

Behavioral And Sero Prevalence Survey Among Injecting Drug Users (IDUs) in Eastern Nepal

November 2003

BEHAVIORAL AND SERO PREVALENCE SURVEY AMONG INJECTING DRUG USERS (IDUs) IN EASTERN NEPAL

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EXECUTIVE SUMMARY

HIV transmission among drug users is typically associated with those who share needles or syringes. Risky behavior has been defined here as needle sharing behaviors, unprotected sex with various partners and female sex workers. Injecting drug user function as a “bridging population” for HIV transmission between a core HIV risk group and the general population. The main objective of this study is “to estimate the prevalence of HIV among IDUs and assess their role in the transmission of HIV.” The study was conducted in the three districts Morang, Sunsari and Jhapa of Eastern Nepal. Three hundred and forty-five IDUs were sampled from 23 randomly selected sites, through respondent driven sampling (RDS). Structured questionnaires were used to collect behavioral data, clinical blood tests were done to determine HIV infection. The clinical protocol used involved collecting blood from a subject’s pricked finger, and then storing the collected blood in 3-4 capillary tubes until tests could be performed. In order to determine participants’ HIV status, two rapid test ‘Capillus’ and ‘Determine’ were conducted. In case of tie a third test “Uni-Gold TM” was performed.

Demographic Characteristics

The median age of IDUs was 25 years, with 11 percent below the age of 20 years, suggesting injecting drug use gaining popularity among the younger generation. A significant proportions of IDUs are adolescents. A large percentage (53.3%) of respondents were unmarried. Almost forty-seven percent respondents were ever married. The median marriage age was 20 years and the majority of respondents (81.4%) were married between the ages of 15 and 24.

Almost sixty-three percent of IDUs were living without sexual partner or alone. All 129 currently married IDUs participating in the study were living with their spouse. Two percent of the currently married IDUs reported their wives having another male sexual partner.

Social Characteristics

The study shows 71.3 percent of IDUs had 6-10 years schooling and only 4.3 percent were illiterate. IDUs from different ethnic groups were represented in the sample. About 32 percent of IDUs were Brahmin followed by Chhetri (16.2%), Tamang/Lama/Magar/Sherpa (14.8%), Newar (7.8%), and Rai/Limbu (7.5%).

A large majority of participants were born in the three study districts (Jhapa, Morang and Sunsari) of Eastern Nepal. Almost sixteen percent of all participants had been living in the study area for more than five years.

Alcohol and Oral Drugs Consumption among IDUs

About 78 percentage of IDUs in the sample have reported the consumption of alcohol. Almost thirty percent IDUs have reported daily consumption of alcohol. Similarly, 30.7 percent consumed alcohol more than once a week during the past month. The average duration of oral drug use was 7.6 years. A majority of IDUs (61.7%) reported using drugs orally for over five years.

Drug Injecting Practice of IDUs

The duration of injecting drugs was lower than the use of oral drugs. For instance, the average duration of injecting drugs was 4.1 years among IDUs. While almost 31 percent of IDUs had injected drugs for more than five years, around half (48.4%) had injected drugs for 1-5 years and 20.6 percent had been injecting drugs for less than a year. Nearly 46 percent IDUs in the sample had first injected drugs when they were less than or equal to 20 years olds. Median age at first drug injection was 21 years.

Four in ten (41.4%) respondents reported that they inject drugs 2-3 times a day. About 32.5 percent respondents inject drugs once a day while only 1.2 percent inject once a week.

About 15 percent had injected drugs three or more times in the previous day/last day while 56.5 percent injected only once in this period. Alternatively, 14.5 percent respondent had not injected drugs the day preceding the interview. The mean number of injections in the previous day/last day was two.

A majority of respondents (40.9%) take injections via the arm. However, around one-third of respondents (31.%) inject drugs in their wrist. Similarly, almost eleven percent of respondents were found to be injecting in left/right elbow.

Tidigesic was widely used by respondents (80.6%) in Eastern Nepal. This was followed by a combination of various drugs, which appeared much higher (56.8%). Other drugs injected in the last week by a sizeable proportion of respondents included Brown sugar and Norfin.

Syringe Use and Sharing Behavior

Using a syringe that has been previously used by others greatly increases the risk of HIV/AIDS transmission. Around 65 percent of the respondents reported of never used another's previously used syringe in the last week. About one-third (33.7%) of participants had used such a syringe sometime in the past week. Similarly, one-fourth (23.5%) reported the use of a syringe kept in a public place. Around 46 percentage of IDUs gave the used needle/syringe to some one in the last week.

Out of the total 345 IDUs in the sample, about half (48.7%) reported not sharing syringes with anyone in the past week. Of those who shared, it was mostly among friends (48.4%). Additionally, half of them shared between 2 to 3 partners.

Drug Sharing Behavior

Out of all respondents, nearly 99 percent had injected drugs within the past week. Of these respondents, 8.4 percent had injected with pre-filled syringes. Fourteen percent of IDUs used drugs from a syringe after someone had transferred drugs into it from his previously used syringe. Around, eight percent IDUs shared materials such as bottles, spoons, cotton. However, 71.6 percent participants in the past week had drawn drug solution from a common container used by others.

Of the total 345 respondents, 84.6 percent were found mobile that means had either injected drugs in other parts of the country or in another country. Almost all of these mobile groups had injected in different parts of India.

Of the 292 IDUs who had either injected in other parts of the country or out of the country, 20.9 percent reported that they had used another's previously used syringe to inject drugs and 28.1 percent reported giving their used syringe to another person.

Needle/Syringe Cleaning Practice

Furthermore, some other patterns of behavior among the IDUs that put them at greater risk for contracting HIV/AIDS are observed. Improper cleaning of shared and reused needles/syringe presents a higher risk of HIV infection to IDUs. The proper method for cleaning a needle is to alternate between thorough rinses using distilled water and bleach, repeating the process several times. The study revealed that most of the IDUs clean their needles/syringes with saliva (31.2%) and distilled water (26.3%). About 17 percent IDUs clean used needles with plain water and 10 percent with bleach.

Accessibility of Syringe

Almost all the respondents were aware of sources for new syringes. About 95 percent cited drugstores as a source of new syringe. About six in ten (58.5%) reported knowledge of the needle exchange program run by various NGOs. Other sources mentioned were drug sellers (16.8%), friends (3.2%), drug wholesaler (2.9%) and hospitals (2%).

Treatment Practice

It was discouraging to note that majority of IDUs have not received treatment. It is even more discouraging to note that among those who had sought treatment less than one percent were currently under treatment. Twenty percent had undergone treatment previously. Out of the ever-treated population, 36.6 percent had received treatment within the past one-year.

About forty-six percent were treated in a residential rehabilitation center like, Punarjiban Kendra (Dharan), Sebyan Drug De-addiction center (India), Ashara, Freedom Center and Richmond Center (Kathmandu). Around 12.7 percent reported they self tried to quit without drugs. Few respondents mentioned that they had received treatment from hospitals within the country and in India.

Sexual Behavior of IDUs

HIV transmission among drug users is most often correlated with injecting or needle/syringe-sharing behavior. However, drug users' risky sexual behavior also contribute to the spread of HIV among both injecting and non-injecting sex partners.

Nine in ten (93%) IDUs have reported ever having sex with female sex partner. Of them 79.1 percent had gained first sexual experience at the age of less than 20 years. The median age of respondents at the first sexual intercourse was 17 years. Out of 321 respondents that reported having had sexual intercourse, 61.4 percent had sexual intercourse in the past 12 months. About one-third (33.5%) of the respondents who had sex in the last 12 months had two or more female sex partners.

Of the total 321 respondents who had sexual experience, 38.3 percent had sexual intercourse with a regular female sex partner in past 12 months. Regular female sex partner is defined as a spouse or female sexual partner living together with the respondent. Out of the 123 IDUs who had sex with regular female sex partners in the past 12 months, 13 (10.6%) had not had

sex with them during the last month. Those who had sex with regular sex partners in the last month, 70 percent have had sex for five or more times. Similarly, study shows that out of 50 respondents who had sex with non-regular female sex partners in the past 12 months, 60 percent had not had sex with them during the last month. And only about 30 percent IDUs who had sex with non-regular partners in the last month have had sex for five or more times in this period.

Around One-fifth (21.8%) respondents have reported having sex with female sex workers in the past 12 months. Of the 70 respondents who had sex with female sex workers in the past 12 months, 44.3 percent had sex with sex workers in the last month also. Out of the 31 respondents who had sex with female sex workers in the last month, about 19.4 percent have had sex with them for 5 or more times.

Knowledge and Use of Condom

All IDUs have heard of condoms. The use of a condom with a regular female sex partner was found to be low when compared to condom use with female sex workers and non-regular female sex partners. The use of condom reported by IDUs while having last sex with female sex workers was about 64 percent. While the use of condom with non-regular female sex partners was 42 percent. But, only 27.6 percent had used a condom with their regular female sex partner during the last sexual intercourse.

In order to protect oneself from sexually transmitted diseases, a condom must be used during all sex acts. In this context, consistent use of condoms with different female sexual partners during the year preceding the survey was assessed. The consistent condom use with regular and non-regular sex partners is low compared to consistent condom use with female sex workers. For instance, only 12.2 percent and 28 percent respondents reported consistent condom use when they had sex with regular and non-regular female sex partners respectively in the last 12 months. But the consistent use of condom with female sex workers during the same duration is about 41.4 percent.

A majority of the respondents who had sex with regular and non-regular female sex partners but did not use condom reported that they did not feel the necessity of using condoms while having sex with them. About twelve percent of respondents having sex with a regular female sex partner reported the use of other means of contraception as the reason for not using condom. A majority of respondents who did not use condom while having sex with female sex workers cited that a condom was not available to them at the time of sexual intercourse.

Source of Condoms

Almost all IDUs had heard about condom. Overwhelming percentages of IDUs (96.5%) mentioned pharmacy as a source of condoms. Peer educator, followed by shop, health worker/health post and hospitals were other major sources of condoms cited by the participants. Almost all of the respondents reported condoms as available within a 30 minutes walk from their place of residence.

Sources of Information about Condom

IDUs were aware of multiple sources of information. The most common sources of information were bill boards/signboards, radio, pharmacy, television, newspapers/ poster friends/neighbors and hospitals .

As part of a strong effort to inform target groups about condoms, the National Health Education Information and Communication Center (NHEIC) has been launching radio and TV programs with technical assistance from various sources. The study gathered information on whether IDUs in the sample had heard specific condom messages broadcasted through radio and TV programs. The specific messages tested were *Condom Lagaaun AIDS Bhagaun*, *Jhilke Dai Chha Chhaina Condom*, *Condom Bata Surakchhya Youn Swastha ko Rakchhya*, *Use condom for the protection from HIV/AIDS*, *Talks about HIV/AIDS from today*, *Gurujee Ra Antare and Dhale Dai*. Data shows that these programs have been largely successful in terms of disseminating messages about condoms, as a high percentage of IDUs had heard of specific messages. Among these messages, respondents' exposure to *Condom lagaun AIDS bhagaun* was highest (98.3%).

Knowledge of STIs

A significantly high percentage (96.5%) of respondents reported having heard about STIs. Those who demonstrated a general awareness about STIs were also aware of the symptoms of STIs. The most commonly cited STI symptoms among females included genital ulcers/sore blisters, genital discharge, foul smelling discharge and itching around genital area. Similarly, major symptoms of STIs among males reported by male IDUs are genital ulcers/sore blisters, genital discharge, burning pain during urination and itching around genital area. About two third and half of the respondents had no idea on the symptoms of STIs among females and males respectively Study participants also mentioned that they have had STI symptoms in the past year. Around 2 percent IDUs reported a genital ulcer/sore blister, genital discharge within the past year. Similarly, among the respondents who had STI symptoms past year, around 25 percent had such problem at the time of survey also.

Out of the 345 respondents about 85 percent reported not having any STI symptoms so far. Those respondents who had ever experienced any symptom of STIs almost 9.4 percent did not seek any treatment for such problems and three quarter (75.5%) received treatment from private doctors. Percentage of respondents seeking treatment from hospitals and health posts was only about fifteen.

Knowledge of HIV/AIDS

Almost all IDUs had heard of HIV/AIDS. More than half respondents reported knowing a person who had died from HIV/AIDS. A majority (51.1%) of the respondents said that those who had died were their close friends and 44.2 percent reported knowing a non-relative who had died of AIDS.

Respondents were asked questions to understand their conceptions about HIV/AIDS prevention. About 86 respondents opined that a person could avoid HIV/AIDS through consistent use of condoms and about three-quarter (74.8%) of IDUs cited a monogamous sexual relationship as a means of protection. Similarly, 72.5 percent mentioned abstinence from sex as the way of protection from HIV/AIDS.

Almost 89 percent of IDUs were aware that sharing a meal with an HIV positive person does not transmit HIV/AIDS. Similarly, ninety-six percent knew a person could get HIV by using another's previously used needle. Among the 345 IDUs interviewed about three-fourth (73.3%) believe that switching from injecting to non-injecting drugs could protect them against HIV/AIDS. However, 40 percent were found to believe HIV/AIDS could be transmitted from mosquito bite too.

A large majority (92.5%) of IDUs were aware that a pregnant women infected with HIV could transmit the virus to her unborn child. A relatively lower percentage of respondents, nearly 48.7 percent stated that a woman with HIV could transmit the virus to her newborn child through breast-feeding also. However, a majority of respondents (82%) did not know what steps a pregnant woman can take to reduce the risk of HIV/AIDS transmission to her unborn child.

Knowledge about HIV Testing Facilities

All study participants were enquired on the current availability of confidential HIV testing and whether they had ever been tested for HIV?. About 53 percent of respondents think that confidential HIV testing is possible. About twenty-three percent had tested their blood for HIV either voluntarily or as prescribed by a health professional. Around 91 percent of the respondents who were tested for HIV received the results of their test. Of the total tested respondents about 31 percent were tested within the last 12 months.

Source of knowledge about HIV/AIDS

Radio, billboards/signboards, television, friends/relatives and pamphlets/ posters are reported as the source of knowledge of HIV/AIDS by more than 90 percent respondents. Similarly, newspapers/magazines (86.7%), NGO workers (86.4%), cinema halls (79.4%) and health workers/volunteers (73.3%) also are commonly cited sources of HIV/AIDS knowledge.

In this survey, about three-fourth respondents reported that they were given materials regarding AIDS such as brochure/booklets/pamphlets, condoms, or and any specific information about AIDS during the last year. For instance, 71.9 percent had received information about condoms and nearly 75.6 percent received printed materials related to HIV/AIDS and about 85.5 percent respondents had received information on HIV/AIDS from various sources.

HIV Status

HIV status was derived from two rapid 'Capillus' and 'Determine' tests. In case of tie in the first two test results "Uni-Gold TM" test was performed as the confirmatory test. Out of the 345 blood samples of IDU participating in the study 121 (35.1%) were tested positive.

Relation between Socio-Demographic Characteristics, Injecting and Sexual behaviors of IDUs and HIV Infection

The incidence of HIV was found to be higher among the older IDUs. For instance about 37.1 percent of IDUs of age 20 years and above were positive where as HIV infection in the age group below 20 years was only 18.4 percent. HIV status also differs significantly ($p < .01$) by marital status. Prevalence is higher among formerly married IDUs than those who were either

never married or are currently married. Data shows that literacy had a mild negative relationship with HIV infection among IDUs. HIV prevalence was found 40 percent among illiterate males compared to 34.8 percent among literate IDUs ($p = 0.68$).

Data shows that those who have been injecting drugs for a long period have a greater chance of HIV infection. Among those males who have been injecting for more than five years, 55.1 percent were HIV +ve. HIV infection rates dropped to 29.4 percent as duration of injecting drugs dropped to 1 to 5 years from more than five years. Around 11.4 percent IDUs with less than one year of injecting duration were tested HIV positives.

Frequency of injection in the past week was also found to have a positive association with HIV infection, but not significant ($p = 0.64$). Those who had injected more often within the past week had higher rates of HIV infection. Data indicates that sharing a common syringe does not put IDUs at a higher risk of HIV in comparison to non-sharing IDUs. Those who had not-shared needles in the past week had little higher prevalence of HIV than those who did share. IDUs who had used a syringe kept in a public place in the past week exhibited more risk for HIV infection than those who avoid such syringes. For example, around 42 percent who reported using such syringes had contracted HIV while a lesser percent (32.9) who avoided such syringes had HIV. But all these differences are not statistically significant.

The relationship between sexual behavior of IDUs and the HIV infection does not seem to be as expected. For instance, IDUs having sex with female sex workers have low HIV infection compared to their counterparts. In general IDUs having sex with sex workers and other regular and non-regular sex partners seems to have lower risk of HIV. Similarly, higher the number of sex partners in the last 12 months lower seems to be HIV infection

Recommendations

Based on the finding of this study, a few specific recommendations have been made. First is that this type of study should be conducted at an interval of one or two years in order to monitor and evaluate the HIV prevalence and risk behaviors of IDUs. Secondly, cross boarder awareness program is needed to minimize the out flow of the IDUs for injecting drug in boarder area. Third is that the harm reduction programs for IDUs should be continuously targeted for minimizing syringe sharing and reusing the previously used syringes among the IDUs. Fourthly, lack of practice of consistent use of a condom with different sexual partners might increase HIV infection among their sex partners as they might bridge the infection. Therefore, IDUs should be encouraged for correct and consistent use of condom with female sex workers as well as with different sexual partners through education programs. Fifth is that the study shows the reasons cited for low treatment practice was the economic condition of IDUs. So provision should be made to make the treatments economically and physically more accessible to IDUs. Lastly, IDUs who are not able to quit the injecting behaviors should be given knowledge of proper cleaning of used needle to minimize the spread of infection among the injectors.

CHAPTER 1

INTRODUCTION

1.1 Background

As of November 2003, a cumulative total of 3,244 HIV infections, including 704 cases of AIDS and 182 deaths from AIDS have been reported in Nepal (NCASC, 2003). Although NCASC data reflects only the reported cases and therefore do not show the complete picture, it is estimated that one third of all HIV infections are among IDUs. Sharing and re-use of needles left by others in the public places has been a critical factor in the spread of HIV in several developing countries. In response to growing HIV epidemics, many governments, including Nepal have begun to develop intervention policies and programs that target 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).

‘Risky’ sexual behavior associated with drug use also may be a major contributing factor to the spread of HIV among the non-injecting population. Drug users function as a “bridging population,” that is, a bridge for HIV transmission between a core HIV risk group and the general population. In most areas where HIV is prevalent among injecting drug users, they were found to serve as the primary source for HIV transmission in the heterosexual population and in prenatal transmission as well (Jarlais, 1992).

A HIV and Behavioral Surveillance Survey among IDUs conducted in 2001 showed about 68% HIV prevalence among the male IDUs in Kathmandu. The high prevalence of HIV among IDUs in Kathmandu indicated that other towns and cities where large number of IDUs are active also may have HIV high infection and need to be surveyed to understand their behavior which is needed for the development of proper HIV/AIDS prevention and care programs for this group. BSS and HIV studies were also needed to analyze the trend of HIV among the target group over time.

1.2 Objectives of the Study

The objective of this study is to estimate the prevalence of HIV among IDUs in the three districts Jhapa, Morang and Sunsari of Eastern Nepal and assess their ‘at risk’ behavior. Survey will provide baseline data for measuring the effectiveness of intervention programs aimed at reducing ‘at risk’ behavior among the IDUs.

The specific objectives of this study are:

- To estimate the number of IDUs in three districts in the Eastern Terai of Nepal
- To collect socio-demographic characteristics of IDUs
- To understand both needle sharing and condom use behavior among IDUs
- To ascertain the IDU community’s level of consciousness regarding syringe exchange programs, outreach workers and voluntary HIV counseling and testing services available in the valley
- To assess HIV/AIDS awareness among IDUs and their risk perceptions
- To estimate the current level of HIV prevalence among IDUs

CHAPTER 2 METHODOLOGY

2.1 Study Design

The study was done, among the IDUs in the metropolitan and sub-metropolitan municipalities, and the highway areas of the Morang, Sunsari, and Jhapa districts of Eastern Nepal. 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 had injected drugs within the last three months prior the date of interview.

Structured questionnaires were used to collect behavioral data relating to drug injections, syringe/needle sharing and sexual behavior among IDUs. Additionally, some demographic and social characteristics were collected. 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).

2.1.1 Estimation of Number of IDUs

Number of IDUs and the sites/locations they gather for injecting purposes in the study area was not known prior the study. So an extensive mapping exercise was done before actual fieldwork for identification of the sites/locations and estimating the number of IDUs in those locations. The mapping exercise was completed in about three-weeks time. For this exercise field researchers were divided into four teams, each team consisting of two core researchers and one ex/current IDU from the study area. The study area was divided into four parts and one team of field researchers was assigned to each part.

Popular locations where IDUs gather for injection were identified with the help of NGO's working for IDUs and local key informants. These informants included local leaders, shopkeepers, tourist guides, social workers, police, priests, local restaurant owners, transport workers, local residents, medical shops, saloons, public toilet cleaners, street children, ex/current IDUs, and drug dealers. After possible IDU 'hang-out' sites were identified, field teams counted the number of injecting drug users whom they talked with, the number of injecting drug users they observed, and the number of drug users as reported by key informants. Researchers recorded typical timings of IDU gatherings at particular sites and visited all possible locations for verification. After the triangulation of information obtained from different key informants, the reported number of injecting drug users was listed for each site.

Based on the mapping exercise about 155 sites and 2205 male IDUs were identified in three districts of the Eastern Terai of Nepal (Annex 2). This is a much smaller number than usually coated by local NGOs in the Eastern Nepal. This has been the trend in size estimation of IDUs in Pokhara and Kathmandu also.

The research team could count only a total of 31 female IDUs in the Eastern Nepal and the team was able to contact only with six female IDUs. Key informants reported that female IDUs are small in number in Eastern Nepal. They also indicated that most of them are hidden and inject in isolation.

2.1.2 Sample Size and Sampling Design

As the number of female IDUs was estimated to be fairly low this study was designed to interview only male IDUs. A sample of 345 male IDUs was estimated to measure about 12 percent increase in HIV among IUDs from the assumed rate of 20 percent in Eastern Nepal (Annex 3).

Traditional probability sampling methods, such as simple random, cluster and stratified sampling used in household surveys, are not suitable for reaching IDUs and other such hidden populations, as sampling frame are not available and response rates are usually low and lacking in candor (Spren and Zwaagstra, 1994). Similarly, the street-based location sampling methods that have dominated much risk-reduction research (Semaan et. al., 1998) such as targeted sampling (Watters and Biernacki, 1989) tend to exclusively 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, respondent driven sampling (RDS), a form of chain referral *network* sampling was used.

Theoretically, RDS sampling can safely be applied also in the situations where little information on the population size by sites/locations is available by selecting suitable seeds and recruiting the respondents in sufficient number of waves. However, in Eastern Nepal a mapping exercise was done before the survey. Using the information obtained from mapping exercise following sampling strategy was designed.

Out of the initially identified 155 sites in the study area, twenty-three sites were selected randomly using systematic probability sampling. One 'seed' or initial respondent was chosen from each site. After interview and blood sample collection, each 'seed' was asked to recruit two drug-injecting friends. This group was considered the 'first wave'. Subsequently, each study participant in the first wave was then asked to recruit two more drug-injecting friends (second wave). Similarly, each study participant in the second wave was asked to bring two more drug-injecting friends (third wave). If an IDU could not bring two additional friends, other participating IDUs of the same wave were asked to bring more friends in order to compensate accordingly. In this manner, each 'seed' yielded a total of 15 respondents from the site (Annex 4). Researchers choose the 'seeds' in a way that would tap into networks of both old injectors (using more than five years) and new users (less than or equal to five years). Similarly, attempts were made to use both old and young injector as 'seeds'. In each case, the 'seed' was given a card to give to the friends he recruited. Each card had a unique identification number, indicating the code for the site, the initial seed, and the wave. Only those respondents who came with a referral card were recruited for the study.

In order to maintain the confidentiality of study participants their names and full addresses were not recorded. Instead, they were provided a unique ID number written in a plastic coated card. This card was used for the test result distribution purposes also. Only those participants who produced the card were provided the HIV test results. Each respondent was provided Rs. 200 (equivalent \$ 2.5) to cover the local transportation costs needed for visiting the interview sites and bringing two friends recruited by them to the sites.

The fieldwork started on April 13, 2003 and completed on May 26, 2003.

2.1.3 Informed Consent

The research study was conducted in compliance with both ethical and human rights standards. These standards include participant anonymity as well as pre-and post-test counseling. As this study was done with the human subjects who are highly stigmatized and the injecting drugs is illegal in the country ‘ethical’ as well as ‘technical’ approvals were taken from Family Health International’s ethical body ‘Protection of Human Subject Committee (PHSC)’ and the Nepal Health Research Council (NHRC) prior the field work of the study. Prior the interview and blood sample collection, informed oral consent was obtained from all participants. The oral consent form used in the study is given in Annex 5. All possible precautions were taken in order to maintain confidentiality. Consequently, names and full addresses of the study participants were not asked and recorded.

2.1.4 Blood Sample Collection and HIV Testing

The blood sample for HIV test was obtained by finger pricks and was collected in capillary tubes. Two rapid tests namely, ‘Capillus’ and ‘Determine’ were conducted in order to determine HIV infection among study participants. In case of tie in the first two tests a third test ‘Uni-Gold TM’ was performed. The tests were done by qualified laboratory technician from STD/AIDS Counseling Training Service (SACTS) in the laboratory of AMDA Hospital at Damak and Itahari and Nepal Red Cross Society (NRCS) at Biratnagar and Dharan. Collected blood samples were kept in the cold chain within one hour of collection and the tests were done on the same day of sample collection.

The Abbott Determine HIV-1/2 is an In Vitro, 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 from infected individuals.

The trinity Biotech Capillus HIV-1/HIV-2 is a 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 in low volume testing facilities, emergency situations, or in areas where sophisticated equipment is not available.

Quality of information provided by study participants and clinical specimen collection was monitored through log form developed for monitoring the study.

2.2 **Study Management**

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

Field workers involved in the mapping exercise underwent four days of training. After training, researchers were divided into four teams consisting of two field researchers and one ex/current IDU from the study area. The same team of field workers involved in the BSS among IDUs in Pokhara were used in this study.

Before the data collection, an intensive seven-day training was provided to all study team members. This training allowed field teams to become familiar with research instruments,

study methodology and information collection techniques. Two-day theory and practice on pre-test counseling was also provided to the trainees. Questionnaires were practiced using both classroom-based role-play exercises and the field practices. The field researchers were divided into two teams. These teams consisted of one research assistant, four researchers and one lab technician.

Centers were established in 10 different places of study area for interviewing participants and collecting blood samples. Team A set 5 such centers to cover 11 sites and team B also set 5 centers to cover 12 sites (Annex 6). Individual interviews and blood collection activities were carried out in separate rooms after obtaining participant's informed oral consent. Before blood collection pre-test counseling was provided for all study participants. Blood samples were collected through finger pricks. The blood was then stored in 3-4 capillary tubes until test was performed in the laboratory of AMDA hospital in Jhapa district and in the laboratory of Red Cross in Morang and Sunsary district. The blood test was done by the lab technician from STD/AIDS Counseling and training service (SACTS) in the respective laboratory.

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

In order to avoid duplication/repetition in study participant recruitment a researcher was exchanged between the centers after study activities were completed for one site. Moreover, some basic cross check questions also were asked to the recruited participants before the interview to conform that they are not repeatedly interviewed. Centers, sites and locations of interview are presented in Annex 6.

2.3 Post Test Counseling and Test Result Distribution

After the blood sample collection all study participants were informed about the time and place where they should contact for test results with the ID card issued to them at the time of interview. They were also pre- informed that test results will be provided with post-test counseling by a trained counselor.

Post-test counseling and individual report dissemination was completed between June 7-22, 2003. Out of 345 IDUs tested for HIV only 93 turned out for the test results (Annex 7). The test results were given to the participants only after producing ID cards in a private setting by trained counselors. They were advised on various aspects of STI and HIV and the measures to be taken by participants who had HIV+ or HIV- results. The participants were referred to AMDA Hospital, Regional and Zonal Hospitals for further services. Those participants who wanted to re-confirm their blood test results were allowed to do so free of cost at the SACTS laboratory in Kathmandu.

2.4 Data Cleaning and Analysis

All the questionnaires were collected in the New ERA Kathmandu office after the completion of fieldwork. Questionnaires were thoroughly checked for any inconsistencies before the data was entered into the computer using Fox Pro software. Later data file was transferred into SPSS files for further analysis.

Simple statistical tools, such as frequency distribution, percentages, range, proportion, mean and median were used to analyze the result of the survey. Chi-square values also were calculated for to measure the statistical significance of the relationship between two variables presented in a cross table. Odd ratios were calculated to analyze 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 345 male IDUs recruited in the sample from the three districts (Jhapa, Morang and Sunsari) in the Eastern Terai.

3.1 Demographic Characteristics

Demographic characteristics of the IDUs are presented in Table 3.1. The median age of IDUs was 25 years. Injecting drug use seems to be common among younger generation also. About 11 percent of IDUs are below the age of 20. Around 45 percent IDUs are adolescents and youths (below the age of 25 years).

A large percentage (53.3%) of respondents were never married. Around 47 percent IDUs were ever married. Of them 8.7 percent were found divorced/separated. Median age at marriage is 20 years and the majority of respondents (81.4%) were married at the age of 15 to 24.

Almost 63 percent IDUs were living without sexual partner or alone. All the 129 currently married IDUs were living with their spouse. Two of the currently married IDUs reported having another sexual partner of their spouse (Table 3.1).

3.2 Social Characteristics

Nearly three-quarter (71.3%) of IDUs had 6-10 years schooling and only 4.3 percent were illiterate. Similarly 9 percent IDUs had attained SLC or above education.

IDUs from different ethnic groups had participated in the sample. About 32 percent IDUs were Brahmin followed by Chhetri/Thakuri (16.2%), 14.8 percent were from Mongolian tribe (Tamang/Lama/Magar/Gurung/Sherpa), Newar (7.8%), and Rai/Limbu (7.5%).

A large majority (80.6%) of participants were born in the three study districts of Eastern Nepal. Among the migrant IDUs, majority (54 out of 67) were living in the three study districts of Eastern Nepal for more than five years (Table 3.2).

Table 3.1: Demographic Characteristics of the Sample Population

Characteristics	No. of IDUs	
	N	%
Age		
14-19	38	11.0
20-24	119	34.5
25-29	93	27.0
30-34	68	19.7
35-39	23	6.7
40-44	4	1.2
Median age	25	
Marital Status		
Married	129	37.4
Divorced/Separated	30	8.7
Widower	2	0.6
Never married	184	53.3
Total	345	100.0
Age at First Marriage		
10-14	2	1.2
15-19	57	35.4
20-24	74	46.0
25-29	25	15.5
30-34	3	1.9
Median age	20	
Total	161	100.0
Currently Living With		
Spouse	129	37.4
Living without sexual partner/alone	216	62.6
Total	345	100.0
Other Sexual Partner of IUD's Spouse		
Yes	2	1.5
No	127	98.5
Total	129	100.0

Table 3.2: Social Characteristics of the Sample Population

Characteristics	No. of IDUs	
	n=345	%
Education		
Illiterate	15	4.3
Literate only	5	1.4
Grade 1-5	48	13.9
Grade 6-10	246	71.3
SLC and above	31	9.0
Ethnicity		
Brahmin	111	32.2
Chhetri/Thakuri	56	16.2
Tamang/Lama/Magar/Gurung/Sherpa	51	14.8
Newar	27	7.8
Rai/Limbu	26	7.5
Terai caste	16	4.6
Occupational Caste	13	3.8
Musalman	12	3.5
Rajbanshi	8	2.3
Chaudhary/Tharu	6	1.7
Giri/Puri/Sanyasi	5	1.4
Mandal	5	1.4
Teli/Shah	4	1.2
Others	5	1.4
Duration of stay in Eastern Region (Jhapa, Morang and Sunsari districts)		
Since Birth	278	80.6
Since 5 Years	13	3.8
More than 5 Years	54	15.6

CHAPTER 4

DRUG USE, NEEDLE SHARING AND TREATMENT

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

4.1 Alcohol Consumption among IDUs

The use of alcohol is common among IDUs in Eastern Nepal. Percentage of IDUs reporting never use of alcohol is only about 22 percent. In the sample of 345 IDUs about 29 percent reported daily consumption of alcohol and about 31 percent reported more than once a week in the past month. Similarly, about 18 percent of IDUs reported that they consumed alcohol less than once a week during the past month.

IDUs were asked about the duration of oral drug use. A higher percentage of IDUs had been using oral drugs for quite a long time. The average duration for oral drug use was 7.6 years. A majority of IDUs (61.7%) had been using drugs orally for over sixty months and 35.7 percent of IDUs were using drug orally since last 13-60 months (Table 4.1).

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

Alcohol and oral drug use acts	No. of IDUs	
	n=345	%
Alcohol Used during the past month		
Every day	100	29.0
More than once a week	106	30.7
Less than once a week	62	18.0
Never	77	22.3
Duration of Oral Drug Use		
Up to 12 months	9	2.6
13 – 60 months	123	35.7
More than 60 months	213	61.7
Average duration in years	7.6	

4.2 Drug Injecting Practice of IDUs

The duration of injecting drugs was lower than the use of oral drugs. For instance, the average duration of injecting drug use was 4.1 years among IDUs. Almost 31 percent of IDUs were injecting drugs for more than sixty months. Data indicates that 48.4 percent of the IDUs had been using injecting drugs for a period ranging 13-60 months and that 20.6 percent had been using injecting drugs since 12 months. Around 46 percent of the sampled IDUs had injected drugs when they were less than or equal to 20 years of age. Median age of the IDUs at the first drug injection was 21 years.

A large percentage of respondents (41.4%) reported that they inject drugs 2-3 times a day. Similarly, about 32.5 percent inject once in a day and about 1.2 percent inject once a week. However, about 4.9 percent reported injecting drugs four times or more in a day.

Table 4.2: Drug Injecting Practice of Respondents

Drug Injecting practice	No. of IDUs	
	N=345	%
Duration of Drug Injection habit		
Up to 12 months	71	20.6
13–60 months	167	48.4
More than 60 months	107	31.0
Average duration years	4.1	
Age at first Drug Injection		
Up to 20 years	158	45.8
21 + years	187	54.2
Median age	21	
Frequency of Drug Injections within the Past Week		
Not injected	4	1.2
Once a week	4	1.2
2-3 times a week	25	7.2
4-6 times a week	40	11.6
Once a day	112	32.5
2-3 times a day	143	41.4
4 or more times a day	17	4.9
Frequency of Drug Injections Yesterday/last day		
1 time	195	56.5
2 times	98	28.4
3 or more times	52	15.1
Mean	2	

The frequency of drug injection was also enquired for the day preceding the interview and or last day. About 15.1 percent had injected three or more times the previous day and or last day while 56.5 percent had injected drug only once. The mean number of drug injected in the yesterday/last day was two (Table 4.2). Alternatively, 50 (14.5%) respondents had not injected drugs the day preceding the interview. For about a quarter of the respondents the main reason for this was the lack of money and desire to slowly quit drug-injecting habits. Other reasons cited are busy in household work and unavailability of drugs (Annex 8).

The arms were reported (40.9%) as the most common part of the body used for injecting drugs by IDUs. However, around one-third of respondents (31%) inject drugs in their wrist also. Similarly, almost 11.3 percent of respondents were found to be injecting in elbows (Table 4.3).

The most common place for injecting drugs among respondents was either own rooms/friends room or forest/bushes. Other common places included Jogabani (India), open ground/town planning area, river bank/slum area/pond and pool house/ swimming pool (Annex 9).

Table 4.3: Part of the Body Where Injection is Taken

Typical Injection Points	No. of IDUs	
	n=345	%
In left/right arms	141	40.9
In left/right wrist	107	31.0
In front of left/right elbow	39	11.3
In the back of palm of the hand	24	7.0
In left/right muscles of leg	14	4.1
In the joint of leg and hip	9	2.6
In left/right elbow	4	1.2
Others	7	2.0

Table 4.4 provides information on types of drugs injected in the past week. Tidigesic was widely used by respondents (80.6%). This was followed by a combination of various drugs, whose use appeared much higher (56.8%). Most common drug used in the combination was tidigesic with other drugs like calmpose, Avil, Algic, Saipam etc (For types of combination see Annex 10). Other drugs injected by a sizeable proportion of respondents within the last week included Brown sugar and Nrofin.

Table 4.4: Types of Drugs Injected by Respondents

Types of drugs	Drug Injected in last-week	
	n=345	%
Tidigesic	278	80.6
Brown Sugar	39	11.3
Combination	196	56.8
Norfin	3	0.9

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

All IDUs in the sample were asked about types of drugs used orally or inhaled. Around 59.7 percent IDUs reported using 'nitrosun' within the past week. Other drugs taken either orally or inhaled that constituted sizeable proportions of IDUs were ganja, phensydyll, Brown Sugar and Nitrovate (Annex 11).

Information was also collected on drug-switching behavior among IDUs. Data shows that only 8 respondent had switched from one drug to another. Common reasons mentioned for switching drugs were to reduce tidigestic, to leave drug taking habit slowly and lack of access to brown sugar (Annex 12).

4.3 Syringe Use and Sharing Behavior

Respondents were asked several questions about their needle/syringe use and sharing behavior in the last three injection acts.

In response to the questions "last time you injected, how did you get that syringe/needles" almost 57 to 61 percent of respondents reported they used a purchased new syringe and around 14 to 18 percent reported that they injected with own previously used syringe in all

last three acts. Similarly, 15 to 17 percent had used a new syringe provided by NGO staff/volunteers and around seven percent IDUs used syringe received from friends/relatives after their use in all the last three drug injecting acts (Table 4.5).

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

Needle/syringe use during recent drug injections	Drug injecting acts					
	Most Recent		Second Most Recent		Third Most Recent	
	N	%	N	%	N	%
Needle/syringe received from						
Used a purchased new needle/syringe	196	56.8	196	56.8	211	61.2
Used own previously used needle/syringe	61	17.7	64	18.5	47	13.6
Used new needle/syringe given by NGO staff/volunteers	60	17.4	51	14.8	58	16.8
Friend/relatives gave after his use	23	6.7	27	7.8	26	7.5
Used needle/syringe that had been kept in public place by himself	4	1.2	6	1.7	3	0.9
Used new needle/syringe given by friend	1	0.3	0	0.0	0	0.0
Unknown sexual partner	0	0.0	1	0.3	0	0.0
Persons in the group using the same needle/syringe						
2 person	60	17.4	57	16.5	54	15.6
3 or more persons	17	4.9	12	3.5	14	4.1
None/Alone	268	77.7	276	80.0	277	80.3
Total	345	100.0	345	100.0	345	100.0

In response to another question: “when 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?”, about eight in ten IDUs reported that they did not share needle/syringe or injected alone. While remaining two in ten IDUs had shared same syringe with 2 or more people in all the last three drug injecting acts (Table 4.5).

Information on the needle/syringe-sharing behavior of respondents in the past week also was collected. Around 65.2 percent of IDUs reported having never used others previously used needle/syringe. Almost one third (33.7%) of IDUs had shared syringe in the past week and 23.5 percentage participants were found to use syringes kept in a public place in the past week (Table 4.6).

About half (46.1%) of the IDUs had given syringes to someone after they injected while 52.7 percent respondents had ‘never’ gave a syringe to some one else after injection. Out of the total IDU population surveyed, about half (48.7) reported not sharing syringes with anyone in the past week. Of those who shared, it was mostly among friends (48.4%). Additionally, most of the IDUs who shared, shared between 2 or more partners (Table 4.6).

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

Needle/syringe use throughout the past week	No. of IDUs	
	n=345	%
Used a needle/syringe that had been used by another		
Every time	2	0.6
Almost every time	31	9.0
Some times	83	24.1
Never	225	65.2
Not injected last week	4	1.2
Used a needle/syringe that had been kept in Public place		
Every time	1	0.3
Almost every time	30	8.7
Some times	50	14.5
Never	260	75.4
Not injected last week	4	1.2
Gave a needle/syringe to some one		
Every time	3	0.9
Almost every time	49	14.2
Sometimes	107	31.0
Never	182	52.7
No injection last week	4	1.2
Shared needle/syringe with*		
Friend	167	48.4
Drug seller	4	1.2
Usual sexual partner	2	0.6
Unknown sexual partner	1	0.3
Unknown person	1	0.3
Not shared	168	48.7
No injection last week	4	1.2
Others	2	0.6
Number of needle/syringe shared partners		
None	168	48.7
Two partners	85	24.6
Three or more partners	88	25.5
No injection last week	4	1.2

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

4.4 Drug Sharing Behavior

This section describes the drug-sharing behavior of respondents. Out of all respondents, nearly 99 percent had used injection drugs during the week prior the date of survey. Of the total respondents, 8.4 percent had injected with pre-filled syringes. Similarly, about 14 percent IDUs used drugs from a syringe after someone had transferred drugs into it from his previously used syringe. Materials such as bottles, spoons, and cotton were shared by 8.4 percent of respondents. But almost three fourth (71.5%) respondents had drawn drug solution from a common container used by others during the same time period (Table 4.7).

Information on the internal and external mobility and injecting practices of the respondents was also collected in this survey. Of the total 345 respondents, 84.6 percent were mobile and had injected drugs either in other parts of the country or in another countries. Among these mobile groups all most all participants had injected in different parts of Nepal and India (Annex 13).

Of the 292 IDUs who had either injected in other parts of the country or out of the country, only 20.9 percent reported that they had injected with previously used syringes and about 28.1 percent had given their used syringes to others (Table 4.8).

4.5 Needle/Syringe Cleaning Practice

Improper cleaning of shared and reused needles/syringe increases the risk of HIV infection among IDUs. The prescribed method for cleaning used needles/syringes is: first wash five times by clean water then wash five times by bleach and finally wash it five times by clean water. But the IDUs in Eastern Nepal do not clean the used needles as prescribed. Most of the IDUs reported cleaning used needles/syringes with saliva (31.2%) and distilled water

Table 4.7: Past Week's Drugs Sharing Behavior

Drug sharing practice during past week	No. of IDUs	
	n=345	%
Injected with a pre-filled syringe		
Yes	29	8.4
No	312	90.4
No injection	4	1.2
Injected with a syringe after drugs were transferred into it from another's syringe		
Every time	-	0.0
Almost every time	3	0.9
Sometimes	45	13.0
Never	293	84.9
No injection	4	1.2
Shared a bottle, spoon, cooker, vial/ container, cotton/filter and rinse water		
Every time	3	0.9
Almost every time	8	2.3
Sometimes	18	5.2
Never	312	90.4
No injection	4	1.2
Drawn drug solution from a common container used by others		
Every time	59	17.1
Almost every time	124	35.9
Sometimes	64	18.5
Never	94	27.2
No injection	4	1.2

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	No. of IDUs	
	n=345	%
Used a needle/syringe that had been used by another		
Every time	3	0.9
Almost every time	10	2.9
Sometimes	59	17.1
Never	220	63.8
No injection	53	15.4
Gave a needle/syringe to someone else after use		
Every time	2	0.6
Almost every time	19	5.5
Sometimes	76	22.0
Never	195	56.5
No injection last week	53	15.4

Table 4.9: Needle/Syringe Cleaning Practice of Respondents

Needle/syringe cleaning behavior	No. of IDUs	
	N	%
Re-used needle/syringe in the past week		
Yes	224	64.9
No	121	35.1
Total	345	100.0
Ways of cleaning needle/syringe		
Saliva	70	31.2
Distilled water	59	26.3
Plain Water	39	17.4
Bleach	22	9.8
Paper	9	4.0
Medicine (Tidigesic, Phenarmine, Algie, Phenargan)	7	3.1
Boil in the water	3	1.3
Urine	2	0.9
Total	224	100.0

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

(26.3%). Similarly, about 17.4 percent and 9.8 percent IDUs reported of cleaning needles by plain water and bleach respectively (Table 4.9).

4.6 Knowledge of and Access to New Needle/Syringe

All respondents reported that they could obtain new syringes when they need it. Moreover, almost all respondents were aware of sources for obtaining new needles/syringes. About 95 percent cited drugstores as a source of new syringe. About six in ten (58.5%) know about the needle exchange programme by different NGOs. Other sources of new syringes mentioned by IDUs were drug sellers (16.8%), friends (3.2%) and drug wholesaler (2.9%) (Table 4.10).

4.7 Treatment Practice

Table 4.11 provides information on treatment sought by IDUs to break drug habits. Majority of respondents (79.4) had not received any treatment. Only two respondents were under treatment at the time of survey. Twenty percent had undergone for treatment previously. Out of the 71 ever-treated IDUs, 36.6 percent had received treatment within the last 12 months.

About forty-six percent IDUs who had ever received treatment were treated in residential rehabilitation centers like, Punarjeevan Kendra (Dharan), Sebyan drug de-addiction center (India), Asara, Freedom center and Richmond center (Kathmandu). Around 13 percent IDUs reported that they self tried to quit the drugs. Only few respondents mentioned that they had also received treatment from hospitals within the country and in India (Table 4.12).

Table 4.10: Knowledge of Sources of New Syringes

Descriptions	No. of IDUs	
	N	%
Could obtain new syringe		
Yes	344	99.7
No	1	0.3
Total	345	100.0
Could obtain syringe from		
Drugstore	328	95.1
Needle exchange program	202	58.5
Drug seller	58	16.8
Friends	11	3.2
Drug wholesaler	10	2.9
Hospital	7	2.0
Other drug users	4	1.2
Other shop	2	0.6
Others	5	1.4
Total		

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

Table 4.11: Types of Treatment Received by Respondents

Treatment practice	No. of IDUs	
	N	%
Treatment Status		
Currently Receiving Treatment	2	0.6
Was in treatment but not now	69	20.0
Have not received treatment	274	79.4
Total	345	100.0
When Treatment Was Received		
Less than 6 months	12	16.9
6-11 months before	14	19.7
12-23 months before	21	29.6
24-35 months before	5	7.0
36-47 months before	8	11.3
48 or more months before	11	15.5
Total	71	100.0

Table 4.12: Types of Treatment and Institutions Where Treatment Received

Types of Treatments Types of Institutions	Residential rehabilitation		Out patient counseling		Forced to quit		Helped to quit		Without drug		With other drug		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Punarjivan Kendra	12	16.9	1	1.4	-	-	-	-	-	-	-	-	13	18.3
Sebyan Drug De-addiction Center	6	8.4	-	-	-	-	-	-	-	-	2	2.8	8	11.2
Aashra Sudhar Kendra	4	5.6	-	-	-	-	-	-	-	-	-	-	4	5.6
Freedom Center	2	2.8	-	-	-	-	-	-	-	-	-	-	2	2.8
Richmond Fellowship Center	2	2.8	-	-	-	-	-	-	-	-	-	-	2	2.8
SPYM – Darjeeling	2	2.8	-	-	-	-	-	-	-	-	-	-	2	2.8
Youth Vision	1	1.4	-	-	-	-	-	-	-	-	-	-	1	1.4
Night Chess Club	1	1.4	-	-	-	-	-	-	-	-	-	-	1	1.4
Doctor	1	1.4	-	-	-	-	-	-	-	-	4	5.6	5	7.0
Kripa – Darjeeling	1	1.4	-	-	-	-	-	-	-	-	-	-	1	1.4
Naulo Ghumti	1	1.4	-	-	-	-	-	-	-	-	-	-	1	1.4
Teaching Hospital	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
BP Memorial Hospital	-	-	-	-	-	-	-	-	-	-	6	8.4	6	8.4
Self Tried	-	-	-	-	3	4.2	1	1.4	9	12.7	2	2.8	15	21.1
Nepal Medical College	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
Koshi Anchal Hospital	-	-	-	-	-	-	-	-	-	-	2	2.8	2	2.8
Nursing Home	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
R.K. Homeopathic Clinic	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
Private Clinic	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
Dota Ayurvedic	-	-	-	-	-	-	-	-	-	-	2	2.8	2	2.8
Sadar Hospital, Silgudi	-	-	-	-	-	-	-	-	-	-	1	1.4	1	1.4
Total	33	46.3	1	1.4	3	4.2	1	1.4	9	12.7	24	33.8	71	100.0

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

CHAPTER 5

SEXUAL BEHAVIOR AND CONDOM USE

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

5.1 Sexual Behavior of IDUs

Around nine in ten (93%) respondents reported ever having sex with female. Of the total respondents, 79.1 percent had gained sexual experience while they were in teen ages. The median age of respondents at first sexual encounter was 17 years. Data shows that median age at first sexual intercourse is lower than the median age at first injection (see Table 4.2). Out of 321 respondents that reported ever having sex, 61.4 percent had sex in the past 12 months also. Of those who had sex in the past year about one third had two or more female sex partners (Table 5.1).

Of the total 321 respondents who had sexual experience, 38.3 percent had sexual intercourse with a regular female sex partner in past 12 months. Regular female sex partner is defined as a spouse or any female sexual partner living together with the respondent. Out of the 123 IDUs who had sex with regular female sex partners in the past 12 months, 13 (10.6%) had not had sex with them during the last month. Of the 110 IDUs who had sex in the last month with a regular female sex partner, more than two third (70%) reported at least five sexual intercourse during that period (Table 5.2). Of the total 123 IDUs who had sex with regular female sex partners in the 12 months, only 5 (4.1%) ever had anal sex with them.

IDUs who had sexual experience were asked whether they ever had sex with non-regular female sex partners in the past year. 'Non-regular female sex partners' were defined as those to whom the participants were not married to or living with. However, non-regular

Table 5.1: Sexual History

Sexual behavior	No. of IDUs	
	N	%
Had sexual intercourse	321	93.0
Never had sexual intercourse	24	7.0
Total	345	100.0
Age at first sexual intercourse		
Below 20 years	254	79.1
20 years of age and Above	67	20.9
Total	345	100.0
Median Age	17	
Sexual intercourse in the past 12 months		
Yes	197	61.4
No	124	38.6
Total	321	100.0
Numbers of different female sexual partners in the past 12 months		
1 partner	131	66.5
2 or more partners	66	33.5
Total	197	100.0

Table 5.2: Sexual Intercourse with Regular Female Sex Partners

Sexual practice	No. of IDUs	
	N	%
Sex with a regular female sex partner during the past 12 months		
Yes	123	38.3
No	198	61.7
Total	321	100.0
Regular female sex partner		
1 partner	122	99.2
2 partners	1	0.8
Sex with a regular female sex partner during the last month		
Yes	110	89.4
No	13	10.6
Total	123	100.0
Frequency of sex with a regular female sex partner during the last month		
1- 4	33	30.0
5+	77	70.0
Total	110	100.0

female sex partners were also defined as distinct and separate from female sex workers. Table 5.3 shows that 15.6 percent IDUs had sex with non-regular female sex partners. Of them, half respondents reported of having two or more non-regular female sex partners. Similarly, out of 50 respondents who had sex in the past 12 months, 40 percent had sex with non-regular female sex partners in the past month also. Of those who had sex with non-regular female sex partners in the past month, 70 percent reported to have sex 1-4 times during that time.

IDUs were also asked about their sexual relationship with female sex workers during the past year. 'Female sex workers' are defined as those who sale sex in exchange for cash or kind or drugs. One fifth (21.8%) reported having sex with female sex workers in the past 12 months. Of the 70 respondents who had sex with female sex workers in the past year, 44.3 percent have reported such encounters during the last month as well. Out of the 31 respondents who had sex in the past month, about 19.4 percent reported having sex 5 or more times (Table 5.4). Of the 70 respondents who had sex with female sex workers in the past year, 5 (7.1%) were ever involved in the anal sex with female sex worker. Moreover, of the total 345 respondents, 19 (5.5%) were found ever had involved in anal sex with male partners and only 10.5 percent of the 19 respondents were involve in such activities in the past 12 months.

5.2 Knowledge and Use of Condom

All respondents were asked whether they were aware of condoms, and whether they had used condom during the last sex. All IDUs have heard of condoms. The use of a condom with a regular female sex partner was found to be low when compared to condom use with female sex workers and non-regular female sex partners. Slightly more than a quarter (27.6%) respondents had used a condom with their regular female sex partner during the last sex. The use of condoms with non-regular female sex partners was 42 percent. However, the use of condoms with female sex workers was about 64.3 percent during the last sexual encounter (Table 5.5).

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

Sexual practice	No. of IDUs	
	N	%
Sex with non-regular female sex partner in the past 12 months		
Yes	50	15.6
No	271	84.4
Total	321	100.0
Non-Regular female sex partner		
1 partner	25	50.0
2 or more partners	25	50.0
Sex with non-regular female sex partner during last one month		
Yes	20	40.0
No	30	60.0
Total	50	100.0
Frequency of sex with non-regular female sex partners during last one month		
1- 4	14	70.0
5+	6	30.0
Total	20	100.0

Table 5.4: Sexual Intercourse with Female Sex worker

Sexual practice	No. of IDUs	
	N	%
Sex with female sex worker in the past 12 months		
Yes	70	21.8
No	251	78.2
Total	321	100.0
Number of female sex workers in the past 12 months		
1 partner	33	47.1
2 or more partners	37	52.9
Sex with female sex worker during last one month		
Yes	31	44.3
No	39	55.7
Total	70	100.0
Frequency of sex with a female sex worker during the last month		
1- 4	25	80.6
5+	6	19.4
Total	31	100.0

Table 5.5: Knowledge and Use of Condoms among IDUs

Knowledge and Use of Condom	No. of IDUs	
	N	%
Ever heard of a condom		
Yes	345	100.0
No	0	0.0
Total	345	100.0
Condom use with regular female sex partner during last sexual intercourse		
Yes	34	27.6
No	89	72.4
Total	123	100.0
Condom use with non-regular female sex partner during last sexual intercourse		
Yes	21	42.0
No	29	58.0
Total	50	100.0
Condom use with female sex worker during last sexual intercourse		
Yes	45	64.3
No	25	35.7
Total	70	100.0

In order to protect oneself from sexually transmitted diseases, a condom must be used during all sex acts. In this context, all IDUs were asked about the consistent use of condoms with different female sexual partners during the year preceding the survey. Only 12.2 percent respondents reported consistent condom use when they had sex with regular female sex partners, and about five in ten (49.6%) had never used condoms with their regular female sex partner. Similarly, about twenty-eight percent respondents also reported that they have been consistently using condom with non-regular female sex partners. About four in ten respondents reported consistent use of condoms with female sex workers in the last 12 months. Twenty percent IDUs never used a condom with sex workers during the last 12 months (Table 5.6).

Respondents who had sex with different female partners but had not used a condom were asked about why they had chosen not to use one. A majority of the respondents who had sex with regular and non-regular female sex partners reported that they did not perceived it as necessary. About twelve percent of respondents having sex with a regular female sex partner reported the use of other means of contraception as the reason for not using condom. A majority (50%) of respondents who did not use condom with female sex workers cited that a condom was not available to them at the time of sexual intercourse.

5.3 Source of Condoms

Respondents who had heard about or used condoms were asked about the sources of condom. Overwhelming percentages of respondents (96.5%) mentioned pharmacies as a source of condoms. Peer educator, followed by shops health worker/health post and hospitals were other major sources of condoms cited by IDUs. Almost all the respondents reported condoms were available within a 30 minutes walk.

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

Consistent use of condom	No. of IDUs	
	N	%
Use of condom with regular female sex partners during past 12 months		
Every time	15	12.2
Almost every time	16	13.0
Sometimes	31	25.2
Never	61	49.6
Total	123	100.0
Use of condom with non-regular female sex partners during past 12 months		
Every time	14	28.0
Almost every time	7	14.0
Sometimes	12	24.0
Never	17	34.0
Total	50	100.0
Use of condom with female sex workers during past 12 months		
Every time	29	41.4
Almost every time	17	24.3
Sometimes	10	14.3
Never	14	20.0
Total	70	100.0

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

Sources of condom and time to obtain it	No. of IDUs	
	N	%
Place/person from where condom could be obtained		
Pharmacy	333	96.5
Peer Educator	176	51.0
Shop	137	39.7
Health worker/Health Post	37	10.7
Hospital	33	9.6
Family Planning Center	28	8.1
Purnarjivan Sarokar Kendra	16	4.6
Help Group Nepal	11	3.2
Clinic	11	3.2
SAD	4	1.2
Friends	4	1.2
Night Chess Club	3	0.9
Others	7	2.0
Don't Know	2	0.6
Total	345	100.0
Time taken to obtain condom		
Less than 30 minutes	336	98.0
More than 30 minutes	7	2.0
Total	343	100.0

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

5.4 Sources of Information about Condom

As discussed above all respondents had heard about condoms. Those who had heard were then asked about the sources of condom information. Respondents had heard about Condom from multiple sources of information. The most common sources of information on condom reported were bill boards/sign boards, radio, pharmacy, television, newspapers/posters, friends/neighbors, hospitals, NGOs and cinema halls (Table 5.8).

As part of a strong effort to inform target group about condoms, the National Health Education Information and Communication Center (NHEIC) has been launching radio and TV programs with technical assistance from various sources. The survey asked respondents whether they had heard specific messages about condom and HIV/STI broadcasted through radio and TV programs. More than 90 percent respondents reported exposure to the specific programs such as, *Condom Lagaun AIDS Bhagaaun*, *Jhilk Dai Chha Chhaina Condom*, *Use condom for the protection from HIV/AIDS*, *Condom Bata Surakchhya Youn Swastha ko Rakchhya*, and *Talks about HIV/AIDS from to-day*. Messages like *Gurujee Ra Antare* and *Dhale Dai* also were heard by about three quarter of the respondents. Data indicates that these programs have been largely successful in terms of disseminating messages about condoms in protecting HIV/STI on the target groups.

Table 5.8: Sources of Information about Condoms

Sources	No. of IDUs	
	n=345	%
Bill board/sign board	341	98.8
Radio	340	98.5
Pharmacy	334	96.8
Television	329	95.4
Newspapers/posters	325	94.2
Friends/neighbors	320	92.2
Hospital	305	88.4
NGO's peoples	298	86.4
Cinema hall	257	74.5
Health workers/volunteers	240	69.6
Health Post	227	65.8
Health Center	191	55.4
Comic books	150	43.4
Street drama	136	39.4
Community worker	122	35.4
Video van	61	17.7
Community event/training	45	13.0
Others	1	0.3

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

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

Specific messages	No. of IDUs	
	n=345	%
Condom Lagaun AIDS Bhagaaun	339	98.3
Jhilke Dai Chha Chhaina Condom	338	98.0
Use Condom for the protection from HIV/AIDS	337	98.0
Condom Bata Surakchhya Youn Swastha ko Rakchhya	336	97.4
Talk about HIV/AIDS from today	325	94.2
Gurujee Ra Antare	259	75.1
Dhale Dai	255	73.9
Others	2	0.6

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

CHAPTER 6

KNOWLEDGE OF STIs AND HIV/AIDS

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

6.1 Knowledge of STIs

Out of the 345 respondents almost all (96.5%) respondents have heard about STIs. Those who demonstrated a general awareness about STIs were also asked about the symptoms of STIs. The most commonly cited STI symptoms among females reported by male included genital ulcers/sore blisters, genital discharge, foul smelling discharge and itching around genital area. Similarly, major symptoms of STIs among male IDUs are genital ulcers/ sore blisters, genital discharge, burning pain during urination, swelling in groin area and itching around genital area. About two third and half of the respondents had no idea on the symptoms of STIs among females and males respectively (Table 6.2).

Table 6.1: IDUs Who have Heard about STIs

Heard of STDs	No. of IDUs	
	N=345	%
Yes	333	96.5
No	12	3.5

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

Symptoms of STIs	Respondents who had heard of STIs			
	N=333			
	Among Females	%	Among Males	%
Genital ulcer/sore blisters	91	27.3	142	42.6
Genital discharge	67	20.1	122	36.6
Foul smelling discharge	56	16.8	0	0.0
Itching	33	9.9	28	8.4
Burning/pain during urination	29	8.7	60	18.0
Abdominal pain	14	4.2	0	0.0
Swelling in groin area	16	4.8	37	11.1
Don't Know	219	65.8	175	52.5

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

Only about two percent respondents reported to have genital discharge in the past year and out of them about 25 percent had that symptom at the time of survey. More or less same percentages (2%) of respondents have reported the symptom of a genital ulcer/sore blister within the past year (Table 6.3).

Out of the 345 respondents about 84.6 percent reported not having any STI symptoms. Out of 53 respondents who had ever experienced any symptom of STIs almost nine percent did not seek any treatment for such problems and 75.5 percent received treatment from private doctors. Percentage of respondents seeking treatment from hospitals and health posts was only about fifteen (Table 6.4).

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

STI symptoms	No. of IDUs	
	N	%
Had a genital discharge in the past year		
Yes	8	2.3
No	337	97.7
Total	345	100.0
Have such genital discharge currently		
Yes	2	25.0
No	6	75.0
Total	8	100.0
Had a genital ulcer/sore blister in the past year		
Yes	5	1.4
No	340	98.5
Total	345	100.0
Have such genital ulcer/sore blister currently		
Yes	0	0.0
No	5	100.0
Total	5	100.0

6.2 Knowledge of HIV/AIDS

HIV/AIDS awareness/knowledge also is virtually universal among the IDUs. Almost all respondents in the sample had heard of the infection disease. Five in ten (55.1%) reported knowing a person who had died from HIV/AIDS. A majority (51.1%) of the respondents said that those who had died were their close friends and 44.2 percent reported knowing a non-relative who had died of AIDS (Table 6.5).

Respondents were asked several separate questions to understand their conceptions about HIV/AIDS prevention. About eight (85.6%) in ten respondents opined that a person could avoid HIV/AIDS through consistent use of condoms and about three quarter (74.8%) of IDUs cited a monogamous sexual relationship as a means of protection. Similarly, 72.5 percent mentioned abstinence from sex as the way of protection from HIV/AIDS (Table 6.6).

Almost 89 percent of respondents were aware that sharing a meal with an HIV positive person could not transmit HIV/AIDS. Similarly, ninety-six percent knew a person could get HIV by using another's previously used needle, about three-fourth (73.3%) opine that switching from injecting to non-injecting drugs could protect them against HIV/AIDS. However, 40 percent respondents believe that HIV/AIDS could be transmitted from mosquito bite (Table 6.7).

A large majority (92.5%) of respondents were aware that a pregnant women infected with HIV could transmit the virus to her unborn child. A relatively lower percentage of respondents, nearly 49 percent stated that a woman with HIV could transmit the virus to her newborn child through breast-feeding. However, a majority of respondents did not know what actions a pregnant woman can take to reduce the risk of HIV/AIDS transmission to her unborn child (Table 6.7).

Table 6.4: Treatment of STI Symptoms by IDUs

Treatment Received	No. of IDUs	
	n=345	%
Never had STI symptoms	292	84.6
Ever had some symptoms	53	15.4
Source of Treatment	n=53	%
Private Doctor	40	75.5
Hospital/Health Post	8	15.1
Did not Seek Treatment	5	9.4

Table 6.5: Awareness of HIV/AIDS among IDUs

Knowledge on HIV/AIDS	No. of IDUs	
	N	%
Heard about HIV/AIDS		
Yes	345	100.0
No	0	0.0
Know anyone who died due to AIDS		
Yes	190	55.1
No	144	41.7
Don't Know	11	3.2
Total	345	100.0
Nature of Relationship to the deceased		
Close friend	97	51.1
No relation	84	44.2
Close relative	9	4.7
Total	190	100.0

Table 6.6: Knowledge of Ways to Avoid HIV/AIDS

Methods of Protection Against HIV/AIDS	No. of IDUs	
	N=345	%
Can protect themselves through condom use every time during sex	296	85.8
Can protect themselves through monogamous sexual relations	258	74.8
Can protect themselves through abstinence from sexual contact	250	72.5

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

Statements related to HIV/AIDS and pregnant women	No. of IDUs	
	N=345	%
Can not get HIV/AIDS by sharing meal with HIV+ person	308	89.3
Can get HIV/AIDS by sharing needles	332	96.2
Can protect themselves from HIV/ AIDS by switching to non-injecting drugs	253	73.3
Can get HIV/AIDS from a mosquito bite	138	40.0
A pregnant women infected with HIV/AIDS can transmit the virus to her unborn child	319	92.5
A women with HIV/AIDS can transmit the virus to her child through breast-feeding	168	48.7
A pregnant women with HIV/AIDS can reduce risk of transmission to her unborn child by:		
Taking medicine	35	10.1
Others	1	0.3
No response	0	0.0
Don't know	283	82.0

6.3 Knowledge about HIV Testing Facilities

All study participants were asked whether or not confidential HIV testing facility is currently available, and whether they had ever been tested for HIV. Data presented in Table 6.8 indicates that only about half (53%) respondents were aware of confidential HIV testing facilities in their places. About seventeen percent respondents had tested their blood for HIV as a requirement, about six-percent had tested voluntarily and remaining 76.8 percent had never tested. Almost all (91.2%) respondents tested for HIV had received the results of their test. Out of the total tested respondents 31.2 percent were tests within the past one-year.

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

Description	No. of IDUs	
	N	%
Is it possible for someone to get a confidential HIV test ?		
Yes	183	53.0
No	150	43.5
Don't know	12	3.5
Type of Test Taken		
Required HIV test	58	16.8
Voluntary HIV test	22	6.4
Not tested	265	76.8
Total	345	100.0
Test result received		
Yes	73	91.2
No	7	8.7
Timing of last HIV test		
Within the past year	25	31.2
1-2 years ago	20	25.0
2-4 years ago	20	25.0
More than 4 years ago	15	18.7
No response	0	0.0
Total	80	100.0

6.4 Source of Knowledge about HIV/AIDS

Radio, billboards/signboards, television, friends/relatives and pamphlets/posters, are reported as the source of knowledge of HIV/AIDS by more than 90 percent respondents. Similarly, newspapers/magazines (86.7%), NGO workers (86.4%), cinema halls (73%) and health workers/volunteers (79.4%) also are commonly cited sources of HIV/AIDS knowledge. This finding has program implications (Table 6.9).

In this survey, about three-quarter respondents reported that they were given materials regarding AIDS such as brochure/booklets/pamphlets, condoms, or and any specific information about AIDS during the last year. For instance, 71.9 percent had received information about condoms and nearly 76 percent received printed materials related to HIV/AIDS and about 85.5 percent respondents had received information on HIV/AIDS (Table 6.10).

Table 6.9: Sources of Knowledge Regarding HIV/AIDS

Sources	No. of IDUs	
	n=345	%
Radio	340	98.5
Bill board/sign board	339	98.3
Television	333	96.5
Friends/Relatives	333	96.5
Pamphlets/Posters	332	96.2
Newspapers/Magazines	299	86.7
NGO workers	298	86.4
Cinema halls	274	79.4
Health workers/Volunteers	253	73.3
Comic books	161	46.7
Street drama	161	46.7
School/Teachers	141	40.9
Workplace	152	44.1
Community workers	128	37.1
Video van	77	22.3
Community events or training	44	12.7
Others	1	0.3

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

Table 6.10: Information/Materials Received During the Past Year

Informative Materials Received	No. of IDUs	
	n=345	%
Received information on Condom		
Yes	248	71.9
No	97	28.1
Brochure/booklets/pamphlets on HIV/AIDS		
Yes	261	75.6
No	84	24.3
Received Information on HIV/AIDS		
Yes	295	85.5
No	50	14.5
Others Information		
Yes	3	0.9
No	342	99.1

CHAPTER 7

PREVALENCE OF HIV

HIV infection status of the study participants was derived from two rapid tests ‘Capillus’ and ‘Determine’ of the blood samples collected by finger pricks. In case of tie in the first two test results “Uni-Gold TM” test was performed as the confirmatory test. Out of the 345 blood samples of IDU participating in the study 121 (35.1%) were tested positive.

Table 7.1: HIV Status by Districts

District	Total sample	HIV+	%
Interviewed Districts			
Morang	135	70	51.8
Sunsari	135	45	33.3
Jhapa	75	6	8.0
Districts Currently Lived			
Morang	125	63	50.4
Sunsari	146	51	34.9
Jhapa	73	7	9.6
Saptari	1	0	0.0
Total	345	121	35.1

However, prevalence of HIV varies by districts, while prevalence of HIV is Higher in Morang (51.8%) it was much lower (8%) in Jhapa districts (Table 7.1).

7.1 Relation between Socio-Demographic Characteristics and HIV Infection

The incidence of HIV was found to be significantly ($p < .01$) higher among the older IDUs. For instance about 37.1 percent of IDUs of age 20 years and above were positive where as HIV infection in the age group below 20 years was only 18.4 percent. HIV status also differs significantly ($p < .01$) by marital statuses. Prevalence is higher among formerly and currently married IDUs compared to those who were either never married or are currently married. Literacy has no strong association with HIV infection. Although percentage of HIV+ves is slightly lower among literate such relation is not statistically significantly ($p = 0.68$).

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

Characteristics	No. of IDUs			
	Total	HIV+	%	P Value
Age				
Below 20 years	38	7	18.4	< .01
20 years and Above	307	114	37.1	
Marital Status				
Currently married	129	56	43.4	< .01
Formerly married	32	18	56.2	
Never Married	184	47	25.5	
Literacy				
Illiterate	15	6	40.0	0.68
Literate/formal school	330	115	34.8	
Total	345	121	35.1	

7.2 Relation between Drug Injection Behavior and HIV

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

As revealed in Table 7.3, those who have been injecting drugs for a long period have a greater HIV infection. Among those males who have been injecting for more than five years, 55.1 percent were HIV +ve. HIV infection rates dropped to 29.4 percent as duration of injecting drugs dropped to 1 to 5 years from more than five years. Almost, 11.4 percent of the IDUs with less than one year of injecting duration were tested to be HIV positive.

Frequency of injection in the past week was also found to have a negative association with HIV infection ($p = 0.64$). Those who had injected more than 4-6 times in the past week had higher rates of HIV infection compared to those who injected less than 4 times in the last week. Similarly, data indicates that sharing a common syringe puts IDUs at a higher risk of HIV. Use of needles/syringes previously used by others does not show a strong association with HIV infection (Table 7.3). Similarly, IDUs who had used a syringe kept in a public place in the past week exhibited more of a risk for HIV infection than those who avoid such syringes but such relation is not significant ($p = 0.20$).

Drug injecting behavior	No. of IDUs			
	Total	HIV+	%	P value
Injecting Drugs Since				
Less than 1 year	44	5	11.4	<.01
1-5 Years	194	57	29.4	
More than 5 years	107	59	55.1	
Frequency of Injected Drugs in the Past week				
Not Injected	4	0	0.0	0.64
1-3 times a week	29	8	27.6	
4 -6 times a week	40	16	40.0	
Everyday	112	40	35.7	
2-3 times a day	143	51	35.7	
4 or more times a day	17	6	35.3	
Used another's previously used needle/syringe during the past week				
Not injected/Never	229	87	38.0	0.26
Every time/Almost every time	33	9	27.3	
Some time	83	25	30.1	
Used a needle/syringe kept in public place during the past week				
Not injected/Never	264	87	32.9	0.20
Every time/ Almost every time	31	15	48.4	
Some times	50	19	38.0	
Total	345	121	35.1	

7.3 Relation between Sexual Behavior and HIV

The relationship between sexual behavior of IDUs and the HIV infection does not seem to be as expected. For instance, IDUs having sex with female sex workers have low HIV infection compared to their counterparts. In general IDUs having sex with sex workers and other regular and non-regular sex partners seems to have lower risk of HIV. Similarly, higher the number of sex partners in the last 12 months lower seems to be HIV infection (Annex 14). As IDUs who are not involved in sex may inject frequently and share needles these results should be interpreted cautiously.

7.4 Odds Ratio of HIV Infection by Selected Characteristics of IDUs

Unadjusted or gross odds ratio of HIV risk by selected characteristics of IDUs were calculated. Table 7.4 shows that risk of HIV infection is about 2.6 times higher among older IDUs of age 20 years and above compared to IDUs less than 20 years of age. Although illiterate peoples have almost 1.3 times higher risk of HIV, such association is statistically insignificant. The range of 95 percent confidence interval for estimated odds ratio is 0.38-3.95. Ever married IDUs are at a greater risk of HIV infection compared to those who are never married. For instance, the odds ratio is about 2.4 for ever married IDUs compared to IDUs who are never married. This odds ratio is statistically significant. In this sample injecting behavior of IDUs does not have statistically significant association with HIV infection. An IDU who uses needle/syringe kept in a public place is almost 4.5 times more likely to contract HIV compared to those who do not use such needle/syringe. But the estimated risk varies between 0.86 and 2.53 indicating that the relation is not statistically significant. However, the risk of HIV infection is significantly higher for those IDUs who had previously injected in other parts of the country or in other countries (Table 7.4). Those who had injected in other parts of the country or in other countries had about 3.5 times higher odds ratio of HIV infection compared to their counterparts and the odd ratio is significant.

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

Characteristics	Odd Ratio	# cases (n)	95% Confidence Interval
<u>Age</u>			
<20 years	-	38	(1.06, 6.75)
= >20 years	2.62	307	
<u>Education</u>			
Illiterate	1.25	15	(0.38, 3.95)
Literate	-	330	
<u>Marital status</u>			
Never Married	-	184	(1.54, 4.01)
Ever married	2.48	161	
<u>Injecting behavior</u>			
Injected with another's previously used during past week	-	116	(0.89, 2.46)
Yes	1.48	229	
No			
Injected with a syringe kept in public place			
Yes	1.47	81	(0.86, 2.53)
No	-	264	
Injected with a pre-filled syringe			
Yes	-	29	(1.18, 12.79)
No	3.67	316	
Injected in either another part of the country or another country			
Yes	3.55	292	(1.54, 8.49)
No	-	53	

CHAPTER 8

SUMMARY OF THE FINDINGS

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

Structured questionnaires were used to collect behavioral data. Blood samples collected from finger pricks and collected in capillary tubes were used for HIV test. Two rapid tests 'Capillus' and 'Determine' were conducted in order to test HIV. In case of tie in these tests 'Uni-Gold TM' was used as confirmatory test. Respondent Driven Sampling (RDS), a form of chain referral network sampling, was used to recruit study participants from 23 systematically selected sites. In total 345 IDUs were interviewed and tested for HIV.

Main Results

Socio-Demographics Characteristics

About eleven percent IDUs in the sample, were under the age of 20 years. The median age of the respondents was 25 years. A majority of study participants (94.2%) had formal schooling. About, half (53.3%) respondents were never married. Out of the total 345 respondents 129 were currently married and all of them were living with their spouse.

Injecting Practice

Out of 345 participants, around 48.4 percent had been injecting drugs since last 2-5 years. Almost 46 percent began injecting before or at the age of 20. About 41.4 percent were using injected drugs 2-3 times a day. Eighty-one percent respondents reported the use of Tidigesic. About one-third IDUs reported using syringes previously used by others during the past week. However, the percentage of IDUs reporting the use of a syringe kept in a public place during the past week was 23.5.

About eighty-five percent of IDUs were found to be mobile and had injected drugs in either another part of the country or in another country. Knowledge of sources for new/unused needles is universal among the respondents. A great majority (58%) reported that they received new syringe from local needle exchange programs.

Of the total 345 respondents, 20.6 percent had received some kind of treatment against drug taking habits in the past. About forty-six percent IDUs who received treatment had received from residential rehabilitation centers.

Use of Condom

In the sample of 345 IDUs, almost 93 percent ever had sex but all had heard about condom. Out of the 70 respondents who had engaged in sex with a female sex worker in the last 12 months, 41.4 percent reported consistent use of condom. But such consistent use of condom with regular and non-regular sex partners is reported only by 12.2 and 28 percent of IDUs respectively.

Knowledge of HIV

Almost all respondents had heard about HIV/AIDS. Of the total sample population, 85.8 percent thought that HIV could be protected by using a condom in all sexual intercourse. Similarly, 96 percent of respondents knew that a person could get HIV through the use of another's previously used needle. About 73.3 percent respondents claimed that IDUs can protect themselves from HIV infection by switching to non-injecting drugs.

HIV Prevalence

Out of 345 IDUs in the sample, 121 (35.1%) were found to be HIV positive. Aged (≥ 20 years), married and IDUs who have injected in other places or other countries have significantly higher risk of HIV infection compared to their counterparts. Risk of HIV infection among needle sharing IDUs is higher compared to not sharing IDUs but the difference in risk is not statistically significant.

Recommendations

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

- i. This type of study should be conducted at an interval of one or two years in order to monitor and evaluate the HIV prevalence and risk behaviors of IDUs.
- ii. The study shows that most of the IDUs had injected in different part of the India. Thus, cross boarder awareness program is needed to minimize the out flow of the IDUs for injecting drug in boarder area.
- iii. Practice of using syringe kept/left in public places and sharing syringe among injecting partners, increase the possibility of HIV infection in IDUs community. Thus, harm reduction programs for IDUs should be continuously targeted for minimizing syringe sharing and reusing the previously used syringes among the IDUs.
- iv. Lack of practice of consistent use of a condom with different sexual partners might increase HIV infection among their sex partners as they might bridge the infection. Therefore, IDUs should be encouraged for correct and consistent use of condom with female sex workers as well as with different sexual partners through education programs.
- v. Study shows that the reasons cited for low treatment practice was the economic condition of IDUs. So provision should be made to make the treatments economically and physically more accessible to IDUs.
- vi. IDUs who are not able to quit the injecting behaviors should be given knowledge of proper cleaning of used needle to minimize the spread of infection among the injectors.

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ANNEXES

ANNEX - 1

Confidential

Behavioral and Sero Prevalence Survey
Among Injecting Drug Users (IDUs)

In Eastern Nepal

FHI/New ERA – 2002

(Male Questionnaire)

**(The respondent must be a current injector, and have started injecting
at least 3 months ago)**

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. 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 any 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: _____

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?

1. Yes

2. No

003. Interview Location

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? (<i>Name of current place of residence</i>)	Ward <input type="text"/> <input type="text"/> VDC/Municipality District	
101.1	How long have you been living continuously at this location?	Month <input type="text"/> <input type="text"/> <input type="text"/> 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?	Yes1 No2 Don't know98 No response99	
103	How old are you?	Age <input type="text"/> <input type="text"/> (<i>write the completed years</i>)	
104	What is your educational status?	Illiterate0 Literate19 Grade <input type="text"/> <input type="text"/> (<i>write the completed grade</i>)	
105	What is your caste? (<i>Specify Ethnic Group/Caste</i>)	Ethnicity/Caste	
106	What is your marital status?	Never married1 Married2 Divorced/Permanently separated3 Widow4 Other (Specify)96	→ 109

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
107	How old were you when you first married?	Age <input type="text"/> <input type="text"/> (write the completed years)	
108	Do you think your wife/female sexual partner has any other sexual partners?	Yes.....1 No2 Don't know98 No response99	→109
108.1	If yes, what is the sex of the partner?	Male.....1 Female2	
109	With whom you are living now?	Living with wife1 Living with female sexual partner.....2 Living without sexual partner....3 Others (specify).....96 No response99	
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 week3 Never drink.....4 Others (specify).....96 No response99	

2.0 DRUG USE

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
201.	How long have you been using drugs? <i>(Drug means medicine not used for treatment purpose rather used for Intoxication)</i>	Years..... <input type="text"/> <input type="text"/> Months..... <input type="text"/> <input type="text"/> No response99	
202.	How old were you when you first injected drugs? <i>(Include self-injection or injection by another)</i>	Years <input type="text"/> <input type="text"/> (write the completed years)	
203	How long have you been injecting drugs? <i>(Include self-injection or injection by another)</i>	Years..... <input type="text"/> <input type="text"/> Months..... <input type="text"/> <input type="text"/> No response99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.						
204.	Which of the following types of drugs have you used and/or injected in the past one-week? (<i>Read the list, multiple answer possible</i>)								
	Description	Used in Last-Week				Injected in Last-Week			
		YES	NO	DK	NR	YES	NO	DK	NR
	1. Tidigesic	1	2	98	99	1	2	98	99
	2. Brown Sugar	1	2	98	99	1	2	98	99
	3. Nitrosun	1	2	98	99	1	2	98	99
	4. Ganja	1	2	98	99	1	2	98	99
	5. Chares	1	2	98	99	1	2	98	99
	6. White Sugar	1	2	98	99	1	2	98	99
	7. Phensydyl	1	2	98	99	1	2	98	99
	8. Calmpose	1	2	98	99	1	2	98	99
	9. Diazepam	1	2	98	99	1	2	98	99
	10. Codeine	1	2	98	99	1	2	98	99
	11. Phenergan	1	2	98	99	1	2	98	99
	12. Cocaine	1	2	98	99	1	2	98	99
	13. Proxygin	1	2	98	99	1	2	98	99
	14. Effidin	1	2	98	99	1	2	98	99
	15. Velium 10	1	2	98	99	1	2	98	99
	16. Lysergic Acid Dithylamide(LSD)	1	2	98	99	1	2	98	99
	17. Nitrovate	1	2	98	99	1	2	98	99
	18. Combination(Specify) _____	1	2	98	99	1	2	98	99
	96. Others(specify)_____	1	2	98	99	1	2	98	99
204.1	Did you switch in the last month from one drug to another?	Yes.....1 No2				→ 205			
204.1.1	If yes	From _____ drug To _____ drug							
204.1.2	What is the reason for switching?	_____ _____							
205.	How many times would you say you injected drugs yesterday?	Times <input type="checkbox"/> Not injected0				→ 209 → 206			
206.	Would you like to tell me why you did not injected yesterday?	_____ _____							
207.	How many days ago did you get injected?	Days ago <input type="checkbox"/> <input type="checkbox"/>							
208.	How many times would you say you injected drugs on the last day?	Times <input type="checkbox"/>							

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
209.	During the past one-week how often would you say you injected drugs?	Once a week1 2-3 times a week.....2 4-6 times a week.....3 Once a day4 2-3 times a day5 4 or more times a day6 Not injected in the last week.....7 Don't know98 No response99	

3.0 NEEDLE SHARING BEHAVIORS

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
301.	Think about the times, you have injected drugs yesterday/last day. How many times did you inject drugs that day? <i>(Fill the number from answer to Q. 205 or 208 and verify by asking the respondent)</i>	Times <input type="text"/>	
302.	The last time you injected, how did you get that syringe/needle? <i>(+ Public place means the place where they keep syringe other than his home)</i>	My friend/relative gave it to me after his use1 Unknown person gave it to me2 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/volunteer5 I used a needle/syringe which I purchased6 Don't know98 No response99	
302.1	The last time you injected, If you were in a group while injecting, how many different people in the group do you think used the same needle?	Nos..... <input type="text"/> <input type="text"/> Injected alone96	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
303.	<p>Think about the time before the last time you injected, how did you get that syringe/needle?</p> <p>(+ Public place means the place where they keep syringe other than his home)</p>	<p>My friend/relative gave it to me after his use1</p> <p>Unknown person gave it to me.....2</p> <p>I picked it up from a public place which was left there by others⁺3</p> <p>I picked it up from a public place which was left there by myself⁺4</p> <p>I used a new needle/syringe given by NGO staff/volunteer5</p> <p>I used a needle/syringe which I purchased.....6</p> <p>Don't know98</p> <p>No response99</p>	
303.1	That time, If you were in a group, how many different people in the group do you think used the same needle?	<p>Nos..... <input type="text"/> <input type="text"/></p> <p>Injected alone96</p>	
304.	<p>Now think about the time before (before Q. 303), how did you get that syringe/needle?</p> <p>(+ Public place means the place where they keep syringe other than his home)</p>	<p>My friend/relative gave it to me after his use0</p> <p>Unknown person gave it to me1</p> <p>I picked it up from a public place which was left there by others⁺2</p> <p>I picked it up from a public place which was left there by myself⁺3</p> <p>I used a new needle/syringe given by NGO staff/volunteer4</p> <p>I used a needle/syringe which I purchased.....5</p> <p>Don't know98</p> <p>No response99</p>	
304.1	That time If you were in a group, how many different people in the group do you think used the same needle?	<p>Nos..... <input type="text"/> <input type="text"/></p> <p>Injected alone96</p>	
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?	<p>Every times1</p> <p>Almost every-times2</p> <p>Sometimes3</p> <p>Never used4</p> <p>Not injected in the last week5</p> <p>Don't know98</p> <p>No response99</p>	→ 314
305.1	<p>When you injected drug during the past week, how often did you use a syringe/needle that had been left in public place?</p> <p>(Public place means the place where they keep syringe other than his home)</p>	<p>Every times1</p> <p>Almost every-times2</p> <p>Sometimes3</p> <p>Never4</p> <p>Don't know98</p> <p>No response99</p>	

Q. N.	Questions and Filters	Coding Categories				Skip to Q.N.
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? <i>(Count everyone who injected from the same syringe)</i>	Number of partners <input type="text"/> <input type="text"/> Don't know98 No response99				
308.	In the past one-week, how often did you gave a needle or syringe to someone else, after you had already used it?	Every times1 Almost every-times2 Sometimes3 Never4 Don't know98 No response99				
309.	In the past-week, did you ever inject with a pre-filled syringe? <i>(By that I mean a syringe that was filled without your witnessing it)</i>	Yes1 No2 Don't know98 No response99				
310.	In the past one-week, how often did you inject drugs using a syringe after someone else had squirted drugs into it from his/her used syringe ? <i>(front-loading/back-loading/ splitting)</i>	Every times1 Almost every-times2 Sometimes3 Never4 Don't know98 No response99				
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 times1 Almost every-times2 Sometimes3 Never4 Don't know98 No response99				
312.	In the past one-week, how often you draw up your drug solution from a common container used by others?	Every times1 Almost every-times2 Sometimes3 Never4 Don't know98 No response99				

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 time1 Almost every-times2 Sometimes3 Never4 Never reused.....5 Not injected6 Others (Specify)_____96 Don't know98 No response99	→ 313.1 → 314
313.1	If cleaned, how did you usually clean them?	With water1 With urine2 With saliva.....3 Boil the syringe in water.....4 With bleach.....5 Burning the needle with matchstick6 Others (Specify)_____96 Don't know98 No response99	
314.	Can you obtain new, unused needles and syringes when you need them?	Yes.....1 No2 Don't know98 No response99	→ 316
315.	Where can you obtain new unused needles and syringes? <i>(Do not read out list. Multiple answers possible. Probe only with "Anywhere Else?")</i>	Drugstore1 Other shop2 Health worker.....3 Hospital4 Drug wholesaler/drug agency.....5 Family/relatives6 Sexual partner.....7 Friends.....8 Other drugs users.....9 Drugs seller.....10 Needle exchange program of _____11 Theft from legitimate source.....12 Buy on streets13 Other (Specify) _____96	
316.	In the past one-year, did you ever inject drug in another city/district?	Yes.....1 No2 Don't remember.....98 No response99	→ 317
316.1	If yes, in which other cities/districts did you inject, including cities in other Countries?	Cities _____ Districts _____ Country _____	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
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	
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	→ 318 → 401
318.	How many months ago did you last receive treatment or help for your drug use?	Months <input type="text"/> <input type="text"/> Don't know 98 No response 99	
319.	What kind of treatment or help have you received? <i>(Do not read out the responses, probe asking, "Are there any other kinds of treatment that you've received?" Multiple Answers Possible.)</i> <div> <div>Types of Treatments</div> <div>Name of Institutions</div> </div>		
	1. Outpatient counseling		
	2. Self-help groups		
	3. Detoxification w/methadone		
	4. Maintenance w/methadone		
	5. Detoxification w/other drugs		
	6. Detoxification with no drug		
	7. Residential rehabilitation		
	8. Helped to quite <i>cold turkey</i>		
	9. Forced to quite <i>cold turkey</i>		
	96. Other (Specify) _____		
	99. No response		

4.0 SEXUAL HISTORY

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
401.	How old were you at your first sexual intercourse?	Years old <input type="text"/> <input type="text"/> <i>(Write completed years)</i> Never had sexual intercourse 2 Don't know 98 No response 99	→ 601
402.	Have you had sexual intercourse in the last 12 months	Yes 1 No 2 No response 99	→ 404
403.	In total, how many different female sexual partners have you had in the last 12 months?	Total Number <input type="text"/> <input type="text"/>	
403.1	How many were female "regular partners"? <i>(Your wife or live-in sexual partners)</i>	Number <input type="text"/> <input type="text"/> Don't know 98 No response 99	
403.2	How many were female "sex worker"? <i>(Partners to whom you bought or sold sex in exchange for money or drug)</i>	Number <input type="text"/> <input type="text"/> Don't know 98 No response 99	
403.3	How many were female "non-regular partners"? <i>(Sexual partners, you are not married to and have never lived with and did not have sex in exchange for money)</i>	Number <input type="text"/> <input type="text"/> Don't know 98 No response 99	
404.	Have you just talked about your female sexual partners. Have you ever had any male sexual partners also?	Yes 1 No 2 No response 99	→ 501
404.1	If yes, have you had anal sex with any of your male partners in the last 12 months?	Yes 1 No 2 No response 99	→ 501
404.2	With how many different male partners have you had anal sex in the last 12 months?	Number <input type="text"/> <input type="text"/> Don't know 98 No response 99	

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 No2	→ 502
501.1	Think about your most recent female regular sexual partner. How many times did you have sex with him during last one-month?	Times <input type="text"/> <input type="text"/> Don't know98 No response99	
501.2	The last time you had sex with a female regular partner did you and your partner use a condom?	Yes.....1 No2 Don't know98 No response99	→ 501.4 → 501.3 → 501.4
501.3	Why did not you or your partner use a condom that time? <i>(Do not read the possible answers, multiple answer possible)</i>	Not available.....1 Too expensive.....2 Partner objected.....3 Don't like them4 Used other contraceptive5 Didn't think it was necessary6 Didn't think of it7 Other (Specify)96 Don't know98 No response99	
501.4	How often have you used a condom with female regular partners in the past year?	Every times.....1 Almost every-times2 Sometimes3 Never used.....4 Don't know98 No response99	
501.5	Did your female regular partner also inject drugs?	Yes.....1 No2 Don't know98 No response99	
501.6	Have you had ever-anal sex with your female regular partners?	Yes.....1 No2 Don't know98 No response99	→ 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 No2 Don't know98 No response99	
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-times2 Sometimes3 Never used.....4 Don't know98 No response99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
502.	Did you have a sexual intercourse with a female sex worker in last 12 months? <i>(Check 403.2 and circle the response of Q. 502)</i>	Yes.....1 No2	→ 503
502.1	Think about the female sex workers that you have had sex in the past one-month. In total how many were:	Nos. <input type="text"/> <input type="text"/> Don't know98 No response99	
502.1.1	Number of female sex workers, to whom you sold sex in exchange for money or drugs.	Nos. <input type="text"/> <input type="text"/> Don't know98 No response99	
502.1.2	Number of female sex workers, to whom you bought sex in exchange for money or drugs.	Nos. <input type="text"/> <input type="text"/> Don't know98 No response99	
502.2	Think about your most recent female sex worker. How many times did you have sexual intercourse with him in the past one-month?	Times..... <input type="text"/> <input type="text"/> Don't know98 No response99	
502.3	The last time you had sex with a female sex worker did you and your partner use a condom?	Yes.....1 No2 Don't know98 No response99	→ 502.5 → 502.4 → 502.5
502.4	Why did not you and your partner use a condom that time? <i>(Do not read the possible answers, multiple answer possible)</i>	Not available.....1 Too expensive.....2 Partner objected3 Don't like them4 Used other contraceptive5 Didn't think it was necessary6 Didn't think of it7 Other (Specify)96 Don't know98 No response99	
502.5	How often have you used a condom with female sex workers in the past year?	Every times.....1 Almost every-times2 Sometimes3 Never used.....4 Don't know98 No response99	
502.6	Do you know whether your female sex worker also inject drugs?	Yes.....1 No2 Don't know98 No response99	
502.7	Have you had ever-anal sex with your female sex workers?	Yes.....1 No2 Don't know98 No response99	→ 503

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
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 No2 Don't know98 No response99	
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-times2 Sometimes3 Never used.....4 Don't know98 No response99	
503.	Did you have a sexual intercourse with a female non-regular sex partner during last 12 months? <i>(Check 403.3 and circle the response of Q. 503)</i>	Yes.....1 No2	→ 601
503.1	Think about your most recent female non-regular sexual partner. How many times did you have sexual intercourse with him over the past one-month?	Times..... <input type="text"/> <input type="text"/> Don't know98 No response99	
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 No2 Don't know98 No response99	→ 503.4 → 503.3 → 503.4
503.3	Why did not you and your partner use a condom that time <i>(Don't read the possible answers, multiple answer possible)</i>	Not available.....1 Too expensive.....2 Partner objected.....3 Don't like them4 Used other contraceptive5 Didn't think it was necessary6 Didn't think of it7 Other (Specify) _____96 Don't know98 No response99	
503.4	How often have you used a condom with a female non-regular partner in the past year?	Every times.....1 Almost every-times2 Sometimes3 Never used.....4 Don't know98 No response99	
503.5	Did you know whether your female non-regular partners also inject drugs?	Yes.....1 No2 Don't know98 No response99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
503.6	Have you had ever-anal sex with your female non-regular partners?	Yes.....1 No2 Don't know98 No response99	→ 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 No2 Don't know98 No response99	
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-times2 Sometimes3 Never used.....4 Don't know98 No response99	

6.0 USE OF CONDOM

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

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
601.	Have you ever heard of a male condom? (<i>Show picture or sample of condom</i>)	Yes.....1 No2 Don't know98 No response99	→ 701
602.	Have you ever used a condom?	Yes.....1 No2	
603.	Do you know of any place or person from which you can obtain male condom?	Yes.....1 Don't know98 No response99	→ 701
604.	From which place or people, you can obtain male condoms? (<i>Multiple answer possible. Don't read the list but should probe.</i>)	Shop1 Pharmacy2 Clinic3 Hospital4 Family planning center5 Bar/Guest house/Hotel6 Health worker7 Peer Educator/outreach educator8 Friend9 Others (specify) ____96 No response99	
605.	How long would it take (<i>from your house or the place where you work</i>) to obtain a male condom?	Less than 30 minutes1 More than 30 minutes.....2 Don't know98 No response99	

7.0 STDs

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 No2 No response99	→ 704
702.	Can you describe any symptoms of STDs in women? <i>(Do not read possible answers, multiple answers possible.)</i>	Abdominal pain1 Genital discharge2 Foul smelling3 Burning pain on urination.....4 Genital ulcers/sore5 Swelling in groin area.....6 Itching.....7 Other (Specify)96 Don't know98 No response99	
703.	Can you describe any symptoms of STDs in men? <i>(Do not read possible answers, multiple answer possible)</i>	Genital discharge1 Burning pain on urination.....2 Genital ulcers/sore blister3 Swellings in groin area4 Others (Specify)96 Don't know98 No response99	
704.	Have you had a genital discharge/burning urination during the last 12 months?	Yes.....1 No2 Don't know98 No response99	→ 705
704.1	Currently, do you have a genital discharge/burning urination problem?	Yes.....1 No2 Don't know98 No response99	
705	Have you had a genital ulcer/sore blister during the last 12 months?	Yes.....1 No2 Don't know98 No response99	→ 706
705.1	Currently, do you have a genital ulcer/sore blister problem?	Yes.....1 No2 Don't know98 No response99	
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 hospital3 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 No2 Don't know98 No response99	
802.	Do you know anyone who is infected with HIV or who has died of AIDS?	Yes.....1 No2 Don't know98 No response99	804
803.	Do you have close relative or close friend who is infected with HIV or has died of AIDS?	Yes, a close relative1 Yes, a close friend2 No3 Don't know98 No response99	
804.	Can people protect themselves from HIV, the virus that causes AIDS, by using a condom correctly every time they have sex?	Yes.....1 No2 Don't know98 No response99	
805.	Can a person get HIV, from mosquito bites?	Yes.....1 No2 Don't know98 No response99	
806.	Can people protect themselves from HIV, by having one uninfected faithful sex partner?	Yes.....1 No2 Don't know98 No response99	
807.	Can people protect themselves from HIV, by abstaining from sexual intercourse?	Yes.....1 No2 Don't know98 No response99	
808.	Can a person get HIV, by sharing a meal with someone who is infected?	Yes.....1 No2 Don't know98 No response99	
809.	Can a person get HIV, by getting injections with a needle that was already used by someone else?	Yes.....1 No2 Don't know98 No response99	
810.	Can people who inject drugs protect themselves from HIV, the virus that causes AIDS, by switching to non-injecting drugs?	Yes.....1 No2 Don't know98 No response99	

Q. N.	Questions and Filters	Coding Categories	Skip to Q.N.
811.	Can a pregnant woman infected with HIV transmit the virus to her unborn child?	Yes.....1 No2 Don't know98 No response99	813
812.	What can a pregnant woman do to reduce the risk of transmission of HIV to her unborn child? <i>(Do not read the possible answers, multiple answer possible)</i>	Take medication (Antiretrovirals)1 Others (Specify) _____96 Don't know98 No response99	
813.	Can women with HIV transmit the virus to her newborn child through breast-feeding?	Yes.....1 No2 Don't know98 No response99	
814.	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? <i>(By confidential, I mean that no one will know the result if you don't want him or her to know it.)</i>	Yes.....1 No2 Don't know98 No response99	
815	I don't want to know the result, but have you ever had an HIV test?	Yes.....1 No2 No response99	901
816.	Did you voluntarily undergo the HIV test, or were you required to have the test?	Voluntary.....1 Required2 No response99	
817.	Please do not tell me the result, but did you find out the result of your test?	Yes.....1 No2 No response99	
818.	When did you have your most recent HIV test?	Within the past 12 months.....1 Between 13-24 months2 Between 25-48 months3 More than 49 months4 Don't know98 No response99	

9.0 AWARENESS OF AIDS
(To be asked to those who have answered yes to Q. 801)

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 AIDS? <i>(Read the following list, multiple answers possible)</i>			
	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? <i>(Multiple answer possible, read the list)</i>			
	Items	Yes	No	
	1. Condom	1	2	
	2. Brochure/Booklets/Pamphlets about AIDS	1	2	
	3. Information about 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.	<p>In the past one-year have you seen, read or heard any advertisements about condoms from the following sources? <i>(Read the following list, multiple answer possible)</i></p> <table border="1"> <thead> <tr> <th>Sources</th><th>Yes</th><th>No</th></tr> </thead> <tbody> <tr><td>1. Radio</td><td>1</td><td>2</td></tr> <tr><td>2. Television</td><td>1</td><td>2</td></tr> <tr><td>3. Pharmacy</td><td>1</td><td>2</td></tr> <tr><td>4. Health Post</td><td>1</td><td>2</td></tr> <tr><td>5. Health Center</td><td>1</td><td>2</td></tr> <tr><td>6. Hospital</td><td>1</td><td>2</td></tr> <tr><td>7. Health Workers/Volunteers</td><td>1</td><td>2</td></tr> <tr><td>8. Friends/Neighbours</td><td>1</td><td>2</td></tr> <tr><td>9. NGOS</td><td>1</td><td>2</td></tr> <tr><td>10. Newspapers/Posters</td><td>1</td><td>2</td></tr> <tr><td>11. Video Van</td><td>1</td><td>2</td></tr> <tr><td>12. Street Drama</td><td>1</td><td>2</td></tr> <tr><td>13. Cinema Hall</td><td>1</td><td>2</td></tr> <tr><td>14. Community Event/Training</td><td>1</td><td>2</td></tr> <tr><td>15. Bill Board/Sign Board</td><td>1</td><td>2</td></tr> <tr><td>16. Comic Book</td><td>1</td><td>2</td></tr> <tr><td>17. Community Workers</td><td>1</td><td>2</td></tr> <tr><td>96. Others (Specify) _____</td><td>1</td><td>2</td></tr> </tbody> </table>	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/Neighbours	1	2	9. NGOS	1	2	10. Newspapers/Posters	1	2	11. Video Van	1	2	12. Street Drama	1	2	13. Cinema Hall	1	2	14. Community Event/Training	1	2	15. Bill Board/Sign Board	1	2	16. Comic Book	1	2	17. Community Workers	1	2	96. Others (Specify) _____	1	2		
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1002.	<p>Have you ever seen, heard or read following messages/characters during past one year? <i>(Multiple answer possible)</i></p> <table border="1"> <thead> <tr> <th></th><th>Yes</th><th>No</th></tr> </thead> <tbody> <tr><td>1. Dhaale Dai</td><td>1</td><td>2</td></tr> <tr><td>2. Guruji and Antare</td><td>1</td><td>2</td></tr> <tr><td>3. Condom Lagaoun AIDS Bhagaun</td><td>1</td><td>2</td></tr> <tr><td>4. Condom Bata Surakchhya Youn Swasthya KO Rakchhya</td><td>1</td><td>2</td></tr> <tr><td>5. Jhilke Dai Chha Chhaina condom</td><td>1</td><td>2</td></tr> <tr><td>6. Use condom for the protection from HIV/AIDS and STI</td><td>1</td><td>2</td></tr> <tr><td>7. Talk about HIV/AIDS from today</td><td>1</td><td>2</td></tr> <tr><td>96. Others (Specify) _____</td><td>1</td><td>2</td></tr> </tbody> </table>		Yes	No	1. Dhaale Dai	1	2	2. Guruji and Antare	1	2	3. Condom Lagaoun AIDS Bhagaun	1	2	4. Condom Bata Surakchhya Youn Swasthya KO Rakchhya	1	2	5. Jhilke Dai Chha Chhaina condom	1	2	6. Use condom for the protection from HIV/AIDS and STI	1	2	7. Talk about HIV/AIDS from today	1	2	96. Others (Specify) _____	1	2																																
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1003.	Have you ever herd/seen or read messages or materials other than mentioned above?	Yes.....1 No2	►1003.1 ►1004																																																									
1003.1	What?	_____																																																										
1004.	Generally, where do you gather to inject drug?	_____																																																										

ANNEX - 2
Description of Samples

Description	Eastern Nepal	Remarks
Estimated Sites	155	
Estimated Numbers of Males IDUs	2205	
Selected Sites	23	
Interviewed IDUs	345	
Refusals	39	

ANNEX - 3

Basic equation used in sample design

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

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

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

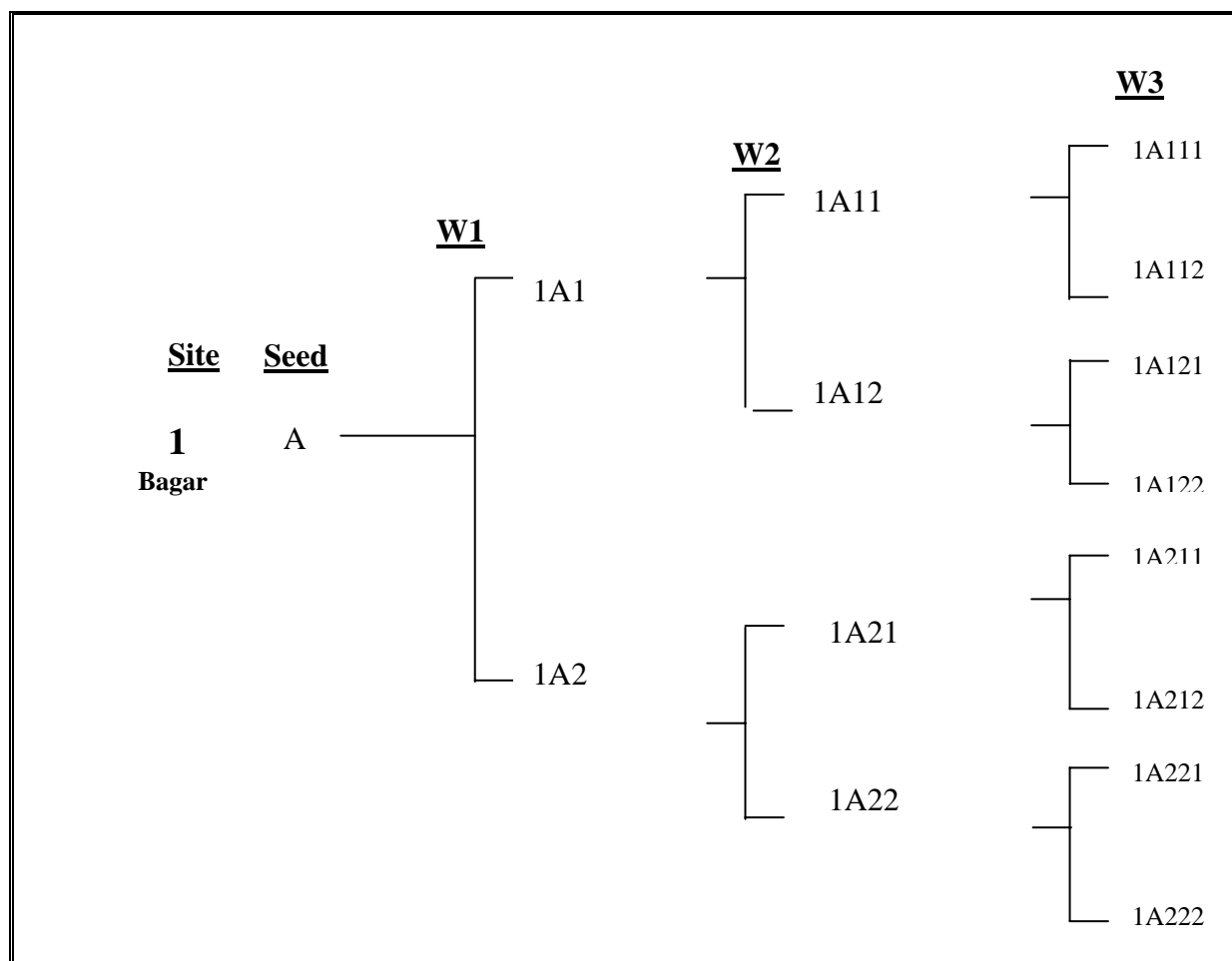
P_1 = the estimated number of an indicator measured as a proportion at the time of the first survey or for the control area

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 - 4
Respondent Driven Sampling Method Chart



ANNEX – 5
FAMILY HEALTH INTERNATIONAL (FHI), NEPAL
Oral Informed Consent

Name of Research Study: **HIV Prevalence and Risk Behavior Among Injecting Drug Users (IDUs) in Eastern Region: A Cross Sectional Survey**

Co-Principal Investigators: Siddhartha Man Tuladhar, New ERA
Stephen Mills, Family Health International
Laxmi Bilas Acharya, Family Health International
Jim Ross, Family Health International

Introduction

This Consent Form provides you the information on the above mentioned research. In order to ensure that you are informed about the study and your participation in the study, you will be asked to read it or it will be read for you. You will be asked to show your agreement on whether you are willing to participate in the study or not by saying it loudly in presence of other two witnesses. The whole research work has been designed as per the norms set by Family Health International (FHI) and Nepal Health Research Council (NHRC). The ethics review committee(s) of Family Health International and the Nepal Health Research Council have approved this research. We will provide you a copy of this, if you want. This consent form might contain some words that are unfamiliar to you. Please do not hesitate to ask us if you do not understand or you have any query.

Rational for the Research

You are being asked to participate in the research which aims to find out the rate of HIV, the virus that causes AIDS and the risk behaviors among the people who inject drugs in Eastern Region. The Ministry of Health and local groups will use the findings of this research in planning and formulating strategies to prevent such infections.

General Information on Research Methodology

If you agree to participate in this research we would like to convince you that your name will not be taken in any parts of the research. We will ask you some questions and take a few drops of blood sample from your fingertips. You will be provided with the necessary treatment if you have some skin problems caused by injecting drugs, if you want.

Your Role in the Research

Your participation in the research will take about one hour. About 345 male injecting drug users of Eastern Region will participate in the research.

You will be asked some questions regarding your age and education if you agree to participate in the research. We will ask you some questions about the history of your sexual behavior and symptoms of sexually transmitted diseases and provide you counseling on HIV that causes AIDS and other sexually transmitted diseases as well. We will explain you what the laboratory (Lab.) test is and what treatment and care is available to you. We will then take a blood sample from your finger by using a small finger stick.

Your name will neither be recorded on blood sample nor in the questionnaire. Both the questionnaire and the blood sample will be labeled with a code number. All the collected blood samples will be tested in a laboratory for HIV that causes AIDS. We can provide you HIV test results (reports) after a

month. The research team will inform you about the right place for you to collect your report. You will be given a code number and you will have to show it to us to get the report. Otherwise we will not be able to provide you the report.

Possible Risk and Benefits

You may feel uncomfortable while taking blood from your fingertips but it neither does any harm to you nor it is risky for you. Since your name has not been recorded anywhere, no one will be able to know that this laboratory test report belongs to you. Some of the questions we ask might put you in trouble or make you feel uncomfortable to answer them. You are free not to answer such questions and also to withdraw yourself from participating the research process at any time you like to do so. You might feel some mental stress after getting your report. If you come for the report, you will also get counseling on HIV.

To talk about the benefits of this research, you will be provided with free treatment, if you are having some kind of wounds on your skin while injecting drugs. You will be given lab test result of HIV and made aware of how HIV is transmitted and how it can be prevented and controlled. You will also be provided with information on safe sex and safe injecting behavior. The information we obtain from this research will help us plan and formulate strategies to control and prevent further spread of AIDS and other sexually transmitted diseases.

If you do not Give Your Consent to Participate in the Research

You are free to decide whether to participate or not. Whatever be your decision, this will not affect in any way in the health services you have been seeking now.

Confidentiality

We will do our best to deal with the information regarding you and your participation in the research as a highly confidential matter. We are not interested to know your name so it will not be recorded anywhere. A code number will be assigned to each questionnaire and sample of your blood. You will be given a card with the code number. If you want to get the report of lab test of your blood, you can do so by showing the card with the code number to us. We will not be able to identify you and give the report to you without the card.

We will not record your name anywhere so your name will not be mentioned in the report of this research, if published. However, the officials of International Health Center, in rare cases, might show interest to have a look at the record of the participants of the research and court sometimes might ask to show the record of the research to others. Whatever be the case, these records will not have your name.

Compensation

You will be given Rs.200 (Two Hundred), a condom and some reading materials as compensation for your participation in the research.

Withdraw from Participating the Research

You are free to withdraw yourself from participating the research process at any time you like or not to respond the questions you do not prefer to answer.

Contact

If you have any questions or queries regarding this research please contact the following persons/agencies:

Siddhartha Man Tuladhar
New ERA, Kalopool, Kathmandu, Nepal
Phone Number: 01-413603

Jim Ross
Family Health International (FHI),
Gairidhara, Kathmandu,
Phone Number: 01-427540

If you have some problems or queries regarding your rights as a participant of this research please contact:

Jim Ross
Family Health International (FHI)
Gairidhara, Kathmandu, Nepal
Phone Number: 01-427540

OR

David Borasky
Institutional Representative, Human Rights Protection Committee,
P.O.Box. 13950,
Research Triangle Park, North Carolina, USA
Phone Number: 00-1-919-405-1445,
E-mail:
dborasky@fhi.org
OR Cable: FAME.HEALTH

If you encounter any problem just because of your participation in this research please contact:

Siddhartha Man Tuladhar
New ERA
Kalopool, Kathmandu, Nepal
Phone No. 413603, 430060

OR

Asha Basnyat
Family Health International (FHI)
Gairidhara, Kathmandu
Phone No. 427540

If you need more help, we can provide you a referral where you may have to pay.

Volunteer Agreement

If you have fully understood what is being asked to you in the process of research, the person who is explaining these things to you will read the following words for you and sign on the form.

"I have read and explained the contents of this consent paper to the respondent. He explained the research activities back to me and from his understanding I am convinced that he is fully aware of the research activities. He has given his oral consent, on his own willingness, to participate in this study. No pressure was given to him to participate in the research work".

Date: _____

Signature of the person who obtained consent

I was present while reading out the benefits, risk and methods of the study for the respondent. All the questions were answered and the respondent has agreed to participate in the study.

Date: _____

Signature of the witness

ANNEX - 6
Centers Where Interviews and Blood Collection of IDUs Conducted

S. N.	Center	Sample Sites	Locations	Team	Completed Date
1	Kakarvitta	Barmeli Tole	Kakarvitta	A	April 19, 2003
2	Birtamod	Budhabare Hatiya	Birtamod	B	April 19, 2003
3	Bhadrapur	Bhanunagar	Bhadrapur	B	April 23 2003
4	Damakchowk	Sitapuri	Sitapuri	A	April 26, 2003
	Damakchowk	Pashupati Mandir	Damak	A	April 26, 2003
5	Urlabari	Urlabari	Urlabari	B	April 26, 2003
6	Biratnagar College Road	Dairy Farm Area	Kharji Kobara	A	May 07, 2003
	„	Sombare Haat	Bargachhi	A	May 02, 2003
	„	Teen Painsi	Teenpainsi	A	May 02, 2003
	„	Bhimpur	Bhimpur	A	May 11, 2003
	„	Sainik Tole	Sainik Tole	B	May 11, 2003
7	Biratnagar Bus Park	Ghogapul Chowk	Ghogapul Chowk	B	May 05, 2003
	„	Traffic Chock	Traffic Chock	B	May 05, 2003
	„	Hartali Haat	Mills Area	B	May 10, 2003
8	Itahari Swagat Market	Itahari	Itahari	A	May 25, 2003
9	Dharan Buddha Marga	Sabhagriha Chowk	Bhotepul	B	May 16, 2003
	„	Ananda Marga	Chaukibari	B	May 19, 2003
	„	Kirat Chowk	Chaukibari	B	May 22, 2003
	„	Ratna Chowk	Ratna Chowk	B	May 26, 2003
	„	Kalyan Chowk	Kalyan Chowk	B	May 26, 2003
10	Dharan, Niketan Galli	Devkota Chowk	Banjhaghara	A	
	„	Niketan Galli	Desi Line	A	May 16, 2003
	„	Annapurna Marga	Janapath	A	May 19, 2003

ANNEX – 7
Date and Place of Counseling Performed to IDUs

Date	Counseling center	Expected Client	Client Counseled	Client with HIV+	Client with HIV-
June 7-8, 2003	Karkarvitta	15	4	0	4
„	Bhadrapur	15	3	2	1
June 9-10, 2003	Birtamod	15	2	0	2
„	Sitapuri	15	3	0	3
June 11-12, 2003	Damak	15	4	0	4
„	Urlabari	15	3	0	3
June 14-20, 2003	Biratnagar	120	21	15	6
„	Dharan	120	48	14	32
June 21-22, 2003	Itahari	15	5	3	2
Total		345	93	34	59

ANNEX – 8
The Reasons of Not Injecting Drugs Yesterday

Injecting Practice	N	%
Reasons of Not Injecting Yesterday		
Lack of money	17	34.0
To quite slowly	17	34.0
Busy in house work	5	10.0
Unavailability/lack of drugs	6	12.0
Others	7	14.0
Total	50	100.0

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

ANNEX – 9
Gathering Place of IDUs to Inject Drugs

S.No.	Characteristics	No. of IDUs	
		n=345	%
1.	Own room/friends room	115	33.3
2.	Forest/Bushes	70	20.3
3.	Jogbani (India)	70	20.3
4.	Open Ground/Town planning area /open places	35	10.1
5.	River Bank/Slum Area/Pond/bridge area	16	4.6
6.	Garage/Junk Store	12	3.5
7.	Pani Tanki (India)	7	2.0
8.	Temple Area	5	1.4
9.	Shop	5	1.4
10.	Vacant House	4	1.2
11.	Galgaliya (India)	3	0.9
12.	Pool House/Swimming Pool	2	0.6
13.	Toilet/Public Toilet	1	0.3

ANNEX – 10
Combination of Different Drugs Injected by IDUs

S.No.	Drugs Combination	N
1.	Tidigesic + Calmpose	118
2.	Tidigesic + Avil	102
3.	Tidigesic + Algie	44
4.	Tidigesic + Saipam	39
5.	Tidigesic + Diazepam	14
6.	Tidigesic + Phenargan	12
7.	Tidigesic + Espomas Proxyvon	8
8.	Tidigesic + Fortwin	7
9.	Tidigesic + Norphin	6
10.	Tidigesic + Proxybon	6
11.	Tidigesic + Cyclopam	4
12.	Brown Sugar + Vitamin C	3
13.	Tidigesic + Phoding	1
14.	Tidigesic + Paczam	1
Total		365

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

ANNEX – 11
Types of Drugs Used Orally by Respondents

Types of drugs	Used in last-week	
	n=345	%
Nitrosun	206	59.7
Ganja	194	56.2
Phensydyl	82	23.8
Brown Sugar	35	10.1
Nitrovate	26	7.5
Proxygin	19	5.5
Velium 10	16	4.6
Calmpose	13	3.8
Codeine	9	2.6
Diazepam	8	2.3
Chares	6	1.7
Effidin	3	0.9
Phenergan	2	0.6
Combination	2	0.6
White Sugar	2	0.6
Cocaine	2	0.6
Lysergic Acid Dithylamidel(LSD)	1	0.3
Lysergic Acid Dithylamidel(LSD)	1	0.3
Lysergic Acid Dithylamidel(LSD)	1	0.3
Others	25	7.2

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

ANNEX – 12
Switched from one Drug to another and the Reasons of it

Responses	No. of IDUs	
	N	%
Switched from one drugs to another drugs in past month		
Yes	8	2.3
No	337	97.7
Total	345	100.0
Switched From		
Brown sugar to Tidigesic	8	100.0
Reasons of Switching		
To reduce brown sugar/Leave slowly	3	37.5
Not access of brown sugar	5	62.5
Total	8	100.0

Annex - 13
Cities/District and Countries Where Drugs were Injected by
IDUs During Last 12 Months

S.N.	City	District	Country	No. of IDUs	
				n	%
1.	Damak	Jhapa	Nepal	5	1.7
2.	Birtamod	Jhapa	Nepal	6	2.0
3.	Kerkha	Jhapa	Nepal	1	0.3
4.	Belbari	Morang	Nepal	8	2.7
5.	Dharan	Sunsari	Nepal	9	3.1
6.	Vantabari	Sunsari	Nepal	3	1.0
7.	Rampur	Udayapur	Nepal	1	0.3
8.	Haattiban	Lalitpur	Nepal	1	0.3
9.	Kumarigal	Lalitpur	Nepal	1	0.3
10.	Kathmandu	Kathmandu	Nepal	42	14.4
11.	Kakarvitta	Jhapa	Nepal	1	0.3
12.	Urlabari	Morang	Nepal	1	0.3
13.	Charaali	Jhapa	Nepal	1	0.3
14.	Jhiljhile	Jhapa	Nepal	1	0.3
15.	Biratnagar	Morang	Nepal	9	3.1
16.	Malangewa	Sarlahi	Nepal	1	0.3
17.	Hamfagu	Taplejung	Nepal	1	0.3
18.	Rabi	Panchthar	Nepal	1	0.3
19.	Rajarani	Dhankutta	Nepal	1	0.3
20.	Pakharibas	Dhankutta	Nepal	1	0.3
21.	Siruwani	Dhankutta	Nepal	1	0.3
22.	Okhaldhunga	Okhaldhunga	Nepal	1	0.3
23.	Halesithan	Khotang	Nepal	1	0.3
24.	New Bus Park	Kathmandu	Nepal	1	0.3
25.	Old Baneshor	Kathmandu	Nepal	1	0.3
26.	Balkhu	Kathmandu	Nepal	1	0.3
27.	Pokhara	Kaski	Nepal	2	0.7
28.	Khadbari	Sankhuwasabha	Nepal	1	0.3
29.	Dhankutta	Dhankutta	Nepal	1	0.3
30.	Ilam	Ilam	Nepal	2	0.7
31.	Butwal	Rupandehi	Nepal	1	0.3
32.	Kerabari	Morang	Nepal	1	0.3
33.	Rakshaul		India	1	0.3
34.	Gorkhapur		India	1	0.3
35.	Silgudi		India	6	2.0
36.	Darjeeling	Darjeeling	India	1	0.3
37.	Delhi		India	5	1.7
38.	Pani Tanki	Darjeeling	India	23	7.9
39.	Batase		India	2	0.7
40.	Galgaliya	Purniya	India	12	4.1
41.	Thakurgunj		India	6	2.0
42.	Sippole		India	1	0.3
43.	Naxalbadi		India	5	1.7
44.	Birpur		India	3	1.0
45.	Pharbisgunj		India	5	1.7
46.	Jogbani	Arariya	India	212	72.6
47.	Dagijyot		India	1	0.3
48.	Katihar		India	1	0.3
49.	Bombay		India	2	0.7
50.	Devigunj		India	1	0.3
51.	Calcutta		India	1	0.3
52.	Nagaland		India	1	0.3
53.	Sikkim		India	1	0.3
54.	Bhagalpur		India	1	0.3
55.	Tijpur		India	1	0.3
56.	Babadham		India	1	0.3
57.	Purniya	Purniya	India	1	0.3
58.	Uttar Pradesh		India	1	0.3
59.	Bhatparani		India	1	0.3
60.	Kharsang		India	1	0.3
61.	Himanchal Pradesh		India	1	0.3
62.			India	292	

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

ANNEX 14

Relation between Sexual Behavior and HIV

Sex with different partners in the past 12 months	No. of IDUs			
	Total	HIV+	%	P value
With regular female sex partner				
Yes	123	53	43.1	.06
No	74	12	16.2	
Never had sexual experience	148	56	37.8	
With Non-regular female sex partners				
Yes	50	7	14.0	<.01
No	147	58	39.5	
Never had sexual experience	148	56	37.8	
With female sex worker				
Yes	70	11	15.7	<.01
No	127	54	42.5	
Never had sexual experience	148	56	37.8	
Number of female partners in the past 12 months				
Number of Regular female sex partner in the past 12 months				
0 Partner	222	68	30.6	<.01
1 partner	122	53	43.4	
2 partners	1	0	0.0	
Number of Non-Regular female sex partner in the past 12 months				
0 Partner	295	114	38.6	<.01
1 partner	25	4	16.0	
2 or more partners	25	3	12.0	
Number of female sex workers in the past 12 months				
0 Partners	275	110	40.0	<.01
1 sex worker	33	6	18.2	
2 or more sex workers	37	5	13.5	
Total	345	121	35.1	

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