

**Integrated Bio-Behavioral Survey  
(IBBS) Among Male Injecting  
Drug Users (IDUs) in Western To  
Far Western Terai**

**2005**



**INTEGRATED BIO-BEHAVIORAL SURVEY (IBBS)  
AMONG MALE INJECTING DRUG USERS (IDUs) IN  
WESTERN TO FAR WESTERN TERAJ**

*Submitted To:*

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## ABBREVIATIONS

AHH	-	Association for Helping Helpless
AIDS	-	Acquired Immuno-Deficiency Syndrome
FHI	-	Family Health International
FSWs	-	Female Sex Workers
HIV	-	Human Immuno-Deficiency Virus
IBBS	-	Integrated Bio-Behavioral Survey
ID	-	Identification Number
IDUs	-	Injecting Drug Users
IEC	-	Information, Education and Communication
NCASC	-	National Center for AIDS and STD Control
NGO	-	Non-Governmental Organization
NHRC	-	Nepal Health Research Council
NNSWA	-	Nepal National Social Welfare Association
PHSC	-	Protection of Human Subjects Committee
PLWHA	-	People Living with HIV/AIDS
RDS	-	Respondent Driven Sampling
RPR	-	Rapid Plasma Reagin
SACTS	-	STD/AIDS Counseling and Training Services
SLC	-	School Leaving Certificate
SPSS	-	Statistical Package for the Social Sciences
STD	-	Sexually Transmitted Disease
STI	-	Sexually Transmitted Infection
SW	-	Sex Worker
TPHA	-	Treponema Pallidum Hemagglutination Assay
TUTH	-	Tribhuvan University Teaching Hospital
USA	-	United States of America
VCT	-	Voluntary Counseling and Testing
WHO	-	World Health Organization



## EXECUTIVE SUMMARY

HIV transmission among drug users is associated with injecting drug use that involves the sharing of needles or syringes. Risky sexual behavior associated with drug use also contributes to the spread of HIV. Injecting drug users function as a “bridging population” for HIV transmission between a core HIV risk group, other high-risk groups and the general population. The main objective of this study was “to estimate the prevalence rate of HIV among injecting drug users (IDUs) and assess their risky behavior”. The study was conducted among IDUs in the municipalities and highway areas of Rupandehi, Banke, Kailali and Kanchanpur districts of the Western to Far Western Terai. Three hundred male IDUs were sampled using the respondent driven sampling (RDS) methodology. While structured questionnaires were used to collect behavioral data, clinical blood tests were used to determine the rate of HIV infection. The clinical test procedure used involved collecting blood from a subject’s pricked finger and then storing it in 2-4 capillary tubes until tests could be performed. In order to determine a participant's infection status, a rapid test kit algorithm was used in which two rapid tests (Capillus and Determine) were initially conducted with Uni-Gold reserved as a tie-breaker. In terms of socio-demographic characteristics, the study found that the median age of the IDUs was 25 years. About half of them were previously or currently married. The median age at marriage was 21 years. A majority of the IDUs had formal schooling. IDUs from different ethnic backgrounds participated in the study.

The IDUs had been injecting drugs for 4.3 years on average. Two-fifths of them got into the habit before or when they were 20 years old. A majority of the IDUs (50.6%) were found to be injecting drugs at least once a week, and 37.3% did so at least once daily during the past week. The most common illicit drug used by the IDUs was a combination of different drugs. Around 59% of the IDUs reported that they had not shared needles/syringes during the past week. However, about one-fourth of the IDUs shared syringes/needles, and the practice was usually limited to two or more friends. Among all the IDUs, 83% reported having injected drugs in another part of the country or in another country.

Improper cleaning of shared and reused needles/syringes presents a higher risk of HIV infection to the IDUs. The study revealed that, while three-fourths of the IDUs cleaned their needles or syringes with plain water, half of them cleaned their needles/syringes with urine and 13% with saliva. However, almost all could obtain a new syringe from a drug store.

The IDUs were also found to be sexually active. Almost all (98%) of them had engaged in sex. The median age of the IDUs at the time of their first sexual encounter was 17 years. A majority of respondents reported that they had sexual intercourse in the last 12 months (75.5%) and, of this group, 46% reported having two or more partners while about 34% reportedly had sex with FSWs during the period. Consistent use of condoms with regular partners is low (3.9%), but high (46.5%) with a sex worker.

General awareness about HIV/AIDS does not seem to have motivated a significant change in behavior. All the participants knew about HIV/AIDS and 88.7% reported

having heard about STD. About 96% of the respondents were aware that one could protect oneself from HIV/AIDS by always wearing a condom. Similarly, almost all (97.7%) the IDUs knew that a person could contract HIV by injecting drugs with somebody else's previously-used needle. Friends/relatives and radio were the first and second most common sources of information about HIV/AIDS for the IDUs. HIV infection was found to be higher (11.7%) among the IDUs.

Study shows that a significant percentage of IDUs (41.4%) consist of adolescents and youths. HIV awareness programs therefore should be taken to a larger group of IDUs sub-population especially to the adolescents and youths. It is also necessary to continue disseminating HIV related information through radio, television and other IEC materials like posters, pamphlets, brochures and, hoarding boards to cover large group of IDUs. The need to design special strategies to cover mobile IDUs under HIV/AIDS awareness campaign has also been highlighted in the chapter as a majority of the sampled IDUs (83%) were reportedly mobile sub-population, who had also injected drugs elsewhere in Nepal or in other countries. It has also been recommended that client friendly STI treatment and HIV test facilities should be made available to the target population to encourage more IDUs to voluntarily come forward for such services. Further, the study has recommended the need to monitor and evaluate the HIV prevalence and risk behaviors of IDUs at regular time intervals.



# CHAPTER 1

## INTRODUCTION

### 1.1 Background

The National Center for AIDS and STD Control (NCASC) has been compiling and publishing cumulative number of HIV cases conformed by laboratory tests in different population subgroups, such as sex workers, clients of sex workers, housewives, persons getting blood transfusion and injecting drug users and of perinatal transmission since 1991. As of August 2005, a cumulative total of 5,338 cases of HIV infection, including 907 cases of AIDS and 262 deaths from AIDS, have been reported in Nepal (NCASC, 2005). Since the NCASC data reflects only the reported cases, and, therefore, does not show the complete picture, it is estimated that one-third of all HIV infections are among IDUs. Sharing and reusing needles left by others in public places has been a critical factor in the spread of HIV in several developing countries. In response to the growing HIV epidemic, many governments, including Nepal, have begun to develop intervention policies and programs targeting injecting drug users. A major difficulty in developing strategies for HIV prevention is a lack of general knowledge among planners about factors influencing drug use and the spread of HIV (Richman, 1996).

High-risksexual behavior associated with drug use has also been found to be a major contributing factor to the spread of HIV among the non-injecting population(AIDS in Asia, MAP Report, 2004). Drug users function as a core HIV risk group in Nepal and they could transmit infection to the general population.In most areas where HIV is prevalent among injecting drug users, they were found to serve as the primary source for HIV transmission in the heterosexual population and in prenatal transmission as well (Jarlais, 1992).

An HIV and Behavioral Surveillance Survey (BSS) conducted among IDUs in the Kathmandu Valley in 2002, Eastern Terai and Pokhara Valley in 2003 showed about 68%, 35.1% and 22% HIV prevalence among the male IDUs respectively. The high prevalence of HIV among IDUs in Kathmandu, the Eastern Terai and Pokhara indicates that other towns and cities where large numbers of IDUs are active may also have a high rate of HIV infection. It was necessary to survey these IDUs in order to understand their behavior, which is needed for the development of proper HIV/AIDS prevention and care programs for them. The BSS and HIV studies were also needed to analyze time trends in HIV prevalence among the target group over time.

### 1.2 Objectives of the Study

The objective of the first round of the IBBS was to estimate the prevalence of HIV among IDUs in the four districts of Rupandehi, Banke, Kailali and Kanchanpur in the Western to Far Western Terai and assess their "at risk" behavior. The survey would provide baseline data for measuring the effectiveness of intervention programs aimed at reducing the "at risk" behavior of the IDUs. The main objectives of the first cycle of the IBBS were:

- To determine the prevalence of HIV among IDU sub-populations in the Western to Far Western Terai.
- To describe drug injecting and sexual behaviors among IDU sub-populations in the Western to Far Western Terai.
- To measure the frequency of, and the association between, risk behavior and HIV infection status among IDU sub-populations.
- To measure the proportion of IDU sub-populations that transmit HIV infection because of their practice of high-risk injecting behavior and having sexual links with regular and non-regular partners.

## CHAPTER 2 METHODOLOGY

### 2.1 Study Design

The study was done among IDUs in the municipalities and highway areas of Rupandehi, Banke, Kailali and Kanchanpur districts in the Western to Far Western Terai. The area extends for a distance of almost 427 kilometers on the East–West Highway from Butwal of Rupandehi district to Banbasa of Kanchanpur district. A cross-sectional study was designed to collect both behavioral and clinical data related to HIV. In this study, IDUs are defined as those who have injected drugs during the last three months prior to the date of the interview.

Structured questionnaires were used to collect behavioral data relating to drug injection, syringe/needle sharing and sexual behavior among the IDUs. A number of demographic and social characteristics were also gathered. The questionnaires were developed based on the "Guidelines for Repeated Behavioral Surveys in Populations at Risk of HIV" (FHI, 2000) and were finalized after pre-testing (Annex 1).

In this study the inclusion criteria used for IDUs was “current injectors who had been injecting drugs for at least three months prior to the date of survey”.

#### 2.1.1 Sample Size and Sampling Design

A sample size of 300 male IDUs was estimated to measure about 15% change in HIV among IDUs from the assumed rate of 20% in the Western to Far Western Terai of Nepal based on  $\alpha=0.05$  and statistical power  $(1-\beta)=0.80$  (Annex 2).

Traditional probability sampling methods, such as simple random, cluster and stratified sampling used in household surveys, are not suitable for reaching IDUs and such other hidden populations, as a sampling frame is not available and response rates are usually low and lacking in candor (Spren and Zwaagstra, 1994). Similarly, street-based location sampling methods that have dominated much risk-reduction research (Semaan et. al., 1998), such as targeted sampling (Watters and Biernacki, 1989), exclusively tend to recruit IDUs who spend considerable time on the street, especially older male IDUs. In order to overcome many of the problems generally attributed to chain referral sampling, a form of chain referral *network* sampling, known as respondent driven sampling (RDS), was used in this study. RDS is a recent enhancement of chain-referral sampling designed to overcome the limitations of other forms of chain-referral-sampling, while at the same time maintaining the advantages of broad coverage and easy implementation in the field. RDS is a member of a new class of sampling methods, termed "linked-tracing/adoptive sampling designs" that are designed to operate in settings where traditional probability sampling methods are infeasible (Heckathron 2003).

Theoretically, RDS can also be applied safely in situations where little information on the population size by sites/locations is available by selecting suitable seeds and recruiting the respondents in a sufficient number of waves.

A research team, with the help of local NGO partners, recruited a total of 15 known IDUs from different sites as "seeds". These "seeds" were enlisted from different injecting groups to obtain a more random sample. These seeds were interviewed and then given three referral cards each to bring three more fellow IDUs for the same interview that they had just completed. Each card had a unique identification number. Only those respondents who came with a referral card were recruited for the study and provided three referral cards to enroll three others. The researchers chose the seeds in a way that would tap into networks of both long-term and short-term users. Similarly, attempts were made to select both old and young drug injectors as seeds.

Of the 15 seeds recruited, two completed one wave, four completed two waves and nine completed three or more waves. However, they could not meet the desired number of 300 participants. A group of 27 IDUs (16 in Kanchanpur, five in Kailali and six in Banke districts) were chosen through peer educators as individual respondents. Though the selected IDUs said that they had friends who were potential subjects, they could not bring them to the study because they had participated previously. The recruitment process was completed when the targeted sample size of 300 IDUs was achieved (Annex 3).

Each respondent was provided Rs. 100 (equivalent to \$ 1.40) to cover local transportation costs to the interview site. He was paid only after he had completed the interview and given blood for an HIV test. Each IDU was also provided an incentive of Rs. 50 (equivalent to \$ 0.70) to recruit up to three other IDUs.

Before interviewing the study participants, the researcher conducted a verification process to make sure that only genuine IDUs were recruited for the study. The verification process included an informal discussion regarding the names of drugs, price of the drugs, gathering place, drug preparation process, names of NGOs working for IDUs and injection techniques. He also made an observation of the part of the body where injections were done including recent injection marks.

In order to maintain the confidentiality of the study participants, their names and full addresses were not recorded. Instead, they were provided a unique ID number written on a plastic-coated card. This card was also used for the distribution of the test results. Only those participants who produced the card were provided the HIV test results verbally.

The fieldwork started on April 17 and was completed on May 28, 2005.

### 2.1.2 Informed Consent

The research study was conducted in compliance with both ethical and human rights standards. These standards included participant anonymity as well as pre-and post-test counseling. As this study was done with human subjects who are highly stigmatized and injecting drugs is illegal in the country, "ethical" as well as "technical" approvals were obtained from Family Health International's ethical review body, Protection of Human Subject Committee (PHSC), and the Nepal Health Research Council (NHRC) prior to the initiation of the study fieldwork. Prior to the interview and collection of a blood sample, witnessed verbal informed consent was obtained from all the participants. The verbal consent form used in the study is given

in Annex 4. All possible precautions were taken in order to maintain participant anonymity (no personal identifiers were collected).

### 2.1.3 Blood Sample Collection and HIV Testing

Blood samples for the HIV test were obtained by minimally invasive finger-prick technique. Two rapid tests, namely, "Capillus" and "Determine", were conducted to determine HIV infection. In case of a tie in the first two tests, a third test "Uni-Gold" was performed. Qualified laboratory technicians from the STD/AIDS Counseling and Training Service (SACTS) conducted the tests in a laboratory at the study site. The blood samples collected were kept in a cold chain within one hour of collection and the tests were performed on the same day.

The Abbott Determine HIV-1/2 is a visually read and qualitative immunoassay for the detection of HIV-1 and HIV-2 antibodies in human serum, plasma or whole blood. The test is intended to aid in the detection of antibodies to HIV-1/HIV-2 in infected individuals.

The Trinity Biotech Capillus HIV-1/HIV-2 is also a visually read rapid qualitative assay for the detection of human immuno-deficiency virus type 1 (HIV-1) and/or human immuno-deficiency virus type 2 (HIV-2) antibodies in human whole blood, serum or plasma. This test is primarily used for initial screening at low-volume testing facilities, during emergency situations or in areas where sophisticated equipment is not available.

Trinity Biotech Uni-Gold, used as a tie-breaker in the parallel testing algorithm is a visually read recombinant proteins representing the immunodominant regions of the envelope proteins of HIV-1 and HIV-2 glycoprotein gp41, gp120 (HIV-1) and glycoprotein gp36 (HIV-2) respectively are immobilized at the test region of the nitrocellulose strip. These proteins are also linked to colloidal gold and impregnated below the test region of the device. A narrow band of the nitrocellulose membrane is also sensitized as a control region.

The quality of information provided by the study participants and the collection of clinical specimens was monitored through a log form developed for monitoring the study.

## **2.2 Study Management**

The study team was comprised of a project director, project coordinator, senior research associate (pathology doctor), senior lab technician, lab technicians, lab supervisor, research assistant, field supervisors, interviewers and motivators.

Before the data collection was initiated, an intensive, nine-day training was provided to all the study team members. This training allowed the field teams to become familiar with the research instruments, study methodology and information collection techniques. A two-day theory and practical training on pre-test counseling was also provided. The team members practiced administering the questionnaires using both classroom-based role-play exercises and field practice. The field researchers were divided into two teams. These teams each consisted of one research assistant, four researchers and one lab technician.

Centers were established at five different places (one each in Mahendranagar of Kanchanpur, Dhangadhi of Kailali, Nepalgunj of Banke and Bhairahawa and Butwal of Rupandehi district) to interview the participants and collect blood samples. Individual interviews and blood collection activities were carried out in separate rooms after obtaining the participant's informed oral consent. Pre-test counseling was provided to all the study participants before their blood samples were collected, which was done by pricking the finger. The blood was then stored in three-four capillary tubes until tests were performed at the site laboratory. A lab technician from SACTS did the blood test.

In order to assure the quality of data collection, New ERA and FHI officials supervised the fieldwork regularly. Field supervisors reviewed all the completed questionnaires on the day the data was collected. Any inconsistencies in the responses were clarified through discussions with the concerned interviewer later that day.

In order to avoid duplication/repetition when recruiting the study participants, a researcher was exchanged between the centers after study activities had been completed at one site. Moreover, some basic cross-checking questions were also put to the participants before the interview to confirm that they had not been interviewed previously. The centers, sites and locations of the interview are presented in Annex 5.

### **2.3 Post-Test Counseling and Test Result Distribution**

After the blood samples were collected, all the study participants were informed about the location and operating hours of the VCT site where they should go to obtain their test results and requirement that they must bring the ID card issued to them at the time of the interview. They were also pre-informed that the test results would be provided to them with pre- and post-test counseling by a trained counselor. Post-test counseling and individual report dissemination was completed between April 26 to May 12, 2005 in Bhairahawa, May 23 to 29, 2005 in Butwal, April 26 to May 3, 2005 in Mahendranagar, May 14 to 20, 2005 in Dhangadhi and May 23 to 31, 2005 in Nepalgunj. Out of the 300 IDUs tested for HIV, only 75 turned up to get their test results (Annex 6). Trained counselors from Namuna Integrated Development Council in Bhairahawa and Butwal, Nepal National Social Welfare Association in Mahendranagar, Association for Helping Helpless in Dhangadhi and Drug Rehabilitation Center of INF in Nepalgunj gave the test results in a private setting only after the participants had produced their ID cards. Before opening the sealed envelope, a counselor counseled them about the possibility of a positive or negative result of the blood test. After the test result was revealed to them, they were advised about various aspects of STI and HIV and the measures to be taken whether they had HIV+ or HIV- results. The participants were also referred to Regional and Zonal Hospitals and VCTs for further services.

### **2.4 Data Cleaning and Analysis**

All the questionnaires were collected and transported to the New ERA Kathmandu office after the fieldwork was completed. The questionnaires were thoroughly checked for any inconsistencies before the data was entered into a computer using FoxPro software. Double entry approach was used to minimize errors during the data entry. Later, the data file was transferred to SPSS files for further analysis.

The analyses presented in this report are preliminary and are not yet adjusted using the RDS software. Simple statistical tools, such as frequency distribution, percentages, range, proportion, mean and median, were used to analyze the results of the survey. Chi-square test values were also calculated to measure the statistical significance of the relationship between cross-tabulated categorical variables. Odd ratios were calculated to measure the relative risk of HIV infection between the categories of the selected explanatory variables. Clinical and behavioral data were merged in order to examine the relationship between the participants' HIV status and background characteristics and injecting and sexual behaviors.

## CHAPTER 3

### SOCIO-DEMOGRAPHIC CHARACTERISTICS OF IDUs

This chapter discusses the demographic and social characteristics of the 300 male IDUs recruited for the sample from the four districts (Rupandehi, Banke, Kailali and Kanchanpur) in the Western to Far Western Terai.

#### 3.1 Demographic Characteristics

The demographic characteristics of the IDUs are presented in Table 3.1. Use of injecting drugs seems to be common among the younger generation also. About eight percent of the IDUs were below the age of 20 years. About two-fifths (41.4%) were adolescents and youths (below the age of 25 years). The median age of the IDUs was 25 years.

Almost half (49%) of the respondents had never been married. About 43% were currently married, and 7.7% were found to be divorced/separated or widower. The median age at first marriage was 21 years, and a majority of the respondents (49.7%) were married between the ages of 20 to 24 years.

**Table 3.1: Demographic Characteristics of the Sample Population**

Demographic characteristics	N	%
<b>Age</b>		
16-19	23	7.7
20-24	101	33.7
25-29	103	34.3
30-34	49	16.3
35-39	13	4.3
40-56	11	3.7
<b>Median age</b>	<b>25</b>	<b>-</b>
<b>Marital status</b>		
Married	130	43.3
Divorced/Separated	20	6.7
Widower	3	1.0
Never married	147	49.0
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Age at first marriage</b>		
12-14	5	3.3
15-19	49	32.0
20-24	76	49.7
25-29	21	13.7
30-31	2	1.3
<b>Median age</b>	<b>21</b>	<b>-</b>
<b>Total</b>	<b>153</b>	<b>100.0</b>
<b>Currently living with</b>		
Spouse	127	42.3
Living without sexual partner/alone	173	57.7
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Other sexual partner of IDU's spouse/Female sex partner</b>		
Yes	1	0.8
No	125	98.4
Don't know	1	0.8
<b>Total</b>	<b>127</b>	<b>100.0</b>

Around 58% of the IDUs did not live with a sexual partner or were living alone. Among the 130 currently-married IDUs, 127 were living with their spouse. One of the currently-married IDUs reported that the spouse had another sexual partner (Table 3.1).



### 3.2 Social Characteristics

More than one-third (37.7%) of the IDUs had attained secondary level schooling. About 11% were illiterate and more than half of them (58%) had primary plus education.

IDUs from various ethnic backgrounds participated in the study. About 30% were from the Chhetri/Thakuri caste, followed by occupational caste (13.7%), Tamang/Magar (12.0%), Brahmin (10.3%), Terai caste (10%) and Muslims (8.7%).

A large majority (81.3%) of the participants had been born in the districts under study. Among the 56 migrant IDUs (IDUs whose birthplace was not within the study districts), 34 had been living in the study districts for more than five years (Table 3.2).

**Table 3.2: Social Characteristics of the Sample Population**

Social Characteristics	N=300	%
<b>Education</b>		
Illiterate	34	11.3
Literate only	14	4.7
Primary	78	26.0
Secondary	113	37.7
SLC and above	61	20.3
<b>Ethnicity</b>		
Brahmin	31	10.3
Chhetri/Thakuri	91	30.3
Tamang/Magar	36	12.0
Gurung	20	6.7
Newar	16	5.3
Terai caste	30	10.0
Occupational caste	41	13.7
Musalman	26	8.7
Chaudhary/Tharu	6	2.0
Giri/Puri/Sanyasi	2	0.7
Others	1	0.3
<b>Duration of stay in Western to Far-Western Terai (Rupandehi, Banke, Kailali and Kanchanpur districts)</b>		
Since birth	244	81.3
Since 5 years	22	7.3
More than 5 years	34	11.3

## CHAPTER 4

### DRUG USE, NEEDLE SHARING AND TREATMENT

HIV transmission among drug users is most often associated with their needle/syringe-sharing behavior. Therefore, it is important that the behavior of the IDUs be explored in order to design future programs and intervention strategies. Behavioral information on the IDUs related to alcohol use, drug use, needle sharing and treatment against their drug habit is presented in this chapter.

#### 4.1 Alcohol Consumption and Oral Drug Use among IDUs

The use of alcohol is common among the IDUs from the Western to Far Western Terai. The percentage of IDUs reporting never having used alcohol is only about 18%. In the sample of 300 IDUs, about 35% reported drinking daily and 25% reported that they drank more than once a week during the past month. Similarly, about 23% of the IDUs reported that they consumed alcohol less than once a week during the past month.

The IDUs were asked about the duration of oral drug use. A majority of them (54.3%) had been using drugs orally for over 60 months and 43.7% had been doing so for the last 13-60 months. The average duration of oral drug use was 6.8 years (Table 4.1).

**Table 4.1: Consumption of Alcohol and Oral Drug Use among IDUs**

Alcohol and oral drug use acts	N=300	%
<b>Alcohol Used during the past month</b>		
Every day	104	34.7
More than once a week	75	25.0
Less than once a week	68	22.7
Never	53	17.7
<b>Duration of oral drug use</b>		
Up to 12 months	6	2.0
13 – 60 months	131	43.7
More than 60 months	163	54.3
<b>Average duration in years</b>	<b>6.8</b>	<b>-</b>

All the IDUs in the sample were asked about the types of drugs they used orally or inhaled during the past week. More than half (52.3%) of them reported using "ganja". This was followed by brown sugar (43.3%), nitrosun (25%) and charas (23.7%) (Table 4.2).

**Table 4.2: Types of Drugs Used Orally by Respondents**

Types of drugs used orally	Used in last-week	
	N=300	%
Ganja	157	52.3
Brown Sugar	130	43.3
Nitrosun	75	25.0
Chares	71	23.7
Spasmo	18	6.0
Phensydyl	16	5.3
Nitrovate	16	5.3
Proxygin	13	4.3
Proxyvon	13	4.3
Corex	8	2.7
Diazepam	3	1.0
Codeine	3	1.0
Others	5	1.7

Note: Because of multiple answers percentage may add up to more than 100.

## 4.2 Drug Injecting Practice of IDUs

Almost 28% of the IDUs had been injecting drugs for more than five years. The data indicates that 55.3% of the IDUs had been injecting drugs for a period ranging from 13-60 months and that 16.7% had been doing so for the past 12 months. The average duration of injecting drugs among the IDUs was 4.3 years. Nearly two-fifths (42%) of the sampled IDUs had injected drugs before or when they were 20 years of age. The median age of the IDUs when they began injecting drugs was 21 years.

Among the IDUs included in the survey, 15% reported that they injected drugs two-three times a day. The data indicates that around 51% of the respondents were injecting drugs at least once a week and 37% were doing so once daily during the past week.

The respondents were also asked about the frequency of drug injection on the day preceding the interview and/or on the last day. About 6% had injected drugs three or more times on the previous day and/or on the last day, while about 78% had done so only once. The mean number of times of drug injection on the previous/last day was 1.3 (Table 4.3).

Alternately, 144 (48%) respondents had not injected drugs the day preceding the interview. For more than half (51.4%) of the respondents, the main reason for not injecting drugs was lack of money. Other reasons cited were a desire to slowly quit the habit, unavailability or lack of drugs, busy in house work or lack of time and taking other medicines (Annex 8).

**Table 4.3: Drug Injecting Practice of Respondents**

Drug Injecting practice	N=300	%
<b>Duration of drug Injection habit</b>		
Up to 12 months	50	16.7
13–60 months	166	55.3
More than 60 months	84	28.0
<b>Average duration years</b>	<b>4.3</b>	<b>-</b>
<b>Age at first drug injection</b>		
Up to 20 years	126	42.0
21 + years	174	58.0
<b>Median age</b>	<b>21</b>	<b>-</b>
<b>Frequency of drug injections within the past week</b>		
Not injected	36	12.0
Once a week	19	6.3
2-3 times a week	90	30.0
4-6 times a week	43	14.3
Once a day	63	21.0
2-3 times a day	45	15.0
4 or more times a day	4	1.3
<b>Frequency of drug injections on the last day</b>		
1 time	233	77.7
2 times	48	16.0
3 or more times	19	6.3
<b>Mean</b>	<b>1.3</b>	<b>-</b>

The thigh was reported as the common part of the body used for injecting drugs by about 60% respondents. However, 15.3% of the IDUs reported injecting drugs in their upper arm, and 12% were found to be injecting drugs in the wrist (Annex 8).

The most popular places for injecting drugs was forest/bushes, the Indian side of the Sunauli border, one's own room/friend's room and riverbank/slum area/pond. Other spots included toilet/public toilet and around schools and campuses. Similarly, the Indian border towns of Sunauli and Banbasa were also favored places for injecting drugs (Annex 9).

Table 4.4 lists the types of drugs injected during the past week. Most of the respondents (80%) widely used a combination of various drugs. The most common drugs used in the combination were diazepam with hydrocole, phenargan with bruffen, norphin with phenargan and tidigesic with diazepam and phenargan, etc. (for types of combinations, see Annex 10). Other drugs injected by a sizeable proportion of the respondents during the last week included brown sugar, tidigesic and proxygin.

**Table 4.4: Types of Drugs Injected by Respondents in the Last Week**

Types of drugs injected	N=300	%
Brown sugar	24	8.0
Tidigesic	8	2.7
Norphin	5	1.7
Proxygin	4	1.3
Calmpose	1	0.3
Bruffen	1	0.3
Proxyvon	1	0.3
Combination	240	80.0
Not injected	36	12.0

Note: Because of multiple answers, the percentages may add up to more than 100.

Information was also collected on the drug-switching behavior among the IDUs. The data shows that 13 respondents had switched to other drugs. The reasons mentioned for the change were lack of money and desire to reduce the intake of tidigesic/quit the habit (Annex 12).

### 4.3 Syringe Use and Sharing Behavior

The respondents were asked several questions about their needle/syringe use and sharing behavior during the last three injection acts.

In response to the question where they got the syringe/needle the last time they injected drugs, almost 71% of the respondents said they used a purchased new syringe, and around 10-13% answered that they used a new syringe provided by NGO staff/volunteers. The responses for all the three last injecting acts were quite similar. The data shows that the behavior of around 83% of the respondents during the last three drug injecting acts was of low-risk.

Similarly, 8-11% of the IDUs used their own previously used syringe, and about 7% received syringes from friends/relatives after they had used them during the last three drug injecting acts. In sum, about 17% of the respondents were found to have engaged in high-risk behavior during the last three drug injecting acts (Table 4.5).

The participants were also asked whether or not they had last injected in a group and the number of people who had shared the same syringe on the occasion if they had injected in a group. About eight out of 10 answered that they did not share their syringes/needles or that they injected drugs alone. Two out of 10 said that they had shared a syringe with two or more people (Table 4.5).

**Table 4.5: Behavior of Respondents Regarding Syringe Use and Sharing during the Last Three Injections**

Needle/syringe use during recent drug injections	Drug injecting acts N=300					
	Most Recent		Second Most Recent		Third Most Recent	
	n	%	n	%	n	%
<b>Low Risk Behavior</b>						
Used a purchased new needle/syringe	213	71.0	208	69.3	213	71.0
Used new needle/syringe given by NGO staff/volunteers	30	10.0	38	12.7	33	11.0
Used new needle/syringe given by friend	4	1.3	2	0.7	3	1.0
<b>Low Risk Behavior Total</b>	<b>247</b>	<b>82.3</b>	<b>248</b>	<b>82.7</b>	<b>249</b>	<b>83.0</b>
<b>High Risk Behavior</b>						
Used own previously used needle/syringe	25	8.3	32	10.7	31	10.3
Friend/relatives gave after his use	24	8.0	20	6.7	20	6.7
Used needle/syringe that had been kept in public place by himself	2	0.7	0	0.0	0	0.0
Used needle/syringe that had been kept in public place by someone	2	0.7	0	0.0	0	0.0
<b>High Risk Behavior Total</b>	<b>53</b>	<b>17.7</b>	<b>52</b>	<b>17.3</b>	<b>51</b>	<b>17.0</b>
<b>Persons in the group using the same needle/syringe</b>						
2 person	41	13.7	41	13.7	45	15.0
3 or more persons	13	4.3	15	5.0	5	1.7
None/Alone	246	82.0	244	81.3	250	83.3
<b>Total</b>	<b>300</b>	<b>100.0</b>	<b>300</b>	<b>100.0</b>	<b>300</b>	<b>100.0</b>

Information on the needle/syringe-sharing behavior of the respondents during the past week was also collected. Around 69% of them reported never having used other people's previously used needles/syringes. About one-fifth (19%) said they had shared a syringe a number of times during the past week. Similarly, 15% were found to have used syringes kept in a public place during the past week (Table 4.6).

**Table 4.6: Past Week's Syringe Use and Sharing Behavior**

Needle/syringe use throughout the past week	N=300	%
<b>Used a needle/syringe that had been used by another</b>		
Every time	5	1.7
Almost every time	14	4.7
Some times	38	12.7
Never	207	69.0
Not injected last week	36	12.0
<b>Used a needle/syringe that had been kept in public place</b>		
Every time	0	0.0
Almost every time	4	1.3
Some times	42	14.0
Never	218	72.7
Not injected last week	36	12.0
<b>Gave a needle/syringe to some one</b>		
Every time	6	2.0
Almost every time	14	4.7
Sometimes	56	18.7
Never	188	62.7
No injection last week	36	12.0
<b>Number of needle/syringe shared partners</b>		
None	176	58.7
Two partners	61	20.3
Three or more partners	27	9.0
No injection last week	36	12.0
<b>Shared needle/syringe with*</b>		
Friend	87	29.0
Unknown person	1	0.3
Not shared	176	58.7
No injection last week	36	12.0

\* Note: Because of multiple answers, the percentages may add up to more than 100.

About one-fourth (25.4%) of the IDUs had given their used syringes to others while nearly two-thirds said they had "never" given away their used syringes. Out of the total IDU population surveyed, about three in five (58.7%) reported not sharing syringes with anyone

during the past week. Those who reportedly shared syringes said that they did it mostly among friends (29%). Additionally, most of the IDUs who shared syringes did so among two or more partners (Table 4.6).

#### 4.4 Drug Sharing Behavior

This section describes the drug-sharing behavior of the respondents. Among all the respondents, nearly 88% had injected drugs during the past week prior to the date of the survey. Out of the total respondents, three percent had injected with pre-filled syringes. Similarly, about seven percent had used drugs from a syringe into which someone had transferred drugs from his previously used syringe. Materials such as bottles, spoons, cotton, etc. were shared by nine percent of the respondents. About two out of five (39.3%) respondents had drawn drug solutions from a common container used by others during the same time period (Table 4.7).

**Table 4.7: Past Week's Drugs Sharing Behavior**

Drug sharing practice during past week	N=300	%
<b>Injected with a pre-filled syringe</b>		
Yes	9	3.0
No	255	85.0
No injection	36	12.0
<b>Injected with a syringe after drugs were transferred into it from another's syringe</b>		
Every time	0	0.0
Almost every time	0	0.0
Sometimes	22	7.3
Never	242	80.7
No injection	36	12.0
<b>Shared a bottle, spoon, cooker, vial/container, cotton/filter and rinse water</b>		
Every time	0	0.0
Almost every time	2	0.7
Sometimes	25	8.3
Never	237	79.0
No injection	36	12.0
<b>Drawn drug solution from a common container used by others</b>		
Every time	10	3.3
Almost every time	55	18.3
Sometimes	53	17.7
Never	146	48.7
No injection	36	12.0

Information on the internal and external mobility and injecting practices of the respondents was also collected during this survey. Out of the total 300 respondents, 83% were mobile and had also injected drugs elsewhere in Nepal or in other countries. Among these 249 mobile IDUs, 186 had injected drugs in India and one had done so in Malaysia (Annex 13).

Among the 249 IDUs who had also injected drugs elsewhere in Nepal or outside the country, 45.4% said they had used a second-hand syringe. About half (51.8%) of the respondents said they had given their old syringes to others (Table 4.8).

**Table 4.8: Injecting Behavior of IDUs in Other Parts of Country and Out of Country**

Injecting practice in other parts of the country and out of the country	N=249	%
<b>Used a needle/syringe that had been used by another</b>		
Every time	0	0.0
Almost every time	4	1.6
Sometimes	109	43.8
Never	136	54.6
<b>Gave a needle/syringe to someone else after use</b>		
Every time	0	0.0
Almost every time	6	2.4
Sometimes	123	49.4
Never	120	48.2

#### 4.5 Needle/Syringe Cleaning Practice

Improper cleaning of shared and reused needles/syringes increases the risk of HIV infection among IDUs. The prescribed method of cleaning a used needle/syringe is to first wash it five times with clean water, then wash it again five times with bleach, and finally wash it five more times with clean water. The IDUs in the study area, however, had not been cleaning their used needles as prescribed. About three-fourths (74.1%) of them said that they cleaned their used needles/syringes with plain water, and about half (49.1%) said they used urine. Similarly, about 13% and 8% reported cleaning their needles with saliva and distilled water respectively (Table 4.9).

**Table 4.9: Needle/Syringe Cleaning Practice of Respondents**

Needle/syringe cleaning behavior	N	%
<b>Re-used needle/syringe in the past week</b>		
Yes	116	38.7
No	184	61.3
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Ways of cleaning needle/syringe*</b>		
Plain water	86	74.1
Urine	57	49.1
Saliva	15	12.9
Distilled water	9	7.8
Bleach	6	5.2
Paper/cloth	5	4.3
Heating the needle in fire	3	2.3
Boiling in water	2	1.7
<b>Total</b>	<b>116</b>	<b>*</b>

\* Note: Because of multiple answers, the percentages may add up to more than 100.

#### 4.6 Knowledge of and Access to New Needle/Syringe

Almost all the respondents reported that they could obtain a new syringe when they needed one. Moreover, almost all of them knew of sources for obtaining new needles/syringes. About 98% cited drugstores as a source of new syringes. Around four in 10 (42.7%) knew about the needle exchange program. Other sources of new syringes mentioned by the IDUs were drug sellers (31.3%), hospitals (24%) and friends (5%) (Table 4.10).

**Table 4.10: Knowledge of Sources of New Syringes**

Descriptions	N	%
<b>Could obtain new syringe</b>		
Yes	298	99.3
No	2	0.7
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Could obtain syringe from *</b>		
Drugstore	295	98.3
Needle exchange program	128	42.7
Drug seller	94	31.3
Hospital	72	24.0
Friends	15	5.0
Other shop	4	1.3
Other drug users	3	1.0
Drug wholesaler	2	0.7
Others	5	1.7
<b>Total</b>	<b>300</b>	<b>*</b>

\*Note: Because of multiple answers, the percentages may add up to more than 100.

## 4.7 Treatment Practice

Table 4.11 shows types and characteristics of IDU-related treatment received by the sampled IDUs. A majority of the respondents (75.3%) had not received any treatment. Only one respondent was being treated at the time of the survey. About 24% had undergone treatment previously. Out of the 74 ever-treated IDUs, around 54% had received treatment during the last 12 months.

**Table 4.11: Treatment Received by Respondents**

Treatment practice	N	%
<b>Treatment status</b>		
Currently receiving treatment	1	0.3
Was in treatment but not now	73	24.3
Have not received treatment	226	75.3
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>When treatment was received</b>		
Less than 6 months	17	23.0
6-11 months before	23	31.1
12-23 months before	19	25.7
24-35 months before	4	5.4
36-47 months before	4	5.4
48 or more months before	7	9.5
<b>Total</b>	<b>74</b>	<b>100.0</b>

About 72% of the IDUs who had received treatment were treated at residential rehabilitation centers like Naulo Ghumti, Youth Vision, Navajeevan Punarsthapana, Lumbini Punarsthapana, Sahara Treatment Center and Nirmal Nasha Kendra. Around 4% of the IDUs reported that they had tried to give up the habit on their own. A few respondents mentioned that they had received treatment at hospitals in Nepal (Table 4.12).



**Table 4.12: Types of Treatment and Institutions from Where Treatment Received**

Types of Treatments Types of Institutions	Residential rehabilitation		Forced to quit		Without drug		With other drug		Total	
	n	%	n	%	n	%	n	%	n	%
Naulo Ghunti	13	17.6	-	-	-	-	-	-	13	17.6
Youth Vision	7	9.5	-	-	-	-	-	-	7	9.5
Navajeevan Punarsthapana	6	8.1	-	-	-	-	-	-	6	8.1
Lumbini Punarsthapana	4	5.4	-	-	-	-	-	-	4	5.4
Sahara Treatment Center	3	4.1	-	-	-	-	-	-	3	4.1
Nirmal Nasha Kendra	3	4.1	-	-	-	-	-	-	3	4.1
Seren Foundation	2	2.7	-	-	-	-	-	-	2	2.7
Richmond Fellowship	2	2.7	-	-	-	-	-	-	2	2.7
Punarjeevan Kendra	2	2.7	-	-	-	-	-	-	2	2.7
Tinal Challenge Punarsthapana	2	2.7	-	-	-	-	-	-	2	2.7
Ashara Sudhar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Freedom Rehabilitation	1	1.4	-	-	-	-	-	-	1	1.4
Nasha abam Manasik Upachar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Rama Sudhar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Harsha Nasha Mukti Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Nirman Punarsthapana	1	1.4	-	-	-	-	-	-	1	1.4
Jeewan Punarsthapana	1	1.4	-	-	-	-	-	-	1	1.4
Kohalpur Medical College	-	-	-	-	-	-	2	2.7	2	2.7
Bhairahawa Medical College	-	-	-	-	-	-	1	-	1	1.4
G.B. Hospital	-	-	-	-	-	-	1	-	1	1.4
Om Nursing Home	-	-	-	-	-	-	1	-	1	1.4
Inter Medical College	-	-	-	-	-	-	1	-	1	1.4
Family Members	-	-	1	1.4	1	1.4	-	-	2	2.7
Teaching Hospital	-	-	-	-	-	-	1	1.4	1	1.4
Doctor	-	-	-	-	-	-	1	1.4	1	1.4
International Nepal Fellowship	-	-	-	-	-	-	4	5.4	4	5.4
Association for Helping Helpless	-	-	-	-	-	-	1	1.4	1	1.4
Self Tried	-	-	-	-	-	-	3	4.1	3	4.1
Don't know	2	2.7	-	-	-	-	7	9.5	9	12.2
<b>Total</b>	<b>53</b>	<b>71.6</b>	<b>1</b>	<b>1.4</b>	<b>1</b>	<b>1.4</b>	<b>23</b>	<b>31.1</b>	<b>74</b>	<b>*</b>

Note: Because of multiple answers, the percentages may add up to more than 100.

## CHAPTER 5 SEXUAL BEHAVIOR AND CONDOM USE

HIV transmission among injecting drug users is most often correlated with their needle/syringe-sharing behavior. However, the unsafe sexual behavior of drug users contributes to spreading HIV among the non-injecting population like their spouses, girlfriends and other sex partners. In order to understand the sexual behavior of the IDUs, the respondents were asked a number of questions related to their sexual history, number and type of sexual partners, and knowledge and use of condoms. This chapter discusses their main responses.

### 5.1 Sexual Behavior of IDUs

Almost all (98%) the respondents reported having had sex with a female. Among them, 83% gained their first sexual experience when in their teens (below 20 years). The median age of the respondents at their first sexual encounter was 17 years. Out of the 294 respondents that reported having had sex, almost three-quarters had done it during the past 12 months also. Among this group, about 46% had two or more female sex partners (Table 5.1).

**Table 5.1: Sexual History**

Sexual behavior	N	%
Had sexual intercourse	294	98.0
Never had sexual intercourse	6	2.0
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Age at first sexual intercourse</b>		
Below 20 years	244	83.0
20 years of age and above	50	17.0
<b>Median Age</b>	<b>17</b>	<b>-</b>
<b>Sexual intercourse in the past 12 months</b>		
Yes	222	75.5
No	72	24.5
<b>Total</b>	<b>294</b>	<b>100.0</b>
<b>Numbers of different female sexual partners in the past 12 months</b>		
1 partner	120	54.1
2 or more partners	102	45.9
<b>Total</b>	<b>222</b>	<b>100.0</b>

Of the total 294 respondents with sexual experience, 43.5% had sex with a regular female sex partner during the past 12 months. Regular female sex partner is defined as spouse or any sexual partner living together with the respondent. Out of the 128 IDUs who had sex with regular female sex partners during the past 12 months, 10 (7.8%) had not had sex with them during the last month. Of the 118 IDUs who had sex during the last month with a regular female sex partner, about eight in 10 (78%) reported at least five sexual encounters during that period (Table 5.2). Of the total 128 IDUs who had sex with regular female sex partners during the past 12 months, only six (4.7%) reported having anal sex.

**Table 5.2: Sexual Intercourse with Regular Female Sex Partners**

Sexual practice	N	%
<b>Sex with a regular female sex partner during the past 12 months</b>		
Yes	128	43.5
No	166	56.5
<b>Total</b>	<b>294</b>	<b>100.0</b>
<b>Regular female sex partner</b>		
1 partner	128	100.0
2 partners	0	0.0
<b>Sex with a regular female sex partner during the last month</b>		
Yes	118	92.2
No	10	7.8
<b>Total</b>	<b>128</b>	<b>100.0</b>
<b>Frequency of sex with a regular female sex partner during the last month</b>		
1-4	26	22.0
5+	92	78.0
<b>Total</b>	<b>118</b>	<b>100.0</b>

The IDUs with sexual experience were asked whether they had ever had sex with non-regular female partners in the past year. "Non-regular female sex partners" were defined as those with whom the participants were not married or living. However, non-regular female sex partners were also defined as being distinct and separate from female sex workers. Table 5.3 shows that about one-fifth (18.4%) of the IDUs had sex with non-regular female sex partners. Of them, about half (48.1%) reported having had two or more non-regular female sex partners. Similarly, out of the 54 respondents who had sex during the past 12 months, 33.3% had sex with non-regular female sex partners during that time. Of those who had sex with non-regular female sex partners during the past month, 83.3% reported having sex one to four times during that period.

**Table 5.3: Sexual Intercourse with Non-Regular Female Sex Partner**

Sexual practice	N	%
<b>Sex with non-regular female sex partner in the past 12 months</b>		
Yes	54	18.4
No	240	81.6
<b>Total</b>	<b>294</b>	<b>100.0</b>
<b>Non-Regular female sex partner</b>		
1 partner	28	51.9
2 or more partners	26	48.1
<b>Sex with non-regular female sex partner during last one month</b>		
Yes	18	33.3
No	36	66.7
<b>Total</b>	<b>54</b>	<b>100.0</b>
<b>Frequency of sex with non-regular female sex partners during last one month</b>		
1- 4	15	83.3
5+	3	16.7
<b>Total</b>	<b>18</b>	<b>100.0</b>

Of the 54 respondents who had sex with non-regular female sex partners, only one (1.9%) reported having anal sex.

The IDUs were also asked about their sexual relationship with female sex workers during the past year. "Female sex workers" are defined as those who sell sex in exchange for cash, kind or drugs. About one-third (34.4%) reported having sex with female sex workers during the past 12 months. Among these 101 respondents, 40.6% reported having such encounters during the last month also. Out of these 41 respondents who had sex during the past one month, all reported having sex one-four times (Table 5.4). Among the 101 respondents who had sex with female sex workers during the past year, seven (6.9%) reported having anal sex with them. Moreover, of the total 300 respondents, 12 (4.0%) said they had engaged in anal sex with male partners, but only 50% of these 12 had done it during the past 12 months.

**Table 5.4: Sexual Intercourse with Female Sex worker**

Sexual practice	N	%
<b>Sex with female sex worker in the past 12 months</b>		
Yes	101	34.4
No	193	65.6
<b>Total</b>	<b>294</b>	<b>100.0</b>
<b>Number of female sex workers in the past 12 months</b>		
1 partner	34	33.7
2 or more partners	67	66.3
<b>Sex with female sex worker during last one month</b>		
Yes	41	40.6
No	60	59.4
<b>Total</b>	<b>101</b>	<b>100.0</b>
<b>Frequency of sex with a female sex worker during the last month</b>		
1- 4	41	100.0
5+	0	0.0
<b>Total</b>	<b>41</b>	<b>100.0</b>

## 5.2 Knowledge and Use of Condom

All the respondents were asked whether they were aware of condoms, and whether they had used a condom during the last sex act. All the IDUs had heard of condoms. The use of a condom with a regular female sex partner was found to be low when compared to condom use with female sex workers and non-regular female sex partners. Less than one-fifth (18.8%) of the respondents had used a condom during the last time they had sex with their regular female sex partners. The use of condoms with non-regular female sex partners was 53.7%. However, six out of 10 (59.4%) respondents had worn a condom during their last sexual encounter with female sex workers (Table 5.5).

**Table 5.5: Knowledge and Use of Condoms among IDUs**

Knowledge and use of condom in the last sex	N	%
<b>Ever heard of a condom</b>		
Yes	300	100.0
No	0	0.0
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Condom use with regular female sex partner during last sexual intercourse</b>		
Yes	24	18.8
No	104	81.2
<b>Total</b>	<b>128</b>	<b>100.0</b>
<b>Condom use with non-regular female sex partner during last sexual intercourse</b>		
Yes	29	53.7
No	25	46.3
<b>Total</b>	<b>54</b>	<b>100.0</b>
<b>Condom use with female sex worker during last sexual intercourse</b>		
Yes	60	59.4
No	41	40.6
<b>Total</b>	<b>101</b>	<b>100.0</b>

In order to protect oneself from sexually transmitted diseases, a condom must be worn during every sex act. In this context, all the IDUs were asked about the consistent use of condoms with different female sexual partners during the year preceding the survey. Only about 4% of the respondents reported using a condom every time they had sex with regular female sex partners, and more than half (55.5%) had never used a condom with their regular female sex partners. Similarly, about 32% of the respondents also reported that they had been using condoms consistently with non-regular female sex partners. About 46% of the respondents reported consistent use of condoms with female sex workers during the last 12 months, while 26% never used a condom with sex workers during the last 12 months (Table 5.6).

**Table 5.6: Consistent Use of Condom with Different Female Sexual Partners in the Past Year**

Consistent use of condom	N	%
<b>Use of condom with regular female sex partners during past 12 months</b>		
Every time	5	3.9
Almost every time	12	9.4
Sometimes	40	31.2
Never	71	55.5
<b>Total</b>	<b>128</b>	<b>100.0</b>
<b>Use of condom with non-regular female sex partners during past 12 months</b>		
Every time	17	31.5
Almost every time	10	18.5
Sometimes	10	18.5
Never	17	31.5
<b>Total</b>	<b>54</b>	<b>100.0</b>
<b>Use of condom with female sex workers during past 12 months</b>		
Every time	47	46.5
Almost every time	16	15.8
Sometimes	12	11.9
Never	26	25.7
<b>Total</b>	<b>101</b>	<b>100.0</b>

The respondents who had sex with different partners but had not reported consistent condom use were asked why they had chosen not to use one. A majority of them said that they did not feel it was necessary. About 32% of the respondents having sex with a regular female sex partner reported that they were using other means of contraception so they did not use a condom. A majority (75.6%) of the respondents who did not use a condom with female sex workers said that it was not available at the time (Annex 14).

### 5.3 Source of Condoms

The respondents who had heard about or used condoms were asked about their sources of condoms. An overwhelming percentage (97.3%) mentioned pharmacies. Shops, followed by hospitals and peer educators, were other major sources. Almost all the respondents reported that condoms were available within a 30-minute walking distance.

**Table 5.7: Sources of Condom and Time Needed to Obtain It**

Sources of condom and time to obtain it	N	%
<b>Place/person from where condom could be obtained*</b>		
Pharmacy	292	97.3
Shop	239	79.7
Hospital	138	46.0
Peer Educator	54	18.0
Pan shop	51	17.0
Association for Helping Helpless (AHH)	42	14.0
Clinic	37	12.3
Family Planning Center	23	7.7
International Nepal Fellowship	23	7.7
Women Acting Together for Change (WATCH)	19	6.3
Bar/Guest house/Hotel	15	5.0
Friends	13	4.3
Others	8	2.7
Health worker/Health Post	7	2.3
NAMUNA	2	0.7
<b>Total</b>	<b>300</b>	<b>*</b>
<b>Time taken to obtain condom</b>		
Less than 30 minutes	295	98.3
More than 30 minutes	5	1.7
<b>Total</b>	<b>300</b>	<b>100.0</b>

\*Note: Because of multiple answers, the percentages may add up to more than 100.

## 5.4 Sources of Information about Condom

As discussed above, all the respondents had heard about condoms. Those who had heard of them were then asked where they got their information. The respondents had heard about condoms from different sources. The most common sources of information for more than 90% of the respondents were pharmacies, friends/neighbors, television, radio and billboards/signboards. Other sources reported by the respondents were newspapers/posters, hospitals, NGO people, health posts, etc. (Table 5.8).

**Table 5.8: Sources of Information about Condoms**

Sources of knowledge of condom	N=300	%
Pharmacy	291	97.0
Friends/neighbors	285	95.0
Television	277	92.3
Radio	276	92.0
Bill board/sign board	272	90.7
Newspapers/posters	265	88.3
Hospital	263	87.7
NGO people	252	84.0
Health Post	208	69.3
Cinema hall	201	67.0
Health workers/volunteers	189	63.0
Health Center	181	60.3
Street drama	163	54.3
Community event/training	107	35.7
Community worker	91	30.3
Video van	64	21.3
Comic books	57	19.0
Others	2	0.7

Note: Because of multiple answers, the percentages may add up to more than 100.

As part of a strong effort to inform the target group about condoms, the National Health Education Information and Communication Center (NHEIC) has been running radio and TV programs with technical assistance from various sources. The survey asked the respondents whether they had heard specific messages about condoms and HIV/STI broadcast over the radio and TV. More than 80% of the respondents reported hearing or seeing specific programs such as *Condom Bata Surakchhya Youn Swastha ko Rakchhya*, *HIV/AIDS Bare aajai dekhi kura garaun* and *Youn Rog Ra AIDS bata Bachnalai Rakhnu Parchha Sarbatra paine Condom Lai*. Other messages reported by the respondents were *Ramro Sanga Prayog Gare Jokhim Huna Dinna Bharpardo chu Santosh Dinchu Jhanjhat Manna Hunna*, *Jhilke Dai Chha Chhaina Condom* and *Condom Kinna Ma Bhaya Hunna Ra*. The data indicates that these programs have been largely successful in disseminating messages to the target groups about using condoms to prevent HIV/STI.

**Table 5.9: Exposure to Specific Condom Messages in the Past Year**

Heard/seen/read the following messages/characters in past one year	N=300	%
Condom Bata Surakchhya Youn Swastha ko Rakchhya	269	89.7
HIV/AIDS Bare Aaji Dekhi Kura Garaun	254	84.7
Youn Rog Ra AIDS Bata Bachnalai Rakhnu Parchha Sarbatra Paine Condom Lai	244	81.3
Ramro Sanga Prayog Gare Jokhim Huna Dinna Bharpardo Chhu Santosh Dinchhu Jhanjhat Manna Hunna	234	78.0
Jhilke Dai Chha Chhaina Condom	215	71.7
Condom Kinna Ma Bhaya Hunna Ra	215	71.7
Others	18	6.0

Note: Because of multiple answers, the percentages may add up to more than 100.

## CHAPTER 6 KNOWLEDGE OF STIs AND HIV/AIDS

In this survey, a series of questions were administered pertaining to the respondents' general level of consciousness about STIs and HIV/AIDS, their specific knowledge about how such diseases were contracted and where testing facilities were available. The results are discussed below.

### 6.1 Knowledge of STIs

Table 6.1 shows that out of the 300 respondents, 88.7% had heard about STIs.

**Table 6.1: IDUs Who Have Heard about STIs**

Heard of STIs	N=300	%
Yes	266	88.7
No	34	11.3

Those who expressed a general awareness about STIs were also asked about its symptoms. The most commonly cited STI symptoms in females as reported by the male IDUs included genital ulcers/sore blisters, genital discharge, foul-smelling discharge, itching around the genital area and swelling in the groin area. Similarly, the common symptoms of STIs in males were genital ulcers/sore blisters, genital discharge, burning pain during urination, swelling in the groin area and itching. About two-fifths (39.5%) of the respondents had no idea about what STI symptoms were like in females, and one quarter (33.8%) were similarly ignorant about the signs in males (Table 6.2).

**Table 6.2: Symptoms of STIs Cited by Respondents who have Heard about STIs**

Knowledge on symptoms of STIs	Respondents who had heard of STIs			
	n=266			
	Among Females	%	Among Males	%
Genital ulcer/sore blisters	148	55.6	168	63.2
Genital discharge	116	43.6	129	48.5
Foul-smelling discharge	94	35.3	0	0.0
Itching	65	24.4	45	16.9
Swelling in groin area	54	20.3	71	26.7
Burning/pain during urination	47	17.7	74	27.8
Abdominal pain	9	3.4	0	0.0
Bleeding	1	0.4	0	0.0
Don't know	105	39.5	90	33.8

Note: Because of multiple answers, the percentages may add up to more than 100.

Only about eight (2.7%) respondents reported having genital discharge during the past year. Out of them, about five (62.5%) had that symptom at the time of the survey. Similarly, 10 (3.3%) respondents reported having genital ulcer/sore blister during the past year; and among them, two (20%) had it at the time of the survey (Table 6.3).

**Table 6.3: Genital Discharge and Genital Ulcers/Sore Blisters Experienced During the Past Year and Currently**

Experience of STI symptoms	N	%
<b>Had a genital discharge in the past year</b>		
Yes	8	2.7
No	292	97.3
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Have such genital discharge currently</b>		
Yes	5	62.5
No	3	37.5
<b>Total</b>	<b>8</b>	<b>100.0</b>
<b>Had a genital ulcer/sore blister in the past year</b>		
Yes	10	3.3
No	290	96.7
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Have such genital ulcer/sore blister currently</b>		
Yes	2	20.0
No	8	80.0
<b>Total</b>	<b>10</b>	<b>100.0</b>

Out of the 300 respondents, about 93% reported not having any STI symptoms. Among those respondents who had experienced a symptom of STIs, about one-fifth (18.2%) did not seek any treatment, while nearly two-thirds (63.6%) received treatment from private doctors. The percentage of respondents seeking treatment from hospitals and health posts was only about nine percent (Table 6.4).

**Table 6.4: Treatment of STI Symptoms by IDUs**

Treatment Received	N	%
Never had STI symptoms	278	92.7
Ever had some symptoms	22	7.3
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Source of treatment</b>		
Private Doctor	14	63.6
Hospital/Health Post	2	9.1
Others	2	9.1
Did not seek treatment	4	18.2
<b>Total</b>	<b>22</b>	<b>100.0</b>

## 6.2 Knowledge of HIV/AIDS

Knowledge of HIV/AIDS was universal among the IDUs. All the respondents in the sample had heard of the infection. Around six out of 10 reported knowing a person who had died of HIV/AIDS. A majority (71.4%) of the respondents said that those who had died did not have any relation with them, and about 22% said they were their close friends (Table 6.5).

**Table 6.5: Awareness of HIV/AIDS among IDUs**

Knowledge on HIV/AIDS	N	%
<b>Heard about HIV/AIDS</b>		
Yes	300	100.0
No	0	0.0
<b>Know anyone who died due to AIDS</b>		
Yes	185	61.7
No	111	37.0
Don't know	4	1.3
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Nature of relationship to the deceased</b>		
Close friend	41	22.2
No relation	132	71.4
Close relative	8	4.3
Don't know	4	2.2
<b>Total</b>	<b>185</b>	<b>100.0</b>



The respondents were asked several separate questions to understand their conception about HIV/AIDS prevention. About nine out of 10 (96.3%) opined that a person could avoid HIV/AIDS by consistent use of condoms, and 82.3% cited monogamous sexual relationship as a means of protection. Similarly, 62% mentioned that one could avoid the transmission of the HIV/AIDS by abstaining from sex (Table 6.6).

**Table 6.6: Knowledge of ABC**

Knowledge of ABC for avoiding HIV/AIDS	N=300	%
<b>A</b> Can protect themselves through abstinence from sexual contact	186	62.0
<b>B</b> Can protect themselves through monogamous sexual relations	247	82.3
<b>C</b> Can protect themselves through condom use every time during sex	289	96.3

About 98% knew that a person could get HIV by using somebody else's previously used needle, and three-fourths (75.3%) opined that switching from injecting to non-injecting drugs could protect them against HIV/AIDS. Similarly, 82% of the respondents were aware that sharing a meal with an HIV positive person could not transmit HIV/AIDS. However, 42.7% believed that HIV/AIDS could be transmitted through mosquito bite (Table 6.7).

A large majority (89.7%) of the respondents were aware that a pregnant woman infected with HIV could transmit the virus to her unborn child. A little more than half (51.7%) said that a woman with HIV could transmit the virus to her newborn child through breast-feeding. However, a majority of the respondents did not know what actions a pregnant woman could take to reduce the risk of transmitting HIV/AIDS to her unborn child (Table 6.7).

**Table 6.7: Respondents Knowledge on Ways of HIV/AIDS Transmission**

Statements related to HIV/AIDS and pregnant women	N=300	%
Can get HIV/AIDS by sharing needles	293	97.7
A pregnant woman infected with HIV/AIDS can transmit the virus to her unborn child	269	89.7
Cannot get HIV/AIDS by sharing meal with HIV+ person	246	82.0
Can protect themselves from HIV/ AIDS by switching to non-injecting drugs	226	75.3
A woman with HIV/AIDS can transmit the virus to her child through breast-feeding	155	51.7
Can get HIV/AIDS from a mosquito bite	128	42.7
<b>A pregnant women with HIV/AIDS can reduce risk of transmission to her unborn child by:</b>		
Taking medicine	1	0.3
Treatment/consultation with doctor	28	9.3
Don't know	271	90.3

### 6.3 Knowledge about HIV Testing Facilities

All the study participants were asked if they knew about the availability of confidential HIV testing facilities, and whether they had ever been tested for HIV. The data presented in Table 6.8 shows that about three-fourths (74.3%) of the respondents were aware of confidential HIV testing facilities. About 19% of the respondents had been tested for HIV as a requirement, 11.7% had undergone the test voluntarily and the remaining 69.7% had never been tested. Among the respondents who had been tested, 87% had received their test results. Out of the total respondents who had taken a test, 48.4% had done so during the past year.

**Table 6.8: Knowledge about HIV Testing Facilities and History of HIV Test**

Description on HIV testing	N	%
<b>Is it possible for someone to get a confidential HIV test?</b>		
Yes	223	74.3
No	54	18.0
Don't know	23	7.7
<b>Type of test taken</b>		
Required HIV test	56	18.7
Voluntary HIV test	35	11.7
Not tested	209	69.7
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Test result received</b>		
Yes	79	86.8
No	12	13.2
<b>Timing of last HIV test</b>		
Within the past year	44	48.4
1-2 years ago	24	26.4
2-4 years ago	14	15.4
More than 4 years ago	9	9.9
<b>Total</b>	<b>91</b>	<b>100.0</b>

#### 6.4 Source of Knowledge about HIV/AIDS

More than 90% of the respondents said they found out about HIV/AIDS from friends/relatives, radio, television and billboards/signboards. Similarly, pamphlets/posters (87.3%), NGO workers (85.3%), cinema halls (74%) newspapers/magazines (73%) and health workers/volunteers (68.7%) were also commonly cited sources of information. This finding has program implications (Table 6.9).

**Table 6.9: Sources of Knowledge Regarding HIV/AIDS**

Sources of knowledge of HIV/AIDS	N=300	%
Friends/Relatives	289	96.3
Radio	281	93.7
Television	280	93.3
Bill board/sign board	272	90.7
Pamphlets/Posters	262	87.3
NGO workers	256	85.3
Cinema halls	222	74.0
Newspapers/Magazines	219	73.0
Health workers/Volunteers	206	68.7
Workplace	204	68.0
Street drama	186	62.0
School/Teachers	134	44.7
Community events or training	114	38.0
Community workers	96	32.0
Video van	70	23.3
Comic books	69	23.0
Others	1	0.3

Note: Because of multiple answers, the percentages may add up to more than 100.

As revealed by the survey, 69.3% of the respondents had received information about condoms, and about two-thirds (64.7%) reported that they were given materials about HIV/AIDS, such as brochures/booklets/pamphlets, during the past year. The percentage of respondents who had received such information was 73.3% (Table 6.10).

**Table 6.10: Information/Materials Received During the Past Year**

<b>Informative materials received</b>	<b>N=300</b>	<b>%</b>
<b>Received information on condom</b>		
Yes	208	69.3
No	92	30.7
<b>Brochure/booklets/pamphlets on HIV/AIDS</b>		
Yes	194	64.7
No	106	35.3
<b>Received Information on HIV/AIDS</b>		
Yes	220	73.3
No	80	26.7
<b>Others information</b>		
Yes	1	0.3
No	299	99.7

## CHAPTER 7 PREVALENCE OF HIV

HIV status was derived from two rapid HIV tests (Capillus and Determine). Uni-Gold was reserved as a ‘tie-breaker’ rapid test kit in the parallel testing algorithm but was used only in few cases. The clinical test results indicated that 11.7% of the respondents were HIV positive. Among those testing positive, 30% were from Banke district and 13.3% were from Rupandehi. No HIV infection was found among the IDUs from Kailali and Kanchanpur districts.

**Table 7.1: HIV Status by Districts**

District	Total sample	HIV+	%
<b>Interviewed districts</b>			
Rupandehi	150	20	13.3
Banke	50	15	30.0
Kailali	50	0	0.0
Kanchanpur	50	0	0.0
<b>Total</b>	<b>300</b>	<b>35</b>	<b>11.7</b>

### 7.1 Relation between Socio-Demographic Characteristics and HIV Infection

The incidence of HIV was found to be higher among the younger IDUs. For instance, 13% of the IDUs below 20 years of age tested positive, whereas the rate of infection was only 11.6% among those in the age group 20 years and above. However, the difference is not significant statistically. The incidence of HIV also differs with marital status. It is more prevalent among formerly and currently married IDUs than among those who had never been married. However, the difference is insignificant. Literacy and infection rates are closely related. The rate of HIV infection is higher among illiterate IDUs, and the relation is statistically important ( $p < 0.05$ ).

**Table 7.2: Relation between Socio-Demographic Characteristics and HIV Infection**

Socio-demographic characteristics	Total	HIV+	%	P Value
<b>Age</b>				
Below 20 years	23	3	13.0	>0.05
20 years and above	277	32	11.6	
<b>Marital status</b>				
Currently married	130	15	11.5	>0.05
Formerly married	23	4	17.4	
Never married	147	16	10.9	
<b>Literacy</b>				
Illiterate	34	8	23.5	< 0.05
Literate/formal school	266	27	10.2	
<b>Total</b>	<b>300</b>	<b>35</b>	<b>11.7</b>	

### 7.2 Relation between Drug Injection Behavior and HIV

Literature on HIV/AIDS shows that HIV infection is typically associated with the drug-injecting behavior of IDUs. In this study, information on various injecting behaviors such as duration of the habit of injecting drugs, frequency of injecting drugs during the past week, use of publicly-discarded syringes and use of other people's previously-used syringes was collected.

As shown in Table 7.3, those who have been injecting drugs for a long period of time have a greater rate of HIV infection. The infection rate was 21.4% among those who have been injecting drugs for more than five years. The rate dropped to 8.6% as the duration of injecting drugs declined from more than five years to one to five years. The rate decreased further to 3.4% among IDUs who had been doing drugs for less than one year.

The frequency of injection during the past week was found to have no association with HIV infection ( $p > 0.05$ ). Those who injected drugs four-six times a week were found to have a higher (18.6%) rate of HIV infection than those who did so two-three times daily (13.3%). Similarly, the data indicates that sharing syringes puts the IDUs at a greater risk of contracting HIV. Those who shared needles during the past week had a higher prevalence of HIV than those who did not. Likewise, those who used syringes left in public places during the past week were more vulnerable to infection than those who stayed away from such syringes. For example, the infection rate was 64.3% among those who reported using such syringes, while it was only 10.6% among those who avoided such syringes.

**Table 7.3: Relation between Drug Injecting Behavior and HIV Infection**

Drug injecting behavior	Total	HIV+	%	P value
<b>Injecting drugs since</b>				
Less than 1 year	29	1	3.4	< 0.01
1-5 Years	187	16	8.6	
More than 5 years	84	18	21.4	
<b>Frequency of injected drugs in the past week</b>				
Not Injected	36	3	8.3	>0.05
1-3 times a week	109	12	11.0	
4 -6 times a week	43	8	18.6	
Everyday	63	6	9.5	
2-3 times a day	45	6	13.3	
4 or more times a day	4	0	0.0	
<b>Used another's previously used needle/syringe during the past week</b>				
Not injected/Never	243	29	11.9	>0.05
Every time/Almost every time	19	1	5.3	
Sometime	38	5	13.2	
<b>Used a needle/syringe kept in public place during the past week</b>				
Not injected/Never	254	27	10.6	0.05
Every time/Almost every time	4	2	50.0	
Sometimes	42	6	14.3	
<b>Total</b>	<b>300</b>	<b>35</b>	<b>11.7</b>	

### 7.3 Relation between Sexual Behavior and HIV

The relation between sexual behavior of the IDUs and HIV infection does not seem to be as expected. For instance, the IDUs having sex with female sex workers have a lower rate of HIV infection compared to those who did not. In general, the IDUs having sex with sex workers and other regular and non-regular sex partners seem to have less chances of getting HIV. Similarly, the higher the number of sex partners during the last 12 months, the lower seems to be the rate of HIV infection (Annex 15). Caution is however, needed when examining the association between HIV infection status (i.e. HIV prevalence) and risk behavior. Current behaviors may not be related to HIV status because participants may have been infected many years ago and then subsequently changed their behavior. Again the IDUs who are not sexually active may inject drugs and share needles frequently.

### 7.4 Odds Ratio of HIV Infection by Selected Characteristics of IDUs

Unadjusted or gross odds ratio of HIV risk by selected characteristics of the IDUs was calculated. Table 7.4 shows that the risk of HIV infection is about 1.1 times

greater among younger IDUs than older IDUs aged 20 years and above. Illiterate people are almost 2.7 times more likely to get HIV. The estimated risk varies between 1.02 and 7.11, indicating that the relation is statistically significant. Ever-married IDUs are at greater risk of being infected with HIV compared to those who were never married. For instance, the odds ratio is about 1.2 for ever-married IDUs compared to those who were never married. In this sample, the injecting behavior of the IDUs does not have a statistically significant association with HIV infection. An IDU who uses needles/syringes kept in public places is almost 1.7 times more likely to get HIV than those who do not. The estimated risk varies between 0.68 and 4.47, indicating that the relation is statistically not significant. The risk of HIV infection is also insignificant for IDUs who have injected drugs in other places in Nepal or outside the country, though the odd ratio is about 1.2 times higher compared to others (Table 7.4).

**Table 7.4: Odds Ratios of HIV Infection by Selected Characteristics of IDUs**

Socio-demographic and injecting Characteristics	Odd Ratio	# Cases (n)	95% Confidence Interval
<b>Age</b>			
<20 years	1.15	23	(0.26, 4.41)
=>20 years	-	277	
<b>Education</b>			
Illiterate	2.72	34	(1.02, 7.11)
Literate	-	266	
<b>Marital status</b>			
Never married	-	147	(0.54, 2.49)
Ever married	1.16	153	
<b>Injecting behavior</b>			
Injected with another's previously used syringe during past week	-	57	(0.43, 3.28)
Yes	1.15	243	
No	-	-	
Injected with a syringe kept in public place			
Yes	1.77	46	(0.68, 4.47)
No	-	254	
Injected with a pre-filled syringe			
Yes	-	9	(0.13, 23.24)
No	1.06	291	
Injected in another part of the country or in another country			
Yes	1.23	249	(0.50, 3.02)
No	-	51	

## **CHAPTER 8**

### **SUMMARY OF THE FINDINGS**

The main objective of this study was to measure the prevalence of HIV among IDUs and assess their risk behaviors.

Structured questionnaires were used to collect behavioral data. Blood samples were obtained by pricking the finger and collected in capillary tubes for HIV testing. A parallel testing algorithm based on 3 rapid test kits was used to assess HIV status. Respondent driven sampling (RDS), a form of chain referral network sampling, was used to recruit 300 study participants from the selected sites of the four districts in a probability-based manner.

#### **Main Results**

##### *Socio-Demographics Characteristics*

Overall the median age of the respondents was 25 years (range: x to y). A majority of the participants (84%) had formal schooling. About half of the respondents had never been married. Out of the total 300 respondents, 130 were currently married, and among them, 127 were living with their spouse.

##### *Injecting Practice*

Out of the 300 participants, more than half (55.3%) had been injecting drugs from the past two-five years. Almost two-fifths (42%) got into the habit before or at the age of 20. About 51% of the respondents were injecting drugs at least once a week, and 37% were doing it at least once daily during the week prior to the interview. Eight out of 10 were injecting a combination of different drugs, and 8% reported using brown sugar. About 19% of the IDUs were using syringes that had been used by others during the past week. The percentage of IDUs reporting using syringes kept in public places during the past week was 15.3%.

Among the participating IDUs, 83% were found to be mobile and had injected drugs in other places in the country or in another country. Knowledge of sources for new/unused needles was universal among the respondents. About 43% of the respondents reported that they received new syringes through local needle exchange programs.

Of the total 300 respondents, 24.7% had got some kind of treatment against their drug habit. Among those who had received treatment, 72% had received it at residential rehabilitation centers.

### *Sexual Risk Behavior and Use of Condom*

In the sample of 300 IDUs, almost everybody (98%) had sexual experience, and all had heard about condoms. Among the respondents who had engaged in sex during the past 12 months, consistent use of a condom was only 3.9% and 31.5% with regular and non-regular partners respectively. However, out of the 101 respondents who had engaged in sex with a female sex worker during the last 12 months, 46.5% reported consistent use of a condom.

### *Knowledge of HIV*

All the respondents had heard about HIV/AIDS. Of the total sample population, 96.3% thought that wearing a condom each time during sex could prevent HIV. Similarly, 97.7% of the respondents knew that a person could get HIV by using somebody else's previously-used needle. About 75% of the respondents claimed that IDUs could protect themselves from HIV by switching to non-injecting drugs.

### *HIV Prevalence*

In the total sample of 300 IDUs, 35 (11.7%) were found to be HIV positive. IDUs who were under the age of 20, formerly married or illiterate had a higher risk of HIV infection. The risk of getting HIV is greater among IDUs who shared needles compared to those who did not, but the difference in risk is not statistically significant.

### **Recommendations**

- \* HIV/AIDS awareness and prevention programs for IDUS should be continued with more focus on younger groups as about two-fifths (41.4%) of the sampled IDUs were below the age of 25 years.
- \* Around 34% of the IDUs reported of having used previously used needle/syringe or those left in public places in the last week preceding the survey. Education programs should emphasize on the increased risk of HIV transmission due to such "risky" behaviors.
- \* Special strategies should be designed to cover mobile IDUs under HIV/AIDS awareness campaign as a majority of the IDUs (83%) were mobile and had also injected drugs elsewhere in Nepal or in other countries.
- \* Around four in 10 (42.7%) respondents knew about the needle exchange program while about 98% cited drugstores as a source of new syringes. Needle exchange programs should expand its program coverage to reach more IDUs in West to Far West Terai region and should also provide proper counseling for detoxification for the IDUs.
- \* About two-fifths (41.4%) of the sampled IDUs were adolescents and youths (below the age of 25 years). Awareness raising programs is urgently needed for this specific group.



- \* The median age of the respondents at the time of their first sexual encounter was 17 years. Workshops, interaction programs, training sessions should be conducted for adolescents both in schools and in the community to impart proper sex education and awareness on HIV/AIDS.
- \* The use of a condom with a regular female sex partner was found to be low when compared to condom use with female sex workers and non-regular female sex partners. More awareness program is required to make the IDUs aware on the need to use condom consistently with all kinds of sex partners.
- \* More target group specific IEC materials should be designed and distributed for the IDUs in West to Far West Terai region. Radio and television programs which have been very successful in disseminating information related to condoms and HIV/AIDS should be continued.
- \* Among those respondents who had experienced a symptom of STIs, the percentage of respondents seeking treatment from hospitals and health posts was only about nine percent. In the same way, only 11.7% of the respondents had undergone HIV test voluntarily. Client friendly STI treatment and HIV test facilities should be made available to the target population to encourage more IDUs to voluntarily come forward for such services.
- \* Seventy five percent of the interviewed IDUs reported of not having received any treatment to break their drug taking habits. Necessary assistance should be provided to the rehabilitation and detoxification centers to help them improve their physical facilities and quality of services to encourage more IDUs seek treatment from them.
- \* IBBS for monitoring and evaluation of HIV programs targeted to IDUs need to be conducted at regular time intervals.

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ANNEX – 1

**Confidential**

**Integrated Bio- Behavioral Survey (IBBS) among Injecting Drug Users in  
Western to Far-Western Nepal  
FHI/New ERA/SACTS - 2005**

Namaste! My name is... I am here from New ERA to collect data for a research study. During this data collection, I will ask you some personal questions that will be about sexual behavior, use of condoms, HIV/AIDS and use of needle/syringe when taking drugs. You may feel uneasy responding to some personal questions. But it is important that you answer truthfully. The information given by you will be strictly treated as confidential and not shared with any one. Also we collect a few drops of blood for laboratory testing for HIV. You do not need to worry. Nobody will know whatever we talk about because your name will not be mentioned on this form. All the mentioned information will be used only for the study purpose. This survey will take about 40 to 60 minutes.

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

Would you be willing to participate? 1. Yes 2. No

Signature of the interviewer: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/2061

**Operational Definition of Respondent:**

**Injecting Drug User (IDU):** Person who injects various drugs in muscles or in veins for intoxication purposes. Please note that people who inject drugs as part of medical treatment are not included in IDUs. The respondent must be a current injecting drug user who has started injecting at least 3 months before the interview date. Those who have started injection within last three months are not eligible for interview.

Men under the age of 16 will be excluded.

**Code Respondents:**

Seed: 1. Yes 2. No

IDENTIFICATION NUMBER (Coupon Number): \_\_\_\_\_ (*Write '0' for seed*)

Coupon number given: 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

Did the interviewee abandon the interview?

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

Interviewer Name: \_\_\_\_\_ Code Interviewer: \_\_\_\_\_

Date Interview: \_\_\_\_/\_\_\_\_/2061

Checked by the supervisor: Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/2061

Data Entry # 1: Clerk's name: \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/2061

Data Entry # 2: Clerk's name: \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/2061



Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
105	What is your caste? <i>(Specify Ethnic Group/Caste)</i>	Ethnicity/Caste _____	
106	What is your marital status?	Never married ..... 1 Married ..... 2 Divorced/Permanently separated ... 3 Widow..... 4 Other (Specify) ..... 96	→ 108
107	How old were you when you first married?	Age ..... <input type="text"/> <input type="text"/> <b>(Write the completed years)</b>	
108	With whom you are living now?	Living with wife..... 1 Living with female sexual partner . 2 Living without sexual partner ..... 3 Others (Specify)..... .. 96 No response ..... 99	} 110
109	Do you think your wife/female sexual partner has any other sexual partners?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	} 110
10 9.1	If yes, what is the sex of the partner?	Male ..... 1 Female..... 2	
110	During the past one-month how often have you had drinks containing alcohol? <b>(Such as beer, local beer etc.)</b>	Every day ..... 1 More than once a week ..... 2 Less than once a week..... 3 Never drink ..... 4 Others (Specify)..... .. 96 No response..... 99	

## 2.0 DRUG USE

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
201.	How long have you been using drugs? <i>(Drug means medicine not used for treatment purpose rather used for Intoxication)</i>	Years ..... <input type="text"/> <input type="text"/> Months ..... <input type="text"/> <input type="text"/> No response ..... 99	
202.	How old were you when you first injected drugs? <i>(Include self-injection or injection by another)</i>	Years ..... <input type="text"/> <input type="text"/> <b>(Write the completed years)</b>	
203	How long have you been injecting drugs? <i>(Include self-injection or injection by another)</i>	Years ..... <input type="text"/> <input type="text"/> Months ..... <input type="text"/> <input type="text"/> No response ..... 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.						
204.	Which of the following types of drugs have you used and/or injected in the past one-week? <i>(Read the list, multiple answer possible)</i>								
	Description	Used in Last-Week				Injected in Last-Week			
		YES	NO	DK	NR	YES	NO	DK	NR
	1. Tidigesic	1	2	98	99	1	2	98	99
	2. Brown Sugar	1	2	98	99	1	2	98	99
	3. Nitrosun	1	2	98	99	1	2	98	99
	4. Ganja	1	2	98	99	1	2	98	99
	5. Chares	1	2	98	99	1	2	98	99
	6. White Sugar	1	2	98	99	1	2	98	99
	7. Phensydyl	1	2	98	99	1	2	98	99
	8. Calmpose	1	2	98	99	1	2	98	99
	9. Diazepam	1	2	98	99	1	2	98	99
	10. Codeine	1	2	98	99	1	2	98	99
	11. Phenergan	1	2	98	99	1	2	98	99
	12. Cocaine	1	2	98	99	1	2	98	99
	13. Proxygin	1	2	98	99	1	2	98	99
	14. Effidin	1	2	98	99	1	2	98	99
	15. Velium 10	1	2	98	99	1	2	98	99
	16. Lysergic Acid Dithylamide (LSD)	1	2	98	99	1	2	98	99
17. Nitrovate	1	2	98	99	1	2	98	99	
18. Combination (Specify)	1	2	98	99	1	2	98	99	
96. Others (Specify) _____	1	2	98	99	1	2	98	99	
204.1	Did you switch in the last month from one drug to another?	Yes ..... 1 No ..... 2	→ 205						
204.1.1	If yes	From _____ drug To _____ drug							
204.1.2	What is the reason for switching?	_____ _____							
205.	How many times would you say you injected drugs yesterday?	Times ..... <input type="text"/> Not injected..... 0	→ 209						
206.	Would you like to tell me why you did not injected yesterday?	_____ _____							
207.	How many days ago did you get injected?	Days ago ..... <input type="text"/> <input type="text"/>							
208.	How many times would you say you injected drugs on the last day?	Times ..... <input type="text"/> <input type="text"/>							
209.	During the past one-week how often would you say you injected drugs?	Once a week ..... 1 2-3 times a week ..... 2 4-6 times a week ..... 3 Once a day ..... 4 2-3 times a day ..... 5 4 or more times a day ..... 6 Not injected in the last week ..... 7 Don't know ..... 98 No response..... 99							

### 3.0 NEEDLE SHARING BEHAVIORS

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
301.	Think about the times, you have injected drugs yesterday/last day. How many times did you inject drugs that day? <i>(Fill the number from answer to Q. 205 or 208 and verify by asking the respondent)</i>	Times ..... <input type="text"/> <input type="text"/>	
302.	The last time you injected, how did you get that syringe/needle?  <i>(+ Public place means the place where they keep syringe other than his home)</i>	My friend/relative gave it to me after his use .....1 Unknown person gave it to me .....2 I picked it up from a public place which was left there by others <sup>+</sup> .....3 I picked it up from a public place which was left there by myself <sup>+</sup> ....4 I used a new needle/syringe given by NGO staff/volunteer .....5 I used a needle/syringe which I purchased .....6 I reused my own needle/syringe .....7 Others (Specify) .....96 Don't know .....98 No response .....99	
302.1	The last time you injected, If you were in a group while injecting, how many different people in the group do you think used the same needle?	Nos. .... <input type="text"/> <input type="text"/> Injected alone .....96	
303.	Think about the time before the last time you injected, how did you get that syringe/needle?  <i>(+ Public place means the place where they keep syringe other than his home)</i>	My friend/relative gave it to me after his use .....1 Unknown person gave it to me .....2 I picked it up from a public place which was left there by others <sup>+</sup> .....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 I used a needle/syringe which I purchased .....6 I reused my own needle/syringe .....7 Others (Specify) .....96 Don't know .....98 No response .....99	
303.1	That time, If you were in a group, how many different people in the group do you think used the same needle?	Nos. .... <input type="text"/> <input type="text"/> Injected alone ..... 96	
304.	Now think about the time before <b>(before Q. 303)</b> , how did you get that syringe/needle?  <i>(+ Public place means the place where they keep syringe other than his home)</i>	My friend/relative gave it to me after his use .....1 Unknown person gave it to me .....2 I picked it up from a public place which was left there by others <sup>+</sup> .....3 I picked it up from a public place which was left there by myself <sup>+</sup> ....4 I used a new needle/syringe given by NGO staff/volunteer .....5 I used a needle/syringe which I purchased .....6 I reused my own needle/sy .....7 Others (Specify) .....96 Don't know .....98 No response .....99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
304.1	That time If you were in a group, how many different people in the group do you think used the same needle?	Nos..... <input type="text"/> <input type="text"/> Injected alone..... 96	
305.	Think about the times, you have injected drugs during the past one-week. How often was it with a needle or syringe that had previously been used by someone else?	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never used ..... 4 Not injected in the last week ..... 5 Don't know ..... 98 No response..... 99	→ 314
305.1	When you injected drug during the past week, how often did you use a syringe/needle that had been left in public place?  <i>(Public place means the place where they keep syringe other than his home)</i>	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	
306.	In the past one-week, did you ever share needles and syringes with any of the following? <b>Read out list. Multiple answers possible</b>	<b>Yes</b>   <b>No</b>   <b>DK</b>   <b>NR</b>	
	1. Your usual sexual partner	1   2   98   99	
	2. A sexual partner who you did not know	1   2   98   99	
	3. A friend	1   2   98   99	
	4. A drugs seller	1   2   98   99	
	5. Unknown Person	1   2   98   99	
	96. Other (Specify) _____	1   2   98   99	
307.	With how many different injecting partners did you share needles or syringes in the past one-week? <i>(Count everyone who injected from the same syringe)</i>	Number of partners ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
308.	In the past one-week, how often did you give a needle or syringe to someone else, after you had already used it?	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	
309.	In the past-week, did you ever inject with a pre-filled syringe? <i>(By that I mean a syringe that was filled without your witnessing it)</i>	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	
310.	In the past one-week, how often did you inject drugs using a syringe after someone else had squirted drugs into it from his/her used syringe? <i>(front-loading/back-loading/ splitting)</i>	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	
311.	In the past one-week, when you injected drugs, how often did you share a cooker/vial/container, cotton/filter, or rise water?	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	
312.	In the past one-week, how often you draw up your drug solution from a common container used by others?	Every times ..... 1 Almost every-times ..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	



Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
313.	In the past one-week, when you injected with needles or syringes that had previously been used, how often did you clean them first?	Every time..... 1 Almost every-times..... 2 Sometimes..... 3 Never..... 4 Never reused ..... 5 Others (Specify)..... 96 Don't know..... 98 No response..... 99	} 314
313.1	If cleaned, how did you usually clean them?	With water ..... 1 With urine ..... 2 With saliva ..... 3 Boil the syringe in water..... 4 With bleach..... 5 Burning the needle with matchstick ..... 6 Others (Specify)..... 96 Don't know ..... 98 No response..... 99	
314.	Can you obtain new, unused needles and syringes when you need them?	Yes..... 1 No ..... 2 Don't know ..... 98 No response..... 99	} 316
315.	Where can you obtain new unused needles and syringes?  <i>(Do not read out list. Multiple answers possible. Probe only with "Anywhere Else?")</i>	Drugstore ..... 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 of ..... 11 Theft from legitimate source..... 12 Buy on streets..... 13 Other (Specify)..... 96	
316.	In the past one-year, did you ever inject drug in another city/district?	Yes..... 1 No ..... 2 Don't remember ..... 98 No response..... 99	} 317
316.1	If yes, in which other cities/districts did you inject, including cities in other countries?	Cities _____ Districts _____ Country _____	
316.2	Think about the times you injected drugs in another city/district (including abroad) how often was it with a syringe/needle that had previously been used by someone else?	Every times ..... 1 Almost every-times..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	
316.3	When you injected drugs in another city, how often did you gave a syringe/needle to some one else?	Every times ..... 1 Almost every-times..... 2 Sometimes..... 3 Never..... 4 Don't know ..... 98 No response..... 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
317.	Are you currently under treatment (or receiving help) or have you ever received treatment (or help) because of your drug use?	Currently under treatment ..... 1 Was in treatment but not now ..... 2 Have never received treatment ..... 3 No response..... 99	} 401
318.	How many months ago did you last receive treatment or help for your drug use?	Months ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
319.	What kind of treatment or help have you received? <i>(Do not read out the responses, probe asking, "Are there any other kinds of treatment that you've received?" Multiple Answers Possible.)</i> <b>Types of Treatments</b>	<b>Name of Institutions</b>	
	1. Outpatient counseling		
	2. Self-help groups		
	3. Detoxification w/methadone		
	4. Maintenance w/methadone		
	5. Detoxification w/other drugs		
	6. Detoxification with no drug		
	7. Residential rehabilitation		
	8. Helped to quite <i>cold turkey</i>		
	9. Forced to quite <i>cold turkey</i>		
	96. Other (Specify) _____		
	99. No response		

#### 4.0 SEXUAL HISTORY

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
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..... 2 Don't know ..... 98 No response..... 99	→ 601
402.	Have you had sexual intercourse in the last 12 months	Yes ..... 1 No ..... 2 No response..... 99	} → 404
403.	In total, how many different female sexual partners have you had sex in the last 12 months?	Total Number ..... <input type="text"/> <input type="text"/>	
403.1	How many were female "regular partners"? <i>(Your wife or live-in sexual partners)</i>	Number ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
403.2	How many were female "sex worker"? <i>(Partners to whom you bought or sold sex in exchange for money or drug)</i>	Number ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
403.3	How many were female "non-regular partners"? <i>(Sexual partners, you are not married to and have never lived with and did not have sex in exchange for money)</i>	Number ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
404.	Have you just talked about your female sexual partners. Have you ever had any male sexual partners also?	Yes ..... 1 No ..... 2 No response..... 99	→ 501
404.1	If yes, have you had anal sex with any of your male partners in the last 12 months?	Yes ..... 1 No ..... 2 No response ..... 99	→ 501
404.2	With how many different male partners have you had anal sex in the last 12 months?	Number ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
404.3	The last time you had anal sex with a male sex partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't Know ..... 98 No response ..... 99	
404.4	How often have you used a condom in an anal sex with male sex partner in the past 12 months	Every Times ..... 1 Almost Every Times ..... 2 Some Times ..... 3 Never Used ..... 4 Don't Know ..... 98 No response ..... 99	

**5.0 NUMBERS AND TYPES OF PARTNERS**  
*(Check Q. 403.1 and circle the response of Q.501)*

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
501.	Did you have sex with female regular partner during last 12 months?	Yes ..... 1 No ..... 2	→ 502
501.1	Think about your most recent female regular sexual partner. How many times did you have sex with her during last one-month?	Times ..... <input type="text"/> <input type="text"/> Don't know ..... 98 No response..... 99	
501.2	The last time you had sex with a female regular partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	→ 501.4 → 501.4
501.3	Why did not you or your partner use a condom that time?  <i>(Do not read the possible answers, multiple answer possible)</i>	Not available ..... 1 Too expensive ..... 2 Partner objected ..... 3 Don't like them ..... 4 Used other contraceptive..... 5 Didn't think it was necessary..... 6 Didn't think of it..... 7 Other (Specify) ..... 96 Don't know ..... 98 No response..... 99	
501.4	How often have you used a condom with female regular partners in the past year?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response..... 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
501.5	Did your female regular partner also inject drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	
501.6	Have you had ever-anal sex with your female regular partners?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	→ 502
501.7	The last time you had anal-sex with a female regular partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	
501.8	How often have you used a condom in an anal-sex with female regular partners in the past 12 months?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response ..... 99	
502.	Did you have a sexual intercourse with a female sex worker in last 12 months? <i>(Check 403.2 and circle the response of Q. 502)</i>	Yes ..... 1 No ..... 2	→ 503
502.1	<b>Think about the female sex workers that you have had sex in the past one-month. In total how many were:</b>  Number of female sex workers, to whom you sold sex in exchange for money or drugs.	Nos. .... <input type="text"/> <input type="text"/> Don't know ..... 98 No response ..... 99	
502.1.1	Number of female sex workers, to whom you bought sex in exchange for money or drugs.	Nos. .... <input type="text"/> <input type="text"/> Don't know ..... 98 No response ..... 99	
502.2	Think about your most recent female sex worker. How many times did you have sexual intercourse with her in the past one-month?	Times .... <input type="text"/> <input type="text"/> Don't know ..... 98 No response ..... 99	
502.3	The last time you had sex with a female sex worker did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	→ 502.5 → 502.5
502.4	Why did not you and your partner use a condom that time?  <i>(Do not read the possible answers, multiple answer possible)</i>	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	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
502.6	Do you know whether your female sex worker also inject drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	
502.7	Have you had ever-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 a anal-sex with a female sex worker did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	
502.9	How often have you used a condom in an anal sex with female sex workers in the past 12 months?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response ..... 99	
503.	Did you have a sexual intercourse with a female non-regular sex partner during last 12 months? <i>(Check 403.3 and circle the response of Q. 503)</i>	Yes ..... 1 No ..... 2	→ 601
503.1	Think about your most recent female non-regular sexual partner. How many times did you have sexual intercourse with her over the past one-month?	Times ..... <input type="text"/> Don't know ..... 98 No response ..... 99	
503.2	The last time you had a sex with a female non-regular partner did you and your partner use a condom?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	→ 503.4 → 503.4
503.3	Why did not you and your partner use a condom that time?  <i>(Don't read the possible answers, multiple answer possible)</i>	Not available ..... 1 Too expensive ..... 2 Partner objected ..... 3 Don't like them ..... 4 Used other contraceptive ..... 5 Didn't think it was necessary ..... 6 Didn't think of it ..... 7 Other (Specify) ..... 96 Don't know ..... 98 No response ..... 99	
503.4	How often have you used a condom with a female non-regular partner in the past year?	Every times ..... 1 Almost every-times ..... 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 inject drugs?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	
503.6	Have you had ever-anal sex with your female non-regular partners?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	→ 601
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	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
503.8	How often have you used a condom in an anal-sex with female non-regular partners in the past year?	Every times ..... 1 Almost every-times ..... 2 Sometimes ..... 3 Never used ..... 4 Don't know ..... 98 No response ..... 99	

## 6.0 USE AND AVAILABILITY OF CONDOM

*(Don't ask Q601 and 602 Check Q. 501.2, 501.4, 502.3, 502.5, 503.2, 503.4 and tick accordingly)*

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
601.	Have you ever heard of a male condom?  <i>(Show picture or sample of condom)</i>	Yes ..... 1 No ..... 2 Don't know ..... 98 No response ..... 99	701
602.	Have you ever used a condom?	Yes ..... 1 No ..... 2	
603.	Do you know of any place or person from which you can obtain condom?	Yes ..... 1 Don't know ..... 98 No response ..... 99	701
604.	From which place or people, you can obtain condoms?  <i>(Multiple answer possible. Don't read the list but should probe).</i>	Shop ..... 1 Pharmacy ..... 2 Clinic ..... 3 Hospital ..... 4 Family planning center ..... 5 Bar/Guest house/Hotel ..... 6 Health worker ..... 7 Peer Educator/outreach educator ..... 8 Friend ..... 9 Others (Specify) ..... 96 No response ..... 99	
605.	How long would it take <i>(from your house or the place where you work)</i> to obtain a condom?	Less than 30 minutes ..... 1 More than 30 minutes ..... 2 Don't know ..... 98 No response ..... 99	

## 7.0 STIs

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
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?  <i>(Do not read possible answers, multiple answers possible.)</i>	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	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
703.	Can you describe any symptoms of STIs in men?  <i>(Do not read possible answers, multiple answer possible)</i>	Genital discharge ..... 1 Burning pain on urination ..... 2 Genital ulcers/sore blister ..... 3 Swellings in groin area..... 4 Others (Specify) _____ 96 Don't know ..... 98 No response..... 99	
704.	Have you had a genital discharge/burning urination during the last 12 months?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	} 705
704.1	Currently, do you have a genital discharge/burning urination problem?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	
705	Have you had a genital ulcer/sore blister during the last 12 months?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	} 706
705.1	Currently, do you have a genital ulcer/sore blister problem?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	
706.	Last time you had a genital discharge/ burning urination or a genital ulcer/sore blister, where did you go for treatment?	Did not seek treatment ..... 1 With private doctor ..... 2 In hospital ..... 3 No Symptoms ..... 4 Others (Specify) ..... 96	

## 8.0 KNOWLEDGE, OPINIONS AND ATTITUDES

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
801.	Have you ever heard of HIV or the disease called AIDS?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	
802.	Do you know anyone who is infected with HIV or who has died of AIDS?	Yes ..... 1 No ..... 2 Don't know ..... 98 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 Don't know ..... 98 No response..... 99	
804.	Can people protect themselves from HIV, the virus that causes AIDS, by using a condom correctly every time they have sex?	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 people protect themselves from HIV, by having one uninfected faithful sex partner?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
807.	Can people protect themselves 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 people who inject drugs protect themselves from HIV, the virus that causes AIDS, by switching to non-injecting 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? <i>(Do not read the possible answers, multiple answer possible)</i>	Take medication (Antiretrovirals) . 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	
814.	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? <i>(By confidential, I mean that no one will know the result if you don't want him or her to know it.)</i>	Yes ..... 1 No ..... 2 Don't know ..... 98 No response..... 99	
15	I don't want to know the result, but have you ever had an HIV test?	Yes ..... 1 No ..... 2 No response..... 99	} 901
816.	Did you voluntarily undergo the HIV test, or were you required to have the test?	Voluntary ..... 1 Required..... 2 No response..... 99	
817.	Please do not tell me the result, but did you find out the result of your HIV test?	Yes ..... 1 No ..... 2 No response..... 99	
818.	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 49 months ..... 4 Don't know ..... 98 No response..... 99	



**9.0 AWARENESS OF HIV/AIDS**  
*(If answer to Q. 801 "No", Go to Q. 902)*

Q. N.	Questions and Filters	Coding Categories		Skip to Q.N.
901.	Of the following sources of information, from which sources have you learned about HIV/AIDS? <i>(Read the following list, multiple answers possible)</i>			
	<b>Source of Information</b>	<b>Yes</b>	<b>No</b>	
	1. Radio	1	2	
	2. Television	1	2	
	3. Newspapers/Magazines	1	2	
	4. Pamphlets/Posters	1	2	
	5. School/Teachers	1	2	
	6. Health Worker/Volunteer	1	2	
	7. Friends/Relatives	1	2	
	8. Work Place	1	2	
	9. People from NGO	1	2	
	10. Video Van	1	2	
	11. Street Drama	1	2	
	12. Cinema Hall	1	2	
	13. Community Event/Training	1	2	
	14. Bill Board/Sign Board	1	2	
	15. Comic Book	1	2	
16. Community Workers	1	2		
96. Others (Specify) _____	1	2		
902.	Has anyone give you following information or items in the past year? <i>(Multiple answer possible, read the list)</i>			
	<b>Items</b>	<b>Yes</b>	<b>No</b>	
	1. Condom	1	2	
	2. Brochure/Booklets/Pamphlets about HIV/AIDS	1	2	
	3. Information about HIV/AIDS	1	2	
96. Others (Specify) _____	1	2		

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

Q. N.	Questions and Filters	Coding Categories		Skip to Q.N.
1001.	In the past one-year have you seen, read or heard any advertisements about condoms from the following sources? <i>(Read the following list, multiple answer possible)</i>			
	<b>Sources</b>	<b>Yes</b>	<b>No</b>	
	1. Radio	1	2	
	2. Television	1	2	
	3. Pharmacy	1	2	
	4. Health Post	1	2	
	5. Health Center	1	2	
	6. Hospital	1	2	
	7. Health Workers/Volunteers	1	2	
	8. Friends/Neighbors	1	2	
	9. NGOs	1	2	
10. Newspapers/Posters	1	2		

Q. N.	Questions and Filters	Coding Categories		Skip to Q.N.
	11. Video Van	1	2	
	12. Street Drama	1	2	
	13. Cinema Hall	1	2	
	14. Community Event/Training	1	2	
	15. Bill Board/Sign Board	1	2	
	16. Comic Book	1	2	
	17. Community Workers	1	2	
	96. Others (Specify) _____	1	2	
1002.	Have you ever seen, heard or read following messages/characters during past one year? ( <b>Multiple answer possible</b> )			
	<b>Message/characters</b>	<b>Yes</b>	<b>No</b>	
	1. Jhilke Dai Chha Chhaina Condom	1	2	
	2. Condom Kina Ma Bhaya Hunna Ra	1	2	
	3. Youn Rog Ra AIDS Bata Bachnalai Rakhnu Parchha Sarbatra Paine Condom Lai	1	2	
	4. Ramro Sanga Prayog Gare Jokhim Huna Dinna Bharpardo Chhu Santosh Dinchhu Jhanjhat Manna Hunna	1	2	
	5. Condom Bata Surakchhya, Youn Swasthya Ko Rakchhya AIDS Ra Younrog Bata Bachna Sadhai Condom Ko Prayog Garau	1	2	
	6. HIV/AIDS Bare Aajai Dekhee Kura Garau	1	2	
	96. Others (Specify) _____	1	2	
1003.	Have you ever heard/seen or read messages or materials other than mentioned above?	Yes ..... 1 No ..... 2		→ 1004
1003.1	What?	_____	_____	
1004.	Generally, where do you gather to inject drug?	_____	_____	
1005	How many IDUs do you know and also know you?  <b>Knowing someone is defined as being able to contact them, and having had contact with them in the past 12 months – knowing each other</b>	Total _____ Don't know ..... 98 No response ..... 99		
1005.1	Among them persons how many are male and female?	Male _____ Female _____ Don't know ..... 98 No response ..... 99		
1006	Among those persons, please try to estimate the number of people by range of age:	Less than 15 years old [ ] 15-19 years old [ ] 20-24 years old [ ] 25-29 years old [ ] 30-40 years old [ ] > 40 years old [ ] Don't know ..... 98 No response ..... 99 Not applicable ..... 97		

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
1007	Again, among those guys, please try to estimate the number of people by religion:	Hindu <input type="text"/> Buddhist <input type="text"/> Muslim <input type="text"/> Christian <input type="text"/> Others (Specify) _____ <input type="text"/> Don't know ..... 98 No response ..... 99 Not applicable ..... 97	
1008	With regard to the person who gives you the coupon to come here, was he....	A close friend..... 1 A friend ..... 2 Your sexual partner ..... 3 A relative ..... 4 A stranger..... 5 Others (Specify) _____ . 96 Don't know ..... 98 No response ..... 99	

## ANNEX - 2

Basic equation used in sample design

$$n = \frac{D [(Z_{\alpha} + Z_{\beta})^2 * (P_1 (1 - P_1) + P_2 (1 - P_2))]}{(P_2 - P_1)^2}$$

n = required minimum sample size per survey round or comparison groups

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

P<sub>1</sub> = the estimated number of an indicator measured as a proportion at the time of the first survey or for the control area

P<sub>2</sub> = the expected level of the indicator either at some future date or for the project area such that the quantity (P<sub>2</sub>-P<sub>1</sub>) is the size of the magnitude of change it is desired to be able to detect

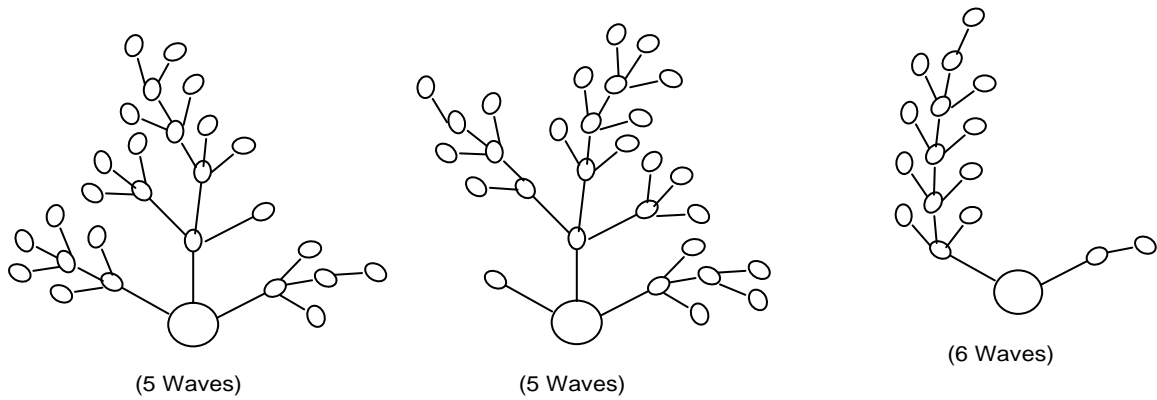
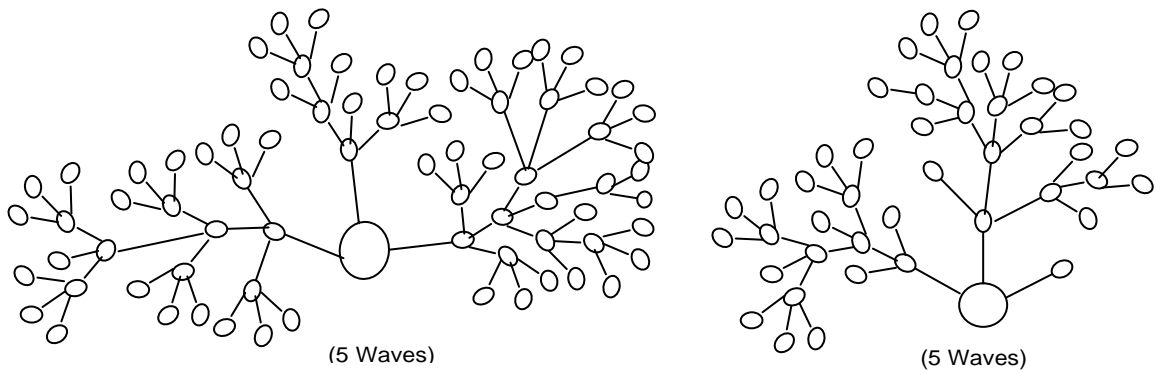
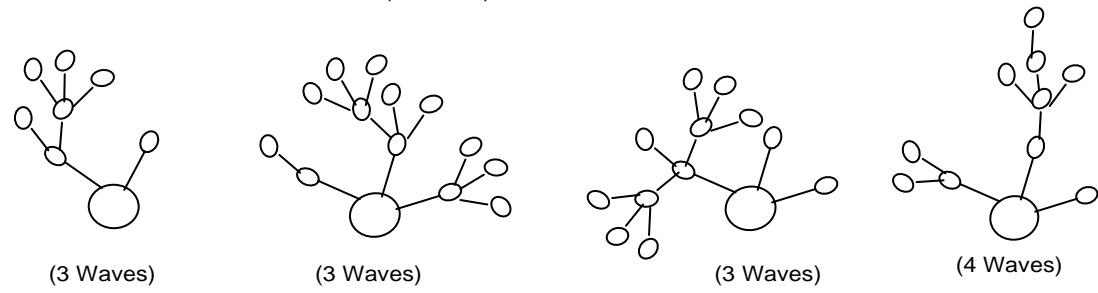
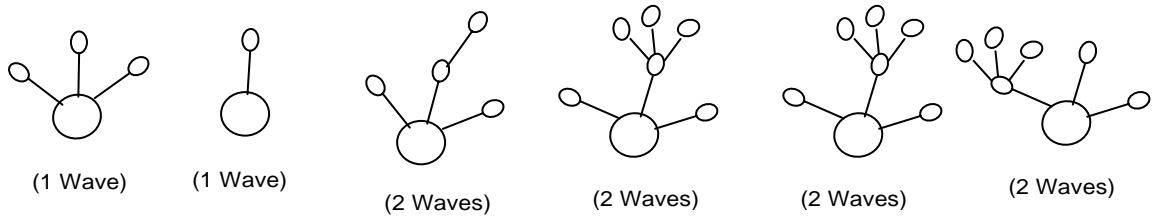
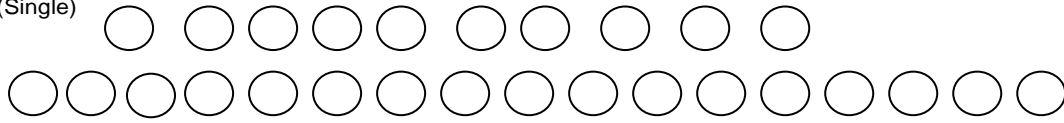
Z<sub>α</sub> = the Z-score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size (P<sub>2</sub>-P<sub>1</sub>) would not have occurred by chance (α – the level of statistical significance), and

Z<sub>β</sub> = the Z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P<sub>1</sub>-P<sub>2</sub>) if one actually occurred (β – statistical power).

ANNEX – 3

Respondent Driven Sample of IDUs in Western to Far-Western Terai

(Single)



## ANNEX - 4

### FAMILY HEALTH INTERNATIONAL (FHI), NEPAL Oral Informed Consent

- Name of Research Study** : Behavioral and Sero Prevalence Survey among male Injection Drug Users (IDUs) in Selected Sites of Nepal.
- Principal Investigators** : Asha Basnyat, FHI/Nepal  
: Laxmi Bilas Acharya, PhD, FHI/Nepal
- Co- Investigators** : Dimitri Prybylski, PhD, FHI/APDThailand  
: Siddhartha Tuladhar, New ERA, Nepal  
: Niranjana Dhungel, New ERA, Nepal  
: Dr. Vijayalal Guruvacharya, SACTS, Nepal

#### Introduction

This Consent Form contains information about the research named above. In order to be sure that you are informed about being in this research study, we are asking you to read (or have read to you) this Consent Form. You will be asked to say out loud in front of two persons whether you agree to be part of the study or not. The Protection of Human Subject Committee (PHSC) of Family Health International (FHI) and Nepal Health Research Council (NHRC) have approved this study. We will give you a copy of this form if you would like. This consent form might contain some words that are unfamiliar to you. Please ask us to explain anything you may not understand.

#### Reason for the Research

You are being asked to be in a research study to find out the prevalence of HIV, the virus that causes AIDS as well as risk behaviors among injection drug users who live in the Kathmandu Valley /Pokhara Valley /Eastern Terai/Western to Far Western Terai. The His Majesty's Government of Nepal and local groups will use the results of this study to help prevent such infections among the target groups.

#### General Information about the Research Methods

If you agree to be in this research we will not take your name. We will ask you some questions and take few drops of blood from finger prick in small capillary tubes.

If we think you might have skin abscesses from injecting drugs, you will be informed of the probable place where you will be given treatment if you desire.

#### Your Part in the Research

Your part in the research will take about **60** minutes. About **1245** male IDUs will take part in this research in Kathmandu Valley/Pokhara Valley/Eastern Terai/Western to Far Western Terai.

If you agree to be in the research, you will be asked some questions about your age, education and ethnicity. We will ask you about your injection behaviors, sexual history and any symptoms related to sexually transmitted infections. We will ask you about drug and alcohol use. You will also be counseled about sexual infections and the HIV. You will be told about what the lab tests mean and the treatments or care available to you. We will then take a blood sample from your fingertips with the help of small capillary tube.

We will not record your name on any of the questions or the lab tests. They will only be labeled with a code number. The blood sample will be tested for HIV infection.

We will be able to give you the results of the lab tests for the HIV infections after 7 days from the date of blood sample collection. At the time of blood sample collection the study team members will give you the detail address of the place and the exact dates where you can go to receive your result of HIV test. Test result will be given by a qualified counselor with pre and post test counseling. Test results can only be obtained by presenting the study ID card with your code number on it. If you do not have the ID card when you return for the test results we cannot give you the results because we will not be able to recognize you without the study ID card. We will refer you to places where you can go for treatment of any other sexual health problems if you would like to do so. If you are HIV positive you will be counseled for further precautions and will be referred to available care and support services in and around your place.

### **Possible Risks and Benefits**

You will feel uncomfortable while taking blood from your fingertips but it does not harm you and increase the risk of any other problems. There is a chance that some of the questions asked may make you feel ill at ease. At any time, you may refuse to answer any question or withdraw from the study.

You may be scared or feel sad by learning your blood test results. If you decide to come in for the results, you will be provided with HIV counseling. You will be given the names of places where you can go for more help. We will not take your name so no one will learn of your test results unless you tell them.

There may be some risk that people may see you associated with the study, either now or when you return for your results.

You will be helped by this study because we will inform you about the places where you can get treatment for some kind of wounds on your skin while injecting drugs. We will teach you how to avoid infections in the future. We will give you your HIV test result. You will also learn about sexual infections and HIV, and ways to prevent these infections. We will not treat you for HIV but will inform you about the places for follow-up. The information we obtain from this study will also help us to design programs in this area to slow down the spread of HIV infections and AIDS.

### **If you Decide Not to be in the Research**

You are free to refuse to be in this research and it will not affect the health care you would normally receive from the study.

### **Confidentiality**

We will protect information about you and your taking part in this research to the best of our ability. Your name will not be recorded anywhere. Blood specimens will be labeled with a study code number. You will be given a card with your code number. This will allow you to obtain your HIV infection test results if you wish. We will not be able to identify you and give you your test results without the study ID card.

If the results of this research were published, your name would not be shown because we will not have your name. However, the officials of International Health Center may sometimes look at records of those who take part in the research study. These will not have your name. A court of law could order research records shown to other people, but that is unlikely.

**Compensation**

We will provide you a fixed amount of Nepalese Rupees (NRs.) 100.00 (approximately, US\$ 1.50) after completing the study requirements as a compensation for local transportation costs and an additional NRs. 50.0 (US\$ 0.70) for successful referral each peer for the study. You may refer up to three peers or friends. We will also give you condoms and IEC materials to compensate you for your time.

**Leaving the Research Study**

You may leave the research study at any time and refuse to answer any questions. If you decide to leave the study you will be asked for the reason to do so.

**Contact for Questions**

We will give you a separate sheet with contact information, should you have any questions or problems about this research, questions about your rights as a study participant, or have a problem that you think might be related to the research.



## VOLUNTEER AGREEMENT

**Study ID number:** \_\_\_\_\_

If you understand what is being asked of you for this research project, the person explaining the research to you will read the following paragraph and sign this consent form.

"I have read and explained this informed consent form to the study recruit. He has explained the study activities back to me and I am convinced he understands the activities that will occur. He has not been coerced, and he has given his oral consent to participate in all the aspects of this study".

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature of person who obtained consent**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature of Witness**

**CONTACT INFORMATION (to be given to the participant)**

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**ANNEX - 5**  
**Lab Centers**

District	Lab Centers	No. of Centers	Sample Covered	Total
Western to Far-Western Nepal	Mahendranagar	5	50	300
	Dhangadhi		50	
	Nepalgunj		50	
	Bhairahawa		70	
	Butwal		80	

**ANNEX - 6**  
**Participation in Post Test Counseling**

Date	Counseling Center	Expected Client	Client Counseled		Client with HIV+	Client with HIV-
			N	%		
April 26-May 03, 2005	Mahendranagar	50	19	38.0	0	19
May 14-20, 2005	Dhangadhi	50	21	42.0	0	21
May 23-31, 2005	Nepalgunj	50	07	14.0	0	07
April 26- May 12, 3005	Bhairahawa	70	14	20.0	0	14
May 23- 29, 2005	Butwal	80	14	17.5	0	14
	<b>Total</b>	<b>300</b>	<b>75</b>	<b>25.0</b>	<b>0</b>	<b>75</b>

**ANNEX - 7**  
**The Reasons for Not Injecting Drugs Yesterday**

Injecting practice	n = 144	%
<b>Reasons for not injecting yesterday</b>		
Lack of money	74	51.4
To quite slowly	47	32.6
Unavailability/ Lack of drugs	11	7.6
Busy in house work/lack of time	7	4.9
Taking other medicines	2	1.4
Others	5	3.5

Note: Because of multiple answers, percentages add up to more than 100.

**ANNEX 8**  
**Part of the Body Where Injection is Taken**

Typical injection points	N=300	%
In thigh	179	59.7
In upper arm	46	15.3
In wrist	36	12.0
Forearm	23	7.7
In armpit	7	2.3
In finger	3	1.0
In calf	3	1.0
Others	3	1.0

**ANNEX – 9**  
**Gathering Place of IDUs to Inject Drugs**

S.N.	Gathering places of IDUs to inject drugs	N=300	%
1.	Forest/Bushes	116	38.7
2.	Own room/Friends room	44	14.7
3.	River bank/Slum area/Pond	18	6.0
4.	Toilet/Public toilet	16	5.3
5.	Around school/Campus	7	2.3
6.	Chowk/Tole/Galli/Road	2	0.7
7.	Garage	1	0.3
8.	Others	1	0.3
9.	Sunauli (India)	57	19.0
10.	Banbasa (India)	23	7.7
11.	Belhiya (India)	6	2.0
12.	Gaurifanta (India)	6	2.0
13.	Rupaidiya (India)	2	0.7
14.	Nautanuwa (India)	1	0.3

**ANNEX - 10**  
**Combination of Different Drugs Injected by IDUs**

S.N.	Drugs Combination	N
1.	Diazepam + Hydrocole	79
2.	Phenargan + Bruffen	43
3.	Norphen + Phenargan	33
4.	Tidigesic + Diazepam + Phenargan	16
5.	Brown Sugar + Lemon	12
6.	Brown Sugar + Vitamin C	9
7.	Tidigesic + Diazepam	8
8.	Tidigesic + Phenargan	4
9.	Norphen + Diazepam + Hydrocole	4
10.	Tidigesic + Phenargan + Hydrocole	3
11.	Norphen + Diazepam	3
12.	Phenoramine + Bruffen	2
13.	Tidigesic + Hydrocole	2
14.	Tidigesic + Diazepam + Calmpose	2
15.	Phenargan + Fortwin	2
16.	Diazepam + Lubrigesic	2
17.	Vitamin C + Proxyvin	2
18.	Diazepam + Bruffen + Hydrocole	1
19.	Phenargan + Diazepam + Tidigesic	1
20.	Diazepam + Fortwin	1
21.	Phenargan + Diazepam + Bruffen	1
22.	Brown Sugar + Vitamin C + Lemon	1
23.	Norphen + Tidigesic	1
24.	Phenoramine + Lubrigesic	1
25.	Calmpose + Fortwin	1
26.	Norphen + Phenargan + Calmpose	1
27.	Tidigesic + Calmpose	1
28.	Diazepam + Calmpose	1
29.	Tidigesic + Calmpose + Hydrocole	1
30.	Phenargan + Calmpose + Bruffen	1
31.	Phenargan + Neurophin	1
	<b>Total</b>	<b>240</b>

Note: Because of multiple answers, numbers may add up to more than 100.

**ANNEX – 11**  
**Switched from one Drug to another and the Reasons for it**

<b>Drug switching behavior of IDUs</b>	<b>N</b>	<b>%</b>
<b>Switched from one drugs to another drugs in past month</b>		
Yes	13	4.3
No	287	95.7
<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>Switched from</b>		
Diazepam + Tidigesic + Hydrocole to Brown Sugar	7	53.8
Tidigesic to Brown Sugar	2	15.4
Tidigesic + Hydrocole to Brown Sugar	1	7.7
Norphin + Phenargan to Phenargan + Neurophin	1	7.7
Diazepam + Tidigesic + Phenargan to Proxyvon + Spasmo	1	7.7
Diazepam + Tidigesic + Calmpose to Brown Sugar	1	7.7
<b>Reasons for switching *</b>		
Lack of money	9	69.2
To reduce Tidigesic/Leave slowly	3	23.0
Others	1	7.7
<b>Total</b>	<b>13</b>	<b>*</b>

## ANNEX - 12

### Cities/District and Countries Where Drugs were Injected by IDUs During Last 12 Months

City	District	Country	N=249	%
Kathmandu	Kathmandu	Nepal	16	6.4
Pokhara	Kaski	Nepal	10	4.0
Mahendranagar	Kanchanpur	Nepal	8	3.2
Dhangadhi	Kailali	Nepal	6	2.4
Dipayal Silgadhi	Doti	Nepal	4	1.6
Nepalgunj	Banke	Nepal	4	1.6
Lalitpur	Lalitpur	Nepal	2	0.8
Hetauda	Makwanpur	Nepal	2	0.8
Bharatpur	Chitwan	Nepal	2	0.8
Tansen	Palpa	Nepal	1	0.4
Rajapur	Bardiya	Nepal	1	0.4
Birendranagar	Surkhet	Nepal	1	0.4
Mechinagar N.P.	Jhapa	Nepal	1	0.4
Baglung	Baglung	Nepal	1	0.4
Tulsipur	Dang	Nepal	1	0.4
Syangja	Syangja	Nepal	1	0.4
Nawalparasi	Nawalparasi	Nepal	1	0.4
Sunauli	-	India	119	47.8
Banbasa	-	India	35	14.1
Rupaidiya	-	India	22	8.8
Nautanuwa	-	India	18	7.2
Krishnanagar	-	India	14	5.6
Paliya	-	India	13	5.2
Gaurifanta	-	India	8	3.2
Bombay	-	India	6	2.4
Delhi	-	India	6	2.4
Baharain	-	India	6	2.4
Nanpara	-	India	5	2.0
Gorakhpur	-	India	5	2.0
Lakhnow	-	India	3	1.2
Surat	-	India	2	0.8
Babagunj	-	India	2	0.8
Chandigadh	-	India	2	0.8
Heerabazar	-	India	1	0.4
Gujarat	-	India	1	0.4
Bareli	-	India	1	0.4
Amritsar	-	India	1	0.4
Ludhiyana	-	India	1	0.4
Haidarabad	-	India	1	0.4
Pharinda	-	India	1	0.4
Galiyakot	-	India	1	0.4
Bhira	-	India	1	0.4
Singari	-	India	1	0.4
Deharadoon	-	India	1	0.4
Raksaul	-	India	1	0.4
Pratapgunj	-	India	1	0.4
Juma	-	India	1	0.4
Badiya	-	India	1	0.4
Name not known	-	India	1	0.4
Savepyant	-	Malaysia	1	0.4

Note: Because of multiple answers, percentage and number may add up to more than the actual figure.

**ANNEX – 13**  
**Types of Treatment and Institutions from Where Treatment Received**

Types of Treatments Types of Institutions	Residential rehabilitation		Forced to quit		Without drug		With other drug		Total	
	n	%	n	%	n	%	n	%	n	%
Naulo Ghumti	13	17.6	-	-	-	-	-	-	13	17.6
Youth Vision	7	9.5	-	-	-	-	-	-	7	9.5
Navajeevan Punarsthapana	6	8.1	-	-	-	-	-	-	6	8.1
Lumbini Punarsthapana	4	5.4	-	-	-	-	-	-	4	5.4
Sahara Treatment Center	3	4.1	-	-	-	-	-	-	3	4.1
Nirmal Nasha Kendra	3	4.1	-	-	-	-	-	-	3	4.1
Seren Foundation	2	2.7	-	-	-	-	-	-	2	2.7
Richmond Fellowship	2	2.7	-	-	-	-	-	-	2	2.7
Punarjeevan Kendra	2	2.7	-	-	-	-	-	-	2	2.7
Tinal Challenge Punarsthapana	2	2.7	-	-	-	-	-	-	2	2.7
Ashara Sudhar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Freedom Rehabilitation	1	1.4	-	-	-	-	-	-	1	1.4
Nasha abam Manasik Upachar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Rama Sudhar Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Harsha Nasha Mukti Kendra	1	1.4	-	-	-	-	-	-	1	1.4
Nirman Punarsthapana	1	1.4	-	-	-	-	-	-	1	1.4
Jeewan Punarsthapana	1	1.4	-	-	-	-	-	-	1	1.4
Kohalpur Medical College	-	-	-	-	-	-	2	2.7	2	2.7
Bhairahawa Medical College	-	-	-	-	-	-	1	-	1	1.4
G.B. Hospital	-	-	-	-	-	-	1	-	1	1.4
Om Nursing Home	-	-	-	-	-	-	1	-	1	1.4
Inter Medical College	-	-	-	-	-	-	1	-	1	1.4
Family Members	-	-	1	1.4	1	1.4	-	-	2	2.7
Teaching Hospital	-	-	-	-	-	-	1	1.4	1	1.4
Doctor	-	-	-	-	-	-	1	1.4	1	1.4
International Nepal Fellowship	-	-	-	-	-	-	4	5.4	4	5.4
Association for Helping Helpless	-	-	-	-	-	-	1	1.4	1	1.4
Self Tried	-	-	-	-	-	-	3	4.1	3	4.1
Don't know	2	2.7	-	-	-	-	7	9.5	9	12.2
<b>Total</b>	<b>53</b>	<b>71.6</b>	<b>1</b>	<b>1.4</b>	<b>1</b>	<b>1.4</b>	<b>23</b>	<b>31.1</b>	<b>74</b>	<b>*</b>

Note: Because of multiple answers percentages may add up to more than 100.

## ANNEX 14

### Reasons of Not Using Condoms

Reasons of not using condom	West to Far-West Nepal	
	N	%
<b>Reasons of not using condom with regular partner in the last sexual intercourse</b>		
Not available	0	0.0
Partner objected	7	6.7
Don't like them	33	31.7
Used other contraceptive	33	31.7
Didn't think it was necessary	79	76.0
Didn't think of it	4	3.8
Willing to have baby	5	4.8
Trust on partner	0	0.0
Wife is pregnant	5	4.8
Others	5	4.8
<b>Total</b>	<b>104</b>	<b>*</b>
<b>Reasons of not using condom with sex worker in the last sexual intercourse</b>		
Not available	31	75.6
Partner objected	0	0.0
Don't like them	9	21.6
Didn't think it was necessary	0	0.0
Didn't think of it	4	9.8
Others	1	2.4
<b>Total</b>	<b>41</b>	<b>*</b>
<b>Reasons of not using condom with non- regular partner in the last sexual intercourse</b>		
Not available	15	60.0
Partner objected	0	0.0
Don't like them	8	32.0
Used other contraceptive	0	0.0
Didn't think it was necessary	4	16.0
Didn't think of it	5	20.0
Trust on partner	2	8.0
Sexual unsatisfaction	1	4.0
Others	1	4.0
<b>Total</b>	<b>25</b>	<b>*</b>

\*Note: Because of multiple answers percentages may add up to more than 100.



**ANNEX – 15**  
**Relation between Sexual Behavior and HIV**

<b>Sex with different partners in the past 12 months</b>	<b>Total</b>	<b>HIV+</b>	<b>%</b>	<b>P value</b>
<b>With regular partner</b>				>0.05
Yes	128	15	11.7	
No	166	20	12.0	
Never had sexual experience	6	0	0.0	
<b>With Non-regular partners</b>				> 0.05
Yes	54	2	3.7	
No	240	33	13.7	
Never had sexual experience	6	0	0.0	
<b>With sex worker</b>				>0.05
Yes	101	11	10.9	
No	193	24	12.4	
Never had sexual experience	6	0	0.0	
<b>Number of Partners in the past 12 months</b>				>0.05
<b>Number of Regular partner in the past 12 months</b>				
0 Partner	172	20	11.6	
1 partner	128	15	11.7	
2 partners	0	0	0.0	
<b>Number of non-regular partner in the past 12 months</b>				> 0.05
0 Partner	246	33	13.4	
1 partner	28	1	3.6	
2 or more partners	26	1	3.8	
<b>Number of sex workers in the past 12 months</b>				>0.05
0 Partners	199	24	12.1	
1 sex worker	34	4	11.8	
2 or more sex workers	67	7	10.4	
<b>Total</b>	<b>300</b>	<b>35</b>	<b>11.7</b>	



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