Integrated Bio-Behavioral Survey (IBBS) Among Male Injecting Drug Users (IDUs) in The Kathmandu Valley

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INTEGRATED BIO-BEHAVIORAL SURVEY (IBBS) AMONG MALE INJECTING DRUG USERS (IDUs) IN THE KATHMANDU VALLEY

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ABBREVIATIONS

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
LALS	-	Life Giving and Life Saving Society
NCASC	-	National Center for AIDS and STD Control
NGO	-	Non-Governmental Organization
NHRC	-	Nepal Health Research Council
PHSC	-	Protection of Human Subjects Committee
PLWHA	-	People Living with HIV/AIDS
PSU	-	Primary Sampling Unit
RDS	-	Respondent Driven Sampling
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
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 in the Kathmandu Valley. 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.

The study found that the median age of the IDUs was 26 years. The percentage of adolescent and youth IDUs (below the age of 25) was 42.3%. A majority of the IDUs were either previously or currently married. The median age at first marriage was 21 years. Eight percent of the respondents were found to be illiterate. IDUs from different ethnic groups participated in the study.

Forty-six percent of the respondents had been injecting drugs for more than five years, and the average duration of injection was six years. Among the participants in the study, it was found that 53% started injecting drugs before the age of 20 years. The frequency of injecting drugs as cited by around 53% of the study participants was two-three times a day. The illicit drug used by the IDUs was a combination of any two or three different drugs such as tidigesic, phenergan, diazepam, proxigin, norphin, etc. Tidigesic was the most popular drug among the IDUs participating in the first round of the survey but combination of drugs was popular in 2005. About 20% of the IDUs shared needles/syringes, and among those who shared needles, the practice was most often among two or more friends. Nearly one-fourth of the IDUs 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 45.2% of the IDUs chose to clean their needles or syringes with saliva, and 29.8% cleaned their needles or syringes with plain water. However, almost all could obtain a new syringe from a drug store.

The IDUs were also found to be sexually active. Almost 87% of the participants had engaged in sexual intercourse. The median age of the IDUs at the time of their first sexual encounter was 17 years. The majority of respondents reported that they had sexual intercourse in the last 12 months (58%) and, of this group, 40.8% reported having two or more partners.

Consistent condom use was very low - with regular partners it was only 13% and it was also low (33.9%) during sex with female sex workers.

General awareness about HIV/AIDS does not seem to have motivated a significant change in behavior. More than 95% of the IDUs reported having heard about STD and HIV/AIDS.

Ninety-one percent of the IDUs were aware that one could protect oneself from HIV/AIDS by always using a condom. Similarly, 98.7% knew that a person could contract HIV by injecting drugs with another's previously used needle. Radio and television were the first and second most common media sources for the dissemination of HIV/AIDS information among both males and females. HIV infection was found to be much higher (51.7%) among IDUs. However, this is lower by 16.3% compared to the finding of the first-round survey.Based on the above findings, a few recommendations have been made which point out that there is a need to continue HIV/AIDS education programs among the IDU sub-population in the Kathmandu Valley. It has been stated that such programs should especially target those IDUS who have been living alone, since more than 70% IDUS were found living alone in the valley. The need to cover adolescents by the future awareness raising endeavors has also been highlighted in the recommendation chapter as more than one-half of the IDUs in the valley were of 20 or less years. In the same way, it has been recommended that support for rehabilitation and detoxification centers should be extended so that they can extend necessary assistance especially to IDUs belonging to economically deprived families. Other recommendations include that clients friendly STI treatment and HIV test services should be made available to encourage more IDUs to voluntarily come forward for such services. The need to conduct regular monitoring and evaluation of HIV prevalence and risk behaviors of IDUs has also been highlighted under the chapter.

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 HIV infections, 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 re-using needles kept in public places by themselves or others have 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-risk sexual behavior associated with drug use has also been found to be a major contributing factor in 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 (Jarlais, 1992).

The first cycle of the Integrated Bio-Behavioral Survey (IBBS) among IDUs conducted in 2002 showed about 68% HIV prevalence among the male IDUs in the Kathmandu Valley. Likewise, 45.5% of the sampled IDUs reported that they had used needles/syringes that had been used by peer IDUs, and 31.7% had used needles/syringes kept in public places by themselves or by other IDUs during the week prior to the interview. Similarly, the study revealed that 40% of the IDUs had not used a condom during the last sexual intercourse with a sex worker, and a high percentage (66%) had not used a condom during the last sexual act with a regular sex partner. The high prevalence of HIV among IDUs and the low use of a condom during sex might increase the risk of HIV transmission among the sexual partners of the IDUs.

The NCASC, with technical and financial support from FHI, has begun to develop intervention policies and implement programs targeting injecting drug users. Thus the second cycle of the IBBS was done to find out the change in their behavior and HIV prevalence, which is needed for the development of proper HIV prevention and care programs for this group. The IBBS 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 this second round of the IBBS was to compare and analyze trends against the data from the first round of the IBBS. The data of the second round of the IBBS will also be used to measure the impact of intervention programs on the targeted risk groups - IDUs in the three districts of Kathmandu, Lalitpur and Bhaktapur of the Kathmandu Valley - and assess their "at risk" behavior. The main objectives of the second cycle of the IBBS were:

- To determine the prevalence of HIV among IDU sub-populations in the Kathmandu Valley.
- To describe injecting and sexual behaviors among IDU sub-populations in the Kathmandu Valley.
- 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 could **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 Area and Procedure

The study areas were the three districts (Kathmandu, Lalitpur and Bhaktapur) of the Kathmandu Valley. As the Kathmandu Valley is the most heavily populated region in Nepal, there is presumably a higher concentration of injecting drug users here. 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. Additionally, some demographic and social characteristics were collected. Almost all the questions were similar to the ones asked during the first round of the survey. 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).

For the purposes of this study the inclusion definition for IDUs was "those 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 a 15% change in HIV among IDUs from the 68% prevalence rate in the Kathmandu Valley in 2002 based on α=0.05 and statistical power (1-β) =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 (Spreen 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 sampling 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 17 known IDUs from different sites during the study period as "seeds". These seeds were recruited 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 IDU peers to the study sites 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 recruit three more peer IDUs. 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 choose both old and young injectors as "seeds".

Of the 17 "seeds" recruited, six completed one wave, two completed two waves, one completed three waves and six completed five or more waves. Two seeds did not come back though they had promised to bring peer IDUs for the study. The recruitment process was completed when the target sample size of 300 IDUs was achieved (Annex 3).

Each respondent was provided Rs. 100 (equivalent to $ 1.40) to cover local transportation costs needed to visit the interview sites only upon completion of the interview and blood collection for a HIV test. Each IDU recruited was provided an incentive of Rs. 50 (equivalent to $ 0.70) to recruit up to three other IDUs. The participants were provided both incentives for completing the interview and for recruiting three peers for the study.

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 besides observation of the part of the body where injection was done including recent injection marks.

In order to maintain the confidentiality of the 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 19 and was completed on May 25, 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 field work. 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 and collected in capillary tubes. Two rapid tests, namely, Capillus and Determine, were conducted in order to determine HIV infection among the study participants. 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 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, 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 data collection was initiated, nine-day training was provided to all the study team members. This training allowed field teams to become familiar with research instruments, study methodology and information collection techniques. A two-day theory and practical training on pre-test counseling was also provided to the trainees. The team members practiced administering the questionnaire by 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 three different places in the Kathmandu Valley for interviewing the participants and collecting blood samples (Annex 5). 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 blood samples were collected. Blood samples were collected by pricking the finger. The

blood was then stored in three-four capillary tubes until tests were performed at the SACTS laboratory.

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 were completed at one site. Moreover, some basic cross-checking questions were also put to the recruited participants before the interview to confirm that they had not been interviewed previously.

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 HIV test results would be provided with pre- and post-test counseling by a trained counselor.

Post-test counseling and individual report dissemination was completed between April 27 and May 31, 2005 at the Youth Vision VCT Centre. Out of the 300 IDUs tested for HIV, only 23 turned up for the test results (Annex 6). Trained counselors from the VCT of Youth Vision gave the test results to the participants in a private setting only after they had produced their ID cards. They were advised of 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 Teku Hospital for further services.

2.4 Data Cleaning and Analysis

All the questionnaires were collected and transported to the New ERA Kathmandu office after the completion of the fieldwork. 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 for the RDS methodology. 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 HIV status and background characteristics and injecting and sexual behaviors of the participants.

CHAPTER - 3
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF IDUs

This chapter discusses the demographic and social characteristics of the IDUs in the first- and second-round surveys of the group of 300 samples in the Kathmandu Valley.

3.1 Demographic Characteristics

The demographic characteristics of the IDUs are presented in Table 3.1. The median age of the male IDUs was 26 years, with six percent being below the age of 20 years. The percentage of adolescent and youth IDUs (below the age of 25 years) was 42.3%.

Table 3.1: Demographic Characteristics of the Sample Population

Demographic characteristics	First round (2002)		Second round (2005)	
	N	%	N	%
Age				
15-19	22	7.3	18	6.0
20-24	111	36.6	109	36.3
25-29	84	27.7	75	25.0
30-34	54	17.8	59	19.7
35-45	32	10.6	39	13.0
Median age	**25**		**26**	
Marital status				
Married	107	35.3	83	27.7
Divorced/Separated	13	4.3	25	8.3
Widow/widower	2	0.7	3	1.0
Never married	181	59.7	189	63.0
Total	**303**	**100.0**	**300**	**100.0**
Age at first marriage				
10-14	2	1.6	3	2.7
15-19	27	22.1	40	36.0
20-24	64	52.5	47	42.3
25-29	23	18.9	15	13.5
30-36	6	4.9	6	5.4
Median age	**22**		**21**	
Total	**122**	**100.0**	**111**	**100.0**
Currently living with				
Spouse	90	29.7	81	27.0
Living without sexual partner/alone	213	70.3	219	73.0
Total	**303**	**100.0**	**300**	**100.0**
Other sexual partner of IDU's spouse				
No	90	100.0	81	100.0
Total	**90**	**100.0**	**81**	**100.0**

A large percentage of respondents had been married in the past. About 37% of the IDUs were either currently or previously married. The proportion of married respondents was slightly higher in 2002 since at that time 40 % of them had been found married either during the study period or prior to it. Regarding the age at marriage, the proportion of respondents reporting to have got married at the age of 15-19 years had increased over the past few years. About 36% of the respondents reported to have got married at 15-19 years of age in the second round survey while 22% of them had reported so in 2002. The median age at marriage was 21 years.

Among the 83 currently married IDUs, 97.6% were living with their spouse. None of the currently married male IDUs reported their wives to be having another male sexual partner (Table 3.1).

3.2 Social Characteristics

More than one-third (36.3%) of the IDUs had attained a secondary level of schooling and eight percent were illiterate. IDUs from various ethnic groups participated in the study. About two-fifths of the IDUs were Newar, followed by Chhetri (24%), Tamang/Lama/Magar (15.3%), Gurung/Rai (8.3%) and Brahmin (5.3%).

In 2002 sample more than three fourth (79.5%) respondents had primary plus education but in 2005 such respondents were only about two third (65.6%). Ethnic composition in 2002 and 2005 samples does not have big difference.

A large majority of the study participants (72.3%) were born in the Kathmandu Valley. Almost nine percent had been living in the valley for five years. The percentage of IDUs living in the valley for more than five years was 19% (Table 3.2).

Table 3.2: Social Characteristics of the Sample Population

Social characteristics	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Education				
Illiterate	9	3.0	24	8.0
Literate only	5	1.7	7	2.3
Primary	48	15.8	72	24.0
Secondary	143	47.2	109	36.3
SLC and above	98	32.3	88	29.3
Ethnicity				
Brahmin	20	6.6	16	5.3
Chhetri/Thakuri	87	28.7	72	24.0
Newar	132	43.6	120	40.0
Tamang/Lama/Magar	34	11.2	46	16.3
Gurung/Rai	18	5.9	25	8.3
Occupational caste	6	2.0	10	3.3
Terai caste	4	1.3	2	0.7
Giri/Puri/Sanyasi	0	0.0	6	2.0
Others	2	0.6	3	1.0
Duration of stay in Kathmandu Valley				
Since birth	206	68.0	217	72.3
Since 5 years	45	14.8	26	8.7
More than 5 years	52	17.2	57	19.0

CHAPTER - 4
DRUG USE, NEEDLE SHARING AND TREATMENT

It is important that the behavior of the IDUs be explored in order to help design future programs and intervention techniques. In this context, a range of IDU behaviors is presented in the following chapter. Specifically, the information presented relates to alcohol use, drug use, needle sharing and treatment practices.

4.1 Alcohol Consumption and Oral Drug Use among IDUs

The use of alcohol is common among the IDUs in the Kathmandu Valley. About 30% of the participants consumed alcohol daily. Similarly, a little more than one-fourth (27.3%) consumed alcohol more than once a week during the past month.

The IDUs were asked about the duration of oral drug use. A high percentage of the participants had been using oral drugs for quite a long time. For instance, 74% of the IDUs had been using oral drugs orally for over five years. The average duration of oral drug use was 9.1 years. (Table 4.1).

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

Alcohol and oral drug use acts	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Alcohol used during the past month				
Everyday	80	26.4	89	29.7
More than once a week	66	21.8	82	27.3
Less than once a week	89	29.4	59	19.7
Never	63	20.8	69	23.0
Other	5	1.6	1	0.3
Duration of oral drug use				
Up to 12 months	12	4.0	4	1.3
13 – 60 months	85	28.0	74	24.7
More than 60 months	206	68.0	222	74.0
Average duration in years	**8.5**		**9.1**	
Median duration in years	**7**		**8**	

All the IDUs in the sample were asked about the types of drugs used orally or inhaled. About 70% reported using "gaja" during the past week. Other drugs taken orally or inhaled that were reported by a sizeable proportion of the IDUs were Charas, Nitrovate, Nitrosun, Brown -sugar, Proxyvon and Proxygin (Table 4.2).

Table 4.2: Types of Drugs Used Orally by Respondents

Types of drugs used orally	Used in last-week			
	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Gaja	196	64.7	211	70.3
Nitrosun	166	54.8	60	20.0
Chares	77	25.4	118	39.3
Nitrovate	58	19.1	66	22.0
Brown sugar	34	11.2	58	19.3
Proxygin	22	7.3	40	13.3
Codeine	21	6.9	27	9.0
Diazepam	19	6.3	29	9.7
Effidin	18	5.9	5	1.7
Velium 10	17	5.6	18	6.0
Phenergan	12	4.0	9	3.0
Calmpose	11	3.6	12	4.0
Phensydyl	5	1.7	3	1.0
White sugar	4	1.3	1	0.3
Tidigesic	1	0.3	0	0.0
Cocaine	1	0.3	1	0.3
Proxyvon	0	0.0	42	14.0
Lysergic Acid Dithylamidel (LSD)	0	0.0	1	0.3
Combination	12	4.0	4	1.3
Others	17	5.6	2	0.7

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

4.2 Drug Injecting Practice of IDUs

Almost 46% of the IDUs had been injecting drugs for more than five years. The data indicates that 44.3% had been injecting drugs for a period ranging from two-to-five years. Nearly one in 10 of the IDUs reported that they had been injecting drugs for a year. The percentage of those who had been injecting drugs for one year was 14.2% in the first round of the survey. More than half (53%) of the sampled IDUs reported taking their first drug injection when less than 20 years old. The figure was 45.4% in the first round of the survey.

A little over half (52.7%) of the respondents reported that they injected drugs two-three times a day. About eight percent were injecting drugs at least four times a day. Thirteen percent had reported so in the first round survey.

The frequency of drug injection on the day preceding the interview was also assessed. The data indicates that 16.6% of the IDUs injected drugs at least once a week and 82.1% did so at least once daily in the past week. In the survey conducted in 2002, 12.9% and 86.8% of the IDUs said they injected drugs at least once a week and at least once daily respectively. About two in 10 (18.3%) of the IDUs had injected drugs three or more times the previous day. The percentage of respondents who had injected drugs twice in the period preceding the interview was 37%. The mean number of drug injections during the past day was 1.8.

The frequency of drug injection as reported by the respondents point towards some improvements between the first and the second round of survey. When asked about the frequency of drug injected on the last time there was considerable increase in the proportion of respondents reporting to have had injected just once (26% in 2002 vs 45% in 2005), while the proportion of respondents reporting to have injected more than three times on the last occasion when they had injected drugs had significantly dropped off (42% in 2002 vs.18% in 2005) (Table 4.3).

Table 4.3: Drug Injecting Practice of Respondents

Drug Injecting practice	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Duration of drug injection habit				
Up to 12 months	43	14.2	29	9.7
13 – 60 months	147	48.5	133	44.3
More than 60 months	113	37.3	138	46.0
Average duration years	**5**		**6**	
Age at first drug injection				
Up to 20 years	138	45.5	159	53.0
21 + years	165	54.5	141	47.0
Median age	**21**		**20**	
Frequency of drug injections within the past week				
Not injected	1	0.3	4	1.3
Once a week	4	1.3	4	1.3
2-3 times a week	12	4.0	24	8.0
4-6 times a week	23	7.6	22	7.3
Once a day	46	15.2	65	21.7
2-3 times a day	179	59.1	158	52.7
4 or more times a day	38	12.5	23	7.7
Frequency of drug injection in the last day				
1 time	79	26.1	134	44.7
2 times	96	31.7	111	37.0
3 or more times	128	42.2	55	18.3
Mean	**2.6**		**1.8**	

In total, 41 IDUs reported not having injected drugs on the day before the interview. When asked the reason, the most common answer given by the respondents was lack of money. Other reasons included a desire to slowly quit the habit, used other drugs, unavailability of drugs, etc. (Annex 7).

A majority of the IDUs (37%) took injections in the wrist. Around one-fourth (24.3%) injected drugs in their forearms. Similarly, almost 17% injected drugs in their upper arms (Annex 8).

The most common place for injecting drugs among the respondents was either their own room or that of a friend. Other common places included forest/bushes, riverbank/slum area and courtyards (*chok*)/lanes (*galli*/*tol*) (Annex 9).

Table 4.4 shows the types of drugs injected during the past week. The respondents widely used a combination of drugs (for types of combinations see Annex 10). This was followed by norphin and brown sugar. Other drugs injected by a sizeable proportion of the respondents within the last week included proxygin, and proxyvon. The use of drug combinations has increased compared to the first round of the survey. The reason behind the increase was frequent road blockades and imposition of emergency in the country, which restricted the supply of tidigesic from the neighboring country on the southern border.

Table 4.4: Types of Drugs Injected by Respondents

Types of drugs injected	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Tidigesic	283	93.4	14	4.7
Brown sugar	42	13.9	70	23.3
Calmpose	42	13.9	8	2.7
Phenergan	28	9.2	2	0.7
Diazepam	13	4.3	3	1.0
Proxygin	2	0.7	13	4.3
Phensydyl	2	0.7	0	0.0
White sugar	2	0.7	0	0.0
Nitrovate	1	0.3	1	0.3
Codeine	1	0.3	0	0.0
Norphin	0	0.0	85	28.3
Proxyvon	0	0.0	13	4.3
Talgesic	0	0.0	8	2.7
Nitrosun	0	0.0	3	1.0
Avil	0	0.0	2	0.7
Tylegenic	0	0.0	1	0.3
Combination	74	24.4	219	73.0
Others	2	0.7	0	0.0

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

Information was also collected on the drug-switching behavior among the IDUs. The data shows that only eight IDUs (about 2.7%) had switched from one drug to another. Unavailability and lack of money were the main reasons mentioned for switching drugs (Annex 11).

4.3 Syringe Use and Sharing Behavior

The respondents were then asked several questions regarding their needle/syringe use and sharing behavior during the last three drug-injection acts. In response to the question whether they had used somebody else's previously used syringe during their last injection, between two and five percent said they had used somebody else's previously used syringe. In the first-round survey, the percentage was between 14 to 18% (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					
	Most Recent		Second Most Recent		Third Most Recent	
	First round	Second round	First round	Second round	First round	Second round
	2002	2005	2002	2005	2002	2005
	%	%	%	%	%	%
	N = 303	N = 300	N = 303	N = 300	N = 303	N = 300
Used the same needle/syringe that had been used by others						
Yes	16.2	2.0	14.5	2.3	18.8	4.7
No	83.8	98.0	85.5	97.7	81.2	95.3
Used needle/syringe that had been left in public place						
Yes	22.1	1.3	18.8	1.7	18.5	1.3
No	77.9	98.7	81.2	98.3	81.5	98.7
Persons in the group using the same needle/syringe						
2 persons	0.3	4.7	0.7	5.3	1.3	7.0
3 or more persons	33.0	1.7	28.4	2.0	31.4	1.7
None/Alone	66.7	93.6	70.9	92.7	67.3	91.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

In response to the second question whether they had used a syringe kept in a public place to inject drugs, about one percent reported using such syringes when taking their last injection. The instances of using syringes left in public places were similar across all three of the

respondents' most recent injections as well. The percentage was between 18 to 22% in the first-round survey, which has dropped sharply in 2005 (Table 4.5).

The IDUs were asked about the number of people in the group if they had injected drugs in a group sharing the same needle in the last three injecting acts. About 91 to 94% said they were not in a group and the remaining six to nine percent said they had injected drugs in a group. Most of those who had injected drugs in a group were in a group of two or more. In response to the same query in the first-round survey, about 67 to 71% said that they were not in group. About one-third of the respondents were sharing needles among two to three friends (Table 4.5).

Several questions were asked and categorized as low-risk and high-risk behavior. The data indicates that 18 to 21% were engaging in high-risk behavior during the last three acts (Annex 12).

Information on the syringe-sharing behavior of the respondents during the past week was also collected. It was found that the behavior of the IDUs regarding needle sharing had improved from the first-round survey. For instance, the number of participants who had injected drugs during the past week reporting having never used another's old syringe has increased (78.3% in 2005 vs. 54.1% in 2002). However, 20.4% of the IDUs had sometimes used somebody else's old syringe during the past week. The percentage of IDUs using such syringes in the first-round survey was 45.5%. Similarly, 19.3% had sometimes used a syringe kept in a public place during the past week. In the first-round survey, the percentage of those engaging in such a practice was 31.7% (Table 4.6).

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

Needle/syringe use throughout the past week	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Used a needle/syringe that had been used by another				
Every time	1	0.3	0	0.0
Almost every time	34	11.2	11	3.7
Sometimes	103	34.0	50	16.7
Never	164	54.1	235	78.3
Not injected last week	1	0.3	4	1.3
Used a needle/syringe that had been kept in public place				
Every time	25	8.3	2	0.7
Almost every time	0	0.0	7	2.3
Sometimes	71	23.4	49	16.3
Never	206	68.0	238	79.3
Not injected last week	1	0.3	4	1.3
Gave a needle/syringe to some one				
Every time	7	2.3	0	0.0
Almost every time	39	12.9	11	3.7
Sometimes	101	33.3	49	16.3
Never	155	51.2	236	78.7
No injection last week	1	0.3	4	1.3
Number of needle/syringe shared partners				
None	124	40.9	215	71.7
Two partners	62	20.5	52	17.3
Three or more partners	116	38.3	29	9.7
No injection last week	1	0.3	4	1.3
Shared needle/syringe with*				
Usual sexual partner	1	0.3	1	0.3
Friend	175	57.8	79	26.3
Drug Seller	4	1.3	0	0.0
Unknown person	4	1.3	0	0.0
Someone at the injecting place	6	2.0	0	0.0
Not shared	124	40.9	215	71.7
No injection last week	1	0.3	4	1.3
Others	4	1.3	2	0.7

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

Twenty percent of the IDUs had given a syringe to someone after using it themselves. The percentage of those never giving a syringe to another has increased compared to the first-round survey (78.7% in 2005 vs. 51.2% in 2002). Out of the total IDU population surveyed, about three-quarters (71.7%) reported not sharing syringes with anyone during the past week. Those who shared syringes said they did it mostly among friends (26.3%). Additionally, most of them shared syringes between two partners. The percentage of those not sharing syringes among injecting partners was 40.9% in the first-round survey. This indicates significant change in needle sharing behavior among IDUs in Kathmandu in the last four years.

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4.4 Drug-Sharing Behavior

This section describes the drug-sharing behavior of the respondents. Nearly all of them (296) had used injection drugs during the past week. Of these respondents, four percent had injected drugs using pre-filled syringes. The percentage of IDUs injecting drugs using a syringe into which someone had transferred drugs from his previously-used syringe was 12.6%. 30% of the IDUs had shared materials such as bottles, spoons, cotton, etc. Similarly, about 62% had drawn drug solutions from a common container used by others during the past week (Table 4.7). Sharing of drug injection-related materials and using drug solutions from a common container among IDUs has increased compared to the first-round survey. Because of the road blockades and declaration of emergency in the country, those items were in short supply resulting in increased incidents of sharing of such items among the IDUs.

Table 4.7: Past Week's Drugs Sharing Behavior

Drug sharing practice during past week	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Injected with a pre-filled syringe				
Yes	18	5.9	12	4.0
No	284	93.7	284	94.7
No injection	1	0.3	4	1.3
Injected with a syringe after drugs were transferred into it from another's syringe				
Every time	0	0.0	0	0.0
Almost every time	1	0.3	1	0.3
Sometimes	33	10.9	37	12.3
Never	268	88.4	258	86.0
No injection	1	0.3	4	1.3
Shared a bottle, spoon, cooker, vial/container, cotton/filter and rinse water				
Every time	5	1.6	6	2.0
Almost every time	7	2.3	30	10.0
Sometimes	22	7.3	54	18.0
Never	268	88.4	206	68.7
No injection	1	0.3	4	1.3
Drawn drug solution from a common container used by others				
Every time	27	8.9	29	9.7
Almost every time	61	20.1	54	18.0
Sometimes	81	26.7	102	34.0
Never	133	43.9	111	37.0
No injection	1	0.3	4	1.3

Information on internal and external mobility and injecting practices of the respondents was also collected during this survey. Of the total 300 respondents, about one-fourth (23%) were found to be mobile and they had injected drugs in other parts of the country or in another country. Among these mobile groups, more than one-fifth (21.7%) had injected drugs in different parts of India (Annex 13).

Of the 69 IDUs who had injected drugs in other parts of the country or out of the country, about seven percent reported that they had used another's previously used syringe and 14.5% reported giving their used syringe to other people (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	First round (2002)		Second round (2005)	
	n=98	%	n=69	%
Used a needle/syringe that had been used by another				
Yes	8	8.2	5	7.2
No	90	91.8	63	91.3
No response	0	0.0	1	1.4
Gave a needle/syringe to someone else after use				
Yes	20	20.4	10	14.5
No	78	79.6	58	84.1
No response	0	0.0	1	1.4

4.5 Needle/Syringe Cleaning Practice

Improper cleaning of shared and reused needles/syringes is a major risk of HIV infection among IDUs. It was encouraging to note that in the second round of survey, considerably smaller proportion of the respondents than those in the first round reported that they had reused needle/syringe in the past one week (87% in 2002 vs.56% in 2005). The proper method of cleaning a needle is to subject it to a thorough rinse using distilled water and bleach alternately and repeating the process several times. Information was collected on the process used by the IDUs to clean needles and syringes. It was found that most of the IDUs cleaned their needles/syringes with saliva (45.2%), plain water (29.8%) and cotton/cloth

(19.6%). About 17% and 15% of the IDUs used distilled water and bleach respectively (Table 4.9).

Table 4.9: Needle/Syringe Cleaning Practice of Respondents

Needle/syringe cleaning behavior	First round (2002)		Second round (2005)	
	N	%	N	%
Re-used needle/syringe in the past week				
Yes	263	86.8	168	56.0
No	40	13.2	132	44.0
Total	**303**	**100.0**	**300**	**100.0**
Ways of cleaning needle/syringe*				
Saliva	148	56.3	76	45.2
Plain water	141	53.6	50	29.8
Bleach	63	23.9	25	14.9
Distilled water	30	11.4	28	16.7
Boil in the water	25	9.5	5	3.0
Paper	23	8.7	0	0.0
Cotton/cloth	18	6.8	33	19.6
Medicine (calmpose, tidigesic, phenargan)	8	3.0	0	0.0
Urine	6	2.3	7	4.2
Burn the needle with matches	4	1.5	0	0.0
Never cleaned	6	2.3	6	3.6
Others	6	2.3	3	1.8
Total	**263**	*****	**168**	*****

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

4.6 Accessibility of Syringe

All the respondents knew about sources for new syringes. About 99% of the IDUs cited drugstores as a source of new syringes. About eight out of 10 (79.3%) reported being aware of the needle exchange program, which is a positive indicator since only 59% of the respondents had reported so in 2002. Sources like hospitals and drug sellers were mentioned by less than four percent of the IDUs (Table 4.10).

Table 4.10: Knowledge of Sources of New Syringes

Descriptions	First round (2002)		Second round (2005)	
	N	%	N	%
Could obtain new syringe				
Yes	301	99.3	300	100.0
No	2	0.7	0	0.0
Total	**303**	**100.0**	**300**	**100.0**
Could obtain syringe from *				
Drugstore	294	97.7	298	99.3
Needle exchange program	176	58.5	238	79.3
Friends	38	12.6	12	4.0
Hospital	14	4.6	4	1.3
Drug seller	4	1.3	1	0.3
Others	3	1.0	1	0.3
Total	**301**	*****	**300**	*****

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

4.7 Treatment Practice

Table 4.11 shows the types and characteristics of IDU-related treatment received by the sampled IDUs. It is discouraging to note that a majority of the respondents had not received any treatment. It is even more discouraging to note that among those who had sought treatment, only about one percent were currently under treatment. About 31% had undergone treatment previously. Out of the ever-treated population, 39% had received treatment during the past one year, and three-quarters had been treated at a residential rehabilitation center. Most of them had received treatment at different rehabilitation centers run by NGOs in Nepal (Annex 14).

Table 4.11: Treatment Received by Respondents

Treatment practice	First round (2002)		Second round (2005)	
	N	%	N	%
Treatment status				
Currently receiving treatment	4	1.3	2	0.7
Was in treatment but not now	121	39.9	93	31.0
Have not received treatment	178	58.7	205	68.3
Total	**303**	**100.0**	**300**	**100.0**
When treatment was received				
Less than 6 months	14	11.2	17	17.9
6-11 months before	32	25.6	20	21.1
12-23 months before	31	24.8	23	24.2
24-35 months before	15	12.0	9	9.5
36-47 months before	14	11.2	12	12.6
48 or more months before	19	15.2	14	14.7
Total	**125**	**100.0**	**95**	**100.0**
Types of treatment received *				
Residential rehabilitation	61	48.8	71	74.7
Detoxification w/other drugs	31	24.8	14	14.7
Helped to quit cold turkey	14	11.2	3	3.2
Detoxification w/methadone	11	8.8	2	2.1
Forced to quit cold turkey	6	4.8	1	1.1
Out patient counseling	6	4.8	0	0.0
Maintenance w/methadone	5	4.0	3	3.2
Detoxification w/no drugs	4	3.2	1	1.1
Use alcohol/Ganja	3	2.4	0	0.0
Self-help group	2	1.6	0	0.0
Total	**125**	*****	**95**	*****

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

CHAPTER - 5
SEXUAL BEHAVIOR AND CONDOM USE

HIV transmission among drug users is most often correlated with injecting or needle/syringe-sharing behavior. However, the risky sexual behavior of drug users also contributes to the spread of HIV among the non-injecting population. In order to better understand how HIV is spread through the sexual behavior of IDUs, the respondents were asked a number of questions related to sexual history, number and type of sexual partners, and knowledge and use of condoms. The main responses provided by the study participants will be discussed and compared with the results of the first round of the survey in this chapter.

5.1 Sexual Behavior of IDUs

Table 5.1 shows that about 13% of the IDUs had never had sex. Of the total respondents, around three-quarters (77.1%) had gained sexual experience before they were 20 years old. The median age of the respondents at the time of their first sexual encounter was 17 years in 2005 which is a year less than 2002 survey results. Out of the 262 respondents who reported having had sexual intercourse, 58% reported having sex in the past 12 months. In 2002 only one fourth of the respondents had reported to have had two or more sex partners in twelve months preceding the survey while in 2005 about two-fifths of the IDUs reported. There is no big difference in age at first sex and percentage having sex in the last 12 months in 2002 and 2005 (Table 5.1)

Table 5.1: Sexual History

Sexual behavior	First round (2002)		Second round (2005)	
	N	%	N	
Had sexual intercourse	269	88.8	262	87.3
Never had sexual intercourse	34	11.2	38	12.7
Total	**303**	**100.0**	**300**	**100.0**
Age at first sexual intercourse				
Below 20 years	202	75.1	202	77.1
20 years of age and above	67	24.9	60	22.9
Median Age	**18**		**17**	
Sexual intercourse in the past 12 months				
Yes	156	58.0	152	58.0
No	113	42.0	110	42.0
Total	**269**	**100.0**	**262**	**100.0**
Numbers of different sexual partners in the past 12 months				
1 partner	117	75.0	90	59.2
2 or more partners	39	25.0	62	40.8
Total	**156**	**100.0**	**152**	**100.0**

Of the total 262 IDUs who had sexual experience, 29.4% had sex with a regular partner in the past 12 months. Here, "regular partner" is considered to be either spouse or live-in sexual partner. Among all the IDUs who had sex with regular partners in the past 12 months, a little more than three-quarters (77.9%) had sex during the last month, and around half of them had sex five or more times during that month (Table 5.2). Only one respondent was found to have engaged in anal sex with a regular sex partner.

Table 5.2: Sexual Intercourse with Regular Female Sex Partners

Sexual practice	First round (2002)		Second round (2005)	
	N	%	N	
Sex with a regular partner during the past 12 months				
Yes	97	36.0	77	29.4
No	172	64.0	185	70.6
Total	**269**	**100.0**	**262**	**100.0**
Regular partner				
1 partner	96	99.0	77	100.0
2 partners	1	1.0	0	0.0
Sex with a regular partner during the last month				
Yes	78	80.4	60	77.9
No	19	19.6	17	22.1
Total	**97**	**100.0**	**77**	**100.0**
Frequency of sex during the last month with a regular partner				
1- 4	28	35.9	29	48.3
5+	50	64.1	31	51.7
Total	**78**	**100.0**	**60**	**100.0**

The IDUs with sexual experience were asked whether they had ever had sex with non-regular partners in the past year. "Non-regular partners" were defined as those with whom the participants were not married or living. However, non-regular partners were also defined as being distinct and separate from sex workers. Table 5.3 shows that one in five (19.5%) of the IDUs had sex with non-regular partners. Of them, almost 43% had two or more non-regular partners. Six respondents had engaged in anal sex with non-regular partners.

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

Sexual practice	First round (2002)		Second round (2005)	
	N	%	N	%
Sex with non-regular female sex partner in the past 12 months				
Yes	50	18.6	51	19.5
No	219	81.4	211	80.5
Total	**269**	**100.0**	**262**	**100.0**
Non-Regular female sex partner				
1 partner	34	68.0	29	56.9
2 or more partners	16	32.0	22	43.1
Sex with non-regular female sex partner during last one month				
Yes	21	42.0	24	47.1
No	29	58.0	27	52.9
Total	**50**	**100.0**	**51**	**100.0**
Frequency of sex during last one month with non-regular female sex partners				
1- 4	19	90.5	22	91.7
5+	2	9.5	2	8.3
Total	**21**	**100.0**	**24**	**100.0**

Table 5.3 also shows that out of the 51 respondents who had sex in the past 12 months,47.1% had sex with non-regular partners during the past month. Among those who had sex with non-regular partners during the past month, 91.7% reported having sex one-four times during that time.

The sexual behavior of the IDUs puts their partners at greater risk of HIV infection. In this context, they were asked whether they had sexual relations with sex workers during the past year. "Sex workers" were defined here as those who bought or sold sex in exchange for money or drugs. Around 21% of the IDUs reported having sex with sex workers during the past 12 months. Of them, almost 52% had sex with two or more female sex workers. Out of the 56 respondents who had sex with sex workers during the past year, 48.2% had such encounters during the past month. Out of the 27 respondents who had sex during the past one month, about 7% reported having sex five or more times (Table 5.4).

Table 5.4: Sexual Intercourse with Female Sex Worker

Sexual practice	First round (2002)		Second round (2005)	
	N	%	N	%
Sex with female sex worker in the past 12 months				
Yes	35	13.0	56	21.4
No	234	87.0	206	78.6
Total	**269**	**100.0**	**262**	**100.0**
Number of female sex workers in the past 12 months				
1 partner	20	57.2	27	48.2
2 or more partners	15	42.8	29	51.8
Sex with female sex worker during last one month				
Yes	15	42.8	27	48.2
No	20	57.2	29	51.8
Total	**35**	**100.0**	**56**	**100.0**
Frequency of sex with a female sex worker during the last month				
1- 4	13	86.7	25	92.6
5+	2	13.3	2	7.4
Total	**15**	**100.0**	**27**	**100.0**

5.2 Knowledge and Use of Condom

All the respondents were asked whether they were aware of condoms, and whether they had used one during their last sexual contact. Almost all the IDUs had heard of condoms. The use of a condom with a regular partner was found to be low when compared to condom use with sex workers and non-regular partners. Only two-fifths (40.3%) of the IDUs had used a condom with their regular sex partners during the last time they had sex. However, reported condom use with sex workers was higher. Seventy-five percent of the IDUs said they used a condom during their last sexual encounter with a sex worker. The use of condoms with non-regular partners was 64.7%. Comparison of the survey results of 2005 with that of 2002 shows that condom use among the IDUs with all types of sex partners has significantly increased. As shown by Table 5.5, the survey results of 2002 and 2005 reveal that the reported use of condom by the IDUs in their last sexual intercourse had increased by 6% with their regular partner, by almost 5% with their non-regular partner and by 15% with sex workers.

Table 5.5: Knowledge and Use of Condoms among IDUs

Knowledge and use of condom in the last sex	First round (2002)		Second round (2005)	
	N	%	N	%
Ever heard of a condom				
Yes	303	100.0	300	100.0
No	0	0.0	0	0.0
Total	**303**	**100.0**	**300**	**100.0**
Condom use with regular partner during last sexual intercourse				
Yes	33	34.0	31	40.3
No	64	66.0	46	59.7
Total	**97**	**100.0**	**77**	**100.0**
Condom use with non-regular partner during last sexual intercourse				
Yes	30	60.0	33	64.7
No	20	40.0	18	35.3
Total	**50**	**100.0**	**51**	**100.0**
Condom use with sex worker during last sexual intercourse				
Yes	21	60.0	42	75.0
No	14	40.0	14	25.0
Total	**35**	**100.0**	**56**	**100.0**

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 the respondents who had sex with regular and non-regular partners reported that they did not feel it was necessary. About one-third of the respondents having sex with a regular partner reported the use of other

means of contraception as the reason for not using a condom. About 40% did not think it necessary to use a condom while having sex with sex workers. A significant proportion of the respondents having sex with sex workers and non-regular partners also said that a condom was not available to them at the time. No significant change has been observed in the reasons of not using condom in the last sex with regular and non-regular sex partners between 2002 and 2005. However, partners objection and didn't think necessary while sex with sex worker are increased in 2005 compared to 2002. (Annex 15).

In order to protect oneself from sexually transmitted diseases, a condom must be used during every sex act. In this context, all the IDUs were asked about the consistent use of condoms with different sexual partners during the year preceding the survey. Only about 13% of them reported using a condom every time they had sex with regular partners, and about 36% had never used a condom with their regular partners. Regarding the use of condoms with sex workers, 33.9% of the IDUs reported consistent use. About 13% never used a condom with sex workers during the past year. Similarly, about one-third of the IDUs also reported that they had been consistently using condoms with non-regular partners (Table 5.6).

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

Consistent use of condom	First round (2002)		Second round (2005)	
	N	%	N	%
Use of condom with regular female sex partners during past 12 months				
Every time	18	18.5	10	13.0
Almost every time	13	13.4	16	20.8
Sometimes	26	26.8	23	29.9
Never	40	41.2	28	36.4
Total	**97**	**100.0**	**77**	**100.0**
Use of condom with non-regular female sex partners during past 12 months				
Every time	24	48.0	18	35.3
Almost every time	8	16.0	17	33.3
Sometimes	3	6.0	9	17.6
Never	15	30.0	7	13.7
Total	**50**	**100.0**	**51**	**100.0**
Use of condom with female sex workers during past 12 months				
Every time	19	54.3	19	33.9
Almost every time	2	5.7	22	39.3
Sometimes	5	14.3	8	14.3
Never	9	25.7	7	12.5
Total	**35**	**100.0**	**56**	**100.0**

5.3 Sources of Condoms

The respondents who had heard about or used condoms were asked where they could be obtained. Almost all (98.7%) of the IDUs mentioned pharmacies as a source of condoms. LALS, followed by shops, hospitals and *pan pasal* were other major sources. Almost all the respondents reported that condoms were available within a 30-minute walking distance (Table 5.7).

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

Sources of condom and time to obtain it	First round (2002)		Second round (2005)	
	N	%	N	%
Place/person from where condom could be obtained *				
Pharmacy	289	95.4	296	98.7
Health worker/health post	160	52.8	9	3.0
Hospital	82	27.1	52	17.3
Shop	59	19.5	99	33.0
Clinic	32	10.6	17	5.7
Friends	24	7.9	9	3.0
Family planning center	15	5.0	6	2.0
Bar/Guest house/hotel	1	0.3	3	1.0
Pan shop	0	0.0	52	17.3
Peer educator/outreach worker	0	0.0	17	5.7
LALS	0	0.0	187	62.3
Others	3	1.0	3	1.0
Don' t know	3	1.0	0	0.0
Total	**303**	*****	**300**	*****
Time taken to obtain condom				
Less than 30 minutes	296	98.7	298	99.3
More than 30 minutes	4	1.3	1	0.3
No response	0	0.0	1	0.3
Total	**300**	**100.0**	**300**	**100.0**

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

5.4 Sources of Information about Condom

As mentioned above, all the IDUs had heard about condoms. They were then asked about their sources of information about condoms. The respondents knew of many sources of information. The most common sources of information were radio, television, pharmacies, hospitals, friends/neighbors, billboards/signboards, NGO people and newspapers/posters, etc. The details of the sources of information about condoms are presented in Table 5.8 below.

Table 5.8: Sources of Information about Condoms

Sources of knowledge of condom	First round (2002)		Second round (2005)	
	N	%	N	%
Radio	302	99.7	296	98.7
Television	296	97.7	296	98.7
Friends/neighbors	277	91.4	281	93.7
Newspapers/posters	276	91.1	266	88.7
Bill board/sign board	271	89.4	281	93.7
Pharmacy	258	85.1	293	97.7
Hospital	224	73.9	212	70.7
NGO's peoples	211	69.6	270	90.0
Cinema hall	207	68.3	184	61.3
Health Post	195	64.4	149	49.7
Health Center	176	58.1	129	43.0
Health workers/volunteers	173	57.1	225	75.0
Community worker	119	39.3	55	18.3
Comic books	109	36.0	111	37.0
Street drama	100	33.0	104	34.7
Community event/training	75	24.8	49	16.3
Video van	61	20.1	75	25.0
Others	10	3.3	0	0.0
Total	**303**	*****	**300**	*****

*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 90% of them reported seeing or hearing specific programs such as *Condom bata surakchhya youn swastha ko rakchhya, HIV/AIDS bare aajai dekhi kura garau, Yon rog ra AIDS bata bachnalai rakhnu parchha sarbatra paine condom lai, Condom kinna*

ma bhaya hunna ra and *Jhilk dai chha chhaina condom.* These messages were not exposed during the first round of the survey. Nobody had heard of messages like *Condom Lagaaun AIDS Bhagaaun, Dhale Dai* and *Gurujee Ra Antare* that were exposed during the first round of the study. The data indicates that these radio and TV programs have been largely successful in disseminating new 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	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Condom Lagaaun AIDS Bhagaaun	296	97.7	0	0.0
Condom Bata Surakchhya Youn Swastha ko Rakchhya	278	91.7	286	95.3
Dhale Dai	243	80.2	0	0.0
Gurujee Ra Antare	207	68.3	0	0.0
HIV/AIDS Bare Aaji Dekhi Kura Garaun	0	0.0	285	95.0
Youn Rog Ra AIDS Bata Bachnalai Rakhnu Parchha Sarbatra Paine Condom Lai	0	0.0	278	92.7
Ramro Sanga Prayog Gare Jokhim Huna Dinna Bharpardo Chhu Santosh Dinchhu Jhanjhat Manna Hunna	0	0.0	276	92.0
Condom Kina Ma Bhaya Hunna Ra	0	0.0	274	91.3
Jhilke Dai Chha Chhaina Condom	0	0.0	271	90.3
Others	9	3.0	8	2.7

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

CHAPTER - 6
KNOWLEDGE OF STDs AND HIV/AIDS

A series of questions were administered to the respondents to find out the general level of consciousness about STIs and HIV/AIDS and their specific knowledge about how such diseases were contracted and where testing facilities were available.

6.1 Knowledge of STIs

Table 6.1 shows the percentage of IDUs who have heard about STIs. A significantly high percentage (95.7%) of the IDUs reported having heard about STIs.

Table 6.1: IDUs who have heard about STIs

Heard of STIs	First round (2002)		Second round (2005)	
	N	%	N	%
Yes	277	91.4	287	95.7
No	26	8.6	13	4.3
Total	**303**	**100.0**	**300**	**100.0**

Those who demonstrated a general awareness about STIs were also asked about the symptoms of STIs. The most commonly reported STD symptoms included genital ulcers/sore blisters, foul-smelling discharge, itching and genital discharge (Table 6.2). Abdominal pain and foul-smelling discharge were reported only among women.

Table 6.2: Symptoms of STIs Cited by Respondents Who Have Heard about STIs

Knowledge of symptoms of STIs	Respondents who had heard of STIs							
	First round (2002) n=277				Second round (2005) n=287			
	Among Females	%	Among Males	%	Among Females	%	Among Males	%
Genital ulcer/sore blisters	76	27.4	148	53.4	105	36.6	134	46.7
Foul-smelling discharge	63	22.7	0	0.0	57	19.9	0	0.0
Itching	46	16.6	39	14.1	66	23.0	65	22.6
Genital discharge	44	15.9	82	29.6	49	17.1	82	28.6
Burning/pain during urination	28	10.1	66	23.8	22	7.7	59	20.6
Abdominal pain	17	6.1	0	0.0	16	5.6	0	0.0
Swelling in groin area	14	5.1	27	9.7	16	5.6	25	8.7
Becomes thin	9	3.2	8	2.9	0	0.0	0	0.0
Others	20	7.2	29	10.5	1	0.3	0	0.0
Don't know	156	56.3	98	35.4	154	53.7	132	46.0

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

All the respondents were asked two specific questions regarding STI symptoms: "Have you had a genital discharge during the past year?" and "Have you had a genital ulcer/sore blister during the same period?" The proportion of respondents who reported to have had any of such symptoms during the past year was lower than proportions reported in 2002. In 2002 survey, 11percent of the respondents had reported of genital discharge and six percent of them had reported of genital ulcer/sore/blister while in 2005 only about three percent IDUs reported of having experienced each of the symptom. (Table 6.3). Comparison of the results between 2002 and 2005 shows that reported symptoms of STIs has decreased over time.

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

Experienced of STI symptoms	First round (2002)		Second round (2005)	
	N	%	N	%
Had a genital discharge in the past year				
Yes	33	10.9	8	2.7
No	270	89.1	292	97.3
Had a genital ulcer/sore blister in the past year				
Yes	19	6.3	8	2.7
No	284	93.7	292	97.3
Total	**303**	**100.0**	**300**	**100.0**

Out of eight respondents who had STI symptoms past year, all of them had that symptom at the time of survey. Of the total 300 respondents about 93 percent reported not having any STI symptoms. Out of 21 who had ever experienced any symptom of STIs, a quarter (33.3%) of the respondents did not seek any treatment for such problems, while a quarter of them had received treatment from private doctors. Percentage of respondents seeking treatment from hospitals/health posts was about 14%. About nine percent each received treatment from LALS, which is an NGO and from others. (Table 6.4).

Table 6.4: Treatment of STI Symptoms by IDUs

STI symptoms and treatment	Second round (2005)	
	N	%
Has a genital discharge currently		
Yes	3	37.5
No	5	62.5
Has a genital ulcer/sore blister currently		
Yes	1	12.5
No	7	87.5
Total	**8**	**100.0**
	N = 300	**%**
Never had STI symptoms	279	93.0
Ever had some symptoms	21	7.0
Source of treatment	**n=21**	**%**
Private Doctor	7	33.3
Hospital/Health Post	3	14.3
LALS	2	9.5
Others	2	9.5
Did not seek treatment	7	33.3

6.2 Knowledge of HIV/AIDS

All the IDUs surveyed were aware of HIV/AIDS. Around eight in 10 (78.7%) reported knowing a person who had died of HIV/AIDS. A majority (50.8%) said that those who had died were close friends (Table 6.5.

Table 6.5: Awareness of HIV/AIDS among IDUs

Knowledge of HIV/AIDS	First round (2002)		Second round (2005)	
	N	%	N	%
Heard about HIV/AIDS				
Yes	303	100.0	300	100.0
No	0	0	0	0.0
Know anyone who died due to AIDS				
Yes	212	70.0	236	78.7
No	84	27.7	61	20.3
Don't know	7	2.3	3	1.0
Total	**303**	**100.0**	**300**	**100.0**
Nature of relationship with the deceased				
Close friend	119	56.1	120	50.8
No relation	83	39.2	104	44.1
Close relative	6	2.8	12	5.1
Close friend/close relation	2	0.9	0	0.0
Don't know	2	0.9	0	0.0
Total	**212**	**100.0**	**236**	**100.0**

The respondents were also asked three questions regarding their conception about HIV/AIDS prevention. These methods were regular condom use, having monogamous sexual relations (in which partners only have sex with one another) and abstinence from sex. A higher percentage (91%) of the IDUs cited regular condom use as a means of protection from HIV/AIDS. Similarly, about 88% cited a monogamous sex partner as a means of protection. Nearly two-thirds of the IDUs surveyed were also aware that abstinence from sex provides protection from HIV/AIDS (Table 6.6).

Table 6.6: Knowledge of ABC

Knowledge of ABC for avoiding HIV/AIDS	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
A Can protect themselves through abstinence from sexual contact	196	64.7	197	65.7
B Can protect themselves through monogamous sexual relations	244	80.5	265	88.3
C Can protect themselves through condom use every time during sex	274	90.4	273	91.0

Ninety-four percent of the IDUs were aware that sharing a meal with an HIV-positive person couldn't transmit HIV/AIDS. Similarly, 98.7% knew a person could get HIV by using another's previously used needle. About 82% of the respondents said that switching from injecting to non-injecting drugs could protect them against HIV/AIDS. However, one-third of the IDUs were found to believe that HIV/AIDS could be transmitted from mosquito bites (Table 6.7.

Table 6.7: Respondents' Knowledge of Ways of HIV/AIDS Transmission

Statements related to HIV/AIDS and pregnant women	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
Can get HIV/AIDS by sharing needles	295	97.4	296	98.7
Cannot get HIV/AIDS by sharing meal with HIV+ person	282	93.1	282	94.0
A pregnant woman infected with HIV/AIDS can transmit the virus to her unborn child	275	90.8	267	89.0
Can protect themselves from HIV/ AIDS by switching to non-injecting drugs	229	75.6	247	82.3
A woman with HIV/AIDS can transmit the virus to her child through breast-feeding	146	48.2	131	43.7
Can get HIV/AIDS from a mosquito bite	105	34.7	96	32.0
A pregnant woman with HIV/AIDS can reduce risk of transmission to her unborn child by:				
Taking medicine	23	7.6	22	7.3
Treatment/consultation with doctor	21	6.9	35	11.7
Others	4	1.3	1	0.3
Don't know	255	84.2	242	80.7

A large majority of the IDUs (89%) were aware that pregnant women infected with HIV could transmit the virus to her unborn child. A relatively lower percentage of respondents, nearly 44%, claimed that women with HIV could transmit the virus to their newborn child through breast-feeding. However, a majority of the respondents did not know what steps a pregnant woman could take to reduce the risk of HIV/AIDS transmission to her unborn child (Table 6.7).

6.3 Knowledge about HIV Testing Facilities

All the study participants were asked whether confidential HIV testing was currently available, and whether they had ever been tested for HIV. Table 6.8 indicates that almost 90% of the IDUs were aware of confidential HIV testing. Forty percent of the IDUs had had their blood tested for HIV either voluntarily or as prescribed by a health professional. About 86% of the respondents tested for HIV received the results of their test. About 38% of the IDUs reported having an HIV blood test during the past year.

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

Description of HIV testing	First round (2002)		Second round (2005)	
	N	%	N	%
Is it possible for someone to get a confidential HIV test?				
Yes	248	81.8	269	89.7
No	50	16.5	28	9.3
Don't know	5	1.7	3	1.0
Type of test taken				
Required HIV test	68	22.4	91	30.3
Voluntary HIV test	37	12.2	29	9.7
Not tested	198	65.3	180	60.0
Total	**303**	**100.0**	**300**	**100.0**
Test result received				
Yes	87	82.9	103	85.8
No	18	17.1	17	14.2
Timing of last HIV test				
Within the past year	44	41.9	46	38.3
1-2 years ago	24	22.9	35	29.2
2-4 years ago	19	18.1	25	20.8
More than 4 years ago	18	17.1	14	11.7
Total	**105**	**100.0**	**120**	**100.0**

6.4 Source of Knowledge about HIV/AIDS

For those participants who had heard of HIV/AIDS, radio and television were the first and second most common media sources for information on HIV/AIDS. Other sources commonly cited by the respondents included friends/relatives, billboards/signboards, pamphlets/posters, NGO workers and newspapers/magazines. This finding shows that the information-receiving tendencies are similar to those recorded during the first-round survey (Table 6.9.

Table 6.9: Sources of Knowledge Regarding HIV/AIDS

Sources of Knowledge of HIV/AIDS	First round (2002)		Second round (2005)	
	N	%	N	%
Radio	300	99.0	297	99.0
Television	297	98.0	296	98.7
Friends/Relatives	289	95.4	289	96.3
Newspapers/Magazines	274	90.4	255	85.0
Billboard/signboard	270	89.1	282	94.0
Pamphlets/Posters	269	88.8	274	91.3
NGO workers	212	70.0	270	90.0
Cinema halls	211	69.6	205	68.3
Health workers	208	68.6	239	79.7
Workplace	136	44.9	111	37.0
School/Teachers	135	44.6	115	38.3
Community workers	129	42.6	58	19.3
Comic books	115	38.0	127	42.3
Street drama	109	36.0	138	46.0
Community events or training	71	23.4	60	20.0
Video van	57	18.8	85	28.3
Others	4	1.3	1	0.3
Total	**303**	*	**300**	*

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

The percentage of respondents reporting to have received information on condom and HIV/AIDS had also significantly increased since 2002. When asked whether anyone had given them materials regarding HIV/AIDS such as brochures/booklets/pamphlets, condoms, or/and any specific information about HIV/AIDS during the last year, about three-fourths (72.7%) reported to have had received information about condoms and almost the same proportion (71%) reported receiving printed materials such as brochures/booklets/pamphlets on HIV/AIDS. In 2002 survey, only 49 and 59 percents of the respondents had reported to

have had received information about condoms and such printed materials on HIV/AIDS respectively (Table 6.10). Comparison of the results between 2002 and 2005 shows that information on condom and information from brochures/booklets has increased over time. For instance, in 2002 only about 49 percent had reported of received information on condom and about 56 percent had received brochures/booklets/pamphlets on HIV/AIDS

Table 6.10: Information/Materials Received during the Past Year

Informative materials received	First round (2002)		Second round (2005)	
	N	%	N	%
Received information on condom				
Yes	148	48.8	218	72.7
No	155	51.2	82	27.3
Brochures/booklets/pamphlets on HIV/AIDS				
Yes	175	57.8	213	71.0
No	128	42.2	87	29.0
Received information on HIV/AIDS				
Yes	247	81.5	247	82.3
No	56	18.5	53	17.7
Other information				
Yes	9	3.0	6	2.0
No	294	97.0	294	98.0
Total	**303**	**100.0**	**300**	**100.0**

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 which was used in very few cases. The clinical test results indicate an alarming situation among injecting drug users.

Of the total 300 sample, HIV prevalence was found to be higher among IDUs (51.7%), which is less by 16.3% compared to the finding of the 2002 survey.

7.1 Relation between Socio-Demographic Characteristics and HIV Infection

Table 7.1 shows the rate of HIV infection among selected demographics and social characteristics. The incidence of HIV was found to be higher among the older group of IDUs. As compared to their younger counterparts, HIV infection was higher by 13.6%. The incidence of HIV also differs significantly with marital status. Prevalence is higher among formerly married IDUs than among those who were never married or were currently married. The data shows that literacy had a negative relationship with HIV infection among the IDUs. HIV prevalence was found to be as high as 83.3% among illiterate IDUs compared to 49% among literate IDUs.

Table 7.1: Relation between Socio-Demographic Characteristics and HIV Infection

Socio-demographic characteristics	First round (2002)				Second round (2005)			
	Total	HIV+	%	P Value	Total	HIV+	%	P Value
Age								
Below 20 years	22	9	40.9		18	7	38.9	
20 years and above	281	197	70.1	< .01	282	148	52.5	> 0 .05
Marital Status								
Currently married	107	82	76.6		83	50	60.2	
Formerly married	15	14	93.3	< .01	28	21	75.0	< .01
Never married	181	110	60.8		189	84	44.4	
Literacy								
Illiterate	9	7	77.8		24	20	83.3	
Literate/formal school	294	199	67.7	> 0 .05	276	135	48.9	< .01
Total	**303**	**206**	**68.0**		**300**	**155**	**51.7**	

7.2 Relation between Drug Injection Behavior and HIV

HIV infection is typically associated with the drug-injecting behavior of IDUs. Information on various injecting behaviors such as duration of the habit of injecting drugs, frequency of injections during the past week, use of publicly discarded syringes and use of another's previously-used syringe was collected in this study.

It was found that those who had been injecting drugs for a long period have a greater chance of HIV infection. Among those IDUs who had been injecting drugs for more than five years, 76% have HIV. The HIV infection rate dropped to 32% among the IDUs who had been injecting drugs for one to five years and to 19% among the IDUs who had been injecting drugs for less than a year (Table 7.2).

Table 7.2: Relation between Drug Injecting Behavior and HIV Infection

Drug injecting behavior	First round (2002)				Second round (2005)			
	Total	HIV+	%	P Value	Total	HIV+	%	P Value
Injecting Drugs Since								
Less than 1 year	22	9	40.9	< 0.01	16	3	18.8	< 0.01
1-5 years	168	105	62.5		146	47	32.2	
More than 5 years	113	92	81.4		138	105	76.1	
Frequency of Injecting Drugs in the Past Week								
Not injected	1	0	0.0	< 0.01	4	1	25.0	> 0 .05
1-3 times a week	16	9	56.3		28	11	39.3	
4 -6 times a week	23	8	34.8		22	9	40.9	
Everyday	46	26	56.5		65	33	50.8	
2-3 times a day	179	132	73.7		158	91	57.6	
4 or more times a day	38	31	81.6		23	10	43.5	
Used another's previously-used needle/syringe during the past week								
Not injected/Never	165	111	67.3	> 0 .05	239	113	47.3	< 0.01
Every time/Almost every time	35	28	80.0		11	7	63.6	
Sometimes	103	67	65.0		50	35	70.0	
Used a needle/syringe kept in a public place during the past week								
Not injected/Never	207	126	60.9	< 0.01	242	118	48.8	< 0.05
Every time/Almost every time	25	21	84.0		9	8	88.9	
Sometimes	71	59	83.1		49	29	59.2	
Total	**303**	**206**	**68.0**		**300**	**155**	**51.7**	

Frequency of injections was also found to have a positive association with HIV infection. Those who had injected drugs more often during the past week had higher rates of HIV infection. Similarly, the data reflects that sharing syringes places the IDUs at a higher risk. The IDUs who had shared needles sometimes or most often in the past week had a higher prevalence of HIV (70% and 64%) than those who had not shared needles. Likewise, the IDUs who had used a syringe that was kept in public places in the past week were found to be more at risk of contracting HIV than those who avoided such syringes. For example, around 89% of the IDUs who reported using such syringes had contracted HIV while the percentage of HIV infection was only 49% among those who avoided such syringes (Table 7.2).

7.3 Relation between Sexual Behavior and HIV

Caution is 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. HIV infection was found to be higher (61%) among the IDUs who had sex with a regular partner and lower (35.3%) among the IDUs who had engaged in sex with non-regular sex partners during the past 12 months. Similarly, the IDUs who had sex with one regular partner were found to have the highest rate of HIV infection (Table 7.3).

Table 7.3: Relation between Sexual Behavior and HIV

Sex with different partners in the past 12 months	First round (2002)				Second round (2005)			
	Total	HIV+	%	P Value	Total	HIV+	%	P Value
With regular partner								
Yes	97	70	72.2	> 0 .05	77	47	61.0	> 0 .05
No	172	113	65.7		185	91	49.2	
Never had sexual experience	34	23	67.6		38	17	44.7	
With non-regular partners								
Yes	50	27	54.0	> 0 .05	51	18	35.3	< 0.01
No	219	156	71.2		211	120	56.9	
Never had sexual experience	34	23	67.6		38	17	44.7	
With sex worker								
Yes	35	18	51.4	> 0 .05	56	23	41.1	> 0 .05
No	234	165	70.5		206	115	55.8	
Never had sexual experience	34	23	67.6		38	17	44.7	
Number of Partners in the past 12 months								
Number of Regular partners in the past 12 months								
0 Partner	206	136	66.0	> 0 .05	223	108	48.4	< 0. 05
1 partner	96	69	71.9		77	47	61.0	
2 partners	1	1	100.0		0	0	0.0	
Number of Non-Regular partner in the past 12 months								
0 Partner	253	179	70.8	<0 .01	249	137	55.0	< 0.05
1 partner	34	22	64.7		29	11	37.9	
2 or more partners	16	5	31.3		22	7	31.8	
Number of sex workers in the past 12 months								
0 Partners	268	188	70.1	< 0.05	244	132	54.1	> 0 .05
1 sex worker	20	9	45.0		27	11	40.7	
2 or more sex workers	15	9	60.0		29	12	41.4	
Total	**303**	**206**	**68.0**		**300**	**155**	**51.7**	

7.4 Odds Ratio of HIV Infection by Selected Characteristics of IDUs

Unadjusted odd ratios of HIV risk were calculated by selected characteristics of the IDUs. Table 7.5 shows the risk of HIV infection to be 1.7 times higher among those IDUs who are 20+ years old than compared to younger IDUs. Age was significant in 2002 but not in 2005. Illiterate people have an almost 5.2 times higher risk of contracting HIV, and the 95 % confidence interval estimated for odds ratio is 1.63-18.56. Education is significant in 2005 but not in 2002. Ever married IDUs are at a greater risk of HIV infection compared to those who have never married. For example, the odds ratio is about 2.2 for ever married IDUs compared to those who have never married. These odds ratios are statistically significant in both 2002 and 2005 study. The IDUs who injected drugs with another's previously-used syringe had 2.5 times greater chances of HIV infection. Injected drugs with another's previously used syringe was significant in 2005 but not in 2002. The correlating factor for HIV infection is the use of needles/syringes kept in a public place. An IDU who uses such a needle is almost 1.85 times more likely to contract HIV compared to those who do not use such needles/syringes. The estimated risk varies between 0.99 and 3.5. This was significant in 2002 but not in 2005. Similarly, the risk of HIV infection is higher for IDUs who have previously injected drugs in other parts of the country or in other countries though statistically not significant (Table 7.4).

Table 7.4: Odd Ratios of HIV Infection by Selected Characteristics of IDUs

Socio-Demographic and Injecting Characteristics	First round (2002)			Second round (2005)		
	Odd Ratio	# Cases (n)	95% Confidence Interval	Odd Ratio	# Cases (n)	95% Confidence Interval
Age						
<20 years	-	22	(1.13, 3.18)	-	18	(0.60, 5.12)
= >20 years	1.90	281		1.74	282	
Education						
Illiterate	1.67	9	(0.31, 11.87)	5.22	24	(1.63, 18.56)
Literate	-	294		-	276	
Marital status						
Never married	-	181	(1.37, 4.18)	-	189	(1.33, 3.70)
Ever married	2.38	122		2.22	111	
Injecting behavior						
Injected with another's previously-used syringe during last injection						
Yes	-	138	(0.75, 2.85)	2.46	61	(1.30, 4.69)
No	1.47	165		-	239	
Injected with a syringe kept in public place						
Yes	3.33	96	(1.55, 7.34)	1.85	58	(0.99, 3.49)
No	-	207		-	242	
Injected with a pre-filled syringe						
Yes	1.68	18	(0.50, 6.22)	1.32	12	(0.37, 4.93)
No	-	285		-	288	
Injected in another part of the country or in another country						
Yes	-	98	(0.98, 2.87)	1.03	69	(0.58, 1.82)
No	1.68	205		-	231	

CHAPTER - 8
SUMMARY AND RECOMMENDATIONS

8.1 Summary of the Major Findings

The main objective of this study was to estimate the rate of HIV infection among IDUs and assess their risk behaviors.

Structured questionnaires were used to collect behavioral data. Clinical blood tests were conducted by collecting blood by pricking the finger and storing it in capillary tubes. 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 Kathmandu Valley in a probability-based manner.

Result of IDUs

Socio-Demographics

Overall, the median age of respondents was 26 years (range: 14x to 45y). No major changes were observed between the first and second rounds of the study. The percentage of adolescents and youth (below the age of 25) was 42.3%. Eight percent of the IDUs were illiterate. Around 37% of the IDUs were either currently or previously married. Out of the 83 currently married IDUs, 81 were living with their spouse.

Injecting Practice

Out of the 300 IDUs, 46% had been injecting drugs for over five years. More than half (53%) got into the habit before the age of 20. About 53% of the IDUs were injecting drugs two-three times a day. Seventy-three percent were using a combination of drugs. The use of a combination of drugs has increased compared to the first round of the survey and the increase was due to the frequent road blockades and imposition of emergency in the country. The percentage of IDUs that reported using another's previously used syringe during the past week was about 20%. The percentage of IDUs that reported using a syringe kept in a public place during the past week was 19.3%. A positive change was observed compared to the first round of the survey in the practice of sharing injections among the IDUs.

Twenty three percent of the respondents were found to be mobile and had injected drugs in another part of the country or in another country.

All the drug injectors knew of sources of new/unused needles.

Of the total sample respondents, 31.7% had received some kind of treatment in the past. Around three-quarters of the respondents reported having received treatment at rehabilitation centers in the past.

Sexual Risk Behavior and Use of Condom

Of the total study participants, almost 87% had been or were currently sexually active. Among the respondents who had engaged in sex with a sex worker, 33.9% consistently used a condom during sex with a sex worker while about 13% never used a condom. Similarly,

about 35% of the IDUs reported consistently used condom during sex with non-regular female sex partners while only 13% used condom consistently during sex with regular partners. Consistent condom used with all the female sex partners found decreased compared to the 2002 study. However, condom used in the last sex with all the female partners has increased compared to 2002 study.

Knowledge of HIV

All the respondents had heard about HIV/AIDS. Of the total sample IDUs, 91% thought that using a condom every time during sex could prevent HIV. About 99% of the respondents knew that a person could get HIV by using another's previously-used needle. Eighty-two percent of the IDUs were of the opinion that people who use injecting drugs could protect themselves from HIV by switching to non-injecting drugs.

HIV Prevalence

Out of the total sample of 300 IDUs, 51.7% were found to be HIV positive, which is less by 16.3% compared to the finding of the first round of the survey.

8.2 Recommendations

Based on the findings of this study, a few specific recommendations have been made. They are as follows:

- HIV/AIDS awareness and prevention programs in Kathmandu Valley should continuously target IDUs. These programs should especially cover IDUs living without sexual partner or alone, since the survey results have shown that more than 70 percent IDUs live without a sexual partner or alone.
- Education programs run by HIV/AIDS programs targeted to IDUs should emphasize on educating them about the increased risk of HIV transmission due to "risky" behaviors such as sharing syringes and unsafe sex practices.
- There is an urgent need to educate the IDUs in Kathmandu valley on the risk of HIV transmission even through the use of common container for drawing drugs, as more than three-fourth IDUs had reportedly shared such items on one or the other occasion in one week preceding the survey.
- More than one-half of the IDUs in the valley were of less than 20 years of age. Awareness raising programs should focus more on IDUs of this specific age 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 community to impart proper sex education and awareness on HIV/AIDS.
- The use of a condom with a regular partner was found to be low when compared to condom use with sex workers and non-regular partners. More IEC materials should be designed to disseminate information on the need to use condom consistently with all kinds of sex partners.
- More target group specific IEC materials should be designed and distributed in the valley. Radio and television programs on condom use and HIV/AIDS should be continued.

- About a quarter (33.3%) of the IDUs who had experienced one or the other symptom of STIs, had not sought any treatment. As for HIV test, only about two fifth of the respondents had undertaken the test, of whom the proportion of IDUs going for voluntarily test was mere 9.7%. 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.
- Rehabilitation and detoxification centers should be supported for providing necessary assistance the IDUs in Kathmandu valley especially to those belonging to economically deprived families.
- Monitoring and evaluation of HIV prevalence and risk behaviors of IDUs is needed at regular time intervals as HIV prevalence is high and unsafe injecting and unsafe sex is still being practiced in this sub group of population.

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ANNEX – 1

Confidential

Integrated Bio- Behavioral Survey (IBBS) among Injecting Drug Users in Kathmandu Valley

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

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

1. Yes 2. No **(continue interview**)

↓

When? _____Days ago **(close interview)**

002. Respondent ID #: | | | | | | |

002.1 Write down how you made contact? _____

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

_____

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

1. Yes 2. No

002.4 How long you have been injecting drugs? Years _____Months _____

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

003. Interview Location (to be filled by interviewer)

003.1 Name of location **(such as tole, chowk, lane etc.)**

_____

003.2 Ward No. _____

003.3 VDC/Municipality: _____

003.4 District: _____

003.5 Place of interview **(such as temple, restaurant, lodge, Institution etc.)**

_____

1.0 BACKGROUND OF RESPONDENT

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
101	Where are you living now? ***(Name of current place of residence)***	Ward .....☐☐ VDC/Municipality_____ District_____	
101.1	How long have you been living continuously at this location?	Month.....☐☐☐ Always (since birth).....0 Others (Specify)_____96	
102	In the last 12 months have you been away from your home for more than one-month altogether?	Yes.....1 No .....2 Don't' know .....98 No response 99	
103	How old are you?	Age .....☐☐ ***(Write the completed years)***	
104	What is your educational status?	Illiterate.....0 Literate.....19 Grade .....☐☐ ***(Write the completed grade)***	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
105	What is your caste? ***(Specify Ethnic Group/Caste)***	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 ..... ☐☐ **(Write the completed years)**	
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? **(Such as beer, local beer etc.)**	Every day.....1 More than once a week .....2 Less than once a week .....3 Never drink.....4 Others (Specify)_____ .....96 No response 99	

2.0 DRUG USE

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
201.	How long have you been using drugs? ***(Drug means medicine not used for treatment purpose rather used for Intoxication)***	Years..... ☐☐ Months..... ☐☐ No response 99	
202.	How old were you when you first injected drugs? ***(Include self-injection or injection by another)***	Years ..... ☐☐ ***(Write the completed years)***	
203	How long have you been injecting drugs? ***(Include self-injection or injection by another)***	Years..... ☐☐ Months..... ☐☐ 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? ***(Read the list, multiple answer possible)***		

Description	Used in Last-Week				Injected in Last-Week			
	YES	NO	DK	NR	YES	NO	DK	NR
1. Tidigesic	1	2	98	99	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 ..... ☐ → 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 ..... ☐☐	
208.	How many times would you say you injected drugs on the last day?	Times ..... ☐☐	
209.	During the past one-week how often would you say you injected drugs?	Once a week .....1 2-3 times a week .....2 4-6 times a week .....3 Once a day .....4 2-3 times a day.....5 4 or more times a day.....6 Not injected in the last week.....7 Don't know .....98 No response 99	

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? ***(Fill the number from answer to Q. 205 or 208 and verify by asking the respondent)***	Times ..... ☐☐	
302.	The last time you injected, how did you get that syringe/needle? ***(+ Public place means the place where they keep syringe other than his home)***	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+ ....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	
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. ..... ☐☐ Injected alone.....96	
303.	Think about the time before the last time you injected, how did you get that syringe/needle? ***(+ Public place means the place where they keep syringe other than his home)***	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+ .....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..... ☐☐ Injected alone.....96	
304.	Now think about the time before **(before Q. 303**), how did you get that syringe/needle? ***(+ Public place means the place where they keep syringe other than his home)***	My friend/relative gave it to me after his use .....1 Unknown person gave it tome .....2 I picked it up from a public place which was left there by others+ .....3 I picked it up from a public place which was left there by myself+ ..4 I used a new needle/syringe given by NGO staff/volunteer.....5 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.....….....….. ☐☐ 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? ***(Public place means the place where they keep syringe other than his home)***	Every times .....1 Almost every-times.....2 Sometimes .....3 Never .....4 Don't know.....98 No response 99				
306.	In the past one-week, did you ever share needles and syringes with any of the following?					
	Read out list. Multiple answers possible	**Yes**	**No**	**DK**	**NR**	
	1. Your usual sexual partner	1	2	98	99	
	2. A sexual partner who you did not know	1	2	98	99	
	3. A friend	1	2	98	99	
	4. A drugs seller	1	2	98	99	
	5. Unknown Person	1	2	98	99	
	96. Other (Specify) _____	1	2	98	99	
307.	With how many different injecting partners did you share needles or syringes in the past one-week? ***(Count everyone who injected from the same syringe)***	Number of partners ..……..☐☐ Don't know.....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? **(B*y that I mean a syringe that was filled without your witnessing it)***	Yes.....1 No .....2 Don't know .....98 No response 99				
310.	In the past one-week, how often did you inject drugs using a syringe after someone else had squirted drugs into it from his/her used syringe? ***(front-loading/back-loading/ splitting)***	Every times .....1 Almost every-times.....2 Sometimes .....3 Never .....4 Don't know.....98 No response 99				
311.	In the past one-week, when you injected drugs, how often did you share a cooker/ vial/container, cotton/filter, or rise water?	Every times .....1 Almost every-times.....2 Sometimes .....3 Never .....4 Don't know.....98 No response 99				
312.	In the past one-week, how often you draw up your drug solution from a common container used by others?	Every times .....1 Almost every-times.....2 Sometimes .....3 Never .....4 Don't know.....98 No response 99				

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? ***(Do not read out list. Multiple answers possible. Probe only with "Anywhere Else?")***	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 ..... ☐☐ Don't know.....98 No response 99	
319.	What kind of treatment or help have you received? ***(Do not read out the responses, probe asking, "Are there any other kinds of treatment that you've received?" Multiple Answers Possible.)***		
	Types of Treatments	**Name of Institutions**	
	1. Outpatient counseling		
	2. Self-help groups		
	3. Detoxification w/methadone		
	4. Maintenance w/methadone		
	5. Detoxification w/other drugs		
	6. Detoxification with no drug		
	7. Residential rehabilitation		
	8. Helped to quite *cold turkey*		
	9. Forced to quite *cold turkey*		
	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 ..... ☐☐ ***(Write completed years)*** 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..... ☐☐	
403.1	How many were female "regular partners"? ***(Your wife or live-in sexual partners)***	Number ..... ☐☐ Don't know.....98 No response 99	
403.2	How many were female "sex worker"? ***(Partners to whom you bought or sold sex in exchange for money or drug)***	Number ..... ☐☐ Don't know.....98 No response 99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
403.3	How many were female "non-regular partners"? ***(Sexual partners, you are not married to and have never lived with and did not have sex in exchange for money)***	Number ..... ☐☐ Don't know.....98 No response 99	
404.	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 ..... ☐☐ 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 ..... ☐☐ 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? ***(Do not read the possible answers, multiple answer possible)***	Not available.....1 Too expensive.....2 Partner objected .....3 Don't like them.....4 Used other contraceptive .....5 Didn't think it was necessary .....6 Didn't think of it.....7 Other (Specify) _____ ..96 Don't know.....98 No response 99	
501.4	How often have you used a condom with female regular partners in the past year?	Every times .....1 Almost every-times.....2 Sometimes .....3 Never used .....4 Don't know.....98 No response 99	

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? ***(Check 403.2 and circle the response of Q. 502)***	Yes.....1 No 2	→503
502.1.	**Think about the female sex workers that you have had sex in the past one-month. In total how many were:** Number of female sex workers, to whom you sold sex in exchange for money or drugs.	Nos.....☐☐ 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.....☐☐ 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 .....☐☐ 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 → 502.5 No .....2 Don't know.....98 No response .....99 → 502.5	
502.4	Why did not you and your partner use a condom that time? ***(Do not read the possible answers, multiple answer possible)***	Not available.....1 Too expensive.....2 Partner objected .....3 Don't like them.....4 Used other contraceptive .....5 Didn't think it was necessary .....6 Didn't think of it.....7 Other (Specify) _____.96 Don't know.....98 No response 99	
502.5	How often have you used a condom with female sex workers in the past year?	Every times .....1 Almost every-times.....2 Sometimes .....3 Never used .....4 Don't know.....98 No response 99	

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? ***(Check 403.3 and circle the response of Q. 503)***	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 ..... ☐☐ 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? **(*Don't read the possible answers, multiple answer possible*)**	Not available.....1 Too expensive.....2 Partner objected .....3 Don't like them.....4 Used other contraceptive .....5 Didn't think it was necessary .....6 Didn't think of it.....7 Other (Specify) _____.96 Don't know.....98 No response 99	
503.4	How often have you used a condom with a female non-regular partner in the past year?	Every times .....1 Almost every-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? ***(Show picture or sample of condom)***	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?** *(Multiple answer possible. Don't read the list but should probe).*	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 ***(from your house or the place where you work)*** 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? ***(Do not read possible answers, multiple answers possible.)***	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? ***(Do not read possible answers, multiple answer possible)***	Genital discharge .....1 Burning pain on urination .....2 Genital ulcers/sore blister .....3 Swellings in groin area .....4 Others (Specify) _____ .96 Don't know .....98 No response 99	
704.	Have you had 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	
02.	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 fried 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? ***(Do not read the possible answers, multiple answer possible)***	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? ***(By confidential, I mean that no one will know the result if you don't want him or her to know it.)***	Yes.....1 No .....2 Don't know.....98 No response 99	
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? ***(Read the following list, multiple answers possible)***			
	Source of Information	**Yes**	**No**	
	1. Radio	1	2	
	2. Television	1	2	
	3. Newspapers/Magazines	1	2	
	4. Pamphlets/Posters	1	2	
	5. School/Teachers	1	2	
	6. Health Worker/Volunteer	1	2	
	7. Friends/Relatives	1	2	
	8. Work Place	1	2	
	9. People from NGO	1	2	
	10. Video Van	1	2	
	11. Street Drama	1	2	
	12. Cinema Hall	1	2	
	13. Community Event/Training	1	2	
	14. Bill Board/Sign Board	1	2	
	15. Comic Book	1	2	
	16. Community Workers	1	2	
	96. Others (Specify) _____	1	2	
902.	Has anyone give you following information or items in the past year? ***(Multiple answer possible, read the list)***			
	Items	**Yes**	**No**	
	1. Condom	1	2	
	2. Brochure/Booklets/Pamphlets about HIV/AIDS	1	2	
	3. Information about HIV/AIDS	1	2	
	96. Others (Specify) _____	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? ***(Read the following list, multiple answer possible)***			
	Sources	**Yes**	**No**	
	1. Radio	1	2	
	2. Television	1	2	
	3. Pharmacy	1	2	
	4. Health Post	1	2	
	5. Health Center	1	2	
	6. Hospital	1	2	
	7. Health Workers/Volunteers	1	2	
	8. Friends/Neighbors	1	2	
	9. NGOs	1	2	
	10. Newspapers/Posters	1	2	
	11. Video Van	1	2	

Q. N.	Questions and Filters	Coding Categories		Skip to Q.N.
	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? ***(Multiple answer possible)***			
	Message/characters	**Yes**	**No**	
	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? **Knowing someone is defined as being able to contact them, and having had contact with them in the past 12 months – knowing each other**	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 [_____] Buddhist [_____] Muslim [_____] Christian [_____] Others (Specify) _____ [_____] 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

$$n = D\left[(Z_\alpha + Z_\beta)^2 * (P_1 (1 - P_1) + P_2 (1 - P_2)) / (P_2 - P_1)^2\right]$$

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_1 = the estimated number of an indicator measured as a proportion at the time of the first survey or for the control area

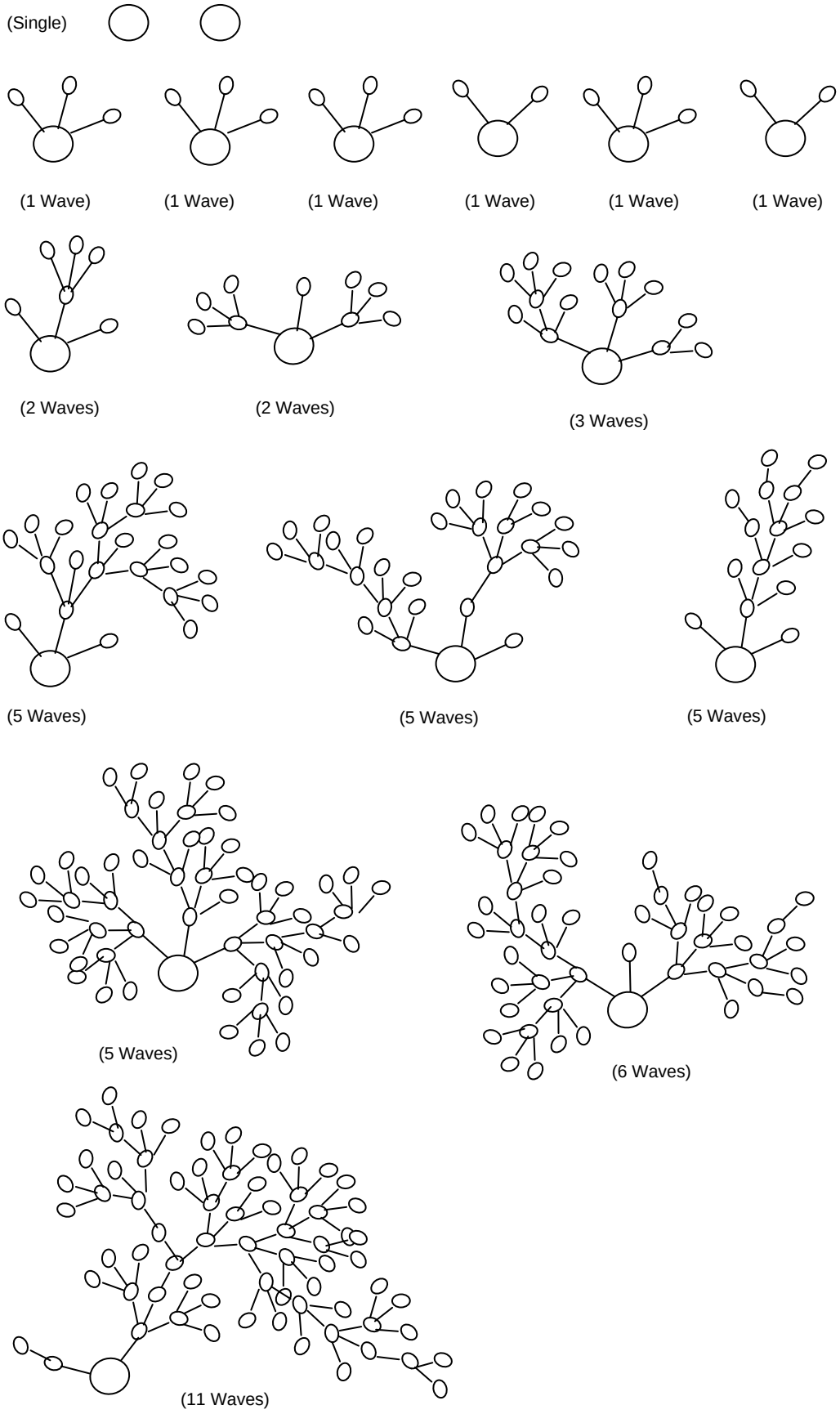
P_2 = the expected level of the indicator either at some future date or for the project area such that the quantity (P_2-P_1) is the size of the magnitude of change it is desired to be able to detect

Z_α = 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_2-P_1) would not have occurred by chance (α – the level of statistical significance), and

Z_β = the Z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P_1-P_2) if one actually occurred (β – statistical power).

ANNEX – 3

Respondent Driven Sample of IDUs in Kathmandu Valley



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/APD Thailand
	:	Siddhartha Tuladhar, New ERA, Nepal
	:	Niranjan 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)

If you have any questions or problems about this research, please contact

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Siddhartha Man Tuladhar
New ERA, Kalopool,Kathmandu, Nepal:Pnone: 1 413603. Asha Basnyat, Family Health International (FHI), Gairidhara, Kathmandu, Phone: 4427540

If you have any questions about your rights while you are in the research, you may contact

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ANNEX - 5
Lab Centers

District	Lab Centers	No. of Centers	Sample Covered	Total
Kathmandu Valley	Gaushala	3	97	300
	Gwarko		53	
	Sundhara		150	

ANNEX - 6
Participation in Post Test Counseling

Date	Counseling Center	Expected Client	Client Counseled		Client with HIV+	Client with HIV-
			N	%		
April 27 to May 31, 2005	Kathmandu	300	23	7.7	11	12

ANNEX - 7
The Reasons for Not Injecting Drugs Yesterday

Injecting practice	First round (2002)		Second round (2005)	
	n	%	n	%
Reasons for not injecting yesterday				
To quite slowly	9	36.0	12	29.3
Lack of money	7	28.0	15	36.6
Unavailability/lack of drugs	3	12.0	3	7.3
Busy in house work/lack of time	2	8.0	3	7.3
Taking other medicine	1	4.0	4	9.8
Due to illness	1	4.0	2	4.9
Attending treatment center	1	4.0	0	0.0
Others	1	4.0	3	7.3
Total	**25**	*****	**41**	*****

*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	First round (2002)		Second round (2005)	
	N=303	%	N=300	%
In upper arm	215	71.0	52	17.3
In wrist	62	20.5	111	37.0
In forearm	8	2.6	73	24.3
In calf	6	2.0	12	4.0
In thigh	5	1.6	27	9.0
In vein of neck	3	1.0	3	1.0
In the back of palm	0	0.0	15	5.0
In arch	0	0.0	3	1.0
In finger	0	0.0	3	1.0
In armpit	0	0.0	1	0.3
Others	4	1.3	0	0.0

ANNEX – 9

Gathering Place of IDUs to Inject Drugs

S.N.	Gathering places of IDUs to inject drugs	First round (2002)		Second round (2005)	
		N	%	N	%
1.	Own room/friends room	117	38.6	112	37.3
2.	Chowk/Tole/Galli/Road	54	17.8	29	9.7
3.	Open ground/Town planning area	41	13.5	0	0.0
4.	Forest/Bushes	24	7.9	84	28.0
5.	Toilet/Public toilet	16	5.3	7	2.3
6.	Bridge area	16	5.3	0	0.0
7.	Temple area	11	3.6	7	2.3
8.	River Bank/Slum area	11	3.6	58	19.3
9.	Around Cinema hall	3	0.9	0	0.0
10.	Hospital area	2	0.7	0	0.0
11.	Vacant house	2	0.7	0	0.0
12.	Others	6	2.0	3	1.0
	Total	**303**	**100.0**	**300**	**100.0**

ANNEX - 10

Combination of Different Drugs Injected by IDUs

S.No.	Drugs combination	First round (2002)	Second round (2005)
		N	N
1.	Calmpose + Tidigesic	31	1
2.	Tidigesic + Phenargan	19	0
3.	Tiodigesic + Saipam	12	0
4.	Tidigesic + Diazepam	6	4
5.	Tidigesic + Avil	5	0
6.	Codeine + Phenargan + effidin (Formula)	4	0
7.	Tidigesic + Proxigin	2	0
8.	Tidigesic + Phenargan + Saipam + Calmpose	2	0
9.	Brawn sugar + Nescorvic (vit.C)	2	0
10.	Spritmindom + Avil (Formula)	1	0
11.	Cinol + Proxyban	1	0
12.	Velium + Nitrovate	1	0
13.	Codeine + Velium + Nitrovate	1	0
14.	Algic + Avil	1	0
15.	Tidigesic + Calmpose + Phenargan	1	0
16.	Brownsugar +Calmpose + Diazepam	1	0
17.	Tidigesic + Calmpose + Diazepam	1	0
18.	Tidigesic + Saipam + Phenargan + Diazepam	1	0
19.	Tidigesic + Phensydyl	1	0
20.	Tidigesic+Calmpose+Diazepam + Phenargan + Saipam	1	0
21.	Tidigesic + White Sugar	1	0
22.	Tidigesic + Nitrovate	1	0
23.	Tidigesic + Algec	1	0
24.	Proxygun + Deltus + Corex	1	0
25.	Codine + Phenargan + Efidine + Proxigin	1	0
26.	Tidigesic + Calmpose + Phenargan	1	0
27.	Proxygin + Corex	1	0
28.	Tidigesic + Phenargan + Codine + Saipam	1	0
29.	Codine + Avil	1	0
30.	Proxybon + Specimindon + Alfazobum + Deltas D + Repharodil + Effide	1	0
31.	Tidigesic + Campose + Saipam	1	0
32.	Norphin + Diazepam	0	107
33.	Norphin + Calmpose	0	42
34.	Norphin + Diazepam + Calmpose	0	9
35.	Norphin + Diazepam + Phenargan	0	5
36.	Norphin +Algic + Calmpose	0	4
37.	Norphin + Diazepam + Phenargan + Algic	0	3
38.	Norphin + Avil + Diazepam	0	3
39.	Norphin + Phenargan	0	3
40.	Norphin + Diazepam + Phenargan + Calmpose	0	2
41.	Diazepam + Tidigesic + Phenargan	0	2
42.	Norphin + Phenargan + Calmpose	0	2
43.	Norphin + Avil + Diazepam + Phenargan	0	2
44.	Norphin + Avil + Calmpose	0	2
45.	Norphin + Avil + Calmpose + Diazepam	0	2
46.	Norphin + Phenargan + Calmpose + Talgesic	0	2
47.	Tidigesic + Phenarmine	0	1
48.	Calmpose + Talgesic	0	1
49.	Phenargan + Calmpose + Talgesic	0	1
50.	Phenarmine + Algic + Phenargan + Saipam + Calmpose	0	1
51.	Phenargan + Phenarmine + Talgesic	0	1
52.	Norphin + Diazepam + Phenarmine + Algic	0	1
53.	Diazepam + Talgesic	0	1
54.	Norphin + Avil	0	1
55.	Norphin + Phenaromain + Diazepam	0	1
56.	Norphin + Algic	0	1
57.	Norphin + Calmpose + Tidigesic	0	1
58.	Norphin + Talgesic	0	1
59.	Norphin + Phenaromine + Phenargan + Calmpose	0	1
60.	Norphin + Diazepam + Jitminormine	0	1
61.	Norphin + Diazepam + Algic	0	1
62.	Diazepam + Nepozine	0	1
63.	Norphin + Diazepam + Algic + Avil + Phenaroming + Phenargan + Calmpose	0	1
64.	Diazepam + Algic	0	1
65.	Norphin + Saipam + Fortwin	0	1
66	Norphin + Avil + Algic	0	1
67	Norphin + Phenarmine + Calmpose	0	1
68	Codeine + Proxyvon	0	1
69	Norphin + Proxyvon	0	1
70	Norphin + Avil + Diazepam + Phenargan + Calmpose	0	1
	Total	**74**	**219**

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

Drug switching behavior of IDUs	First round (2002)		Second round (2005)	
	N	%	N	%
Switched from one drugs to another drugs in past month	5	1.7	8	2.7
Not switched	298	98.3	292	97.3
Total	**303**	**100.0**	**300**	**100.0**
Switched from				
Tidigesic to Brown Sugar	2	40.0	2	25.0
Brown Sugar to Tidigesic	2	40.0	0	0.0
Tidigesic to Nitrovate + Nitrosun	1	20.0	0	0.0
Norphin to Talgesic	0	0.0	2	25.0
Tidigesic to Proxyvon	0	0.0	1	12.5
Tidigesic to Tylegenic	0	0.0	1	12.5
Norphin to Brown Sugar	0	0.0	1	12.5
Norphin to Tylegenic	0	0.0	1	12.5
Total	**5**	**100.0**	**8**	**100.0**
Reasons for switching *				
Low Tips in Tidigesic	2	40.0	0	0.0
Unavailability/scarcity of drugs	1	20.0	7	87.5
To reduce Tidigesic	1	20.0	0	0.0
High price of Brown Sugar	1	20.0	0	0.0
Heavy tips in Brown Sugar	1	20.0	0	0.0
Easy to by Brown Sugar	1	20.0	0	0.0
Enough money to buy Brown Sugar	1	20.0	0	0.0
Lack of money	0	0.0	1	12.5
Others	0	0.0	1	12.5
Total	**5**	*****	**8**	*****

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

ANNEX – 12

Behavior of Respondents Regarding Syringe Use and Sharing within the Last Three Injections

Needle/syringe use during recent drug injections	Drug injecting acts N=300					
	Second round (2005)					
	Most Recent		Second Most Recent		Third Most Recent	
	N	%	N	%	N	%
Needle/syringe received from						
Low risk injecting behavior						
Used a purchased new needle/syringe	207	69.0	194	64.7	198	66.0
Used new needle/syringe given by NGO staff/volunteers	40	13.3	45	15.0	39	13.0
Used new needle/syringe given by friend	0	0.0	1	0.3	1	0.3
Low risk behavior total	**247**	**82.3**	**240**	**80.0**	**238**	**79.3**
High risk injecting behavior						
Used own previously used needle/syringe	43	14.3	48	16.0	44	14.7
Used needle/syringe given by friends/relatives after their use	6	2.0	7	2.3	14	4.7
Used needle/syringe that had been kept in public place by himself	1	0.3	4	1.3	2	0.7
Used needle/syringe that had been kept in public place by someone	3	1.0	1	0.3	2	0.7
High risk behavior total	**53**	**17.6**	**60.0**	**19.9**	**62**	**20.8**
Persons in the group using the same needle/syringe						
2 person	14	4.7	16	5.3	21	7.0
3 or more persons	5	1.7	6	2.0	5	1.7
None/Alone	281	93.7	278	92.7	274	91.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

ANNEX – 13

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

City	District	Country	No. of IDUs			
			First round (2002)		Second round (2005)	
			n	%	n	%
Birgunj	Parsa	Nepal	22	22.4	23	33.3
Pokhara	Kaski	,,	14	14.3	11	15.9
Dharan	Sunsari	,,	10	10.2	7	10.1
Narayanghat	Chitwan	,,	5	5.1	6	8.7
Biratnagar	Morang	,,	5	5.1	2	2.9
Kakadvitta	Jhapa	,,	4	4.0	-	-
Butwal	Rupandehi	,,	4	4.0	-	-
Bhairahawa	Rupandehi	,,	4	4.0	3	4.3
Hetauda	Makawanpur	,,	4	4.0	2	2.9
Manakamana	Gorkha	,,	3	3.0	-	-
Janakpur	Dhanusha	,,	2	2.0	2	2.9
Banepa	Kavre	,,	2	2.0	-	-
Madanpur	-	,,	2	2.0	-	-
Phikal Bazar	Ilam	,,	-	-	1	1.4
Damak	Jhapa	,,	-	-	2	2.9
Letang	Morang	,,	-	-	1	1.4
Panchkhal	Kavre	,,	-	-	1	1.4
Bidur	Nuwakot	,,	-	-	1	1.4
Dhangadhi	Kailali	,,	-	-	1	1.4
Other city of Nepal	-	,,	22	22.4	-	-
Raksaul	-	India	14	14.3	6	8.7
Delhi	-	,,	6	6.1	1	1.4
Budhagaya	-	,,	2	2.0	-	-
Gorakhpur	-	,,	2	2.0	1	1.4
Jogbani	-	,,	-	-	6	8.7
Pani Tanki	-	,,	-	-	1	1.4
Other city of India	Other districts of India	,,	14	14.3	-	-
Total			**98**	**100.0**	**69**	**100.0**

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

ANNEX – 14

Types of Treatment and Institutions from Where Treatment Received In the Second round (2005)

Types of treatments / Types of institutions	Residential rehabilitation		Maintenance with methadone		Forced to quit		Helped to quit		Without drug		With other drug		Detoxification with methadone		Total	
	n	%			N	%	N	%	N	%	N	%	n	%	N	%
Naulo Ghumti	2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	2	2.1
Ashra/Youth Vision/Navajeevan	26	27.4	-	-	-	-	-	-	-	-	-	-	-	-	26	27.4
Nawa Kiran	10	10.5	-	-	-	-	-	-	-	-	-	-	-	-	10	10.5
Ashara Sudhar Kendra	7	7.4	-	-	-	-	-	-	-	-	-	-	-	-	7	7.4
Richmond Fellowship Center	6	6.3	-	-	-	-	-	-	-	-	-	-	-	-	6	6.3
Freedom Center	3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	3	3.2
Mukti Kendra	3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	3	3.2
Sahara Treatment Center	3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	3	3.2
Sangati	3	3.2	-	-	-	-	-	-	-	-	-	-	-	-	3	3.2
Punarjeewan Kendra	2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	2	2.1
Sanjeebani	1	1.1	-	-	-	-	-	-	-	-	-	-	-	-	1	1.1
Bankali	1	1.1	-	-	-	-	-	-	-	-	-	-	-	-	1	1.1
My Home	1	1.1	-	-	-	-	-	-	-	-	-	-	-	-	1	1.1
Patan Hospital	-	-	-	-	-	-	-	-	-	-	-	-	2	2.1	2	2.1
BP Memorial Hospital	-	-	-	-	-	-	1	1.1	-	-	1	1.1	-	-	2	2.1
Himal Nursing Home	-	-	-	-	-	-	-	-	-	-	1	1.1	-	-	1	1.1
Medicare	-	-	-	-	-	-	-	-	-	-	1	1.1	-	-	1	1.1
Others	1	1.1	3	3.2	1	1.1	2	2.1	1	1.1	8	8.4	-	-	16	16.9
Name not known	2	2.1	-	-	-	-	-	-	-	-	3	3.2	-	-	5	5.3
Total	**71**	**74.7**	**3**	**3.2**	**1**	**1.1**	**3**	**3.2**	**1**	**1.1**	**14**	**14.7**	**2**	**2.1**	**95**	**100.0**

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

ANNEX – 15

Reasons of not using condom in the last sex with different female sex partners

Reasons of not using condom	First round (2002)		Second round (2005)	
	N = 303	%	N = 300	%
Reasons of not using condom with regular partner in the last sexual intercourse				
Not available	2	3.1	0	0.0
Partner objected	4	6.2	3	6.5
Don't like them	16	25.0	8	17.4
Used other contraceptive	21	32.8	15	32.6
Didn't think it was necessary	43	67.2	27	58.7
Didn't think of it	2	3.1	2	4.3
Willing to have baby	0	0.0	1	2.2
Others	1	1.6	0	0.0
Total	**64**	*	**46**	*
Reasons of not using condom with sex worker in the last sexual intercourse				
Not available	8	57.1	5	35.7
Partner objected	0	0.0	4	28.6
Don't like them	5	35.7	2	14.3
Didn't think it was necessary	0	0.0	2	14.3
Didn't think of it	2	14.3	1	7.1
Others	2	14.3	0	0.0
Total	**18**	*	**14**	*
Reasons of not using condom with non-regular partner in the last sexual intercourse				
Not available	7	35.0	7	38.9
Partner objected	1	5.0	1	5.6
Don't like them	2	10.0	2	11.1
Used other contraceptive	1	5.0	0	0.0
Didn't think it was necessary	10	50.0	7	38.9
Didn't think of it	4	20.0	4	22.2
Others	4	20.0	0	0.0
Total	**20**	*	**18**	*

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