

**Integrated Biological and Behavioral Surveillance
(IBBS) Survey among Clients of Female Sex Workers
(Truckers) in 22 Terai Highways Districts of Nepal**

Round V



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

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Field Work Conducted by:

School of Planning, Monitoring, Evaluation and Research

Kalanki, Kathmandu

The IBBS Surveys are part of the National HIV Surveillance Plan, led by NCASC. The field work of the survey was carried out by School of Planning, Monitoring, Evaluation and Research and the quality assurance by National Public Health Laboratory with technical and financial assistance from Save the Children US/ Global Fund .

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We believe that the findings from this survey will be useful to all the policy makers, program planners and other implementing agencies to design new programs and revise the current strategies to discourse the concentrated HIV epidemic of Nepal.

Dr. Dipendra Raman Singh,
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ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
ART	Anti-Retroviral Therapy
DIC	Drop-in-Centre
EQA	External Quality Assessment
EQAS	External Quality Assurance Scheme
FP	Family Planning
FPAN	Family Planning Association of Nepal
FSW	Female Sex Worker
GOs	Governmental Organizations
HIV	Human Immunodeficiency Virus
HTC	HIV Testing and Counseling
IBBS	Integrated Biological and Behavioral Surveillance
ID	Identification Number
IEC	Information, Education and Communication
KAP	Key Affected Populations
MSM	Men who have Sex with Men
NCASC	National Centre for AIDS and STD Control
NGO	Non-Governmental Organization
NHRC	Nepal Health Research Council
NPHL	National Public Health Laboratory
OE	Outreach Educator
PE	Peer Educator
PHCC	Primary Health Care Centre
PLHIV	People living with HIV
PPS	Probability Proportional to Size
PWID	People Who Inject Drugs
RPR	Rapid Plasma Reagin
SD	Standard Deviation
SGS	Second Generation Surveillance
SI	Strategic Information
SITWG	Strategic Information Technical Working Group
SLC	School Leaving Certificate
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
WHO	World Health Organization
GWP	General Welfare Pratisthan

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EXECUTIVE SUMMARY

This is the fifth round of Integrated Biological and Behavioral Surveillance (IBBS) survey conducted among 400 clients of sex workers (truckers) who drive trucks in 22 districts of the East–West highway of Nepal. Fieldwork for the survey was carried out from 13 February 2016 to 9 March 2016. The survey was undertaken primarily to track the trend of HIV prevalence among the truckers and to understand their sexual behaviors, practice of use of condom and their exposures to different HIV and AIDS prevention to care programme. Information on the socio-demographic, mobility history, sexual behavior and condom use, knowledge on STI, HIV and AIDS, and exposure to STI, HIV and AIDS awareness programs, and stigma against HIV infected person was collected using a structured questionnaire. Prevalence of HIV was determined by testing blood samples using three different test kits: Determine HIV 1/2 test as the first test to detect antibodies against HIV, Uni-Gold test as the second test, and the STAT PAK test as a tie breaker test as per the HIV Testing and Counseling (HTC) guideline of National Centre for AIDS and STD Control (NCASC). Similarly, Syphilis test (RPR) was done as per the National guidelines. External quality assessment of the 10 percent of negative blood samples and all the positive samples identified at the survey site was done at National Public Health Laboratory, Teku, Kathmandu.

KEY FINDINGS

Comparison of the results of different IBBS surveys (2003-2016): Prevalence of both the HIV (1.8% in 2003 to 0.0% in 2009) and Syphilis (Current Syphilis: 2.3% in 2003 and 0.3% in 2009) has been declined since 2003; however, one of the truckers was identified as having HIV and Syphilis infection in 2016. Proportion of trucker who had driven the trucks in India notably decreased (44.5% in 2009 and 22.8% in 2016). Proportion of truckers who had ever had sex with FSWs in Nepal had markedly increased from 2009 (48.2% in 2009 and 93.4% in 2016). Similarly, proportion of the truckers who had sex with FSW in India in the past year decreased from 51.5 percent in 2009 to 29.4 percent in 2016. Proportion of the truckers who had sex with girlfriend in the past year increased from 22.7 percent in 2009 to 36.0 percent in 2009. Consistent use of condom while having sex with FSWs in Nepal has declined from 81.2 percent in 2009 to 65.2 percent in 2016; nevertheless, all the truckers had reported to have used condom during all sexual contacts with FSWs in India during the last one year in 2009 and 2016. █ Usual condom carrying

practices of the truckers decreased from 58.7 percent in 2006 to 31.0 percent in 2016. Truckers' comprehensive knowledge about ABC and BCDEF (ABC: Abstinence, keeping monogamous sexual relation and condom use; BCDEF: keeping monogamous sexual relation, condom use, healthy looking person can be infected with HIV, HIV is not transmitted through mosquito bite and HIV is not transmitted by sharing meal) considerably decreased in all aspects in the present round of survey in 2016. Exposure to different HIV and AIDS related programmes like visit to PEs/OEs (11.5% in 2006 and 10.8% in 2009 and 3.0% in 2016), STI clinic (3.8% in 2006, 3.3% in 2009 and 1.8% in 2016), HTC (3.8% in 2006, 3.3% in 2009 and 2.5% in 2016) and awareness Raising Programs in the last 12 months (14.8% in 2006, 20.0% in 2009 and 2.5% in 2016) has decreased overtime.

HIV and Syphilis Prevalence: Out of 400 truckers who participated in the survey, one had HIV infection (0.3%) and another one (0.3%) had syphilis infection as diagnosed by the quantitative criteria (TPHA+RPR-ve or RPR with titre < 1:8 is regarded as history of syphilis and TPHA+ and RPR with titre higher than 1:8 are considered as having current syphilis).

Socio-demographic Characteristics: Average (mean/median) age of the truckers was 25.7/24.0 years respectively with the youngest one of 16 years and the oldest ones of 60 years. Majority of the truckers were Janajati (44.8%). Almost half (48.8%) of them had 6- 9 years of formal education. More than half (52.8%) of them were never married and majority (70.5%) of them reported that they were living with their parents at the time of survey.

Mobility History: More than two-fifths (41.6%) of the truckers reported to have been staying stay away from their families for 15-21 days in a month due to driving and the mean duration (mean \pm Standard deviation) of stay away from their families was 18.7 \pm 7.6 days in a month. Almost 23 percent truckers had experience of driving trucks to India and 19.8 percent of them had driven the truck to India in the last week prior to the survey.

Sexual Behavior: Out of 400 truckers, 81.3 percent had an experience of having sex with woman. Nearly three-quarters (72.6%) of the tuckers with such experience had their first sexual

contact between 15-19 years age and the average (mean \pm SD/median) age at first sexual contact among the truckers was 18.1 \pm 2.7/18.0 years.

Sexual Contact with FSWs and Condom Use: More than half (51.1%) of the truckers had experience of having sex with female sex workers. Among them, 93.4 percent had experience of having sex with FSWs in Nepal. On average (mean/median), each of the truckers visited 11.8/3 FSWs respectively in the past year in Nepal. Almost 42 percent of the truckers who had sex with FSWs in Nepal had their last sexual contact in a truck or a bus and another 41.3 percent had sexual intercourse at a hotel or a lodge. About 82 percent of the truckers had used condom during the last intercourse with FSWs in Nepal. Around 65 percent of the truckers who had sex with FSWs in Nepal had used condom at every sexual intercourse whereas all the truckers who had sex with FSWs in India had done so.

Availability of Condom: Only 31 percent of the truckers reported to have carried condom usually. Pharmacies (81.6%), Health Post/Health Centers (40.4%) and Hospitals (39.0%) were reported to be the most frequent places truckers visited for to get condoms.

Knowledge of STI, HIV and AIDS and Treatment of STIs: A total of 84.5 percent truckers had ever heard about the HIV and AIDS. Furthermore, 15.2 percent truckers had knowledge about A-abstinence form sex, 21 percent had knowledge about B- being faithful to sex partner , 59.3 percent were aware of C-consistent use of condom , 49.3percent rejected D- misconception about the transmission of HIV by Mosquito bite ,34 percent believed that E- healthy looking person can transmit HIV and 63.5 percent thought that F- HIV is not transmitted by sharing meals with HIV infected person. Similarly, 31.8 percent of the truckers had knowledge of composite index ABC and 45.5 percent had knowledge of BCDEF. Only 23.4 percent of the truckers had ever had HIV testing. Among them 31.6 percent tested recently in the last 12 months and most of them (87.3%) did so voluntarily.

Commonly known STIs and their symptoms among truckers were Syphilis (Bhiringi)/Gonorrhea (41.3%), Ulcer or Sore around Genital Area (38.8%), Swelling of Penis (26.8%), White Discharge/Discharge of Pus/Dhatu flow (15.5%), burning sensation while urinating (15.0%) and

Pain during urination (8.0%). Similarly, commonly experienced STI symptoms in the recent past were ulcer or sore around genital area (57.6%), burning sensation while urination (36.4%), painful urination (21.2%) and urethral discharge (12.1%). Among the truckers who experienced STI symptoms in the last 12 months, 27.3 percent had received treatment against these symptoms.

Exposure to STI, HIV and AIDS Program: During the 12 months prior to the survey a small portion of the truckers (3.0%) had met/discussed/interacted with Peer Educators (PE)/Outreach Educators (OE), 10.5 percent visited the DICs, 1.8 percent visited any STI Clinic, 2.5 percent HTC, and 2.5 percent of the truckers had participated in HIV and AIDS awareness programs.

Conclusion: HIV prevalence among truckers was found to be low (0% in 2009 and 0.3% in 2016) despite the fact that a substantial proportion of the truckers had sexual contacts with FSWs in Nepal and India. Similarly, sex with other sex partners such as girlfriends, other female partners and male sex partners were also invariably practiced among truckers. However, consistent use of condoms during sex with different partners was quite low. Knowledge of truckers about different aspects of STI, HIV and AIDS prevention was found to be poor. Majority of the truckers who experienced STI symptoms were found to be negligent toward the symptoms and did not seek for treatment for these symptoms. There was poor access and utilization of HIV prevention services among truckers; and their participation in such programmes was found to be very limited.

Recommendations: Following target based approaches are recommended to minimize the risk of HIV and STI among truckers in Nepal.

- a. *Risk reduction strategies:* Promote the awareness and counseling services to the truckers to reduce the number/types of partners, suggest for consistent condom use and develop the trucker-friendly HIV and STI services. The provisions should be made for introduction of HIV related contents in licensing examination for the prospective drivers so that everyone will have essential knowledge of HIV prevention.
- b. *Improve service accessibility and availability for truckers:* Develop and sustain the year round availability of condom for the truckers in selected locations mostly in refreshing

centers and public toilets of highways. Target based services such as awareness programmes for truckers; STI services and counseling services must be implemented in different locations of the East-West highway. Provision of periodic assessment for possible HIV and STIs from trucker-friendly static clinic sites along with the counseling services might be useful to improve the access and utilization of services.

CHAPTER 1: INTRODUCTION

1.1 Background

Nepal's HIV epidemic has been labeled as “concentrated epidemic” since 2004 as there is high prevalence of HIV infection among key affected populations (KAPs) (NCASC, 2004). These KAPs include: People Who Inject Drug (PWIDs), Female Sex Workers (FSWs) and their clients including the truckers, Men having Sex with Men (MSM) and Male Labor Migrants and their spouses. Several studies including recent survey carried out among FSWs in Kathmandu valley affirm that businessman, service holders, transportation workers especially truckers and rickshaw pullers, security personnel, and migrant workers are the key clients of FSWs (New ERA, 2003; The World Bank, 2014; NCASC, 2015).

In the early 1990s, a national HIV surveillance system was established in Nepal to monitor the HIV epidemic and to inform evidence-based HIV prevention efforts (NCASC, 2013). Since then, Integrated Biological and Behavioral Surveillance (IBBS) surveys have been conducted every 2-3 years among KAPs of the identified epidemic zones. IBBS surveys are considered powerful tools to generate evidence based data. Findings of these surveys are widely used for designing HIV interventions, to monitor HIV programs, and for estimation and to project the epidemic of HIV in many countries including Nepal. Estimation and projection of HIV prevalence in the country is also based on IBBS survey data. Data on key National HIV Indicators are determined using IBBS survey results. Furthermore, results of these surveys have wider application as different communities, donors, policy makers, program designers and implementers, academicians, and civil society organizations utilize the results to track the level of HIV epidemic and related risk behaviors in Nepal. Hence, the present survey will serve as an important milestone to guide the national HIV prevention and control program.

1.2 Rationale of the Study

Transport is a social vector in the transmission of diseases. High-risk behaviors of the transport workers such as low condom use, injecting drug and involvement in multiple sexual contacts have fueled in the spread of HIV infection. Transport workers act as the bridge population between high-risk population and the low risk population. Furthermore, transport workers posed double fold risk of acquiring HIV infection than other occupations (The World Bank, 2015). A

survey carried out by New Era reported that 70 percent of the clients of FSWs in the East –West highway were truckers. NCASC (2016) reported that almost three out of every five people living with HIV are the clients of sex workers. A number of factors increase the truckers’ vulnerability to acquire HIV and STIs. These include: lack of awareness and preventive practices; most of the truckers are at sexually active age, spend extended periods of time away from their spouses, indulge in multiple sexual relations in the multi-route sexes, practice unsafe sex, causal relations are more frequent and perceived social stigma are common with this occupation. Meanwhile, identification of potential intervention points provides the opportunity to prevent the HIV infection among truckers (World Bank, 2009). In the meantime, sex trade has been reported to be increasing continuously in the East-West highway and with this, a greater number of younger FSWs are entering into this business (New ERA, 2003, ACNielsen Nepal, 2009), The World Bank, 2014; Singh et al, 2010).

1.3 Objectives of the Survey

This survey was carried out to fulfill the following objectives:

Primary objectives

- To track the trend in the prevalence of HIV infection, syphilis, comprehensive HIV/AIDS knowledge, risk behaviors and uptake of interventions among truckers who drive through the 22 districts on the East-West Highway.

Secondary objectives

- To collect information on various personal, social and demographic characteristics of truckers,
- To assess the level of knowledge of truckers on STIs, HIV and AIDS,
- To find out the exposure and utilization of various HIV and STI prevention and control programs among the truckers.

CHAPTER 2: METHODOLOGY

2.1 Implementation of the Survey

School of Planning, Monitoring, Evaluation and Research (SPMER) carried out this survey with the technical and advisory support from NCASC and Save the Children US/Global Fund and financial support from Save the Children US/Global Fund, Nepal. SPMER was responsible for implementation and overall management of the survey including training of the survey team, management of field team and survey activities, laboratory testing of blood samples, clinical examination of the respondents and supervision of the activities of the survey team throughout the survey period. SPMER carried out mapping to estimate the number of trucks passing through Pathlaiya every day followed by data collection using tablets equipped with structured, interview schedule facilitated by internet based data submission techniques. Data analysis and report writing was done by the technical team of SPMER in close coordination with and support from NCASC and Save the Children, Nepal.

The survey was conducted in close collaboration with many organizations namely General Welfare Pratisthan (GWP) Pathlaiya, GWP Hetauda, GWP Kalaiya, Narayani Transport Workers Association, all transport offices working in Pathlaiya, Traffic Police Office, Police Check posts, Regional Health Training Centre Pathlaiya and DPHO Bara. External quality assurance of all the HIV positive samples and 10 percent of all the negative samples were carried out at the National Public Health Laboratory (NPHL).

2.2 Survey Population and Survey Area

This survey was carried out among the truckers who drive in the 22 districts of East-West highway of Nepal. Truckers are one of the key populations affected by HIV and STIs. These also serve as the major section of clients of FSWs. For the present survey, truckers are defined as “male truck drivers aged 18 years or above or their helpers aged 16 years and above intercepted at the Pathlaiya truck stop along the East-West Highway”.

This survey was carried out in the 22 districts of East-West highway. Nevertheless, the selection of each of the truckers was done at Pathlaiya in Bara district, which is the intersection point of

East-West highway and southern highway to Birgunj. Pathlaiya lies in the central region of Nepal and is located almost 66 Kms in the south-east of the Kathmandu and about 29 Kms to the east of Hetauda. All the trucks originating from the eastern part, including the neighboring borders of India across the eastern border, have to pass through Pathlaiya to reach Kathmandu or western regions of Nepal. The recruitment site was selected taking into consideration the convenience in establishing the mobile laboratory set-ups and meeting the survey population. This site was selected based on feasibility, rationality and the practice established in the last two rounds of surveys.

2.3 Survey Design

The study was a descriptive serial cross-sectional survey. The survey was carried out using the same methods that were used in the previous rounds of IBBS surveys conducted among truckers who drive along the 22 districts of East–West highway in Nepal. Face to face interviews were conducted with each of the selected truckers to assess their sexual risk behaviors; and the testing of biological samples using venous blood/serum to determine the prevalence of HIV and syphilis. HIV and Syphilis among truckers was determined using the National Laboratory Guidelines for testing of HIV and Syphilis that was developed by NCASC. HIV test was performed by using determine – HIV ½ for detection of HIV antibodies. All the positives cases identified by determine - HIV ½ tests were subjected to Uni-gold HIV ½ test. In case of tie in the first two test results, a third test using STAT-PAK was conducted to perform as a tie breaker. Rapid Plasma Reagin (RPR) test was used to diagnose syphilis among truckers.

2.4 Size Estimation/Mapping

A two day training program was organized in January (5th and 6th) 2016 to plan and implement mapping exercise. The training covered techniques and process of estimation of flow of trucks along the east west highway. The size estimation and mapping process of IBBS among Clients of FSWs (Truckers) was done in Pathlaiya. The School of PMER team completed the mapping of truckers from 7th January 2016 to 10th January 2016. The basic ethnographic techniques and observation methods were adopted for mapping of truckers. During the process, the team found that Pathlaiya was strategically important location for survey among truckers as hundreds of trucks passed through this site and hundreds of them stopped here for loading/ unloading and

night halt purposes. There were more than 40 transport offices in this place and more than 20 were observed during the research walk by the team. These transport offices provide goods for these trucks so hundreds of trucks wait for new assignments at this place. There were more than 100 truckers waiting at and around the Pathlaiya Bazar. The research team observed the record of vehicle registration, contacted and talked to various key informants and personnel for this task and conducted formal and informal discussions on the issues. The key informants were security personnel, traffic police, transport workers, truckers, hotel owners, vendors and even greasing personnel who wait for trucks to provide greasing services. The team met the DPHO and HIV focal person of Bara District and local organizations working for truckers like General Welfare Pratisthan (GWP).

2.5 Sampling and Sample Size

This IBBS survey followed sampling procedures similar to the ones used in previous rounds of IBBS surveys among carried out among the clients of FSW (Truckers) who drive in 22 highway districts of Nepal. More precisely, it followed similar sampling procedures that were used in the IBBS surveys conducted among the truckers of 22 districts of East-West highway in 2006 and 2009. The survey followed systematic sampling procedure to select the required sample. An experienced team of School of PMER, including research officer, visited Pathlaiya to observe the flow of trucks and locate their truck holding sites for the new assignments, loading/unloading goods and for night halts purposes. The average daily flow of trucks through Pathlaiya was identified as 472 using the information from key informants, the records of traffic police check posts and the regular observations of trucks flow for three days made by the mapping team of SPMER. At least 20 respondents were selected each day. Thus, a total of 400 eligible truckers were selected for this survey. The truckers passing by Pathlaiya Chowk were listed first and then selected using systematic random sampling approach and were later traced at the parking locations in and around Pathlaiya. A team of motivators approached the selected truckers and enrolled them in the survey process after their verbal consent. Each of the eligible trucker who agreed to take part in the survey was invited for an interview and testing of blood samples for HIV and syphilis was done in clinic set up for the survey purpose. In case of refusals, immediate next trucker was selected from the list and traced.

2.6 Stakeholder and Consultative meeting

The core survey team of School of PMER organized meeting with concerned stakeholders and presented survey implementation plan in detail. The team sought support and recommendation from those stakeholders who participated in these consultative meetings. Survey team shared the findings of the preliminary mapping exercise and sought inputs from the participants on the locations identified through visits. The enumeration list was also shared with the stakeholders in the meeting. Additionally, the objectives of the survey, its methodologies, fieldwork dates, and location of the sites were also shared with all the stakeholders. The stakeholder's meeting was organized in district level prior to fieldwork. In order to facilitate the field operations, concerned government organizations, I/NGOs and their representatives at the district, municipality and community level were consulted for permission and necessary support to collect data.

2.7 Identification and Recruitment of Truckers

Field researchers were trained about the survey area and methods of identification of the participants. Map of the survey site was developed and provided to the researchers to facilitate them for fieldwork. A coordination meeting was organized with the organizations that are working for truckers. School of PMER requested to the participants to provide inputs for the identification of the locations

Trained field researchers were mobilized for the recruitment of truckers. A work schedule was developed and provided to each of the field researchers. Survey team established the clinic site after discussion with different stakeholder at Pathlaiya. The clinic consisted of the package of services such as history taking, pretest counseling, clinical examination, laboratory testing, post-test counseling for HIV and STIs, and syndromic treatment of STIs. The respondents who satisfactorily answered all the screening questions were briefed about the purpose, objectives and methodology of the survey. Once the selected truckers agreed to participate in the survey, the researchers took them into the clinic.

2.8 Refusals

A briefing was done to each of the selected truckers regarding the objectives of survey and the benefits and risks of participating in the survey. Each of the respondents was ensured about their

right to participate or refuse in this survey. Altogether 11 truckers refused to take part in the survey.

2.9 Control of Duplication

To avoid repetition of the truckers, counselors and motivators (local mobilizers) asked various screening questions like the recent exposure to HIV testing, provision of ID cards, name of the organizers of such testing programs before their recruitment.

2.10 Recruitment of and Training to the Research Team

Experienced male researchers having at least university degree education in the relevant discipline, having similar experiences were selected as supervisors and research assistants. Similarly, experienced lab technicians were hired for the testing of blood samples and health assistants were recruited for the symptomatic identification of STIs and their syndromic management.

School of PMER organized one-week intensive training program for field researchers. Training was organized focusing on the introduction to the survey, administration of the questionnaire, and methods of approaching the participants, rapport-building techniques and sharing of experiences (problems and solutions). The program objectives and the purpose of the survey were explained in the training and the sampling methodologies being adopted for selection of the sample were discussed. Similarly, techniques for organizing community meeting were also described to identify the potential participants.

Training sessions also addressed research ethics, research protocol, counseling and overcoming embarrassment. A significant amount of time was allocated to train on HIV and syphilis testing and understanding sample selection techniques for External Quality Assurance System, for the team members of laboratory. In addition, the training session also involved mock interviews, role-plays, and class lectures to help researchers understand each question included in the questionnaire. Role-play practice was carried out assuming actual field situations. Concerned officials from NCASC, Save the Children and other relevant agencies including freelance consultant experts were invited to facilitate the training sessions.

2.11 Data collection period

Fieldwork for this survey was carried out during 13th February to 9th March 2016.

2.11.1 Clinic Set-up

A static clinic was established in a hotel at Pathlaiya, Bara. The clinic was managed with one welcome room, four interview rooms, one counseling room, one STI clinician room, one laboratory room and one waiting room. The flow chart for the working procedure was developed and displayed. The selected truckers were welcomed in the welcome room, briefed about the overall survey process and assigned a unique code. Then they were guided to the interview room where they provided consent and signed the documents with the help of the interviewer and the local mobilizer and interviewed using the structured questionnaire in the tablet computers. After completion of the interview they were led to pre-test counseling room. After the pre-test counseling, they were guided to the laboratory room. In the lab, blood was drawn, centrifuged for separating the serum and undergoing all the tests designated for the survey. After the blood was drawn in the lab, the truckers were sent to the STI Clinician room where necessary Syndromic treatment of STIs as per National Guidelines on Case Management of STI (2014) was provided. Then the truckers were sent to waiting room until the test was performed. The test result was provided to the truckers with post-test counseling according to the findings of the test results in the counseling room. Then, the truckers were provided travel allowance as incentives and the process completed. Throughout the survey, refrigerators/cold chain box was used to maintain the cold chain system. A double power backup facility was ensured in all clinic set up sites. Sanitation and waste management system was properly maintained throughout the survey in survey site.

2.11.2 Clinical Procedures

After completion of the interview, pre test counseling and lab test, a trained Health Assistant (HA) examined the respondent for any signs and symptoms of STI or general health problems. Some essential medicines were also provided to the needy truckers. The Health Assistant made appropriate referrals of the identified cases that needed additional treatment to concerned hospitals or health centers.

2.11.3 Laboratory Procedures

After pre-test counseling, the lab technician briefly explained the respondents about the HIV testing process and took verbal consent to draw blood. Blood samples were drawn in 3-milliliter tubes by disposable syringes. The samples were tested for HIV and syphilis on the spot within an hour. This survey was designed to provide test results with pre- and post-counseling in the shortest possible time. Blood samples were tested using Determine HIV1/2 as first test to detect antibodies against HIV. If the first test result was positive, a second test was performed using Uni-Gold HIV ½. In case of a tie between the first two tests, a third test was also performed using STAT PAK as a tiebreaker.

In addition to the HIV testing, a test for syphilis using RPR with the qualitative and quantitative technique was used. This identified the cases of history syphilis and current syphilis. RPR titre with 1:8 or more was considered active syphilis and less than that was considered as history syphilis. Necessary measures were taken to store the samples for quality control. Waste produced in the lab was collected in different color-coded dustbins and labeled containers. Needles were destroyed using needle destroyer. Waste products formed as a result of laboratory and clinical procedure was managed in accordance with the standard disposal procedures.

2.12 Survey and Laboratory ID Codes

Confidentiality was strictly maintained throughout the survey process. Unique survey ID codes were used for all data components pertaining to the survey. The use of survey codes was prevented linking consent forms with actual surveys and referral history. A separate laboratory code was maintained to identify participant results from rapid tests and to label all specimens for laboratory testing. Each of the respondents was assigned a laboratory code that was linked to their ID code in order to link behavioral and biological data.

2.13 HIV Rapid Testing

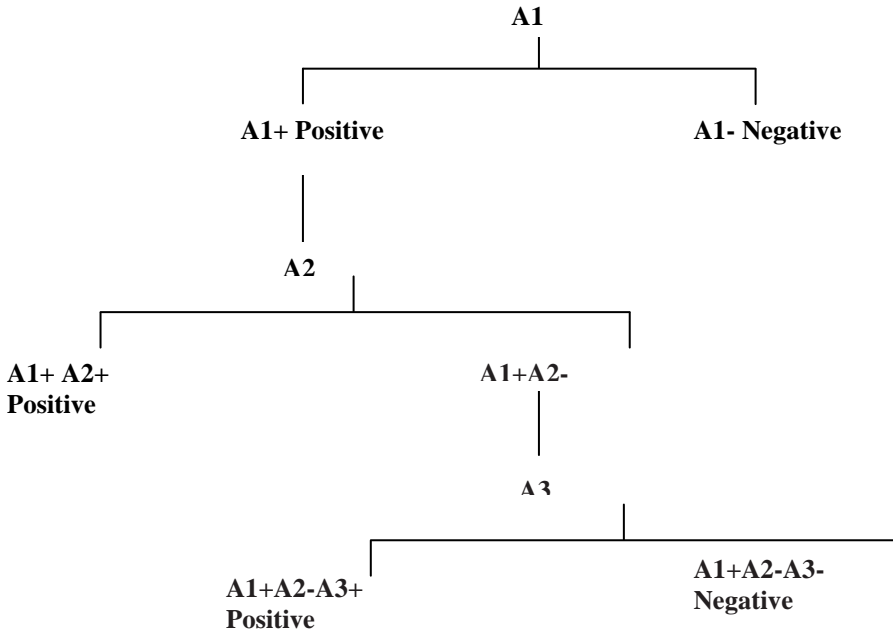
HIV rapid testing method was conducted at the survey site after completion of pre-test counseling by certified laboratory technicians. Rapid testing was conducted by using a serial testing scheme based on the NCASC national guideline algorithm and approved commercial test

kits. All those participants who had given consent were tested using Allere Determine HIV-1/2 rapid test kits. Non-reactive results were considered negative, and reactive results were confirmed with Uni-Gold HIV rapid test. If Uni-Gold results were nonreactive, results were recorded as indeterminate. Thereafter, in case a tie existed between first and second tests, a third test STAT PAK was used as a tiebreaker. All participants received post-test counseling, with specific messages tailored to their test results. The ones with any reactive result or indeterminate result were referred to HIV care services and further counseling and testing.

Interpretation of the Test Results

- All samples negative by first test were reported as negatives.
- All samples positive by one test only subjected to the second test.
- All the positive tests by tiebreaker test were reported positive
- All negative tests by tiebreaker test were reported as negative.

Figure 1: HIV Testing Strategy II Algorithm



Note:

A1 (First test):	Determine HIV ½
A2 (Second test):	Uni-Gold HIV

A3(Third test):	STAT PAK
"+"	Reactive
"_"	Non-reactive

Table 1: Sensitivity and Specificity

Test Kits	Company	Initial	Confirm	Tie	Antigen	Spec.	Sens.
Determine	Allere	X			Recom HIV-1 and HIV-2	99.4%	100.0%
Uni-Gold	Trinity Biotech		X		HIV-1 and HIV-2	100.0%	100.0%
STAT PAK	CHEM BIO			X	HIV-1 (gp41; p24) -2	99.3%	100.0%

2.14 Blood Serum Sample Creation for EQAS

Serum samples were created for the external quality assessment of the tests. The samples were collected in crayo vials and cold chain was maintained during storage and transportation throughout the survey period. All Positive and 10 percent of the negative samples of HIV and RPR were handed over to National Public Health Laboratory (NPHL), Kathmandu for quality assurance.

2.15 Internal and External Quality Assurance

Regular monitoring was an integral part of the quality assurance mechanism of School of PMER during the mapping. Survey core team members visited the field to support field researchers to make them more responsible for quality work and quick response. Besides, , the core team cross-verified the mapping data collected by researchers through interview with different key informants and field visits. Special measures were adopted during data collection process to avoid repetition of interviews with the same truckers. The researchers were instructed to ask the truckers about previous experiences of blood test, inspect the arm from where blood was drawn and possession of ID card issued by SPMER in case of any doubt about duplication. Confidentiality was maintained strictly throughout the survey period.

External Quality Assurance Scheme (EQAS) is the evaluation of the performance of a testing laboratory by an external agency. An EQAS is very essential in such studies to determine the

quality of testing. All the HIV positive samples and 10 percent of the HIV negative samples were retested at NPHL in this survey as an EQA of HIV testing. The EQA samples of serum were sent to the NPHL with code numbers. EQAS results were similar to that was tested by study team in the field.

2.16 Research Instruments

A quantitative research approach was adopted to collect and analyze the data in this survey. A modified questionnaire, used in the previous rounds of surveys, was used as the tool for the survey. The tablet based data collection was introduced for the first time in this round of IBBS survey. Both the behavioral and biological data were collected using an application called Quick tap Survey in Micromax Canvas 5 tablets. The software was developed by Public Health and Environment Research Centre (PERC) Nepal. Separate tablets were provided to each of the research assistant (interviewer) and Laboratory technician for the behavioral and biological data respectively.

2.17 Pretesting of Rresearch tools

The researchers from School of PMER conducted pretesting of the survey tools among survey population. Altogether, 3 questionnaires were tested in Balkhu, Kathmandu. Only minor grammatical changes were made after the pretesting. Tablet based questionnaire was introduced to those truckers who agreed to participated in the pretesting.

2.18 Data Analysis and Management

The data collected through the tablets were uploaded to a server after completion of each questionnaire. The laboratory data were also uploaded to a server at the completion of data collection task every day. Necessary measures were taken to protect the uploaded data. The uploaded data were downloaded by an authorized person of SPMER and were saved every day. Inconsistencies identified in the data collection procedure were noted every day and finally were rechecked and verified in consultation with survey consultant and other experts. These data were further transferred to the Excel sheets and coded. Then, the Excel-based data were transferred to the SPSS-20 version for the final data analysis. Descriptive statistics such as percentage, mean,

median, standard deviation and inferential statistics like Chi-square for trend analysis were used to infer findings.

2.19 Monitoring and Supervision

The team of NCASC, Save the Children US/Global Fund and School of PMER conducted the overall monitoring and supervision of the survey. SPMER conducted various rounds of participatory internal monitoring visits to the survey site. All the feedbacks and suggestions were adopted by the survey team and they paid due attention to the protocol of the survey. Since the beginning of the survey, the Team Leader, Research Officer and Coordinator made regular monitoring and supervision visits of the work in the field. The site coordinators were responsible regularly to ensure that the survey was implemented in the field according to the protocol. Team meetings were held every week to plan for the actions and solve any problems encountered at the field-level. The site coordinators in the field reported the survey coordinator frequently to update the field operations.

2.20 Ethical Considerations

Ethical approval was obtained from Nepal Health Research Council (NHRC). The participants involved in the in-depth interviews and sample surveys were properly informed about the nature of the survey. They were informed that their participation was voluntary and that they were free to refuse to answer any question or to withdraw from the interview at any stage. They were also informed that such withdrawal would not affect the services they would normally receive from the survey.

A consent form, describing the objectives of the survey, the nature of the participant's involvement, the benefits, and confidentiality issues, was clearly read for them. A specific ID card was provided to each of the respondents so that their names and addresses were not recorded anywhere. HIV test results along with post-test counseling were provided to each participant in a confidential manner. A travel allowance of NRs 200 and a pack of fruit juice were provided to each of the respondents as incentive. The research team maintained confidentiality of the data collected throughout the survey. The interviewers submitted the

completed tablet based interviews to the server immediately after the completion of each interview. Only the core team of the research had access to the submitted data.

2.21 HIV Pre- and Post-test Counseling and Follow-Up

After the pretest counseling, the truckers were sent to the interview room for the HIV related behavioral information and then for Lab test for HIV and Syphilis. After that, they were sent to the STI clinic for appropriate advices and treatment of the possible STI symptoms. Finally, a laboratory report along with travel allowance (NRs 200) was provided with the post- test counseling by the trained counselors.

CHAPTER 3: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF TRUCKERS

This chapter describes the socio-demographic characteristics of truckers. A total of 400 truckers participated in the survey. Socio-demographic characteristics like age-wise distribution of truckers, their educational status, marital status, caste group and current living relationship have been described in this chapter.

3.1 Socio-demographic Characteristics of Truckers

Table 2 shows the socio-demographic characteristics of the truckers. Out of 400 truckers who participated in this survey, 29.8 percent were of 20-24 years age group followed by more than a quarter (26.3%) below 20 years. More than two-fifths (43.3%) were of ≥ 25 years old with almost 17 percent being 25-29 years old and 13.3 percent were of age over 34 years. An average (mean/median) age of the truckers was 25.7/24.0 years with the youngest one of 16 years and the oldest one of 60 years. Majority of the truckers were Janajati (44.8%) and Brahmin/Chhetri/Thakuri (32.8%); and 2.5 percent were others (Sanyasi, Majhi, Sunuwar, Gaine, Giri and Bhujel). Nearly half (48.8%) of the truckers had 6- 9 years of formal education and another 29.5 percent of them truckers had primary level education (1- 5 years of schooling). A total of 17.8 percent truckers had education up to School Leaving Certificate (SLC) or above whereas, 0.8 percent were illiterate. More than half (52.8%) of the truckers were never married; 46.3 percent of them were married; and one percent was divorced/separated/widower. Majority of the divorced/separated/widowers, never married and married not living with wife (64.8%) were currently living with parents and another 31.3 percent were living with their male friends. Majority (70.5%) of the truckers reported that they were living with their parents at the time of survey. Similarly, 43.3 percent of the truckers were living with their wives and 31.3 percent were sharing their residence with their male friends. Only a few (1.3%) of the truckers were living alone and 1.6 percent were living with others (brother, maternal uncle and relatives).

Table 2: Truckers by their socio-demographic Characteristics

Characteristics	Number of Truckers	Percentage
Age of the Truckers(in years)		
<20	105	26.3
20 – 24	119	29.8
25 – 29	67	16.8
30 – 34	56	14.0
>34	53	13.3
Mean/Median age (Range)	25.7/24.0 years (16-60 years)	
Total	400	100
Ethnic/Caste Group		
Brahmin/Chhetri/Thakuri	131	32.8
Gurung,/Magar/Tamang/Newar/Rai/Limbu	179	44.8
Terai Caste (Yadav/Tharu/Kusuwah/Musalman/Dhanuk/ Chamar/Kanu/Paswan)	60	15.0
Damai/Sarki/Kami/chamar/Pariyar	20	5.0
Others (Sanyasi, Majhi, Sunuwar, Gaine, Giri & Bhujel)	10	2.5
Total	400	100.0
Education		
Illiterate	3	0.8
Literate, no schooling	13	3.3
Grade 1 – 5	118	29.5
Grade 6 – 9	195	48.8
SLC and Above	71	17.8
Total	400	100
Marital Status		
Married	185	46.3
Divorced/separated/ widower	4	1.0
Never married	211	52.8
Total	400	100
Currently Living With		
Parents	282	70.5
Wife	173	43.3
Male friend	125	31.3
Children	88	22.0
Alone	5	1.3
Female friend	3	0.8
Others	6	1.5
Total	400	*

**Note: The percentages add up to more than 100 because of multiple responses*

3.2 MOBILITY OF TRUCKERS

The truckers constitute frequently movable and dynamic population, as they have to stay in different places while doing their job. In the present survey, out of 185 truckers who reported to have been living away from their families due to the nature of their job, more than two-fifths (41.6%) of them reported that they spent about 15-21 days away from their families every month. In the meantime, 37.7 percent of the truckers reported that they remain away from their families for 22-29 days every month.. The average duration of stay (mean \pm SD) away from their families was 18.7 \pm 7.6 days in a month. Almost 23 percent truckers had experience of driving trucks in India. Among them, 29.7 percent had driven trucks to India more than three months before the survey, 27.5% had driven 1-2 months before and 19.8 percent had done so just the week prior to the survey (Table 3).

Table 3: Mobility of truckers

Truck Driven to Different Part of Nepal and India	No. of truckers	Percentage
Married Truckers: Days per Month Away from Family		
Up to 7 Days	20	10.8
8 - 14 Days	15	8.1
15 - 21 Days	77	41.6
22 - 29 Days	69	37.3
29 days +	4	2.2
Mean \pm SD		18.7 \pm 7.6
Total	185	100.0
Have ever driven trucks to India		
Yes	91	22.8
No	309	77.3
Total	400	100.0
Last time truck driven to India		
Last Week	18	19.8
1-2 weeks ago	5	5.5
3-4 weeks ago	12	13.2
1-2 months ago	25	27.5
2-3 months ago	4	4.4
More than three months ago	27	29.7
Total	91	100.0

CHAPTER 4: PREVALENCE OF HIV AND ITS ASSOCIATION WITH BACKGROUND CHARACTERISTICS OF TRUCKERS

4.1 Prevalence of HIV and Syphilis

Out of 400 truckers who participated in the survey, one had HIV infection (0.3%) and another one (0.3%) had syphilis infection as diagnosed by the quantitative criteria. The syphilis positive case was the case of Syphilis history as the RPR titre was 1:4. To consider the syphilis positive cases, TPHA+RPR-ve or RPR with titre < 1:8 is regarded as history of syphilis and TPHA+ and RPR with titre higher than 1:8 are considered as having current syphilis requiring immediate treatment). None of the truckers had experienced Syphilitic infection (Table 4).

Table 4: Prevalence of HIV and Syphilis infection

HIV/Syphilis infection	No. of truckers	Percentage
HIV Positive	1	0.3
Syphilis history (TPHA+RPR-ve or RPR with titre < 1:8)	1	0.3
Current Syphilis (TPHA+ and RPR with titre higher than 1:8)	0	0.0

4.2 Distribution of HIV and Syphilis Positive Truckers by different Variables

HIV infection was reported among the adolescent truckers (<20 years) while syphilis history was observed in truckers between 30-34 years age. Both the HIV and syphilis infections were seen among those truckers who had 6-9 years of schooling. A never married trucker had HIV infection and ever-married trucker had history of syphilis. HIV was present in a trucker who had first sexual contact at the age of 10 years and syphilis was present in a trucker who had first sex at the age of 16 years. Syphilis was seen in a trucker who had made sexual contact with wife in the past year; and HIV was reported in a trucker who did not have sex in the past year. On the contrary, HIV was reported in a trucker who had sex with girlfriend in the past year and syphilis was present in a trucker who did not have sex with girlfriend in the past year. Both HIV and Syphilis were present among the truckers who did not usually carry condom with them and those who had never had HIV tested.. Similarly, HIV and Syphilis were present among the truckers who did not visit the DIC, STI clinic, HTC and never participated in the HIV related awareness programmes (Table 5).

Table 5: Distribution of truckers by their Socio-Demographic and Behavioral Variables

Variables	HIV positive(n=400)	Syphilis History (n=400)
Age		
<20	1(0.3)	0(0.0)
30-34	0(0.0)	1(0.3)
Educational status		
6-9 years of schooling	1(0.3)	1(0.3)
Marital status		
Married	0(0.0)	1(0.3)
Never Married	1(0.3)	0(0.0)
Ever had sex with woman		
Yes	1(0.3)	1(0.3)
Ever had sex with FSW		
No	1(0.3)	1(0.3)
Ever had sex with FSW in Nepal		
No	1(0.3)	1(0.3)
Ever Driven Trucks to India		
No	1(0.3)	1(0.3)
Age at first sex		
10 years	1(0.3)	0(0.0)
16 years	0(0.0)	1(0.3)
Had sex with wife in the past year		
Yes	0(0.0)	1(0.3)
Not married	1(0.3)	0(0.0)
Had sex with girlfriend in the past year		
Yes	1(0.3)	0(0.0)
No	0(0.0)	1(0.3)
Usually carry condom		
No	1(0.3)	1(0.3)
Ever had HIV test		
No	1(0.3)	1(0.3)
Visited STI clinic in the past year		
No	1(0.3)	1(0.3)
Visited HTC center in the past year		
No	1(0.3)	1(0.3)
Ever participated in HIV awareness programme		
No	1(0.3)	1(0.3)

CHAPTER 5: SEXUAL BEHAVIOR AND CONDOM USE AMONG TRUCKERS

This chapter describes the sexual behaviors of truckers, including sexual contact with any woman, FSWs in Nepal and India, wife, girlfriend, other female friend and male friend. Besides, the practice of use of condom by the truckers was also assessed. The truckers were asked a series of questions to explore their sexual behaviors and risks of acquiring HIV and STIs and the preventive practices they had adopted to protect themselves from STIs.

5.1 Sexual Behaviours of Truckers

Out of 400 truckers, 81.3 percent had an experience of having sex with woman. Among the 325 truckers who had sexual experience at least once, nearly three-quarters (72.6%) had first sexual contact at the age between 15-19 years followed by almost one-fifth (19.6%) having first sexual contact at the age between 20-24 years. A total of 4.3 percent truckers had experienced sexual contact before they were 15 years. Average (mean \pm SD/median) age at first sexual contact among the truckers was 18.1 \pm 2.7/18.0 years. More than half (51.1%) of the truckers ever had sex with the sex workers (Table 6).

Table 6 : Sexual Behaviors of truckers

Sexual behaviors	No. of truckers	Percentage
Ever had sex with a woman		
Yes	325	81.3
No	75	18.8
Total	400	100.0
Age at first sex (in years)		
<15	14	4.3
15-19	233	72.6
20-24	63	19.6
25-31	11	3.4
Mean/Median		18.1 \pm 2.7/18.0
Total	321	100.0
Ever had sex with sex worker		
Yes	166	51.1
No	159	48.9
Total	325	100.0

Out of 166 truckers who ever had sex with FSWs, 93.4 percent ever had sex with FSWs in Nepal. Out of 155 truckers who had sex with FSWs in Nepal during past year, 31.6 percent had sex with one FSW and an equal proportion of the truckers had sex with 2-3 FSWs. In an average, each of the truckers visited 11.8/3 FSWs in the past year. Almost 30 percent of the truckers had last sexual contact with FSWs 3 months prior to the survey whereas, more than a quarter of them reported that they last had sex with FSWs 2-3 months before the survey. More than one a fifth (21.9%) truckers had contacted FSWs within the last week. More than half (54.2%) of them met the last sex worker in outdoor places like street, forest, truck and bus park while another 41.3 percent met last sex worker in hotel, dinner, bhatti or sex worker's house. Almost 42 percent of the truckers who had sex with FSWs had their last sexual contact in a truck/bus followed almost equal proportion of the truckers having sex in a hotel/lodge. Other places where the truckers had their last sexual contact were home of sex workers (6.5%), forest/bushes/park/open field (7.7%), massage centre (0.6%) and the trucker's own room (1.9%). A total of 6.5 percent truckers had sex with FSWs without any payments while majority of them (71.0%) paid NRs 101-500 and almost one-fifth (18.1%) of them paid more than NRs 500 for the last sexual intercourse with FSWs. In an average, each of the truckers had paid NRs 545.1/500 for the last sexual contacts.

Almost three-fifths (58.7%) of the truckers did not have sexual contact with any FSWs while 22.6 percent of them had sex with one FSW in the past one month in Nepal. A few (3.2%) of the truckers had sex with more than 6 FSWs in the past one-month. One in every ten truckers (10.2%) had ever had sex with FSWs in India. Almost 30 percent of the truckers had made sexual contact with FSWs in the past one year in India. Out of 5 truckers who had sex with FSWs in India in the past year, one (20.0%) had a contact in the past week, two (40.0%) had a contact 2-4 weeks before the survey and remaining two (40.0%) had a contact more than four weeks prior to the survey (Table 7).

Table 7: Sexual contact with FSWs in Nepal and India

Sex with FSW	No. of truckers	Percentage
Ever had sex with FSWs in Nepal		
Yes	155	93.4
No	11	6.6
Total	166	100.0
Number of FSWs visited in the past year in Nepal		
1	49	31.6
2-3	48	31.0
4-5	20	12.9
>5	38	24.5
Mean/median		11.8/3
Total	155	100.0
Time of Last sex with FSW in Nepal		
Less than a week ago	34	21.9
1-2 weeks ago	19	12.3
3-4 weeks ago	16	10.3
2-3 months ago	40	25.8
More than 3 months ago	46	29.7
Total	155	100.0
Place where the last sex worker was met in Nepal		
Indoors (hotel, dinner, bhatti, sex workers home)	64	41.3
Outdoors(street, forest, truck, bus park. etc.)	84	54.2
Others (own room, massage centre, friend's room),	7	4.5
Total	155	100.0
Places where the truckers had last sex with FSW in Nepal		
Home of sex workers	10	6.5
Truck/Bus	65	41.9
Hotel/Lodge	64	41.3
Forest/Bushes/park/Open field	12	7.7
Massage centre	1	0.6
Own room	3	1.9
Total	155	100.0
Amount of money paid for the last sex in Nepal		
Not Paid	10	6.5
UptoRs 50	1	0.6
Rs 51-100	6	3.9
Rs 101-500	110	71.0

Rs 501 and more	28	18.1
Mean amount (Rs)	545.1/500.0	
Total	155	100.0
Frequency of sex with FSWs during past one month in Nepal		
0	91	58.7
1	35	22.6
2	12	7.7
3-4	10	6.5
5-6	2	1.3
>6	5	3.2
Total	155	100.0
Ever had sex with FSW in India		
Yes	17	10.2
No	149	89.8
Total	166	100.0
Sex with FSWs in the past one year in India		
Yes	5	29.4
No	12	70.6
Total	17	100.0
Time of Last sex with FSW in India (in weeks)		
1	1	20.0
2-4	2	40.0
>4	2	40.0
Total	5	100.0

Out of 185 married truckers, 94.1 percent reported that they had sex with their wives and remaining 5.9 percent did not have sex with their wives in the past year. Among 174 truckers who had sex with their wives in the past year, more than half (51.7%) had sex more than 6 times in the past one month and another 19 percent had sexual contact for 5-6 times in a month. Similarly, 16.1 percent of the truckers had sex 3-4 times with FSWs while 2.9 percent of them did not have sex with FSWs in the past year. Nearly half (49.8%) of the truckers had sexual contact with their girlfriends during past year. Nearly one-third (32.1%) of the truckers had made more than 5 sexual contacts with their girlfriends in the past one month and another 30.9 percent had made 3-5 sexual contacts during the same period. Nearly 17 percent of the truckers had sex with other female friends in the past year. Out of those truckers who had sex with other female friends in the past year, 29.4 percent had sexual contact for 3-4 times followed by 26.5 percent

doing so once. Moreover, 35.3 percent of them did not have sex in the past one month. Similarly, 2.8 percent of the truckers had sex with male friends in the past one year. Out of those 7 truckers who had sex with male friends in the past one month, 28.6 percent had made sexual contact for one time and another equal proportion of them had made sexual contact for two times respectively and 14.3 percent of them had sex for four times (Table 8).

Table 8: Sex with different partners (wife, girlfriend, female friend and male friends)

Sexual practices	No. of truckers	Percentage
Have sex with wife in the past year		
Yes	174	94.1
No	11	5.9
Total	185	100.0
Frequency of sex with wife in the past one month		
0	5	2.9
1-2	13	7.4
3-4	28	16.1
5-6	33	19.0
>6	90	51.7
Don't Know/can't say	5	2.9
Mean/median	24.9/10	
Total	174	100.0
Had sex with girlfriend during past year		
Yes	117	49.8
No	118	50.2
Total	235	100.0
No. of times of sex with girlfriend in the past one month		
1	12	14.8
2	18	22.2
3-5	25	30.9
>5	26	32.1
Total	81	100.0
Have you had sex with other female friend in the past year		
No girlfriend/lover	89	27.4
Yes	55	16.9
No	181	55.7
Total	325	100.0
No. of times of sexual contact with other female friend in past one month		
0	12	35.3

1	9	26.5
3-4	10	29.4
>3	3	8.8
Total	34	100.0
Had an anal sex with male friend in the past one year		
No male friends	171	52.6
Yes	9	2.8
No	145	44.6
Total	325	100.0
No. of times of anal sex in past one month		
0	2	28.6
1	2	28.6
2	2	28.6
4	1	14.3
Total	7	100.0

5.2 Practice of use of Condom

As indicated in table 9, four out of five (81.9%) truckers had used condom during the last sex with FSWs in Nepal. More than 90 percent of them used condom in the last sex with FSWs and they did so with their own decision. The remaining 9.4 percent truckers used condom based on the suggestion of the FSWs. A total of 28 truckers did not use condom during the last sex with FSWs in Nepal. The reasons for not using condoms include the lack of availability of condom (46.4%), dislike (17.9%), and felt not necessary (35.7%) and not paying attention to use it (14.3%). Almost two-third (65.2%) of the truckers reported that they used condom during every sexual contact with FSWs in Nepal and 12.9 percent of them did so during most of the contacts. Only a few (1.3%) of them reported rare practices of condom use whereas 6.5 percent never used condom while having sex with FSWs in Nepal. Thirty-seven percent of the truckers who did not use condom consistently while having sex with FSWs in Nepal did so because they felt did not feel the use of condom necessary and 27.8 percent of them did not like using it. Other reasons for not using condom consistently with FSWs in Nepal were lack of availability of condom (22.2%), expensive to buy (9.3%), reluctance of the partner (1.9%) and neglected (13.0%). Contrary to this, all the truckers who had sex with FSWs in India had used condom and they used it consistently in all the sexual contacts with FSWs in India.

Table 9 : Condom use with FSWs in Nepal and India

Condom use practices	No. of truckers	Percentage
Use of condom in the last sex with FSWs in Nepal		
Yes	127	81.9
No	28	18.1
Total	155	100.0
Person to suggest condom use during last sex with FSWs in Nepal		
Myself	115	90.6
FSW	12	9.4
Total	127	100.0
Reasons for not using condom in the last sex with FSWs in Nepal		
Not available	13	46.4
Dislike	5	17.9
Felt not necessary	10	35.7
Neglected	4	14.3
Total	28	*
Frequency of condom use while having sex with FSWs in the past year in Nepal		
Every time	101	65.2
Most of the times	20	12.9
Sometimes	22	14.2
Rarely	2	1.3
Never	10	6.5
Total	155	100.0
Reasons for not using condom consistently with FSWs in Nepal		
Not available	12	22.2
Expensive	5	9.3
Wife/partner's reluctance	1	1.9
Did not like to use it	15	27.8
Did not think it was necessary	20	37.0
Neglected	7	13.0
Others	16	29.6
Not known	1	1.9
Total	54	*
Condom use with FSWs during last sex in India		
Yes	5	100.0
No	0	0.0
Total	5	100.0
Frequency of Condom use with FSWs in the past year in India		
Always	5	100.0

Total	5	100.0
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**Note: The percentages add up to more than 100 because of multiple responses*

Among 174 married truckers who were living with their wives, only 5.7 percent used condom during the last sexual intercourse. Four out of five (80.5%) truckers reported that they never used condom during sex with their wives in the past year and only 0.6 percent ever used condom in the past year. Among the truckers who did not use condom regularly while having sex with their wives, majority (54.0%) did so because they did not like using it and 44.3 percent neglected its use. More than two-fifth (42.7%) of the truckers who had sex with their girlfriends had used condom during the last sexual intercourse. Among the condom users, more than one-third (34.2%) used condom in every sexual contacts with their girlfriends; 16.2 percent often used condom while a large proportion of truckers (44.4%) reported that they never used condom during the sexual intercourse with their girlfriends in the past year. The major reasons for not using condoms during sexual intercourse with their girlfriends were personal dislike (47.8%), not feeling necessary (34.3%), not available (32.8%) and neglected (31.3%). More than three-fifth (61.8%) of the truckers had used condom while having sex with other female friends in the last intercourse. Among those who had sex with other girlfriends, half (50.9%) used condom during every sexual contact with and a quarter of them (25.5%) never used condom during sexual contacts with other girlfriends in the past year. The major reasons for not using condom during the sex with other girlfriends were lack of availability of condom (46.2%), dislike (38.5%), neglected (30.8%), felt not necessary (23.1%) and reluctance of the female friend (19.2%). More than three quarters (78%) of the truckers who had sex with male friends had used condom in the past year and most of them (77.8%) used condom during every sexual contact in the past year. The major reasons for not using condoms during sex with male friends were lack of availability (50.0%), reluctance of the sex partner (50.0%) and neglected (50.0%) (Table10).

Table 10 : Condom use with different sex partners (wife, girlfriend, female, male friend)

Condom use with sex partners	No. of truckers	Percentage
Use of condom in the last sex while having sex with wife		
Yes	10	5.7
No	164	94.3
Total	174	100.0

Frequency of condom use during sex with wife in past year		
Always	1	0.6
Mostly	5	2.9
Often	20	11.5
Rarely	8	4.6
Never	140	80.5
Total	174	100.0
Reasons for not using condom regularly with wife		
Not available	5	2.9
Expensive	1	0.6
Wife's reluctance	32	18.4
Dislike	94	54.0
Felt not necessary	32	18.4
Neglected	77	44.3
Others	16	9.2
Don't Known	1	0.6
Total	174	*
Use of condom in the last sex with girlfriend		
Yes	50	42.7
No	67	57.3
Total	117	100.0
Frequency of condom use with girlfriend in the past year		
Always	40	34.2
Mostly	5	4.3
Often	19	16.2
Rarely	1	0.9
Never	52	44.4
Total	117	100.0
Reasons for not using condom in the last sex with girlfriend		
Not available	22	32.8
Expensive	2	3.0
Wife's reluctance	6	9.0
Dislike	32	47.8
Felt not necessary	23	34.3
Neglected	21	31.3
Others	2	3.0
Don't Known	1	1.5
Total	67	*
Use of condom in the last sex while having sex with other female friends		

Yes	34	61.8
No	21	38.2
Total	55	100.0
Frequency of condom use while having sex with the other girlfriends in past year		
Always	28	50.9
Mostly	6	10.9
Often	7	12.7
Never	14	25.5
Total	55	100.0
Reasons for not using condom with other girl friend		
Not available	12	46.2
Expensive	1	3.8
girlfriend's reluctance	5	19.2
Dislike	10	38.5
Felt not necessary	6	23.1
Neglected	8	30.8
Total	26	*
Condom use in the anal sex with male friend in past year		
Yes	7	77.8
No	2	22.2
Total	9	100.0
Frequency of condom use during anal sex with male friend in the past year		
Always	7	77.8
Mostly	2	22.2
Total	9	100.0
Reasons for not using condom consistently with male friend		
Not available	1	50.0
Sex partner's reluctance	1	50.0
Dislike	1	50.0
Neglected	1	50.0
Total	2	*

**Note: The percentages add up to more than 100 because of multiple responses*

5.3: Availability of Condom

This section describes the practices of carrying condom and the availability of condoms among the truckers. It includes the description of the condom carrying practices, availability of condom, and places where condoms are available, mode of obtaining condom, and the sources of knowledge about the availability of condom.

Table 11 shows that 31.0 percent of the truckers usually used to carry the condom with them and more than two-third (67.7%) of them had 2-5 condoms with them at the time of survey. The truckers opined that the major places from where they received condom are Pharmacy (91.7%), general retail (grocery) shop (32.3%), Health Post/Health Centers (51.1%), private clinics (49.5%) and hospitals (39.4%). More than two-fifths (42.8%) of the truckers reported that they obtained condom free of cost, 25.2 percent bought the condoms and 14.2 percent obtained condoms by both means. A great majority (81.6%) of the truckers reported that pharmacy/medical shops are the most convenient places to get condoms. Other most convenient places to avail condoms are health posts/health centers (40.4%), hospitals (39.0%) and friends (25.5%). The truckers reported that they knew about condom from different media. The major sources of knowledge about condom were newspapers (85.5%), billboards/signboards (89.0%), friends/peers (69.3%), IEC materials (46.0%) and drama/cinema (53.3%).

Table 11 : Availability and utilization of condom by truckers

Condom acquisition	No. of truckers	Percentage
Usually carry condom		
Yes	124	31.0
No	201	50.3
Never had sex	75	18.8
Total	400	100.0
No. of condoms available in hand		
0	7	5.6
1	16	12.9
2-5	84	67.7
>5	17	13.7
Total	124	100.0
Places where condoms are available		
Pharmacy	298	91.7
General retail (grocery) shop	105	32.3
Paan shop	67	20.6
NGOs/Health Workers/volunteers	44	13.5
Health Post /Health Centers	166	51.1
Private clinic	161	49.5
Hospital	128	39.4
Peers' friends	29	8.9
Bar/Guest house/hotel	9	2.8

Others	1	0.3
Not known	6	1.8
Total	325	*
Mode of usually obtaining condom		
Purchase	82	25.2
Free of cost	139	42.8
Obtain both ways	46	14.2
Never used condom	58	17.8
Total	325	100.0
Convenient places for obtaining condom		
Health Post/Health Centers	108	40.4
Hospital	104	39.0
Friends/Peers	68	25.5
Community programmes	13	4.9
NGOs/Health Workers/Volunteers	13	4.9
Pharmacy/Medicals	218	81.6
Others (specify)	6	2.2
Total	267	*
Read/listen/know about condom from different media		
Read about condom from newspaper	342	85.5
Heard about Condom from school and teacher	115	28.8
Heard from Health workers and Female Community Health Volunteers	135	33.8
Heard from relatives/friends	277	69.3
Condom IEC materials at the work places observed	184	46.0
Heard about condom from NGO/INGO personnel	58	14.5
Heard about condom from Dram/,Cinema	213	53.3
Heard about condom from community activities and trainings	55	13.8
Heard about condom from billboard or signboard	356	89.0
Heard/seen about the condom from internet or mobile	76	19.0
Heard about condom from Community workers	75	18.8
Other sources(condom day, personal contact, office)	12	3.0
Total	400	*

**Note: The percentages add up to more than 100 because of multiple responses*

5.4: Consumption of Alcohol and Drugs

This section describes the truckers' practice of consumption of alcohol and drug. Issues like consumption of alcohol and drug during last one month, injecting drug during last year and

recent past, use of syringes for drug injection and mode of obtaining syringes have been discussed.

As depicted in table 12, a total of 6.5 percent truckers had used alcohol every day during past one month. Similarly, 13.5 percent of them had taken alcohol 2-3 times per week, 20 percent had taken alcohol once a week and 24.3 percent had taken alcohol less than once a week. Almost 18 percent of the truckers had tried to take any drugs in the past one month and 31.3 percent ever injected drugs. More than one-third (34.4%) of the truckers had injected drugs in last 12 months and one (2.3%) of the trucker was currently injecting drug. The one injecting drugs during the survey period reported that he did not use the syringe used by others while injecting drug in the last month. He used to purchase syringes for drug use from different sources.

Table 12: Alcohol and drugs consumption practices of truckers

Consumption of alcohol and drugs	No. of truckers	Percentage
Alcohol consumption during past one month		
Everyday	26	6.5
2-3 times in a week	54	13.5
Once a week	80	20.0
Less than once in a week	97	24.3
Never	140	35.0
Don't know	3	0.8
Total	400	100.0
Tried to take any types of drug during past one month		
Yes	71	17.8
No	328	82.0
Home treatment	1	0.3
Total	400	100.0
Have you ever injected drugs		
Yes	125	31.3
No	260	65.0
Don't Know	15	3.8
Total	400	100.0
Have injected drugs in last 12 months		
Yes	43	34.4
No	82	65.6
Total	125	100.0

Currently injecting drugs		
Yes	1	2.3
No	42	97.7
Total	43	100.0
Used syringes reused by the truckers for last injection –Not used	1	100.0
Used syringes reused by the truckers in the last one month –Not used	1	100.0
Usual mode of obtaining syringe-I purchase	1	100.0

CHAPTER 6: KNOWLEDGE OF STIs, HIV and AIDS

Awareness and knowledge about the HIV and AIDS including STIs is crucial to reduce the risk of HIV transmission and its prevention. This chapter deals with the level of knowledge among truckers regarding STI, HIV and AIDS.

6.1 Knowledge about HIV and AIDS

This section explores the knowledge of truckers about the HIV and AIDS. It includes the awareness about HIV and AIDS, and the sources of knowledge. It further identifies the composite specific knowledge on A, B, C, D, E, F and its composite indexes ABC and BCDEF. Additionally, knowledge of HIV transmission and risk reduction for transmission of HIV is discussed.

A total of 84.5 percent truckers had heard of the HIV and AIDS. Out of 338 truckers who had ever heard of HIV and AIDS, 11.5 percent had searched HIV related materials from internet/mobile phone. Similarly, 17.2 percent of the truckers reported that they had information about the person infected with HIV or died of AIDS. Among those who died of HIV and AIDS, 17.2 percent were the close relatives and 34.5 percent were the close friends while 48.3 percent stated that no one in their family and family circle had died of HIV and AIDS.

Only 15.2 percent of the truckers opined that they can protect from HIV infection through abstinence from sexual contact (A), 21 percent stated that they can protect themselves through monogamous sexual contact with non-infected partner (B), 59.3 percent reported that they can protect themselves by using condom every time during sex (C), 49.3 percent expressed that healthy-looking person can be infected with HIV (D), 34.0 percent opined that a person cannot get the HIV virus from mosquito bite (E), and 63.5 percent of them reported that a person cannot get HIV by sharing a meal with an HIV infected person (F). Nearly one-third (31.8%) of the truckers had knowledge of composite index ABC and 45.5 percent of them had knowledge of BCDEF. Similarly, 83.1 percent of the truckers opined that the pregnant woman infected with HIV can transmit the virus to her unborn child and she can reduce the risk of transmission of HIV to her unborn child by taking medicine (30.0%). One-fifth (21.0%) of the truckers stated that a woman with HIV and AIDS can transmit the virus to her new-born child through breast

feeding while 24.0 percent of them were aware that HIV cannot be transmitted by holding an HIV infected person's hand. Majority (80.0%) of the truckers expressed that the HIV can be acquired by using previously used needle/syringe and 83.0 percent of them affirmed that the HIV can be transmitted from one person to another one through the transfusion of HIV infected blood (Table 13).

Table 13: Knowledge about HIV and AIDS

Knowledge	No. of truckers	Percentage
Ever heard about HIV and AIDS		
Yes	338	84.5
No	62	15.5
Total	400	100.0
Ever searched information about HIV and AIDS on internet/mobile		
Yes	39	11.5
No	299	88.5
Total	338	100.0
Know anyone who is infected with HIV or who has died of AIDS		
Yes	58	17.2
No	280	82.8
Total	338	100.0
Knowledge of the person who died of HIV and AIDS		
Close relative	10	17.2
Close friend	20	34.5
No deaths	28	48.3
Total	58	100.0
A- Can protect themselves through abstinence from sexual contact	61	15.2
B- Can protect themselves through monogamous sexual contact with non-infected partner	84	21.0
C- Can protect themselves through condom use every time during sex	237	59.3
D- A healthy-looking person can be infected with HIV	197	49.3
E- A person cannot get the HIV virus from mosquito bite	136	34.0
F- Cannot get HIV by sharing a meal with an HIV infected person	254	63.5
Knowledge of all three ABC	127	31.8
Knowledge of all five BCDEF	182	45.5
A pregnant woman infected with HIV can transmit the	281	83.1

virus to her unborn child		
A Pregnant Woman can Reduce the Risk of Transmission of HIV to her Unborn Child by taking medicine	120	30.0
A woman with HIV and AIDS can transmit the virus to her new-born child through breast feeding	84	21.0
Cannot get HIV by holding an HIV infected person's hand	96	24.0
A person can get HIV by using previously used needle/syringe	320	80.0
Blood transfusion from an infected person to the other transmits HIV	332	83.0

6.2 Knowledge and Treatment of Sexually Transmitted Infections

This section describes the knowledge of truckers about STIs and their treatment practices. As Table 14 shows, 38.8 percent of the truckers had understanding about at least one of the STIs. Out of 400 truckers, 41.3 percent stated that Syphilis (Bhiringi)/Gonorrhoea are the STIs. Similarly, other important STIs as understood by the truckers were ulcer or sore around genital area (38.8%), swelling of penis (26.8%), and white discharge/discharge of pus/dhatu flow (15.5%), burning sensation while urinating (15.0%) and pain during urination (8.0%). A total of 8.3 percent of the truckers had experienced any STI symptom in the recent past and majority of them reported that they had Ulcer or Sore around genital area (57.6%) and burning sensation while urinating (36.4%). Other symptoms reported are listed in table 6.2. Only 27.3 percent of those who had experienced STI symptoms had received treatment against STIs and most of them had such treatment from private clinic (55.6%) and pharmacy (22.2%). Among those who had current STI symptoms, 77.8 percent had received treatment of genital ulceration. The other symptoms for which the treatment was sought were pain during urination (11.1%), burning sensation during urination (11.1%) and discharge of urine with foul smell (11.1%). Almost 78 percent of the truckers who had received treatment had taken medication as prescribed and 85.7 percent had used all medications as per the prescription. More than half (55.6%) of the truckers experienced STI symptoms in the past year and the most commonly experienced symptoms in the past year were white discharge/discharge of pus (55.6%), pain during urination (55.6%), burning sensation while urination (55.6%) and genital ulceration (44.4%). Most of the truckers who had received treatment had received the treatment against genital ulcers (75.0%). A total of 71.4 percent truckers had received the counseling services as well while receiving the treatment against STIs.

Table 14: Perception of STI, reported STI Symptoms and treatment among truckers

Perception of STI, reported STI Symptoms and treatment among truckers	No. of truckers	Percentage
Truckers' Understanding of STI	155	38.8
Syphilis (Bhiringi)/Gonorrhea	165	41.3
Ulcer or Sore Around Genital Area	155	38.8
Swelling of Penis	107	26.8
White Discharge/Discharge of Pus/Dhatu flow	62	15.5
Burning Sensation while Urinating	60	15.0
Pain during urination	32	8.0
Don't know	1	0.3
Total	400	*
Have you experienced any other STI symptoms in the recent past		
Yes	33	8.3
No	367	91.7
Total	400	100.0
Types of STI symptoms experienced by truckers in recent past		
Ulcer or Sore Around Genital area	19	57.6
Burning sensation while urinating	12	36.4
Pain during urination	7	21.2
White Discharge/Discharge of Pus	4	12.1
Foul smelling urination	1	3.0
Total	33	*
Received treatment of recently experienced STI symptoms		
Yes	9	27.3
No	24	72.7
Total	33	100.0
Treatment centre		
Private clinic	5	55.6
Pharmacy	2	22.2
Hospital	1	11.1
HP/PHCC	1	11.1
Total	9	100.0
Treatment of STI symptoms		
Ulcer around genitalia	7	77.8
Pain during urination	1	11.1
Burning sensation during urination	1	11.1
Foul smelling urination	1	11.1
Total	9	*

Obtained the medicine as prescribed		
Yes I obtained all of it	7	77.8
I obtained some but not all	1	11.1
I obtained none	1	11.1
Total	9	100.0
Took all of the medicine as prescribed		
Yes	6	85.7
No	1	14.3
Total	7	100.0
Have STI symptoms in the past year		
Yes	5	55.6
No	4	44.4
Total	9	100.0
Presence of STI symptoms in the past year		
White Discharge/Discharge of Pus	5	55.6
Pain during urination	5	55.6
Burning Sensation while Urinating	5	55.6
Ulcer around genital area	4	44.4
Foul smelling urination	1	11.1
Total	9	*
Treatment of STI symptoms experienced in the past year		
White Discharge/Discharge of Pus	3	10.7
Pain during urination	2	7.1
Burning Sensation while Urinating	4	14.3
Ulcer around genital area	21	75.0
Others (HIV testing, foul smelling urination)	2	7.1
Total	28	*
Received the counseling from where treatment received to avoid STIs		
Yes	20	71.4
No	8	28.6
Total	28	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

6.3 Perception on HIV Test

This section includes the perception of truckers about the possibility of confidential HIV test in the community, knowledge of HIV testing sites, HIV testing practices, most recent HIV test conducted, timing for most recent test done, mode of HIV testing (voluntary/required) and the result of HIV test .

As depicted in table 15, Nearly one-third (32.0%) of the truckers opined that someone can have a confidential HIV test in the community and more than three- quarters (76.3%) of them knew about the HIV testing sites. Less than a quarter of truckers (23.4%) had ever had HIV testing and 31.6 percent of them had tested HIV recently within one year. A great majority (87.3%) of the truckers had done voluntary HIV testing and remaining 12.7 percent did so because the HIV test result was required. Out of those who had recently tested for possible HIV infection, one of them had HIV infection and one of them had not received the test result. One of the HIV positive truckers did not go to HTC after diagnosis because of associated stigma (Table 15).

Table 15: Perception of HIV Test

Perception	No. of truckers	Percentage
Possible in your community for someone to have a confidential HIV test		
Yes	108	32.0
No	207	61.2
Don't Know	23	6.8
Total	338	100.0
Know where can you go for HIV testing		
Yes	258	76.3
No	80	23.7
Total	338	100.0
Ever had an HIV test		
Yes	79	23.4
No	259	76.6
Total	338	100.0
Most recent HIV test done		
<12 months	25	31.6
1-2 years	19	24.1
2-4 years	17	21.5
> 4 years	18	22.8
Total	79	100.0
Voluntarily underwent the HIV testing or required		
Voluntary	69	87.3
Required	10	12.7
Total	79	100.0
Result of last HIV test		
Positive	1	1.3
Negative	77	97.5

Test result not received	1	1.3
Total	79	100.0
Did not go to HTC for care (N=1)	1	100.0
Reasons for not attending HTC- because of Stigma (n=1)	1	100.0
Forget to take the report is the reasons for not receiving the test result (n=1)	1	100.0

CHAPTER 7: EXPOSURE TO STI, HIV AND AIDS AWARENESS PROGRAMS

This chapter discusses and explores the trucker’s exposure to ongoing STI, HIV and AIDS awareness programs and their participation in these activities. The respondents in the survey were asked several questions related to some of the most important components of current HIV and AIDS related programs such as exposure to Peer (PE)/Outreach Educator’s (OE) services, Drop in Centre (DIC), STI clinic and HTC clinics, etc. implemented by different organizations. Furthermore, truckers’ participation in various HIV awareness programmes and the stigma related to the HIV are also discussed in this section.

7.1. Exposure to Peer/Outreach Educators

The study shows that only a few (3.0%) truckers had met/discussed/interacted with Peer Educators (PE)/Outreach Educators (OE) in the last 12 Months. Among the truckers who had interacted with PE/OEs, majority had discussed about the use of condom (66.7%), transmission of STIs (58.3%) and HIV (50.0%) and 41.7 percent were involved in demonstration of condom. Majority of the truckers (75.0%) were exposed to OE/PEs services at once and 16.7 percent received services for 4-6 times (table 16).

Table 16: Exposure to Peer/Outreach Educators

Peer Educator/Outreach Educator Visit	No. of truckers	Percentage
Met/Discussed/Interacted with Peer Educators (PE)/Outreach Educators (OE) in the last 12 Months		
Yes	12	3.0
No	387	96.8
No response	1	0.3
Total	400	100.0
Activities Involved with PE/OE		
Discussion on how HIV/AIDS is/isn’t transmitted	6	50.0
Discussion on how STI is/isn’t transmitted	7	58.3
Regular/non-regular use of condom	8	66.7
Demonstration on using condom correctly	5	41.7
Counseling on reducing number of sex partner	1	8.3
Use of safe syringe	3	25.0
Total	12	*

Number of visits to PE/OEs		
Once	9	75.0
2-3 times	1	8.3
4-6 times	2	16.7
Total	12	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

7.2 Practice of visiting Drop-in-Centers (DICs)

Only one-tenth (10.5%) truckers reported to have visited to the DICs in the last 12 months. Out of 42 truckers who had visited the DICs, most (85.7%) went there to collect condom and 38.1 percent visited to learn about the correct use of condom. Out of 42 truckers who had visited DIC, half (50.0%) had visited the DIC at once and 35.7 percent had visited 2-3 times in the last 12 months (Table 17).

Table 17: Drop-in-Centers (DIC) Visiting Practices of truckers

DIC Visiting Practice	No. of truckers	Percentage
Visited any DIC in the Last 12 months		
Yes	42	10.5
No	358	89.5
Total	400	100.0
Activities Involved in at DIC		
Went to collect condoms	36	85.7
Went to learn the correct way of using condom	16	38.1
Participated in training, interaction and discussion programs on HIV/AIDS and STI	11	26.2
Took friend with me	9	21.4
Total	42	*
Number of DIC visits		
Once	21	50.0
2-3 times	15	35.7
4-6 times	5	11.9
More than 6 times	1	2.4
Total	42	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

7.3. Truckers' Practice of Visiting STI Clinic

Very few (1.8%) of the truckers had visited any STI Clinic in the Last 12 months. Out of them, 85.7 percent did so to test blood for STI, 71.4 percent for the clinical examination for STI identification, 57.1 percent to take advice on the use of condom during sexual intercourse and 57.1 percent to receive counseling to reduce the number of sexual partners. Majority of the truckers (57.1%) visited STI clinic once and 42.9 percent of them visited 2-3 times (Table 18).

Table 18: STI Clinic Visiting Practices of Truckers

STI Clinic Visiting Practices	No. of truckers	Percentage
Visited any STI Clinic in the Last 12 Months		
Yes	7	1.8
No	393	98.3
Total	400	100.0
Activities Involved in at STI Clinic		
Blood tested for STI	6	85.7
Was advised to use condom in each sexual intercourse	4	57.1
Was advised to take complete and regular medicine	3	42.9
Was suggested to reduce number of sexual partners	4	57.1
Physical examination conducted for STI identification	5	71.4
Took friend	1	14.3
Total	7	*
Number of Visits to STI Clinics		
Once	4	57.1
2-3 times	3	42.9
Total	7	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

7.4. Truckers' Practice of Visiting HTC Clinic

The study shows that only 2.5 percent of the truckers visited HTC Center in the Last 12 months. Most of them (90.0%) went to HTC for HIV test and 40.0 percent received HIV test result. Similarly, 60.0 percent received pre-test counseling and same ratio (40 %) received post-test counseling. Only one-fifth (20.0%) of the truckers who visited HTC had received counseling on correct and consistent use of condom and 20 percent of them received information regarding the window period of HIV infection. Four out of every five (80.0%) truckers who visited to HTC did so once and the remaining one-fifth (20.0%) visited HTC two or more times (table 19).

Table 19: HTC Clinic Visiting Practices of Truckers

HTC visiting practices	No. of truckers	Percentage
Visited any HTC Center in the Last 12 months		
Yes	10	2.5
No	390	97.5
Total	400	100.0
Activities Involved at HTC Center		
Blood sample taken for HIV and AIDS test	9	90.0
Received HIV test result	4	40.0
Received pre-test counseling	6	60.0
Received post-test counseling	4	40.0
Received counseling on using condom correctly in each sexual intercourse	2	20.0
Got information on HIV window period	2	20.0
Total	10	*
Number of visits to HTC center		
Once	8	80.0
2-3 times	2	20.0
Total	10	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

7.5. Participation in HIV and AIDS Awareness Program

The study shows that only 2.5 percent of the truckers had participated in HIV and AIDS awareness programs or community events in the last 12 months. Among those truckers who were involved in any kind of awareness raising programme, 60.0 percent had observed the street drama, 30.0 percent were involved in condom demonstration, 30.0 percent were involved in World AIDS day celebration, 40 percent participated in group discussion, another 40 percent participated in condom day celebration and 10 percent participated in HIV and AIDS related trainings in the last one year (Table 20).

Table 20: Trucker's Participation in HIV and AIDS Awareness Program

Participation in HIV and AIDS Awareness Programs	No. of truckers	Percentage
Participated in HIV and AIDS Awareness Raising Programs or Community Events in the Last 12 months		
Yes	10	2.5
No	390	97.5

Total	400	100.0
Type of Activities Participated in		
Street drama	6	60.0
Condom use demonstrations	3	30.0
AIDS Day	3	30.0
Group discussions	4	40.0
Condom Day	4	40.0
HIV/AIDS-related training	1	10.0
Total	10	*

Note: The percentages add up to more than 100 because of multiple responses

7.6. Stigma and Discrimination

Majority (88.0%) of the truckers opined that they were willing to take care of a male relative with HIV positive at home. Similarly, 88.3 percent of them responded that they were willing to take care of a female relative with HIV positive at home. Only 30.3 percent of them expressed their willingness to maintain confidentiality of the HIV positive family member. A great majority of the truckers (88.5%) opined that they have not problem to let the children with HIV positive attend the class with their children in the same class. (Table21).

Table 21: Perception of truckers related to stigma and discrimination

Stigma and Discrimination	No. of truckers	Percentage
Willing to Take Care of HIV Positive Male Relative in the household		
Yes	352	88.0
No	47	11.8
Don't know	1	0.3
Total	400	100.0
Willing to Take Care of HIV Positive Female Relative in the household		
Yes	353	88.3
No	46	11.5
Don't know	1	0.3
Total	400	100.0
Willing to maintain confidentiality of the HIV positive family Member		
Yes	121	30.3
No	275	68.8
Don't know	4	1.0
Total	400	100.0

Can HIV positive children attend the class with your children together		
Yes	354	88.5
No	38	9.5
Don't Know	8	2.0
Total	400	100.0

CHAPTER 8: COMPARATIVE ANALYSIS

This chapter analyzes the trends in the prevalence of HIV infection reported in different rounds of IBBS surveys carried out among truckers. The selected indicators like prevalence of HIV, socio-demographic characteristics, mobility of the truckers, sexual behaviors, practice of use of condom, comprehensive knowledge about HIV, availability of condom, practice of consumption of drug and alcohol, stigma and discrimination, and their exposure to HIV and AIDS prevention or awareness programs have been compared with different rounds of IBBS surveys carried out since 2003 among the truckers.

As indicated in table 22, there has been a decline in the prevalence of HIV infection among truckers from 2003 (1.8%) to 2009 (0.0%) and its prevalence is 0.3 percent in 2016. Similarly, syphilis history and current syphilis prevalence has also been in declining trend since 2003. Nevertheless, the prevalence of current syphilis remained stagnant at 0.3 percent since 2009.

Table 22: Trend in the prevalence of HIV and Syphilis

HIV/Syphilis Prevalence	Survey years				
	2003% (n=400)	2006% (n=400)	2009 % (n=400)	2016% (n=400)	P-Value
HIV +ve	1.8	1.0	0.0	0.3	0.033
Syphilis history (TPHA+RPR-ve or RPR with titre<1:8)	8.7	8.5	1.8	0.0	0.0001
Current Syphilis (TPHA+ and RPR with titre higher than 1:8)	2.3	1.8	0.3	0.3	0.0015

There has been increased in the proportion of truckers aged less than 20 years over the years. The preparation of truckers in this age group was 1.7 percent in 2006, 4.0 percent in 2009 and 26.3 percent in 2016. Similarly, average age of the truckers has also decreased since 2003 (28.9/27.0 years in 2003 and 25.7/24.0 years in 2016). Moreover, the proportion of illiterate truckers has decreased since 2003 (6.5% in 2003 and 0.8 percent in 2016) but there has been significant increase in the proportion of the truckers having 6 – 9 years of schooling after 2009 (38.7% in 2009 and 48.8% in 2016). There is continuous decrease in the proportion of married truckers since 2003 (73.0% in 2003 and 48.8% in 2016) and the trend of divorce/separation remained stagnant around 0.5-1.0 percent during 2003 to 2016. A total of 34.8 percent of the truckers

were Janajati in 2003 and their proportion in this profession has increased to 44.8 percent in 2016. However, there has been a decline in the proportion of truckers who belong to the Brahmin/Chhetri/Thakuri groups since 2006 (51.05 in 2006 and 32.8% in 2016). Similarly, the survey carried out in 2006 revealed that 10.6 percent of the truckers used to live with the male friends while none of the truckers in 2009 had this kind of relationship with male friends. Notably high proportion (31.3%) of the truckers had reported to have been living with the male friends in 2016. The proportion of truckers living with parents has been decreasing since 2009 (82.8% in 2009 and 64.8% in 2016) as indicated in the table given below (Table 23).

Table 23 : Trends in the Socio-demographic Characteristics of Truckers

Characteristics	2003 (n=400)		2006 (n=400)		2009 (n=400)		2016 (n=400)	
	n	%	n	%	N	%	n	%
Age of the Truckers								
<20	11	2.8	7	1.7	16	4.0	105	26.3
20 – 24	118	29.5	116	29.0	162	40.5	119	29.8
25 – 29	116	29.0	116	29.0	102	25.5	67	16.8
30 – 34	78	19.5	80	20.0	62	15.5	56	14.0
>34	77	19.2	81	20.2	58	14.5	53	13.3
Mean/Median age	28.9/27.0		28.9/27.0		27.2/25.0		25.7/24.0	
Total	400	100	400	100	400	100	400	100
Education								
Illiterate	26	6.5	7	1.7	4	1.0	3	0.8
Literate, no schooling	18	4.5	28	7.0	15	3.8	13	3.3
Grade 1 – 5	136	34	136	34	122	30.5	118	29.5
Grade 6 – 9	215	57.8	186	46.5	155	38.7	195	48.8
SLC and Above	5	1.2	43	10.7	103	25.7	71	17.8
Don't Know	0	0.0	0	0.0	1	0.3	0	0.0
Total	400	100	400	100	400	100	400	100
Marital Status								
Married	292	73.0	315	78.8	257	64.3	185	46.3
Divorced/separated/ widower	4	1.0	2	0.5	2	0.5	4	1.0
Never married	104	26.0	83	20.7	141	35.2	211	52.8
Total	400	100	400	100	400	100	400	100
Ethnic/Caste Group								
Brahmin/Chhetri/Thakuri	-	-	204	51.0	173	43.2	131	32.8
Gurung/Magar/Tamang/Newar/Rai/Limbu	-	-	139	34.8	156	39.0	179	44.8
Damai/Sarki/Kami	-	-	17	4.2	20	5.0	20	5.0

Terai Caste	-	-	26	6.5	32	8	60	15.0
Others (Sanyasi, Majhi, Sunuwar, Gaine & Bhujel)	-	-	14	3.5	15	3.7	10	2.5
Total	-	-	400	100	400	100	400	100
Currently Living With**								
Parents	-	-	64	75.3	126	82.8	147	64.8
Male Friends	-	-	9	10.6	0	0	71	31.3
Other (Relatives)	-	-	8	9.4	7	4.6	3	1.3
Alone	-	-	3	3.5	18	11.9	3	1.3
Female Friends	-	-	1	1.2	0	0	3	1.3
Total	-	-	85	100	151	100	227	100

**Only for the unmarried, divorced/separated/widower and not living with wife

-- means the findings are not reported in the respective rounds of surveys

More than two-fifths (41.6%) of the truckers reported that they lived away from their families for 15–21 days in a month and nearly equal (37.3%) proportion of them lived away for 22-29 days in a month due to their job.. Although, there is variation in the proportion of truckers who stay away from families due to their occupation, the average duration of the stay outside the family showed an increasing trend since 2003 (16.2 days in 2003, 17.1 days in 2006 and 19.5 days in 2009) and it remained almost stagnant around 19 days in 2016. There has been increase in the proportion of truckers who had ever driven truck in India since 2006 (7.5% in 2003 to 22.8 % in 2016). In 2016, 19.8 percent of the truckers reported to have driven truck in India in the last week. This proportion is notably lower than the one reported in 2009 (49.8%). On the contrary, proportion of truckers who had driven in India in the last 3-4 weeks (2.9% in 2006, 5.6% in 2009 and 13.2 percent in 2016) and 1-2 months (0.0% in 2006, 9.0 % in 2009 and 27.5% in 2016) prior to the survey has been increasing from 2006 to 2016 (Table 24).

Table 24: Mobility of Truckers

Truck Driven to Different Part of Nepal and to India	2003		2006		2009		2016	
	N	%	n	%	n	%	n	%
Married Truckers: Days per Month away from Family								
Up to 7 Days	19	6.5	40	12.7	17	6.6	20	10.8
8 - 14 Days	69	23.6	39	12.4	15	5.8	15	8.1
15 - 21 Days	151	51.7	145	46.0	121	47.1	77	41.6
22 - 29 Days	53	18.2	91	28.9	92	35.8	69	37.3
29 days +	0	0.0	0	0.0	12	4.7	4	2.2
Mean ±SD	16.2		17.1		19.5		18.7±7.6	
Total	292	100	315	100	257	100.0	185	100

Have ever driven trucks to India								
Yes	30	7.5	68	17.0	178	44.5	91	22.8
No	370	92.5	332	83.0	222	55.5	309	77.3
Total	400	100.0	400	100.0	400	100.0	400	100.0
Last time driven truck to India								
Last Week	-	-	3	4.4	28	49.4	18	19.8
1-2 weeks	-	-	2	2.9	3	5.6	5	5.5
3-4 weeks	-	-	8	2.9	3	5.6	12	13.2
1-2 months	-	-	0	0.0	5	9.0	25	27.5
2-3 months	-	-	7	10.3	4	8.4	4	4.4
More than three months	-	-	48	70.6	13	23.0	27	29.7
Total	-	-	68	100.0	56	100.0	91	100.0

-- means the findings are not reported in the respective rounds of surveys

The survey revealed that more than four-fifth truckers (81.3%) had had sex with woman in their life., which is lower than that was reported in all the earlier rounds of surveys (98.5% in 2003, 98.3% in 2006, 96.8% in 2009). Exposure to sex before 15 years of age has decreased since 2006 (7.4% in 2006 and 4.4% in 2016); nevertheless, the proportion of the truckers who had their first sexual contact between the age of 15-19 years has increased (63.9% in 2006 and 72.6% in 2016). The average age of the truckers at their first sexual contact remained nearly stagnant at 18 years in all rounds of surveys. Almost 87 percent of the truckers in 2003 reported that they had ever had sex with female sex workers; however, the present round of survey (2016) revealed that significantly lower number (51.1%) of them had ever had sex with female sex workers. A great majority (93.4%) of the truckers reported to have had sex with FSWs in Nepal that is notably higher than the one reported in earlier rounds of surveys (64.2% in 2006 and 48.2% in 2009). Trends of involvement in the sex with multiple FSWs remained high in all rounds of surveys. The truckers had sex with an average of 11.8/3 FSWs in the last one-year in 2016 and such involvement was even higher in earlier rounds of surveys (23.5/9.0 in 2006 and 11.1/4 in 2009). More than none-fifth of the truckers (21.9%) who had sex with FSWs had last sexual contact with them in during the last week of the survey. This practice has increased markedly in comparison to the one reported in earlier rounds of surveys (13.1% in 2006 and 6.8% in 2009). All surveys reported that majority of the last sexual contact of the truckers with FSW in Nepal took place in a bus/truck (29% in 2006, 24.8% in 2009 and 41.9% in 2016) and hotel/lodge (20.5% in 2006, 47% in 2009 and 41.3% in 2016). In an average, each of the trucker had paid NRs 545.1/500.0 for the last sex with FSWs in 2016. The average amount of money paid for last

sex has increased since 2003 (NRs 138.2 in 2003 to 545.1/500.0 in 2016). The present survey reported that one out of every ten truckers had ever had sex with FSWs in India and this proportion is higher than the one reported in 2003 (8.8%) but lower than the one reported in 2006 (13.9%) and 2009 (13.6%). Among those, who had ever had sex with FSWs in India, 29.4 percent had sex with FSWs in the last year of survey. This experience is lower than the one reported in 2006 (31.6%) and 2009 (51.5%) but slightly higher than the one reported in 2003 (26.7%) (Table 25).

Table 25: Trend in the Sexual behavior of truckers

Sexual Behaviors	2003		2006		2009		2016		P-Value
	n	%	n	%	n	%	n	%	
Ever had sex with a woman									
Yes	394	98.5	393	98.3	387	96.8	325	81.3	0.0001
No	6	1.5	7	1.8	13	3.3	75	18.8	
Total	400	100.0	400	100.0	400	100.0	400	100.0	
Age at first sex (in years)									
<15	-	-	29	7.4	25	6.5	14	4.4	
15-19	-	-	251	63.9	248	64.1	233	72.6	
20-24	-	-	105	26.7	102	26.4	63	19.6	
25-31	-	-	8	2.0	11	2.8	11	3.4	
>31	-	-	0	0.0	1	0.3	0	0.0	
Mean/Median			18.2/18.0		18.3/17		18.1±2.7/18.0		
Total	-	-	393	100	387	100.0	321	100.0	
Ever had sex with sex a worker									
Yes	340	86.3	274	69.7	243	62.8	166	51.1	0.0001
No	54	13.7	119	30.3	144	37.2	159	48.9	
Total	394	100	393	100	387	100.0	325	100.0	

Ever had sex with FSW in Nepal									
Yes	-	-	176	64.2	117	48.2	15	93.4	0.0004
No	-	-	98	35.8	126	51.9	11	6.6	
Total	-	-	274	100.0	243	100.0	16	100.0	
Number of FSW visited in the past year in Nepal									
1	-	-	7	2.6	23	9.5	49	31.6	
2-3	-	-	42	15.4	65	26.7	48	31.0	
4-5	-	-	52	19.0	52	21.4	20	12.9	
>5	-	-	172	63.0	103	42.4	38	24.5	
Mean/median	-	-	23.5/9.0		11.1/4		11.8/3		
Total	-	-	274	100.0	243	100.0	15	100.0	
Time of Last sex with FSW in Nepal									
Less than a week ago	-	-	23	13.1	8	6.8	34	21.9	
1-2 weeks ago	-	-	31	17.6	23	19.7	19	12.3	
3-4 weeks ago	-	-	24	13.6	20	17.1	16	10.3	
2-3 months ago	-	-	69	39.2	40	34.2	40	25.8	
More than 3 months ago	-	-	29	16.5	26	22.2	46	29.7	
Total	-	-	176	100.0	117	100.0	15	100.0	
Places where the truckers had last sex with FSW									
Home of sex workers	-	-	69	39.2	18	15.4	10	6.5	
Truck/Bus	-	-	51	29.0	29	24.8	65	41.9	
Hotel/Lodge	-	-	36	20.5	55	47.0	64	41.3	
Forest/Bushes/park/Open field	-	-	18	10.2	13	11.1	12	7.7	
Other people's house	-	-	2	1.1	1	0.9	-	0.0	
Massage centre	-	-	-	-	1	0.9	1	0.6	

Own room	-	-	-	-	-	-	3	1.9	
Total	-	-	176	100	117	100.0	155	100.0	
Amount of money paid for the last sex (in Nepalese Rupees)									
Not Paid	9	5.1	0	0.0	8	6.8	10	6.5	
Upto Rs 50	54	30.7	18	10.2	5	4.3	1	0.6	
Rs 51-100	54	30.7	51	29.0	14	12.0	6	3.9	
Rs 101-500	55	31.2	96	54.5	82	70.1	11	71.0	
Rs 501 and more	4	2.3	11	6.3	8	6.8	28	18.1	
Mean amount	138.2		229.2		289.0		545.1/500.0		
Total	176	100.0	176	100.0	117	100.0	155	100.0	
Ever had sex with FSW in India									
Yes	30	8.8	38	13.9	33	13.6	17	10.2	0.3699
No	310	91.2	236	86.1	210	86.4	149	89.8	
Total	340	100	274	100.0	243	100.0	166	100.0	
Sex with FSWs in the past one year in India									
Yes	8	26.7	12	31.6	17	51.5	5	29.4	0.2651
No	22	73.3	26	68.4	16	48.5	12	70.6	
Total	30	100	38	100.0	33	100.0	17	100.0	

-- means the findings are not reported in the respective rounds of surveys

More than nine out of every ten truckers in all rounds of surveys reported that they had sex with their wives during the last year. The practice of having sex with a girlfriend has been increasing continuously since 2006 (13.3% in 2006, 22.7% in 2009 and 36.0% in 2016). Sex with other female friend showed inconsistent trend with 16.3 percent of the truckers having sex with other female friends in 2006 and 22.0 percent doing so in 2009. It was found to be similar in 2016 (16.9%) as well. Although, the proportion of the truckers who had sex with male friends in the

past year was low in all rounds of surveys (0.8% in 2006 and 2.8% in 2016) it is increasing (Table 26)

Table 26: Trend of sexual contact with sex partners other than FSWs

Sex partners and sex practices	2003		2006		2009		2016	
	N	%	n	%	N	%	n	%
Have sex with wife in the past year								
Yes	-	-	313	99.4	248	97.3	174	94.1
No	-	-	2	0.6	7	2.7	11	5.9
Total	-	-	315	100	255	100	185	100
Had sex with girlfriend during past year								
Yes	-	-	52	13.3	88	22.7	117	36
No	-	-	341	86.7	299	77.3	208	64
Total	-	-	393	100	387	100	325	100
Have you had sex with other female friend in the past year								
Yes	-	-	64	16.3	85	22	55	16.9
No	-	-	329	83.7	302	78	270	83.1
Total	-	-	393	100	387	100	325	100
Had an anal sex with male friend in the past one year								
Yes	-	-	3	0.8	4	1	9	2.8
No	-	-	390	99.2	383	99	316	97.2
Total	-	-	393	100	387	100	325	100

-- means the findings are not reported in the respective rounds of surveys

Table 27 shows the trend in the consistent use of condom among truckers while having sex with FSWs in Nepal and India. There is a declining trend of consistent use of condom among the truckers while having sex with FSWs since 2006 (83.0% in 2006, 81.2% in 2009 and 65.2% in 2016). In the meantime, it was found that the truckers used condom while having sexual intercourse with FSWs in India on all (100.0%) occasions in the last two rounds of surveys carried out in 2009 and 2016. As reported in all the rounds of surveys, consistent use of condom with wife is very low (from 0.6% to 3.6%) and it is lowest in 2016 (0.6%). Present (2016) round of survey reported that only one third truckers had used condom consistently with their girlfriends. This proportion of condom users is lower than the one reported in earlier rounds of surveys carried out in 2006 (40.4%) and 2009 (45.5%).

Table 27: Trend in the consistent use of condom use with different types of sex partners

Practices	2006			2009			2016			P-Value
	Nu mer ator	Deno minat or	%	Nume rator	Deno minat or	%	Num erato r	Denomi nator	%	
Consistent use of condom in the past year with										
FSWs (in Nepal)	146	176	83.0	95	117	81.2	101	155	65.2	0.0003
FSWs (in India)	11	12	91.1	17	17	100.0	5	5	100. 0	0.3889
Wife	8	313	2.6	9	248	3.6	1	174	0.6	0.0309
Girl friend	21	52	40.4	40	88	45.5	40	117	34.2	0.2586

Condom carrying practices of the truckers shows declining trend with 58.7 percent of them carrying condoms usually in 2006, 46.7 percent in 2009 and 31.0 percent doing so in 2016. More than ninety percent in all the rounds of surveys reported that the pharmacies are the major places to get condoms. Other major places to receive condom are grocery shop (67.2% in 2006, 73.4% in 2009 and 32.2% in 2016), HP/HCs (35.4% in 2006, 69.55 in 2009 and 51.1% in 2016). Almost 43 percent of the truckers who had ever had sexual experience obtained condom free of cost in 2016 and this trend has continuously increased since 2006 (13.2% in 2006 and 16.3% in 2009). The proportion of truckers who bought condom to use was considerably lower (25.2%) in this survey than that was reported in 2006 (47.6%) and 2009 (62.5%). This is shown in table 28 below.

Table 28: Availability of Condom

Condom acquisition	2006		2009		2016	
	N	%	n	%	n	%
Usually carry condom						
Yes	235	58.7	187	46.7	124	31.0
No	158	39.5	200	50.0	201	50.3
Never had sex	7	1.7	13	3.3	75	18.8
Total	400	100.0	400	100.0	400	100.0
Places where condoms are available						
Pharmacy	379	96.4	364	94.1	298	91.7
General retail (Kirana) shop	264	67.2	284	73.4	105	32.3
Paan shop	241	61.3	230	59.4	67	20.6

NGOs/Health Workers/volunteers	192	48.9	66	17.1	44	13.5
HP/HCs	139	35.4	269	69.5	166	51.1
Private clinic	67	17	103	26.6	161	49.5
Hospital	66	16.8	182	47.0	128	39.4
Check Post (Nagdhunga and others)	33	8.4	18	4.7	0	0.0
Peers' friends	26	6.6	36	9.3	29	8.9
FPAN clinic	19	4.8	19	4.9		
Bar/Guest house/hotel	17	4.3	35	9.0	9	2.8
Others	13	3.4	23	6.0	1	0.3
Not known	0	0.0	0	0.0	6	1.8
Total	393	*	387	*	325	*
Mode of usually obtaining condom						
Purchase	187	47.6	241	62.5	82	25.2
Free of cost	52	13.2	63	16.3	139	42.8
Obtain both ways	68	17.3	20	5.2	46	14.2
Never used condom	86	21.9	62	16.0	58	17.8
Total	393	100.0	387	100.0	325	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

A total of 84.5 percent of the truckers had ever heard about HIV and AIDS and this proportion was notably lower than the one observed in 2006 (100.0%) and 2009 (98.5%). Truckers' knowledge about the specific components of HIV and AIDS (A, B, C, D, E, F) and its comprehensive composite index (ABC, BCDEF) decreased considerably in all aspects in the present round of survey 2016 (table 29).

Table 29: Sources/ of Knowledge about HIV and AIDs

Sources/ of Knowledge about HIV and AIDs	2006		2009		2016	
	n	%	n	%	n	%
Ever heard about HIV and AIDS						
Yes	400	100.0	394	98.5	338	84.5
No	0	0.0	6	1.5	62	15.5
Total	400	100.0	400	100.0	400	100.0
Comprehensive knowledge about HIV and AIDS						
A- Can protect themselves through abstinence from sexual contact	391	97.8	202	50.5	61	15.2
B -Can protect themselves through monogamous sexual contact	394	98.5	287	71.8	84	21.0

C- Can protect themselves through condom use every time during sex	393	98.3	346	86.6	237	59.3
D -A healthy-looking person can be infected with HIV	381	95.3	360	90.1	197	49.3
E- A person cannot get the HIV virus from mosquito bite	209	52.3	174	43.4	136	34.0
F -Cannot get HIV by sharing a meal with an HIV infected person	355	88.8	337	84.3	254	63.5
Knowledge of all three ABC	387	96.8	142	35.5	127	31.8
Knowledge of all five BCDEF	202	50.5	103	25.8	182	45.5
Know anyone who is infected with HIV or who has died of AIDS	263	65.8	199	50.5	58	17.2
A woman with HIV/AIDS can transmit the virus to her new-born child through breast feeding	156	39.0	177	44.9	84	21.0
Cannot get HIV by holding an HIV infected person's hand	393	98.5	358	90.8	96	24.0
A person can get HIV by using previously used needle/syringe	393	98.5	388	98.5	320	80.0
Blood transfusion from an infected person to the other transmits HIV	399	99.8	391	99.2	332	83.0
A Pregnant Woman can Reduce the Risk of Transmission of HIV to her Unborn Child by taking medicine	137	34.3	62	15.7	120	30.0

As indicated in table 30, only 32.0 percent of the truckers opined that confidential HIV test can be performed in the community. This opinion is in ever decreasing trend since 2006 (78.55 in 2006 and 59.6% in 2009). Less than a quarter of the truckers (23.4%) reported that they had ever had HIV test in 2016 and this proportion is lower than that of 2006 (26.5%) and 2009 (36.6%). Trends in the voluntarily HIV testing among the truckers has increased since 2006. The comparative data shows that 56.6 percent of the truckers in 2006, 84.7 percent in 2009 and 87.3 percent in 2016 had voluntary HIV testing. Majority of those truckers who underwent for HIV test in all the rounds of surveys had obtained the test result (94.35 in 2006, 86.8% in 2009 and 98.7 percent in 2016). Almost one-third (32%) truckers had ever had HIV test conducted within

12 months prior to the survey in 2016; however this proportion is lower than that was reported in 2006 (44.3%) and 2009 (42.4%).

Table 30: Perception of HIV Test

Perception of HIV test	2006		2009		2016	
	n	%	n	%	n	%
Possible to have confidential HIV test in the community						
Yes	314	78.5	235	59.6	108	32.0
No	80	20.0	130	33.0	207	61.2
Don't Know	6	1.5	29	7.4	23	6.8
Total	400	100.0	394	100.0	338	100.0
Ever had an HIV test						
Yes	106	26.5	146	36.6	79	23.4
No	294	73.5	254	63.5	259	76.6
Total	400	100.0	400	100.0	338	100.0
Voluntarily underwent the HIV testing or required						
Voluntary	60	56.6	122	84.7	69	87.3
Required	43	40.6	22	15.3	10	12.7
No response	3	2.8	0	0.0	0	0.0
Total	106	100.0	144	100.0	79	100.0
HIV test result obtained						
Yes	100	94.3	125	86.8	78	98.7
No	6	5.7	19	13.2	1	1.3
Total	106	100.0	144	100.0	79	100.0
Most recent HIV test done						
Within 12 months	47	44.3	61	42.4	25	31.6
Between 1-2 years	28	26.4	58	40.3	19	24.1
Between 2-4 years	22	20.8	15	10.4	17	21.5
More than 4 years ago	0	8.5	10	6.9	18	22.8
Total	106	100.0	144	100.0	79	100.0

The truckers had a low level of understanding about the different types of STIs, as maximum of 60.0 percent of the truckers in all rounds of surveys were able to state something about the STIs. However, the knowledge about the specific STIs remains variable in different rounds of surveys. Although, few truckers experienced STI-related symptoms, most common reported symptoms were pain during urination (3.0%) and Ulcer or Sore around Genital area (4.8%) in 2016. More than seven out of every ten truckers reported that they had received counseling during treatment of STIs and the proportion of truckers who received counseling in this round of survey was higher than that was reported in 2006 (65.0%) and 2009 (42.9%)(Table 31).

Table 31: Knowledge and Treatment of Sexually Transmitted Infections (STIs)

Perception of STI, Reported STI Symptoms and Treatment Among Truckers	2006		2009		2016	
	n	%	n	%	n	%
Truckers' Understanding of STI						
White Discharge/Discharge of Pus/Dhatu flow	191	47.8	137	34.3	155	38.8
Pain During Urination	40	10.0	22	5.5	62	15.5
Burning Sensation while Urinating	83	20.8	37	9.3	32	8.0
Ulcer or Sore Around Genital Area	214	53.5	173	43.3	60	15.0
Syphilis (Bhiringi)/Gonorrhea	195	48.8	133	33.3	155	38.8
HIV/AIDS	239	59.8	175	43.8	165	41.3
Itching in genital areas	15	3.8	0	0.0	0	0.0
Impotence	0	0.0	2	0.5	0	0.0
Swelling of Penis	0	0.0	2	0.5	0	0.0
Don't know	17	4.3	92	23.0	107	26.8
Others	5	1.3	9	2.3	1	0.3
Total	400	*	400	*	400	*
Types of STI symptoms experienced in the past one year						
White Discharge/Discharge of Pus	18	4.5		8.8	4	1.0
Burning sensation while urinating	16	4		0.8	7	1.8
Pain during urination	5	1.3		2.3	12	3.0
Ulcer or Sore Around Genital area	16	4		2.0	19	4.8
Others	4	1		0.8	1	0.3
Any other above symptoms	38	9.5		2.8	0	0.0
None of the above symptoms	362	90.5		97.3	367	91.8
Received counseling during treatment						
Yes	13	65.0		42.9	20	71.4
No	7	35.0		57.1	8	28.6
Total	20	100.0		100.0	28	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

Trend of the frequent use of alcohol has decreased since 2006 as the proportion of everyday users (37.05 in 2006, 14.8% in 2009 and 6.55 in 2016) and those who consumed alcohol 2-3 times per week (20.3% in 2006, 16.3% in 2009 and 13.5% in 2016) decreased (table 8.11). Contrary to this, the proportion of the truckers who used any type of drug was 17.8 percent in 2016. This proportion is higher than that was reported in 2006 (8.0%) and 2009 (6.0%) (Table 32).

Table 32: Trend in the use of Alcohol and Drugs among Truckers

Consumption of alcohol and drugs	2006		2009		2016	
	n	%	N	%	n	%
Alcohol consumption during past one month						
Everyday	148	37.0	49	14.8	26	6.5
2-3 times in a week	81	20.3	65	16.3	54	13.5
Once a week	31	7.8	68	17.0	80	20.0
Less than once in a week	45	11.3	82	20.5	97	24.3
Never	95	23.8	124	31.0	140	35.0
Don't know	0	0.0	2	0.5	3	0.8
Total	400	100.0	400	100.0	400	100.0
Tried any types of during past one month						
Yes	32	8.0	24	6.0	71	17.8
No	368	92.0	376	94.0	328	82.0
Home treatment	0	0.0	0	0.0	1	0.3
Total	400	100.0		100.0	400	100.0

The results of the present survey (2016) show that only a few (3.0%) of the truckers had received services from PEs/OEs and this practice is found to be decreasing since 2006 (11.5% in 2006 and 10.8% in 2009). Among those who were exposed to the PE/OE services, majority were involved in the discussions about the regular use/nonuse of condom (66.7%), transmission of HIV (50.0%) and STIs (58.3%) and demonstration of use of condom. In addition, the present survey revealed that 25 percent of the truckers had discussed about the safe use of syringes. Among those who visited the OE/PEs services, there is an increase in the trend to visit the OE/PEs once (43.5% in 2006, 48.8% in 2009 and 75.0% in 2016). There is decline in the multiple visits to OE/PEs as none of the truckers had visited there more than six times in this round. (table 33).

Table 33:Peer Educator/Outreach Educator Visit

Peer Educator/Outreach Educator Visit	2006		2009		2016	
	n	%	n	%	n	%
Met/Discussed/Interacted with Peer Educators (PE)/Outreach Educators (OE) in the last 12 Months						
Yes	46	11.5	43	10.8	12	3.0
No	354	88.5	357	89.3	387	96.8

No response	0	0.0	0	0.0	1	0.3
Total	400	100.0	400	100.0	400	100.0
Activities Involved with PE/OE						
Discussion on how HIV/AIDS is/isn't transmitted	41	89.1	37	86.1	6	50.0
Discussion on how STI is/isn't transmitted	27	58.7	26	60.5	7	58.3
Regular/non-regular use of condom	25	54.3	28	65.1	8	66.7
Demonstration on using condom correctly	21	45.7	25	58.1	5	41.7
STI treatment/cure after treatment	1	2.2	7	16.3	0	0.0
Counseling on reducing number of sex partner	2	4.3	5	11.6	1	8.3
Training on HIV and STI, Condom Day, AIDS Day, participation in discussions and interaction programs	3	6.5	2	4.7	0	0.0
Use of safe syringe	0	0.0	0	0.0	3	25.0
Others	4	8.7	1	2.3	0	0.0
Total	46	*	43	*	12	*
Number of visits to PE/OEs						
Once	20	43.5	20	48.8	9	75.0
2-3 times	15	32.6	11	25.6	1	8.3
4-6 times	5	10.9	5	11.6	2	16.7
7-12 times	4	8.7	1	2.3	0	0.0
More than 12 times	2	4.3	5	11.6	0	0.0
Total	46	100.0	43	100.0	12	100.0

**The percentages add up to more than 100 because of multiple responses*

Although, the proportion of the truckers who visited the DIC was low (10.5%) in the present survey, the data shows that there is an improvement in it as compared with earlier rounds findings (6.0% in 2006 and 4.5% in 2009). They had frequently participated in different activities like watching documentaries on HIV and AIDS (66.7% in 2006, 38.9% in 2009 and 21.4% in 2016), collection of condoms (29.2% in 2006, 16.7% in 2009 and 85.7% in 2016) and received advices on correct ways of condom use (25.0% in 2006, 27.8% in 2009 and 38.1% in 2016). In addition, the truckers also participated in discussions, trainings, providing support to friends and testing blood in different rounds of surveys with. The proportion was found to have varied in different activities. Among those who had visited DIC, nearly half reported that they had visited DIC once in the surveys conducted in 2009 and 2016; nevertheless only 33.3 percent of them visited DIC in 2006. There is a decrease in the trend to visit the DIC multiple times (two or more times) since 2006 (Table 34).

Table 34: DIC Visiting Practices of Truckers

Perception of STI, Reported STI Symptoms and Treatment among Truckers	2006		2009		2016	
	n	%	n	%	n	%
Visited any DIC in the Last 12 months						
Yes	24	6.0	18	4.5	42	10.5
No	376	94.0	382	95.5	358	89.5
Total	400	100.0	400	100.0	400	100.0
Activities Involved in at DIC						
Went to watch film on HIV/AIDS	16	66.7	5	38.9	9	21.4
Went to collect condoms	7	29.2	3	16.7	36	85.7
Went to learn the correct way of using condom	6	25.0	4	27.8	16	38.1
Participated in discussion on STI transmission	5	20.8	5	38.9	0	0.0
Participated in training, interaction and discussion programs on HIV/AIDS and STI	2	8.3	3	16.7	11	26.2
Took friend with me	3	12.5	2	11.1	9	21.4
Went for blood test	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0
Total	24	*	18	*	42	*
Number of DIC visits						
Once	8	33.3	9	50.0	21	50.0
2-3 times	9	37.5	4	27.8	15	35.7
4-6 times	5	20.9	2	11.1	5	11.9
More than 6 times	2	8.4	2	11.1	1	2.4
Total	24	100.0	18	100.0	42	100.0

**The percentages add up to more than 100 because of multiple responses*

As shown in the table below, only a few of the truckers (1.8%) had visited at STI clinic in last 12 months before the 2016 survey and it is in a declining trend since 2006 (3.8% in 2006, 3.3% in 2009 and 1.8% in 2016). Out of 7 truckers who visited to STI clinic, there is an improved involvement practice in all the STIC clinic activities in 2016 when it is compared with the earlier rounds of surveys. Out of 7 truckers who had visited STI clinic, almost three-fifths had visited the clinic once in 2016 and this practice is lower than the one reported in 2009 (69.2%). However, the proportion of the truckers who visited STI clinic for 2-3 times in 2016 (42.9%) increased from the one reported in 2009 (23.1%)(Table 35).

Table 35: STI clinic visiting practices of truckers

STI Clinic Visiting Practices of Truckers	2006		2009		2016	
	n	%	n	%	n	%
Visited any STI Clinic in the Last 12 Months						
Yes	15	3.8	13	3.3	7	1.8
No	385	96.2	387	96.8	393	98.3
Total	400	100.0	400	100.0	400	100.0
Activities Involved in at STI Clinic						
Blood tested for STI	10	66.7	8	61.5	6	85.7
Was advised to use condom in each sexual intercourse	5	33.3	2	15.4	4	57.1
Was advised to take complete and regular medicine	5	33.3	0	0.0	3	42.9
Was suggested to reduce number of sexual partners	4	26.7	0	0.0	4	57.1
Physical examination conducted for STI identification	3	20.0	5	38.5	5	71.4
Took friend	2	13.3	3	23.1	1	14.3
Others	3	20.0	0	0.0	0	0.0
Total	15	*	13	*	7	*
Number of Visits to STI Clinics						
Once	4	26.7	9	69.2	4	57.1
2-3 times	8	53.3	3	23.1	3	42.9
4-6 times	2	13.3	1	7.7	0	0.0
More than 6 times	1	6.7	0	0.0	0	0.0
Total	15	100.0	13	100.0	7	100.0

* *The percentages add up to more than 100 because of multiple responses*

As shown in the table below, only a few of the truckers (2.5%) visited the HTC center in the last 12 months. This trend was almost similar in all the rounds of surveys (3.8% in 2006 and 3.3% in 2009). Most of those truckers who visited HTC, participated in HIV testing, pretest and post counseling in all rounds of surveys (Table 36).

Table 36: HTC Clinic Visiting Practices

HTC Visiting Practices of Truckers	2006		2009		2016	
	n	%	n	%	n	%
Visited any HTC Center in the Last 12 months						
Yes	15	3.8	13	3.3	10	2.5
No	385	96.2	387	96.7	390	97.5
Total	400	100.0	400	100.0	400	100.0

Activities Involved in at HTC Center						
Blood sample taken for HIV/AIDS test	14	93.3	8	61.5	9	90.0
Received HIV/AIDS test result	9	60.0	4	30.8	4	40.0
Received pre-test counseling	4	26.7	5	38.5	6	60.0
Received post-test counseling	6	40.0	2	23.1	4	40.0
Received counseling on using condom correctly in each sexual intercourse	4	26.7	5	38.5	2	20.0
Got information on HIV/AIDS window period	0	0.0	5	38.5	2	20.0
Others	2	13.4	4	30.8	0	0.0
Total	15	*	13	*	10	*
Number of visits to VCT center						
Once	6	40.0	7	53.9	8	80.0
2-3 times	8	53.3	5	38.5	2	20.0
More than 12 times	1	6.7	1	7.7	0	0.0
Total	15	100.0	13	100.0	10	100.0

**Note: The percentages add up to more than 100 because of multiple responses*

The present survey showed that only a few (2.5%) truckers participated in HIV and AIDS Awareness Raising Programs in the last 12 months. This is considerably lower than the one reported in earlier rounds of surveys (14.8% in 2006 and 20.0% in 2009). Among those who were involved in awareness raising programs, majority participated in street drama (67.8% in 2006, 86.3% in 2009 and 60.0% in 2016). Other programs in which they participated frequently include demonstration fo use of condom, group discussion and condom day celebration (table 37).

Table 37: Participation in HIV/AIDS Awareness Programs of Truckers

Participation in HIV/AIDS Awareness Programs of Truckers	2006		2009		2016	
	n	%	N	%	n	%
Participated in HIV and AIDS Awareness Raising Programs or Community Events in the Last 12 months (n=400)						
Yes	59	14.8	80	20.0	10	2.5
No	341	85.2	380	80.0	390	97.5
Total	400	100.0		100.0	400	100.0
Type of Activities Participated in						
Street drama	40	67.8	69	86.3	6	60.0
Condom use demonstrations	13	22	2	2.5	3	30.0
Video shows	10	16.9	18	22.5	0	0.0

AIDS Day	8	13.6	5	6.3	3	30.0
Group discussions	7	11.9	4	5.0	4	40.0
Condom Day	4	6.8	12	15.0	4	40.0
HIV/AIDS-related training	4	6.8	3	3.8	1	10.0
HIV/AIDS-related workshops	2	3.4	0	0.0	0	0.0
Others	1	1.7	1	1.3	0	0.0
Total	59	*	80	*	10	*

**Note: The percentages add up to more than 100 because of multiple responses*

Willingness of the truckers to take care of male relative with HIV positive at home has decreased continuously since 2006 (97.0% in 2006, 93.5% in 2009 and 88.0% in 2016). Similarly, willingness of the truckers to take care of female relative with HIV positive at home has also decreased since 2006 (95.8% in 2006, 90.3% in 2009 and 88.3% in 2016). Only 30.3 percent of the truckers expressed their willingness to maintain confidentiality of the HIV positive family member in 2016 which is higher than the one reported in 2006 (28.5%) but lower than the one reported in 2009 (34.5%) (Table 38).

Table 38: Stigma and Discrimination

Stigma and Discrimination	2006		2009		2016	
	n	%	N	%	n	%
Willing to Take Care of HIV Positive Male Relative in the household						
Yes	388	97.0		93.5	352	88.0
No	12	3.0		6.0	47	11.8
Don't know	0	0.0		0.5	1	0.3
Total	400	100.0		100.0	400	100.0
Willing to Take Care of HIV Positive Female Relative in the household						
Yes	383	95.8		90.3	353	88.3
No	17	4.2		9.0	46	11.5
Don't know	0	0.0		0.8	1	0.3
Total	400	100.0		100.0	400	100.0
Willing to maintain confidentiality of the HIV positive family Member						
Yes	114	28.5		34.5	121	30.3
No	286	71.5		64.5	275	68.8
Don't know	0	0.0		0.3	4	1.0
Total	400	100.0		100.0	400	100.0

CHAPTER 9: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

9.1 Summary of Major Findings

Comparison of the results of different IBBS surveys (2003-2016)

The findings of the survey show that prevalence of both the HIV and Syphilis has declined over the time (since 2003 till 2009). However, there has been marginal increase in the prevalence of HIV and Syphilis among the truckers in 2016. Proportion of truckers who had ever had sex with FSWs in Nepal had markedly increased from 48.2% in 2009 to 93.4% in 2016. Similarly, proportion of the truckers who had sex with FSWs in India in the past year decreased from 51.5 percent in 2009 to 29.4 percent in 2016. Proportion of the truckers who had sex with girlfriends in the past year has increased from 22.7 percent in 2009 to 36.0 percent in 2009. Consistent use of condom while having sex with FSWs in Nepal has declined from 81.2 percent in 2009 to 65.2 percent in 2016. Nevertheless, use of condom among the truckers during sex with FSWs in India in the past year remained same (100%) in 2009 and 2016. The truckers' practice of carrying condoms usually reduced from 58.7% in 2006 to 31.0% in 2016. Trucker's comprehensive knowledge about ABC and BCDEF considerably decreased in all aspects in the present round of survey in 2016. Almost 97 percent of the truckers in 2006, 35.5 percent of the truckers in 2009 and 31.1 percent of the truckers in 2016 had knowledge of all the ABCs. Similarly, 50.5 percent of the truckers in 2006, 25.8 percent of the truckers in 2009 and 45.5 percent of the truckers in 2016 had knowledge of BCDEF. Exposure to different HIV and AIDS related programmes like visit to PEs/OEs (11.5% in 2006 and 10.8% in 2009 and 3.0% in 2016), STI clinic (3.8% in 2006, 3.3% in 2009 and 1.8% in 2016), HTC (3.8% in 2006, 3.3% in 2009 and 2.5% in 2016) and awareness raising programs in the last 12 months (14.8% in 2006 and 20.0% in 2009) has decreased since 2003 to 2016. whereas practice of visiting "awareness raising programs" has increased in 2016 in comparison to 2003.

9.2 Conclusions

HIV prevalence among truckers was reported to be low in 2009 (0%); which inclined slightly to 0.3% in 2016. A substantial proportion of the truckers had sexual contacts with FSWs in Nepal (93.4%) and India (10.2%). Similarly, sex with other sex partners such as girlfriends, other

female friends and male sex partners were also invariably practiced among truckers. However, consistent use of condom during sex with different partners was quite low. Knowledge of truckers about different aspects of STI, HIV and AIDS prevention was poor. Majority of the truckers who experienced STI symptoms had not received any treatment for these symptoms. Practice of consumption of alcohol and drug intake was found to have increased among the truckers.. There was poor access and utilization of HIV prevention services among truckers and their participation in such programmes are very limited.

9.3 Recommendations

Since this survey reported the low level of knowledge about the STI, HIV and AIDS; prevalent risky sexual and drugs intake behaviors, their poor access and utilization of HIV related services among the truckers, following target based approaches are recommended to decrease the risk of HIV among them.

- Risk reduction strategies: Promote the awareness and counseling services for truckers through the establishment of static clinics in and around the truck holding sites and mobile clinics in different locations of the east-west highway. Truckers should be counseled to reduce the number/types of partners, suggest for consistent condom use and promote the truckers to utilize HIV and STI services from the established truck friendly clinic. The provisions should be made for introduction of HIV related contents in licensing examination for the prospective drivers so that everyone will have essential knowledge of HIV prevention.
- Improve service accessibility and availability for truckers: Develop and sustain the year round availability of condom and STI services for the truckers in selected locations such as refreshing centers and public toilets on the highways, target based services must be implemented in different locations of the east-west highway. Provision of periodic assessment for possible HIV and STIs from truckers-friendly static clinic sites along the counseling services might be useful to improve the access and utilization of services.
- Enforce regulatory provisions to avoid the alcohol and drug intake among the truckers and establish surveillance sites for the scrutiny of risky sexual behaviors. Moreover, studying the characteristics of the sex partners and their availability will be useful to identify the potential points of interventions.


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ANNEXES

Annex-1 Ethical Clearance letter



Government of Nepal
Nepal Health Research Council (NHRC)
Estd. 1991



Ref. No.: 1232

04 February 2016

Dr. Dipendra Raman Singh,
Principal Investigator
National Centre for AIDS and STD Control
Teku, Kathmandu

Ref: **Approval of Research Proposal** entitled **Integrated Biological and Behavioral Surveillance (IBBS) surveys among identified key populations at higher risk of becoming infected with HIV in Nepal**

Dear Dr. Singh,

It is my pleasure to inform you that the above-mentioned proposal submitted on 07 January 2016 (Reg.no. 03/2016 please use this Reg. No. during further correspondence) has been approved by NHRC Ethical Review Board on 03 February 2016.

As per NHRC rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. Any change in objective(s), problem statement, research question or hypothesis, methodology, implementation procedure, data management and budget that may be necessary in course of the implementation of the research proposal can only be made so and implemented after prior approval from this council. Thus, it is compulsory to submit the detail of such changes intended or desired with justification prior to actual change in the protocol.


If the researcher requires transfer of the bio samples to other countries, the investigator should apply to the NHRC for the permission.

Further, the researchers are directed to strictly abide by the National Ethical Guidelines published by NHRC during the implementation of their research proposal and submit progress report and full or summary report upon completion.

As per your research proposal, the total research amount is NRs. 1,60,76,846.00 and accordingly the processing fee amount to NRs. 4,15,780.50 . It is acknowledged that the above-mentioned processing fee has been received at NHRC.

If you have any questions, please contact the Ethical Review M & E section of NHRC.

Thanking you,


.....
Dr. Khem Bahadur Karki
Member-Secretary

Q. N.	Questions and Filters	Coding Categories	Skip to
101	Respondent ID No.	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
101.1	Type of Respondent	Driver 1 Helper 2	
102	Where were you born?	District _____ VDC/Municipality _____	
103	Where do you live now? (Write Currently living Place)	Districts: _____ VDC/Municipality: _____	

2.0 PERSONAL INFORMATION

Q. N.	Questions and Filters	Coding Categories	Skip to
201	How old are you?	Age <input type="text"/> <input type="text"/> (Write the completed years)	
202	What is your caste?	Ethnicity/Caste(Specify)..... Caste code No..... <input type="text"/> <input type="text"/>	
203	What is your educational status? (Circle '0' if illiterate, '19' for the literate without attending the school, and write exact number of the passed grade)	Illiterate 0 Literate 19 Grade <input type="text"/> <input type="text"/> (write the grade completed)	
204	What is your present marital status?	Married 1 Separated.....2 Divorced/Permanently Separated 3 Widower 4 Never married 5	206 ➔ 206 ➔ 206 ➔

Q. N.	Questions and Filters	Coding Categories	Skip to
205	What is the approximate number of days in a month that you stay away from your wife?	Days..... <input type="text"/> <input type="text"/> I always stay with my wife .0	
206	With whom are you staying currently?	With wife 1 With male friends 2 With female friends 3 Alone 4 With parents.....5 With Children.....6 Others (Specify)_____ 96	
207	Have you ever driven truck to India?	Yes 1 No 2	➔ 301
208	When was the last time you had driven truck to India? (If it is today write "0")	Days ago <input type="text"/> <input type="text"/> Months ago <input type="text"/> <input type="text"/>	

INFORMATION ON SEXUAL BEHAVIOR

Q. N.	Questions and Filters	Coding Categories	Skip to
301	Have you ever had sexual intercourse with a woman before?	Yes 1 No 2	➔ 501
302	How old were you at your first sexual intercourse? (In Completed years)	Year's old <input type="text"/> <input type="text"/> Don't know/Can't recall 98	
303	Have you ever had sex with a sex worker?	Yes 1 No 2	➔ 403

Sexual behavior with Female Sex Workers in Nepal

Q. N.	Questions and Filters	Coding Categories	Skip to
-------	-----------------------	-------------------	---------

304	Have you had sex with a sex worker in the past year in Nepal?	Yes 1 No 2	→ 401
305	During the past year, how many different FSWs did you have sexual intercourse with in Nepal?	Number <input type="text"/> <input type="text"/>	
306	In which places in Nepal have you had sex with sex workers in the past years?	Name of Places _____ _____	

Q. N.	Questions and Filters	Coding Categories	Skip to
307	During the past one year when did you have the last sexual intercourse with a sex worker in Nepal? (Write '00' if the answer is less than a week)	Weeks ago <input type="text"/> <input type="text"/>	
308	Where did you find that last sex worker for sexual intercourse in Nepal?	Lodge/Hotel 1 Eating-place (Restaurant) 2 <i>Bhatti</i> (Liquor shop) 3 On the street 4 Forest 5 Others (Specify) _____ 96	
309	Where did you have sex with her?	Sex worker's own home 1 Client's home/room 2 Hotel/lodge 3 Forest/Bush/Park 4 Other private house 5 Truck/bus 6 Others (Specify) _____ 96	

310	<p>How many rupees and/or other items did you pay the sex worker that time?</p> <p>(Ask the money spend for sexual intercourse only)</p> <p>(Note: If there is '0' in both 'cash and gift equivalent' mention the reasons)</p>	<p>Cash _____ Rs.</p> <p>Gift equivalent to _____ Rs.</p> <p>Total Rs. Other (Specify)</p> <p>_____ 96</p>	
311	<p>In the last one month how many times did you have sexual intercourse with sex workers in Nepal?</p>	<p>Times <input type="text"/> <input type="text"/></p>	

Use of Condoms with Female Sex Workers in Nepal

312	Did you use a condom when you had the last sexual intercourse with a sex worker?	Yes 1 No 2	→ 314.1
313	Who suggested condom use that time?	Myself 1 Female Sex Workers.....2 Don't know 98	} 314.2
314.1	Why didn't you use a condom that time?	Not available 1 Too expensive 2 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____96 Don't know 98	
314.2	How often did you use condoms while visiting sex workers in the last 12 months?	All of the time 1 Most of the time 2 Some of the time 3 Rarely 4 Never 5	→ 401
314.3	Why didn't you use condom always? (Multiple answers. DO NOT READ the possible answers)	Not available 1 Too expensive 2 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____96 Don't know 98	

4.0 Sexual behavior with Female Sex Workers in India

Q. N.	Questions and Filters	Coding Categories	Skip to
401	Have you ever had sex with sex workers in India?	Yes 1 No 2	➔403
401.1	Did you have sexual intercourse with sex workers in India in the past year?	Yes 1 No 2	➔403
401.2	Where?	Name of Places	
402	When did you have had the last sexual Intercourse with sex workers in India? (Write '00' if the answer is less than 7 days)	Weeks ago <input type="text"/> <input type="text"/>	

4.0 Condom Use with Sex Worker in India

Q. N.	Questions and Filters	Coding Categories	Skip to
402.1	Did you use a condom when you had last sexual intercourse with a sex worker in India?	Yes 1 No 2	
402.2	In the past year, how often did you use condom with sex worker in India?	All of the time 1 Most of the time 2 Some of the time 3 Rarely 4 Never 5	

Condom Use with Wife (Ask married respondents only, Other than married go to Ques. no. 407)

Q. N.	Questions and Filters	Coding Categories	Skip to
403	During the past one-year have you had sexual intercourse with your wife?	Yes 1 No 2 Unmarried3	➔407 ➔407

Q. N.	Questions and Filters	Coding Categories	Skip to
404	How many times did you have sexual intercourse with your wife over the last 30 days? (If there is no sexual intercourse with wife in last 30 days write "00")	Number of times <input type="text"/> <input type="text"/> Don't know 98	
405	The last time you had sex with your wife did you use condom?	Yes 1 No 2	
406	How often did you use condoms with your wife over the last 12 months?	All of the time1 Most of the time2 Some of the time.....3 Rarely.....4 Never.....5	➡407
406.1	Why didn't you use condom always? (Multiple answers. DO NOT READ the possible answers)	Not available 1 Too expensive 2 Partner objected 3 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____ 96 Don't know 98	

Condom Use with Girl Friend

Q. N.	Questions and Filters	Coding Categories	Skip to
407	During the past 12 months have you had sexual intercourse with your girl friend?	No Girlfriend.....0 Yes.....1 No.....2	➡411 ➡411

Q. N.	Questions and Filters	Coding Categories	Skip to
408	How many times did you have sexual intercourse with your girl friend over the last 30 days? (If there is none sexual intercourse with girl friend in last 30 days write "00")	Number of times <input type="text"/> Don't know 98	
409	The last time you had sex with your girl friend did you use condom?	Yes 1 No 2	
409.1	How often did you use condoms with your girl friend over the last 12 months?	All of the time 1 Most of the time 2 Some of the time 3 Rarely 4 Never 5	➔411
410	Why didn't you use a condom at that time?	Not available 1 Too expensive 2 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____ 96 Don't know 98	

Condom Use with Other female Friend

Q. N.	Questions and Filters	Coding Categories	Skip to
411	During the past one-year, did you have sexual intercourse with your other female friends?	No other girl friend.....0 Yes 1 No 2	➔415 ➔415

Q. N.	Questions and Filters	Coding Categories	Skip to
412	How many times did you have sexual intercourse with your other female friends over the last 30 days? (If there is none sexual intercourse with female friend in last 30 days write "00")	Number of times <input type="text"/> <input type="text"/> Don't know 98	
413	The last time you had sex with your other female friends did you use condom?	Yes 1 No 2	
413.1	How often did you use condoms with your other female friend over the last 12 months?	All of the time 1 Most of the time 2 Some of the time 3 Rarely 4 Never 5	→ 415
414	Why didn't you use a condom that time?	Not available 1 Too expensive 2 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____ 96 Don't know 98	

Use of Condom with Male Partner

Q. N.	Questions and Filters	Coding Categories	Skip to
415	In last 12 months did you have anal sex with male partner?	No such male partner.....0 Yes.....1 No.....2	→ 420 → 420
416	In past 30 days how many times did you have anal sex with male partner?	Number of time <input type="text"/> <input type="text"/>	

	(If there is none sexual intercourse with male friend in last 30 days write "00")	Don't know 98	
417	The last time you had sex with your male friend did you use condom?	Yes 1 No 2	
418	How often did you use condoms with your male friend over the last 12 months?	All of the time 1 Most of the time 2 Some of the time 3 Rarely 4 Never 5	→420
419	Why you did not use condom always? (Multiple answers. DO NOT READ the possible answers)	Not available 1 Too expensive 2 Partner objected 3 I didn't like to use it 4 Didn't think it was necessary 5 Didn't think of it 6 Other (Specify) _____ 96 Don't know 98	

Condom Accessibility

Q. N.	Questions and Filters	Coding Categories	Skip to
420	Do you usually carry condoms with you?	Yes 1 No 2	→421
420.1	At this moment, how many condoms do you have at-hand with you? (Observe and write)	Number <input type="text"/> <input type="text"/>	
421	Which places or persons do you know from where/whom you can obtain condoms? (Multiple answers. DO NOT READ the possible answers)	Health Post/ Health Center 1 Pharmacy 2 General retail store (KiranaPasal) 3 Private Clinic 4	

		Paan shop 5 Hospital 6 FPAN Clinic 7 Peer/Friends 8 NGO/Health Workers/Volunteers 9 Guest House/Hotel 10 Other (Specify) _____ 96 Don't know 98	
422	How do you usually obtain condoms? (Buy, obtain free of cost or both ways)	I get it free of cost 1 I buy 2 Both 3 Never used condom 4	➔501
422.1	Which would be the most convenient place/s for you to get condoms? (Multiple answers. DO NOT READ the possible answers)	Health Post/ Health Center 1 Hospital 2 Peer/Friends 3 During Community Programme 4 NGO/Health Workers/Volunteers.....5 Pharmacy.....6 Other (Specify).....96	

5.0 HIV/AIDS AWARENESS

Q. N.	Questions and Filters	Coding Categories	Skip to
501	Have you ever heard of HIV/AIDS?	Yes 1 No 2	➔601

Q. N.	Questions and Filters	Coding Categories	Skip to
502	Have you ever searched information about HIV/AIDS on internet/mobile?	Yes.....1 No.....2	

Knowledge, Opinion and Attitude on HIV/AIDS

Q. N.	Questions and Filters	Coding Categories	Skip to
503	Do you know anyone who is infected with HIV or who has died of AIDS?	Yes 1 No 2	→505
504	Do you have a close relative or close friend who is infected with HIV or has died of AIDS?	Yes, a close relative 1 Yes, a close friend 2 No 3	
505	Can people protect themselves from HIV by keeping sexual contact with only one uninfected faithful sex partner?	Yes 1 No 2 Don't know 98	
506	Can people protect themselves from HIV, virus-causing AIDS, by using condom correctly in each sexual contact?	Yes 1 No 2 Don't know 98	

Q. N.	Questions and Filters	Coding Categories	Skip to
507	Do you think a healthy-looking person can be infected with HIV?	Yes 1 No 2 Don't know 98	
508	Can a person get the HIV virus from mosquito bites?	Yes 1 No 2 Don't know 98	
509	Can a person get HIV by sharing a meal with an HIV infected person?	Yes 1 No 2 Don't know 98	

510	Can a pregnant woman infected with HIV/AIDS transmit the virus to her unborn child?	Yes 1 No 2 Don't know 98	} 512
511	What can a pregnant woman do to reduce the risk of transmission of HIV to her unborn child?	Take Medication 1 Other (Specify)_____ 96 Don't know 98	
512	Can a woman with HIV/AIDS transmit the virus to her newborn child through breastfeeding?	Yes 1 No 2 Don't know 98	
513	Can people protect themselves from HIV virus by abstaining from sexual intercourse?	Yes 1 No 2 Don't know 98	
514	Can a person get HIV by holding an HIV infected person's hand?	Yes 1 No 2 Don't know 98	
515	Can a person get HIV, by using previously used needle/syringe?	Yes 1 No 2 Don't know 98	
516	Can blood transfusion from an infected person to the other transmit HIV?	Yes 1 No 2 Don't know 98	
517	Is it possible in your community for someone to have a confidential HIV test?	Yes 1 No 2 Don't know 98	
518	Do you know where can you go for HIV testing?	Yes 1 No 2	
518.1	Have you ever had an HIV test?	Yes 1 No 2	➡ 601

520	Why did you not receive the test result?	Sure of not being infected.....1 Afraid of result.....2 Felt unnecessary.....3 Forgot it.....4 Other (Specify).....96	
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6.0 PROMOTION OF CONDOM

Q. N.	Questions and Filters	Coding Categories		Skip to	
601	In the past one-year have you seen, read or heard any advertisements about condoms from the following sources?				
	(READ THE FOLLOWING LIST)				
	Sources of Information		Yes	No	
	Radio		1	2	
	TV		1	2	
	Pharmacy		1	2	
	Health Post/ Health Center		1	2	
	Hospital		1	2	
	Health Workers/Volunteers		1	2	
	Friends/Neighbors		1	2	
	NGOs		1	2	
	Newspapers/Posters		1	2	
	Street Drama		1	2	
	Cinema Hall		1	2	
	Community Event/Training		1	2	
	Bill Board/Sign Board		1	2	
Internet/Mobile		1	2		
Community Workers		1	2		
96. Others (Specify) _____		1	2		

Q. N.	Questions and Filters	Coding Categories	Skip to
602	Have you met or discussed or interacted with Peer Educators (PE) and /or Outreach Educators (OE) in the last 12 months?	Yes 1 No 2 No response 99	} 605
603	When you met/discussed/interacted with PE or OE in what kind of activities were you involved? (Multiple answers. DO NOT READ the possible answers)	Discussion on how HIV/AIDS is/isn't transmitted.. 1 Discussion on how STI is/isn't transmitted..... 2 Use of safe syringe.....3 Regular/non-regular use of condom..... 4 Demonstration on using condom correctly.....5 Counseling on reducing number of sex partner... 6 Others (Specify)_____ 96	
604	How many times have you been visited by PE and/or OE in the last 12 months?	Once 1 2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	

Q. N.	Questions and Filters	Coding Categories	Skip to
605	Have you visited or been to any drop in center (DIC) in the last 12 months?	Yes 1 No 2	608
606	When you went to the DIC, in which activities did you take part?	Went to collect condoms 1 Went to learn the correct way of using condom. 2	

Q. N.	Questions and Filters	Coding Categories	Skip to
		Went to watch film on HIV/AIDS.. 3 Participated in discussion on HIV transmission... 4 Took friend with me..... 5 Other (Specify)_____96	
607	How many times have you visited DICs in the last 12 months?	Once 1 2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	
608	Have you visited any STI clinic in the last 12 months?	Yes 1 No 2	11
Q. N.	Questions and Filters	Coding Categories	Skip to
609	When you visited or been to any STI clinic in what activities were you involved? (Multiple answers. DO NOT READ the possible answers)	Blood tested for STI 1 Physical examination conducted for STI identification.... 2 Was advised to use condom in each sexual intercourse..... 3 Was advised to take complete and regular medicine..... 4 Was suggested to reduce number of sexual partners 5 Took friend with me 6 Other(Specify)_____96	
610	How many times have you visited STI clinic in the last 12 months?	Once 1	

Q. N.	Questions and Filters	Coding Categories	Skip to
		2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	
611	Have you visited any HIV Testing and Counseling Centre (HTC)) in the last 12 months?	Yes 1 No 2	→14
612	When you visited or been to any HTC center in what activity were you involved? (Multiple answers. DO NOT READ the possible answers)	Received pre-HIV/AIDS test counseling.. .1 Blood sample taken for HIV/AIDS test.....2 Received post HIV/AIDS test counseling 3 Got information on HIV/AIDS window period.....4 Received HIV/AIDS test result 5 Received counseling on using condom correctly in each sexual intercourse..... 6 Took a friend with me.....7 Other (Specify)_____96	

Q. N.	Questions and Filters	Coding Categories	Skip to
613	How many times have you visited HTC center in the last 12 months?	Once 1 2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	
614	Have you ever participated in or involved with HIV/AIDS awareness raising or community events in the last	Yes 1 No 2	→01

Q. N.	Questions and Filters	Coding Categories	Skip to
	12 months?		
615	<p>In what activities have you participated in such HIV/AIDS awareness raising events or community events?</p> <p>(Multiple answers. DO NOT READ the possible answers)</p>	<p>Street drama 1</p> <p>AIDS Day 2</p> <p>Condom Day 3</p> <p>Video Shows 4</p> <p>Group discussions 5</p> <p>Talk programs 6</p> <p>HIV/AIDS related training 7</p> <p>HIV/AIDS related Workshops.....8</p> <p>Condom use demonstrations 9</p> <p>Others (Specify)96</p>	

7.0 STI (SEXUALLY TRANSMITTED INFECTION)

Q. N.	Questions and Filters	Coding Categories	Skip to
701	<p>Which diseases do you understand by STI?</p> <p>(Multiple answers. DO NOT READ the possible answers)</p>	<p>White Discharge/Discharge of Pus/<i>Dhatu</i> flow 1</p> <p>Pain during urination 2</p> <p>Burning Sensation while Urinating 3</p> <p>Ulcer or sore around genital.....4</p> <p>Syphilis (<i>Bhiringi</i>)/Gonorrhea.....5</p> <p>HIV/AIDS6</p> <p>Other (Specify)96</p> <p>Don't know.....98</p>	

Q. N.	Questions and Filters	Coding Categories	Skip to	
702	Do you currently have any of the following symptoms?			
	Symptoms	Yes		No
	1. White Discharge/Discharge of Pus	1		2
	2. Pain during urination	1		2
	3. Burning Sensation while Urinating	1		2
	4. Ulcer or sore around genital area	1		2
	96.Others (Specify) _____	1		2
(If answer is "No" to all in the Q. No. 702 Go to Q. 710)				
703	Have you gone through medical treatment for any of these symptoms?	Yes 1 No 2	→710	
704	Where did you go for the treatment? (Multiple answers. DO NOT READ the possible answers)	Private Clinic 1 NGOs (Specify)2 Health Post/ Health Center 4 Hospital5 Pharmacy 6 Self Treatment (Specify)___7 Others (Specify) _____ 96		
705	For which symptoms did you get treatment? Specify the treatment.			
	Symptoms	Treatment		
	1. White Discharge/Discharge of Pus			
	2. Pain during urination			
	3. Burning Sensation while Urinating			
	4. Ulcer or sore around genital area			
96.Others (Specify) _____				

Q. N.	Questions and Filters	Coding Categories	Skip to
706	Did you obtain the medicine prescribed?	Yes I obtained all of it 1 I obtained some but not all 2 I obtained none 3	709
707	Did you take all of the medicine prescribed?	Yes 1 No 2	709
708	If not, why did you not take all of the medicine prescribed?	Forgot to take 1 Felt cured 2 Medicine did not work properly 3 Others (Specify) _____ 96	
709	Did you have any of the following symptoms in the past year?		
	Symptoms	Yes	No
	1. White Discharge/Discharge of Pus	1	2
	2. Pain during urination	1	2
	3. Burning Sensation while Urinating	1	2
	4. Ulcer or sore around genital area	1	2
	96.Others (Specify) _____	1	2
(If answer is "No" to all in Q. No. 709, Go to Q. No. 801)			
710	Have you gone through medical treatment for any of these symptoms in the past year?		
	Symptoms	Yes	No
	1. White Discharge/Discharge of Pus	1	2
	2. Pain during urination	1	2
	3. Burning Sensation while Urinating	1	2
	4. Ulcer or sore around genital area	1	2
	96.Others (Specify) _____	1	2

Q. N.	Questions and Filters	Coding Categories	Skip to
	(If answer is "No" to all in Q. No. 710, Go to Q. No. 801)		
711	Did anyone from the place where you went for treatment counsel you about how to avoid the problem?	Yes 1 No 2	

USE OF DRUGS AND INJECTION

Q. N.	Questions and Filters	Coding Categories	Skip to
801	During the last 30 days how often have you had drinks containing alcohol?	Everyday 1 2-3 times a week 2 At least once a week 3 Less than once in a week 4 Never.....5 Don't know 98	
802	Some people take different types of drugs. Have you also tried any of those drugs in the past 30 days? (Ganja, Bhang, Nitroson, Nitrovet E.)	Yes 1 No 2 Don't know 98	
803	Some people inject drugs using a syringe. Have you ever-injected drugs? (Do not count drugs injected for medical purpose or treatment of an illness)	Yes 1 No 2 Don't know 98	} 901
804	Have you injected drugs in last 12 months? (Drugs injected for medical purposes or treatment of an illness do not count)	Yes 1 No 2 Don't know 98	} 901
805	Are you currently injecting drugs?	Yes 1 No 2	→ 901
806	Think about the last time you injected drugs. Did you use a needle or syringe that had previously been used by someone else?	Yes 1 No 2 Don't know 98	

Q. N.	Questions and Filters	Coding Categories	Skip to
807	Think about the time you injected drugs during the past one month. How often was it with a needle or syringe that had previously been used by someone else?	Every Time 1 Almost Every Time 2 Sometimes 3 Never 4 Don't Know 98	
808	Usually how do you obtain a syringe/needle?	My friend/relative give it to me after use 1 Unknown person give it to me 2 I pick it up from a public place used and left by others 3 I pick it up from a public place where I leave my syringes 4 I use a new needle/syringe given by NGO/volunteer 5 I purchase a new needle/syringe 6 Others (Specify) _____96	

9.0 STIGMA AND DISCRIMINATION

Q. N.	Questions and Filters	Coding Categories	Skip to
901	If a male relative of yours gets HIV, would you be willing to take care of him in your household?	Yes 1 No 2 Don't know 98	
902	If a female relative of yours gets HIV, would you be willing to take care of him in your household?	Yes 1 No 2 Don't know 98	
903	If a member of your family gets HIV, would you want it to remain a secret?	Yes 1 No 2 Don't know 98	
904	Do you think children living with HIV should be able to attend school with children who are HIV negative?"	Yes 1 No 2 Don't know 98 No response.....99	

☞ Thank You. ☞

ANNEX-3: Laboratory report from

IBBS among Clients of FSWs (TRUCKERS) in 22 Highway Districts-2016

NCASC/Save the Children/GF/SPMER

Report for Rapid Test

Client ID

Date:

LABORATORY REPORT-RAPID TESTS

Determine HIV ½	REACTIVE	NON-REACTIVE
Uni Gold HIV	REACTIVE	NON-REACTIVE
STAT PAK HIV ½	REACTIVE	NON-REACTIVE
RPR Syphilis	REACTIVE	NON-REACTIVE

HIV FINAL RESULT: (To be reported to client)

REACTIVE NON-REACTIVE

SYPHILIS FINAL RESULT: (To be reported to client)

Titre :

NOTE: A negative result does not necessarily indicate that the individual is not infected. If the individual had unprotected sex, shared injecting equipment, or received unscreened blood products, or had an occupational exposure in either the three month period before the test was performed or after blood was drawn, they may be infected. The HIV antibody test may not detect recently acquired HIV infection.

Authorized Signature

Annex 4: Sample EQAS form

**IBBS among Clients of FSWs (TRUCKERS) in 22 Highway Districts-2016
NCASC/Save the Children/GF/SPMER**

Test 1:	Lot #:	Exp Date:	For NPHL Staff Only
			Received Date:
			Examination Date:
			Examined by:
	Total No. of Specimen :		
	Completed By:		

SN	Date of Collection	Client ID	Sample Type	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				

ANNEX-5

Data on Monitoring and Evaluation Indicators based on IBBS among Truckers in Terai Highway Districts of Nepal, 2016

Impact/Outcome Targets	Indicators			Result
	National M& E	GARP	Any other?	
% of clients of female sex workers that are HIV infected (proxy: Truck drivers) (22 districts)				0.3%
% of clients of FSW (Truckers) reporting the use of condom at last sex (22 districts)				82%
% of clients of FSW (Truckers) reporting the consistent condom use over the last 12 months (22 districts)				65%
% of truckers who report commercial sex in the last year				38.7%
Average (median) number of commercial sex partners in the last year (reported by truckers)				3.0