Integrated Biological and Behavioral Surveillance Survey among Female Sex Workers in 22 Highway Districts of Nepal

Round VII

Ministry of Health and Population
National Centre for AIDS and STD Control
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Field Work Conducted by:

The IBBS Survey is part of the National HIV Surveillance Plan led by National Center for AIDS and STD Control (NCASC). The field work of the survey was carried out by Intrepid Nepal with quality assurance from National Public Health Laboratory and with technical and financial assistance from NCASC.

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ACKNOWLEDGEMENT

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

We would like to acknowledge support of entire survey monitoring team and Strategic Information Technical Working Group (SITWG) for their support throughout the survey. The survey was completed with support from stakeholder organizations and different individuals. From the outset, we received support from various NGOs and community experts working with FSWs, namely – *Jagriti Mahila Maha Sang*, Sahara Nepal, NSARC and other stakeholders. We thank the staff of Nepal Public Health Laboratory (NPHL) for carrying out quality control assessments of serological tests from biological samples received during the survey.

Nepal Health Research Council (NHRC) provided a professional review of the survey proposal, which enabled improved survey protocols. We are grateful to them for their support. We acknowledge the support provided by Nepal Police, and District Public Health Office (DPHO) of the survey districts to ensure that the field survey took place safely and in a timely manner.

Furthermore, we highly appreciate WHO, UNAIDS, NPHL and the Technical Working Group (TWG) for their technical inputs. We are grateful to various national and international agencies that supported us directly and indirectly to complete this survey.

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

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LIST OF ABBREVIATIONS

AIDS	Acquired Immuno Deficiency Syndrome
CCU	Consistent Condom Use
CDC	Center for Disease Control
CHBC	Community and Home Based Care
CM	Community Mobilizer
DIC	Drop-In Center
DoHS	Department of Health Service
FSW	Female Sex Worker
GFATM	Global Fund for AIDS, Tuberculosis and Malaria
GOs	Government Organization
HIV	Human Immunodeficiency Virus
HTC	HIV Testing Center
IBBS	Integrated Biological and Behavioral Surveillance Survey
INPL	Intrepid Nepal
JMMS	Jagariti Mahila Maha Shang
KP	Key Population
MLM	Male Labour Migrants
MSM	Men who have Sex with Men
NANGAN	National NGOs Network Group Against AIDS, Nepal
NCASC	National Center for AIDS and STD Control
NGOs	Non-Governmental Organization
NHRC	Nepal Health Research Council
NPHL	Nepal Public Health Laboratory
NSARC	Nepal STD and Research Center
OE	Outreach Educator
PCR	Polymerase Chain Reaction
PE	Peer Educator
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PPS	Probability Proportional to Size

PWID	People Who Inject Drugs
RDT	Rapid Diagnostic Test
RPR	Rapid Plasma Reagin
SDG	Sustainable Development Goals
SGS	Second Generation Surveillance
SITWG	Strategic Technical Working Group
SPSS	Statistical Package for the Social Sciences
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
TWG	Technical Working Group
TPPA	Treponema Pallidum Agglutination Test
WHO	World Health Organization

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EXECUTIVE SUMMARY

Introduction

This Integrated Biological and Behavioral Surveillance (IBBS) survey fieldwork was carried out by Intrepid Nepal (INPL) under the leadership of the National Center for AIDS and STD Control (NCASC). The existing National HIV Strategic Plan (2016-2021) identifies Female Sex Workers (FSWs) as one of the key populations (KPs) at a higher risk of getting HIV infection.

This is the seventh round of the IBBS survey conducted among FSWs in 22 highway districts (Jhapa, Morang, Sunsari, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi, Dhading, Makwanpur, Rautahat, Bara, Parsa, Chitwan, Nawalparasi, Rupandehi, Kapilvastu, Dang, Banke, Bardiya, Kailali and Kanchanpur) of Nepal. In line with the objectives of the previous rounds of IBBS surveys, the seventh round of survey was undertaken to determine the prevalence of HIV and STIs, assess HIV and STI related risk behaviours, explore the level of awareness and understanding of HIV/STIs, record STI symptoms, account incidence of violence, as well as assess exposure to HIV intervention programs and services among FSWs in 22 highway districts of Nepal.

Methodology

This descriptive serial cross-sectional survey was conducted among FSWs from 22 Highway Districts. For the purpose of this survey, the definition of an FSW was *"A woman aged 16 years or above reporting to have been paid in cash or kind for sex with a male within the last 6 months"*.

A two-stage cluster sampling was used to recruit 610 FSWs from 22 survey districts from 6th April, 2018 to 2nd May, 2018.

2.5 Sample Design

A site or hotspot with at least 30 FSWs was defined as a cluster. To ensure proper representation of the survey population, out of 127 clusters, 70 clusters were selected based on probability proportional to size (PPS) from 22 highway districts, 30 clusters from the "6 district domain" and 40 clusters from the "16 district domain". In the second stage, 7 FSWs were selected from the "6 district domain" and 10 FSWs from the "16 district domain" using a systematic random sampling method to ensure self-weighted sample.

The research was conducted in compliance with both ethical and human rights standards. Nepal Health Research Council permitted ethical approval for this survey. All the field staffs were strictly prohibited from recording any personal identifiers in the tablet-based questionnaire. However, we used written informed consent and requested participants to write their short name or nickname with signature (signature should not be a real one which they use for the official purpose). Survey centers with laboratories/clinics were set up at easily accessible locations in each survey district. Individual interviews, clinical examinations, and blood collection were carried out in separate rooms at each of the survey centers.

Laboratory Methods

HIV testing was done using Determine HIV 1/2 as the primary method for detecting antibodies against HIV. If the first test presented a negative result, no further tests were conducted and reported such result as HIV negative. For a sample that are reactive on the Determine and Unigold, a STATPAK was used to confirm the results and issue HIV positive diagnosis. If the STATPAK test result is also reactive, then the status was reported as HIV positive. If the result of the STATPAK was non-reactive (but Reactive in Determine and Unigold), then the test result was interpreted as discrepant and inconclusive HIV status. The survey participants with such results were asked to go to nearby HIV testing and counselling centers within 2 weeks for additional HIV testing.

Syphilis was tested by using the Rapid Plasma Reagin (RPR) test card and confirmed by means of the Serodia Treponema Pallidum Particle Agglutination (TPPA) test. Serum samples that tested RPR positive with titer value above or equal to 1:8 were reported as active syphilis; titration less than 1:8 were reported as a case with history of syphilis. The presence of Gonorrhea and Chlamydia pathogens (*N. gonorrhea* and *C. trachomatis)* was determined by multiplex PCR based pathogen detection assay (Seegene, Korea) on syndromatic cases confirmed under clinical observations.

Key Findings

Socio-Demographic Characteristics

Most of the FSWs were establishment based (87.2%) and were of age group 25-29 years (20.5%) and 30-34 years (19.8%). More than one-third of them had a basic level of education (36.2%) and represented the disadvantaged Janajatis and Dalit, more in comparison to the other ethnic groups. Most of the FSWs were married (77.5%), and among them, 68.3% had married at the age of 15-19 years. Additionally, 10.5 percent of the FSWs were divorced/separated/widowed, and age of divorce/separation/widowed was 30 yrs and above in 35.9 percent of the cases and 25-29 years in 53.1 percent of the cases. Majority of the FSWs (90.7%) were currently living with their families.

Child Birth, Abortion and Pregnancy History of ever married FSWs

Among the FSWs who reported ever having been married, most (81.3%) had also given birth. About one fifth, 19.0 percent, of the FSWs, had experienced a miscarriage, and 34.6 percent of them had terminated/aborted a pregnancy or pregnancies. Out of those who had aborted a pregnancy, in most of the cases, the abortion process was assisted by a doctor (38.4%) or a nurse (35.5%). Likewise, most of the FSWs (80.8%) had no desire for children in the future.

Sexual History of FSWs

Most of the FSWs (65.2%) operated from a hotel or lodge, followed by a home-based establishment (17.5%). Most of them had their first sexual intercourse at the age of 15-19 years (62.0%). Moreover, 10.3 percent of FSWs had worked as sex workers in other locations, and

among them, 3.1 percent had crossed India for the same purpose. Most of the FSWs had the income of Rs.501-Rs.1000 from sex work. Less than half of the FSWs (32.0%) held other jobs in addition to sex work. The most common secondary jobs among FSWs were wage laborer (30.3%) and business owner (24.1%).

Sex workers and their clients

Most of the FSWs had 1-2 clients per day (89.7%), and they normally worked for four or more days in a week (39.0%). Most of the FSW clients were taxi/jeep/microbus or minibus workers (42.6%), bus/truck or tanker workers (35.9%), industrial/wage workers (38.2%) or mobile businessmen (32.8%).

Consistent Condom Use with Different Partners

About 31.1 percent of the FSWs reported consistent use of condoms with sexual partners in the past year. Just over half of the FSWs (50.7%) stated that the major reasons for not using condoms in the last year were objection by their partners, followed by not thinking it was necessary (41.7%). Additionally, 9.3 percent of FSWs had consistently used condoms with regular non-paying clients in the past year, and nearly half (46.8%) of them never used condoms with regular non-paying clients during the same time. The major reasons for not using condoms did not realize it was necessary (55.2%) and use of other contraceptives (42.8%). Also, 34.8 percent of FSWs were consistent condom users, as they used condoms at all times during sexual intercourse with paying partners in the last 12 months. However, 10.2 percent of FSWs had never used condoms and the reasons outlined were similar to the previous ones, i.e. partner objection (58.6%) and not liking its use (36.9%). Furthermore, 21.6 percent of FSWs usually carried condoms and the most convenient places for obtaining them free of cost were NGOs/health workers/volunteers (52.1%).

Alcohol and Drug Use

Most of the FSWs (36.1%) had never consumed alcohol. However, 5.2 percent of FSWs had used drugs in the past 30 days, and 3.1 percent of FSW clients were current injectable drug users.

Comprehensive Knowledge of HIV

More than one-fourth of FSWs (28.9 %) correctly identified all three ABCs (A. Abstaining from sex; B. Being faithful to one partner/avoiding multiple sex partners; C. Consistent condom use or use of condom during every sex act) as HIV preventive measures. However, comprehensive knowledge and misconceptions related to HIV were comparatively lower among FSWs, as only 27.4 percent correctly identified all five 'BCDEF' (D. a healthy-looking person can be infected with HIV; E. HIV cannot be transmitted through a mosquito bite; F. HIV cannot be transmitted while sharing a meal with an HIV positive person). Overall, the trend analysis revealed that comprehensive knowledge of HIV has decreased from previous rounds of IBBS surveys. The percent of FSWs who were aware of all three ABCs decreased from 37.6 percent in 2012 to 28.9 percent in 2018 and, comprehensive knowledge about HIV and AIDS (BCDEF) also decreased from 30.2 percent in 2016 to 27.4 percent in 2018. No significant association was observed in the trend of comprehensive knowledge of HIV.

Awareness about Modes of Transmission

A majority of FSWs perceived that HIV cannot be transmitted by shaking hands with an HIV infected person (93.1%) and 92.6 percent were aware of HIV transmission by use of pre-used needles and also by blood transfusion from an infected person (98.7%). Likewise, 83.9 percent perceived that HIV could be transmitted from a pregnant woman to her unborn child. The survey also assessed the FSW awareness level of ways by which they could reduce transmission risk, and most of them replied by taking medication as the most appropriate medium (72.3%).

Awareness and availability of HIV Testing facilities and HIV testing

Most of the FSWs (77.4%) knew about a confidential HIV testing facility available in the community, and more than half had undergone an HIV test (66.9%). Moreover, 0.3 percent tested HIV positive in their last HIV test.

Knowledge of STIs, Experienced symptoms and Treatment in the past year

A majority of FSWs understood STIs as a whitish discharge (80.3%) and itching around vagina (77.0%). The FSWs were also asked about symptoms they were experiencing and the most common symptoms reported were pain in the lower abdomen (19.5%) and itching in or around the vagina (8.2%). Additionally, 19.2 percent of FSWs had received treatment for symptoms experienced, and the primary treatment facilities were government agency, private clinics/hospitals and NGOs.

Knowledge of PMTCT, ART, Viral Load and CHBC Services

About 16.6 percent of FSWs reported to have heard about prevention of mother to child transmission (PMTCT) services, and of those, most of them (72.3%) knew where to access those services. Also, 27.2 percent of FSWs had heard about antiretroviral therapy (ART) services for PLHIV. Among them, 72.3 percent knew place for obtaining ART services. Additionally, 13.0 percent of FSWs had knowledge of viral load testing services for PLHIV and 23.8 percent had heard about CHBC services for PLHIV.

Exposure to ongoing HIV Awareness Programs

Nearly half (42.5%) of FSWs had met a Peer Educator/Outreach Educator (PE/OE), and 15.2 percent had visited a drop in center (DIC) in the past year. Among those who had visited a DIC, majority had visited more than once. Nearly one-fourth of FSWs (23.8%) had visited an STI clinic, and 31.3 percent had visited an HTC center within the last year. The percentage of FSWs who interacted with an outreach educator (OE) or peer educator (PE) or community motivator (CM) decreased from 47% in 2012 to 42.5% in 2018. FSWs visiting DICs has significantly decreased from 44.8% in 2012 to 15.2% in 2018. Moreover, FSWs visiting HTC centers decreased from 45.9% in 2012 to 31.3% in 2018 and FSWs visiting STI clinics was considerably low in all rounds of IBBS surveys (31.1% in 2006, 45.3% in 2009, 44.9% in 2012, 37.3% in 2016 and 23.8% in 2018).

Violence

Exactly 2.1 percent of FSWs had a history of being beaten due to their profession in the last 12 months, and the perperators were clients (53.8%) and sexual partners (53.8%). Similarly, 3.3

percent of FSWs were forced to have sex against their will, and 5.6 percent were cheated or threatened due to their profession.

Stigma and Discrimination

The findings revealed that most of the FSWs were willing to take care of an HIV positive male relative (89.7%) or a female relative (91.5%) at their home, if necessary. Half of the FSWs (50.8%) also said that if a family member had HIV they would talk about it, rather than keep it a secret. Most FSWs (93.3%) expressed no issues buying food from an HIV positive shopkeeper. Additionally, 44.4 percent of FSWs said that PLHIV need the same care as those living with any other chronic disease and more than half (50.8%) reported that PLHIV needs more care than those living with any other chronic disease. A majority of FSWs (58.2%) agreed that PLHIV should continue to participate in societal duties if he/she is not very sick.

Prevalence of HIV and Syphilis

HIV prevalence among FSWs was 0.7 percent. These results suggest trends in HIV prevalence have decreased from 2 percent in 2003 to 0.7 percent in 2018. Syphilis history was detected among seven FSWs (1.1%). History of syphilis has also declined from 10.0 percent to 0.5 percent in 2016 and again risen slightly to 1.1 percent in 2018. The trends of active syphilis among FSWs has also declined from 10.3 percent in 2006 to 1.6 percent in 2018.

CHAPTER I: Introduction

1.1 Introduction

Nepal is categorized as a country facing a concentrated HIV epidemic. The national Centre for AIDS and STD Control (NCASC) has estimated that there were 31,020 People Living with HIV (PLHIV) in Nepal in 2017, with an adult prevalence of 0.15% (NCASC, 2018). The existing National HIV Strategic Plan (2016-2021) identifies People Who Inject Drugs (PWID), Female Sex Workers (FSWs) and their clients, Male Labor Migrants (MLMs) and their spouses and Men who have Sex with other Men (MSMs)/Transgender (TG) as key populations (KPs) at higher risk of spreading the epidemic.

The government has adopted strengthening of the Second Generation Surveillance (SGS) system as one of the key principles of strengthening surveillance of HIV and STI in Nepal. One of the major components of SGS, and the strategic direction of the national strategy, is to conduct Integrated Biological and Behavioral Surveillance (IBBS) Survey among KPs in selected high-risk clusters and in regular intervals based on the National Plan on HIV and STI surveillance. In Nepal, the National Center for AIDS and STD Control (NCASC) aims to track patterns of HIV incidence and prevalence, STI related awareness, and risk behaviors among high risk populations. A standardized format of the questionnaire is used for each group, which is repeated with relevant modification in the following rounds of the survey to explore behavioral changes over time (NCASC, 2016).

Female sex workers (FSWs) are among the most vulnerable groups for contracting and/or transmitting HIV. In Nepal, varying circumstances influence how likely FSWs are to become carriers of HIV infection, including geographical epidemic typology, structure of sex work, and overlapping nature of HIV risk behaviors such as injection of drugs. The number of FSWs in Nepal varies with different geographical settings and is more concentrated in urban areas such as Kathmandu, Pokhara, and highway boarder areas (NCASC, 2011). However, the heightened risk for HIV acquisition and transmission among sex workers operates through a similar variety of biological, behavioral, and structural risk factors. Biological risk factors involve high prevalence of bacterial sexually transmitted infections (STIs) in FSWs and the synergistic relationship between HIV and STIs (Baral et al., 2012). Behavioral risk factors act at the level of the individual, as sex workers experience frequent sexual risk of exposure through multiple sexual partners and high concurrency of these partners. HIV transmission among sex workers is also exacerbated by the intersection of injection of drugs, probability of sex with more HIV positive partners, low and inconsistent use of condoms, and increased risk of other STIs, such as syphilis and hepatitis C (Baral et al., ibid). Structural risk factors indirectly heighten risk for HIV infection among sex workers by restricting access to preventive health, as well as HIV and STI, services/treatment. Structural factors also include limiting influences of poverty, discrimination, and gender inequality, as well as the damaging effects of physical and sexual violence, stigma, and social exclusion. Finally, structural factors such as the organizational and power dynamics of sex work and legal and regulatory policies regarding sex work also contribute to the vulnerability of FSWs contracting and/or transmitting HIV and STIs.

Over the course of 10 years, Nepal has had great experience conducting IBBS surveys successfully among KPs. IBBS surveys are conducted regularly among FSWs. This is the seventh round of the IBBS survey conducted among FSWs in 22 highway districts of Nepal. The table below sumarizes the previous IBBS surveys among FSWs in Nepal.

Table 1: IBBS Surveys among FSWs in Nepal

Survey Sites	Rounds	Survey Years
Kathmandu Valley	6	2004, 2006, 2008, 2011, 2015,2017
Pokhara Valley	5	2004, 2006, 2008, 2011,2016
22 Highway Districts	6	1999, 2003, 2006, 2009, 2012,2016, 2018

Table 1 shows that IBBS surveys are carried out in limited geographical areas of the country and this is the seventh round of survey conducted among FSWs at 22 highway districts. Even though the prevalence of HIV among FSWs had decreased over the period of time (3.9% in 1999 to 0.8% in 2016), however, the risk factors associated with HIV such as consistent use of condom has not improved (22.7% in 2003 to 30.3% in 2016 during sex with their clients). In the same way, comprehensive knowledge on HIV also has not improved over the time (ABC Knowledge 60% in 2006 to 54.6% in 2016). Likewise, FSWs described high numbers of sexual encounters every day with different categories of male partners (i.e. regular clients, nonpaying, other clients). The situation may become more complex in the case of FSWs using drugs and sharing needles. Thus, these FSWs are at higher risk of HIV and STIs than nonusers.

1.2 Objectives of the Survey

In line with the objectives of the previous rounds of IBBS, this seventh round of the survey was undertaken primarily to determine trend of prevalence of HIV and STIs and to assess HIV and STI-related risk behaviors among FSWs in the 22 Terai Highway Districts (Jhapa, Morang, Sunsari, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi, Rautahat, Bara, Parsa, Makwanpur, Dhading, Chitwan, Nawalparasi, Rupandehi, Kapilvastu, Dang, Banke, Bardiya, Kailali and Kanchanpur).

The objectives of the survey were:

- To determine trends of HIV and STI prevalence in the FSW population of 22 Terai Highway districts
- To assess HIV and STI-related risk behavior among the FSW population of 22 Terai Highway Districts.
- To collect information related to socio-demographic characteristics; drug use and needle sharing behaviors; sexual behavior including knowledge and use of condoms; knowledge of HIV/AIDS; knowledge and treatment of STIs; psychosocial factors exposure of FSWs to available HIV/STI services in selected survey areas;
- To explore association between risk behaviors and HIV and other specified STIs among the FSW population of 22 Terai Highway Districts.

1.3 Rationale of the survey

The IBBS surveys are a major source of information for understanding the HIV dynamics, including behavior, as well as prevalence of HIV and STIs among KPs. IBBS surveys are a strong component of HIV surveillance and the survey data is widely used for designing HIV response, monitoring HIV prevention, developing patient care and treatment programs, and for estimation and projection of HIV infections in many countries, including Nepal. The findings of the survey have been utilized by donors, policymakers, program designers, evaluators, intervention implementers, academicians, and civil society organizations to track the level of the HIV epidemic and related risk behaviors in Nepal. IBBS are also a major source of data on key national impact and outcome HIV indicators for national and global requirements such as Global AIDS Monitoring (GAM) indicators. The IBBS survey has established its reputation of quality and is the major set of surveillance data in Nepal. The findings of the survey was shared with major (e.g. SRH, HIV prevention) stakeholders and survey participants/representatives.

It is anticipated that this survey will be utilized by policy makers, program planners, and implementers to mobilize the national HIV response toward addressing the current epidemic in Nepal. Similarly, it is expected that data from this survey will help guide policy makers and program managers in identifying useful points and areas to target and focus intervention strategies aimed at different subgroups of FSWs, their partners, and clients.

CHAPTER II: Methodology

2.1 Survey design

The survey was descriptive serial cross sectional in design.

2.2 Survey Population

The survey population of the survey was “women aged 16 years and above reporting to have been paid in cash or kind for sex with a male within the last 6 months."

2.3 Survey Site

This survey was conducted in 22 Highway Districts: Jhapa, Morang, Sunsari, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi, Dhading, Makwanpur, Rautahat, Bara, Parsa, Chitwan, Nawalparasi and Rupandehi (also referred as 16 districts hereafter) and Kapilvastu, Dang, Banke, Bardiya, Kailali and Kanchanpur (also referred as 6 districts hereafter).

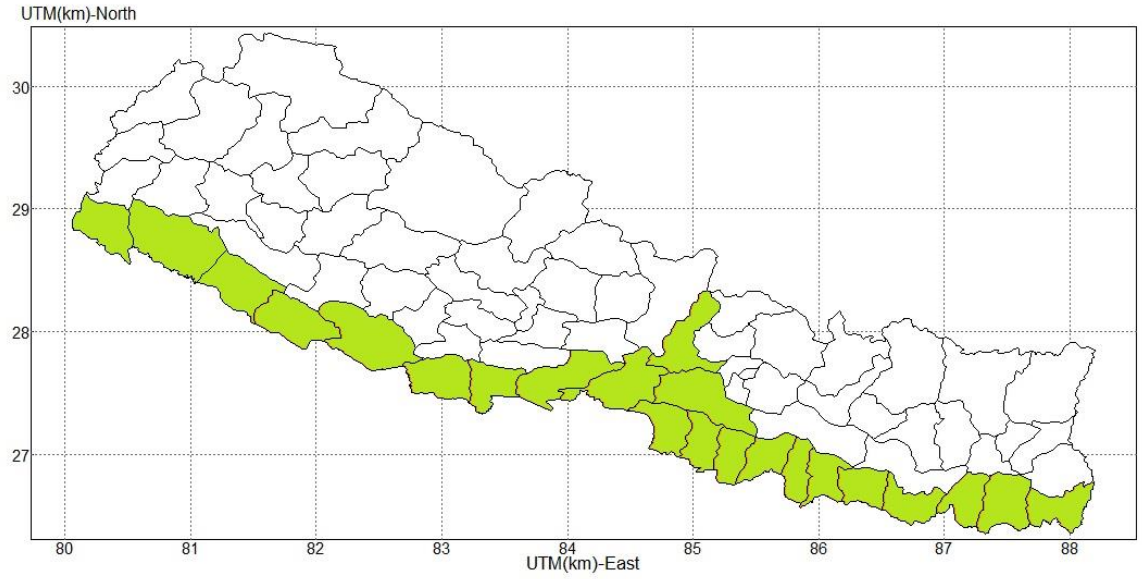

Figure 1: Map of Nepal showing survey districts

2.4 Survey Period

The fieldwork for the survey started on 6th April, 2018 and was completed on 2nd May, 2018.

2.5 Sample Design

A two-stage cluster sampling method was used to select the FSWs. All together 70 clusters were selected from 22 highway districts, 30 clusters were selected from the “6 district domain” and 40 clusters from the “16 district domain” to ensure proper representation of the survey population.

First Stage: Selection of Clusters

The information on the estimated size of the population of FSWs within each district was based on the operational mapping exercise that served as the sampling frame for cluster selection. Data for the mapping and size estimation exercise was done by collected information from government organizations (GOs) and Non-government Organizations (NGOs) working with

FSWs. The team collected information on number of FSWs and possible clusters, in consultation with local NGOs, and finalized the number of FSWs in each cluster using the tools and consultations with NGO representatives.

A site or hotspot with at least 30 FSWs was defined as a cluster. Based on the preliminary information collected during the mapping exercise, a list of locations and an estimated number of FSWs for each location was prepared. The sites with less than 30 estimated FSWs were combined with a neighboring site to form a full cluster, with a minimum number in a cluster not exceeding 30 FSWs. The clusters were arranged in a serpentine order based on location starting from Jhapa and ending in Kailali. All together 127 clusters were identified from this region. Among them, 30 clusters were selected from the "6 district domain" and 40 clusters from the "16 district domain" using a systematic random sampling method with the probability proportional to size (PPS) method.

Second Stage: Selection of Respondents

The field team visited each of the selected clusters to prepare a list of FSWs who met the eligibility criteria for the survey. A cluster wise list of FSWs was created and ID generation was performed for the identified FSWs. Using a simple random sampling technique, 7 FSWs and 10 FSWs were selected respectively from the "6 district domain" and "16 district domain" from each of the respective clusters. The name list of selected FSWs was provided to the motivator and the motivator was allocated to the selected FSWs to the survey site. This resulted in the selection of total 610 FSWs altogether.

Table 2: An overview of Number of Clusters selected in survey districts

Districts		Total no of cluster	No of clusters selected
16 Domain	Jhapa	7	3
	Morang	7	4
	Sunsari	5	2
	Saptari	3	1
	Siraha	3	1
	Dhanusha	5	2
	Mahottari	4	2
	Sarlahi	5	2
	Dhading	4	2
	Makwanpur	8	4
	Rautahat	4	2
	Bara	5	2
	Parsa	5	2
	Chitwan	9	4
	Nawalparasi 1	4	2
	Nawalparasi 2	3	2
	Rupandehi	5	3
6 domain	Kapilvastu.	5	3
	Dang	6	5
	Banke	9	6
	Bardiya	6	4

Districts		Total no of cluster	No of clusters selected
	Kailali	11	10
	Kanchanpur	4	2

2.6 Sample Size

The same size of sample used for previous rounds of IBBS surveys was also used in this round as well. Initially, the sample size was determined by using a basic statistical formula that estimated a sample size of 610 FSWs (Annex 1). An equal number (i.e. 7 from "6 district domain" and 10 from "16 district domain") of FSWs from each selected first stage cluster of both "16 district domain" and "6 district domain" were interviewed for the strategy of self-weighted design.

2.7 Recruitment

The field teams, along with community motivators, visited selected clusters to prepare a list of FSWs who met the criteria of the survey. From the separately created list, 7 and 10 FSWs were selected by systematic random sampling method from each selected cluster. Then the selected FSWs forming each cluster were invited to participate in the survey. In such situations, community mobilizers and peer educators of ongoing HIV/AIDS programs, ex-FSWs, and social workers approached the selected FSWs and invited them to participate in the survey. At least three attempts were made to contact and include the potential participants. If this was not successful within three attempts, the person was replaced by another FSW selected randomly from the same cluster.

2.8 Data collection tools and techniques

The survey used a structured questionnaire to assess background characteristics, sexual risk behaviors, use of condoms, knowledge and awareness of HIV/AIDS and STIs, violence, exposure to HIV/AIDS programs, drug injecting behaviors, stigma, and discrimination. The questionnaire was developed with reference to the existing questionnaire used in the previous round (VI) of IBBS survey among FSWs in the same districts. Modifications were made to the questionnaire based on the pretest. All data collection tools were developed in Nepali and the interviews were conducted in the Nepali language by female researchers.

The data based developer had digitized questionnaire in ODK software and administered into the tablets to collect biological and behavioral data. Tablet-based face to face interview was performed to collect behavioral information whereas lab test results were entered into tablet at the end of each day of field work. In the field, the field coordinators screened the participant's eligibility for the survey with some screening questions and then rapport building was done with support from the runners who have assisted the team in screening process.

2.9 Survey Personnel

The survey team comprised of a team leader, a research officer, a database developer, data entry personnel, a statistician, field researchers, lab technicians, health assistants, counselors, community motivators, and support staff. The field team included a research officer, field researchers, lab personal, a health assistant, counselors, and support staff, whereas, the survey team included a database developer, data entry personnel, and a statistician.

2.10 Training of Field Team and Pretesting

The field team was provided with 5 days of training by Intrepid Nepal from 22nd March, 2018 to 28th March, 2018. The training was facilitated by the relevant experts from NCASC and Save the Children. The training covered an overview of IBBS, HIV Epidemic and Surveillance System in Nepal, survey design and approaches, sampling approaches, ethical consideration, behavioral interviews, interview process, administering informed consent/assent, data collection tools, and role(s) and responsibilities of the team members. The training was followed by mock interview exercises in pairs and large group reflection that involved a discussion of mock exercises. Additionally, experts from FSW networks and organizations also shared their experiences on working with FSWs.

The survey questionnaire was pre-tested in tablets. The drafted survey tools were pre-tested among FSW in a confidential space at the office agreed by the FSWs. A total of 4 FSWs were interviewed during the pretesting that was held on 28th March, 2018. The tools were revised based on the pretest. Information collected during the pretest was not included in the main analysis. The data of pre-test were uploaded into online system, which was then analyzed and reviewed, by survey team and NCASC team. The necessary changes were incorporated into the survey tools. The FSWs were contacted with the help of Jagariti Mahila Maha Shang (JMMS), an implementing agency (through their peer educator's/outreach educators) contacted FSWs and invited them for the pretest with the inclusion of the survey tools. The pretest was carried out and consent was taken from all survey participants.

2.11 Fieldwork

The actual fieldwork of the survey started on 6th April, 2018 to 2nd May, 2018. Before the fieldwork, a stakeholder meeting was conducted among representatives from government organizations (GOs) and I/NGOs working with FSWs. During the meeting, participants shared their experiences and knowledge about different types of FSWs and provided further support to the survey. After the consultation meeting, the survey team contacted the potential community mobilizers (CMs) and prepared them with required information regarding the target population for the survey. The survey team, with the help of CMs, listed the required number of FSWs in the selected clusters. Twenty-two survey sites were selected for inclusion in the survey: Jhapa, Morang, Sunsari, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi, Dhading, Makwanpur, Rautahat, Bara, Parsa, Chitwan, Nawalparasi, Rupandehi, Kapilvastu, Dang, Banke, Bardiya, Kailali, and Kanchanpur. The clinic site was centrally located, specifically for the convenience of meeting and bringing the FSWs to the individual survey sites. The details of the clinic site are in the table below;

Table 3: Survey districts with their clinic sites and no of field days

S.No	Districts	Clinic Site	No of field days
1.	Kailali	Attariya	5
2.	Kanchanpur		
3.	Banke	Nepalgunj	4
4.	Bardiya		
5.	Dang	Ghorahi	3
6.	Kapilvastu	Butwal	4
7.	Rupandehi		
8	Nawalparasi-1		
8.	Nawalparasi-2	Narayanghat	5
9.	Dhading		
10.	Chitwan		
11.	Makwanpur	Simara	5
12.	Bara		
13.	Parsa		
14.	Rautahat		
15.	Sarlahi	Dhalkebar	5
16.	Siraha		
17.	Mahottari		
18.	Dhanusha		
19.	Morang	Itahari	6
20.	Sunsari		
21.	Saptari		
22.	Jhapa	Damak	3

The field office had eight separate rooms for each activity, such as welcome and registration, interviews, general physical and STI examinations, drawing blood and laboratory testing of blood, as well as pretest and post-test counseling. Before the interview, FSWs were informally asked a few questions in order to ensure that they met the eligibility criteria set for the survey. Injecting marks were also observed in order to screen for injecting behavior (i.e. skin lesions, abscesses, or puncture wounds).

Strict confidentiality was maintained throughout the survey. All interviews were conducted by female researchers in a private room. No names were mentioned in the tools or notes. Instead, participants were provided a unique ID number written on a plastic coated card. The same

number was marked on the questionnaire, on the medical record, and blood specimen of each respondent. This card was also used for the distribution of the test results. All fieldwork was completed on 2nd May, 2018.

The field work was supported by several local organizations working in the survey districts. The organizations assisted in tracking the FSWs and bringing them to the clinic site. The organizations which actively helped were; JMMS, THAGIL, NSARC, NAMUNA, Sarathi, Richmond fellowship, KYC, SAHARA Nepal, GWP, BIJAM and RDF.

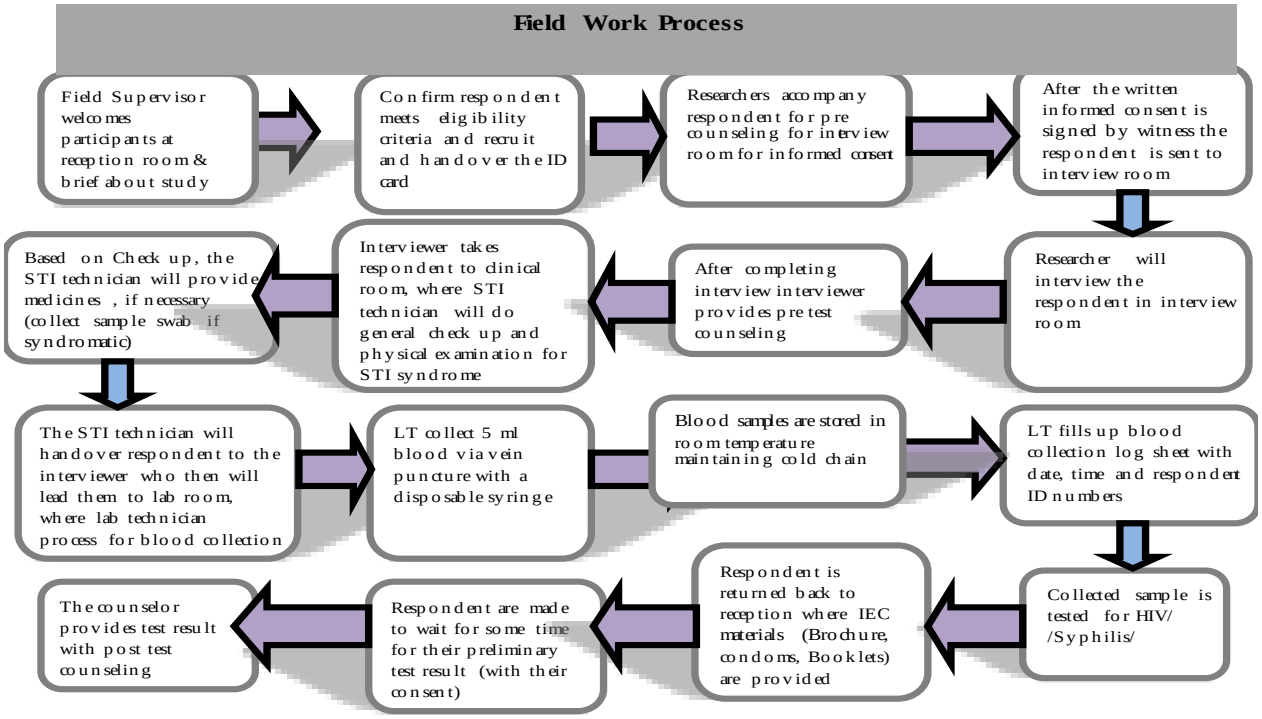

Figure 2: Fieldwork Process for IBBS Surveys

2.12 Refusal

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

2.13 Clinical and Laboratory Procedure

FSWs were checked for any clinical symptoms of STIs by a certified health assistant who also filled out a checklist of health information provided by each participant. The clinical examination included a simple health checkup (measuring blood pressure, body temperature, weight, and pulse) and a symptomatic examination for the presence of any STIs, followed by any necessary syndromic treatment (NCASC, National guidelines on Case Management of sexually transmitted

infections, 2014). Laboratory service entailed onsite rapid screening of HIV 1/2 and syphilis, followed by a confirmation test.

Approximately 5 ml of whole blood was drawn from each of the FSWs using a disposable syringe. The blood sample was centrifuged to separate the blood cells from the serum. Each sample was labeled with the unique ID number correlating to an individual FSW. Following collection, a lab technician used the serum to perform a rapid HIV test and RPR test. Universal precautions and safe waste management practices were followed properly. For external quality assurance of tests, all positive and 10 percent of negative samples were sent to the National Public Health Laboratory (NPHL) in Kathmandu for HIV and syphilis.

HIV 1/ 2

The HIV screenings of serum samples were performed using rapid test kits following the national HIV testing algorithm. Determine HIV 1/2 (Abbot, Japan), Uni-Gold HIV 1/2 (Trinity Biotech, Ireland), and Stat-Pak HIV 1/2 (Chembio Diagnostics), as per the National HIV Testing and Treatment Guidelines by NCASC in 2017, were followed. All the kits were based on the immune chromatography principle for detecting antibodies against HIV in serum or blood. A serum that tested reactive with the initial kit was confirmed with the second kit (A2) and Third Kits (A3). Samples that were found reactive on all three (A1, A2 and A3) tests were considered HIV-positive. Samples that were non-reactive on the first test (A1) were considered HIV-negative. Any sample that was reactive on the first (A1), second (A2) test and non-reactive in the third test (A3) then we repeated all three tests (A1, A2, and A3) with the same individual sample, and if the retested result was the same (A1, A2 positive and A3 negative), then the sample was considered HIV inconclusive. In cases such as this, the respondent was suggested to repeat the test after 14 days. The internal quality of the assay was assured by the inbuilt control of each kit and external quality was assured by sending all positive cases and 10% of negative cases to the reference lab (NPHL).

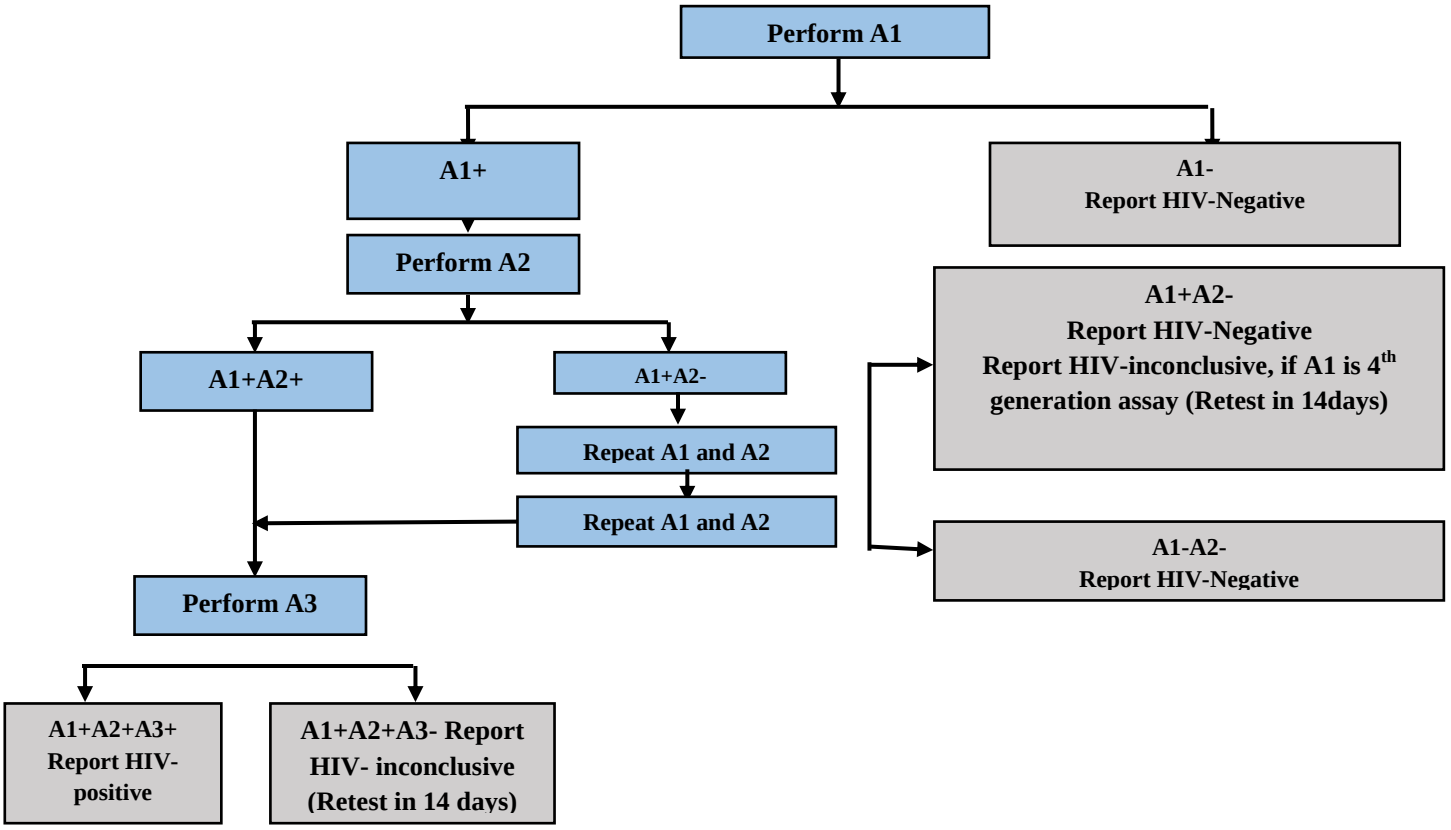

Figure 3: HPV Rapid Test Algorithm

Reference Note

A1 (First test): Determine HIV ½

A2 (Second test): Uni-Gold HIV

A3 (Third test): Stat Pak "+" Reactive ""

Syphilis

A syphilis diagnosis was conducted following the National Guidelines on Case Management of Sexually Transmitted Disease (NCASC, 2009). The serum was tested for non-specific and specific treponemal agents. A non-treponemal test, Rapid Plasma Reagin (RPR) [WAMPOLE Impact RPR card test, Alere], was used for both qualitative screening and semi-quantitative titration. All RPR reactive serum was confirmed using the specific Treponema Pallidum Particle Agglutination (TPPA) test (Fujirebio Inc.). Serum samples that tested RPR positive with titer value above or equal to 1:8 were reported as active syphilis; titration less than 1:8 were reported

as cases with history of syphilis. The quality of regents and test cards of the RPR test kits were assessed on the site daily using a set of strong and moderate positive and negative controls. As part of external quality assurance, internal controls (positive and negative) were used to ensure the kits were working accurately and that all reactive/positive samples and 10% of non-reactive/negative samples were sent to NPHL for retesting.

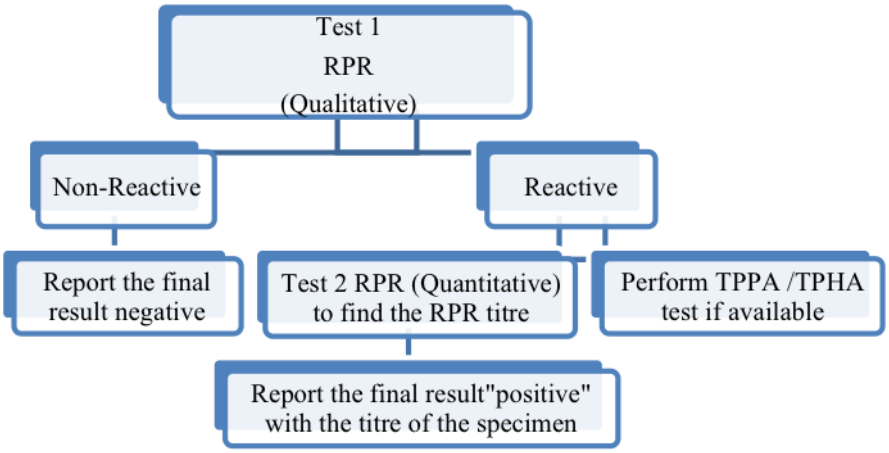

Figure 4: Syphilis Testing Algorithm

Syphilis RPR and TPPA test:

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

→ RPR positive with more than or equal to 1:8 titre value and positive TPPA test confirms active syphilis cases.

→ RPR positive with less than 1:8 titre values with positive TPPA test confirms the history of syphilis cases.

→ RPR positive with greater than, or lower than, or equal to 1:8 titre with negative TPPA test is considered syphilis negative cases. (This may be due to unspecific syphilis RPR positive scenarios.)

Gonorrhea and Chlamydia diagnosis

The presence of gonorrhea and chlamydia pathogens (*N. gonorrhea* and *C. trachomatis)* was determined by multiplex PCR based pathogen detection assay (Seegene, Korea) on syndromic cases confirmed under clinical observation. DNA extraction followed by the PCR test was carried out at NPHL.

Swab Collections

For detection of gonorrhea and chlamydia pathogens, vaginal swabs were collected from the cases found to be symptomatic for STIs during clinical observation. Collected swab samples were preserved in vials containing a sterile transport medium and maintained in cold chain for transport to Intrepid Nepal Pvt Ltd laboratory. Tests were performed in the NPHL Lab

2.14 Precautions, Disposal Mechanism and Post Exposure Management

Universal precautions and post exposure management were followed as per the recommendations of the Center for Disease Control (CDC, USA) and Nepal's national guidelines. In order to minimize the possible spread of infection to clinical personnel and to the local community, a strict disposal procedure was implemented. Color coded disposable plastic bags were inserted in a thick leak proof container with a tight seal. All materials were decontaminated by disinfecting or incinerating before disposal. Contaminated materials including specimens of bodily fluids, cotton gauze, broken glassware, and used needles were decontaminated in 0.5% sodium hypochlorite on a daily basis. The plastic material, papers and cotton were incinerated. The used sodium hypochlorite was poured down the drain or in a flush toilet.

2.15 Quality Control of Laboratory Tests and External Quality Assurance Scheme

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

External Quality Assessment

An External quality assessment (EQA) involves the evaluation of the performance of a testing laboratory through a recognized external agency as a measure of quality control. To quantify the quality of testing in this study, an elaborate External Quality Assessment Scheme (EQAS) was developed, where all samples that tested positive for HIV and RPR respectively were sent to NPHL for retesting. Similarly, 10 percent of all HIV and RPR samples which had tested negative respectively were also sent to NPHL for retesting. As per the protocol for ECA, firstly, aliquots of selected serum specimens prepared in the field were sent to Intrepid Nepal's laboratory in Kathmandu within a week of collection for optimum storage at a temperature below -20°C. Once field testing activities were completed, the specimens stored at Intrepid-Nepal were handed over to NPHL for retesting. To ensure validity and reliability, test kits used during field testing were provided to NPHL.

HIV Testing

A total of 65 samples were transported to NPHL for HIV testing; out of which 4 were identified as positive for HIV and 6 samples were negative for HIV. The kappa value for this test was calculated as 1.

Summary of results of External Quality Assessment of HIV Testing among FSWs

		NPHL Results		Total
		Negative	**Positive**	
Intrepid results	Negative	61	00	61
	Positive	00	04	04
	Total	**61**	**04**	**65**
Percentage Agreement = 100 %				
Kappa*=1				
Strength of agreement= Almost perfect agreement				

Syphilis Testing

Altogether 71 plasma specimens were tested for Syphilis at NPHL. Among them 8 were identified positive for Syphilis whereas the remaining 63 were negative. The Kappa value calculated for this was 0.87 and almost a perfect agreement has been observed.

Summary of results of External Quality Assessment of Syphilis Testing among FSW in 22 highway districts of Nepal

		NPHL Results		Total
		Negative	**Positive**	
Intrepid results	Negative	61	00	61
	Positive	02	08	10
	Total	**63**	**08**	**71**
Percentage Agreement = 97%				
Kappa*= 0.87				
Strength of agreement= Almost perfect agreement				

2.16 Fieldwork Supervision and Monitoring

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

Similarly, quality of the collected data was maintained throughout the survey period. The team leader and research officer were both involved in monitoring and controlling quality from the initial stage of the fieldwork. They reviewed forms to ensure that: 1) the correct clusters had been surveyed; 2) the correct number of FSWs had been interviewed; and 3) the correct administration of the questionnaires and recording had been carried out. They also checked the completed forms randomly, provided feedback, and made random revisits to ensure data quality. External monitors from NCASC and other related stakeholders also monitored the fieldwork.

2.17 Data management

Estimation of the size of the survey population and its distribution in the survey areas was collected. Lists and maps were generated from the operational mapping exercise. The completed questionnaires were rechecked regularly by a field researcher and field supervisor to ensure that the questionnaires were filled out properly.

Tablet-based face to face interview was performed to collect behavioral information and the lab test results were entered into tablet at the end of each day of field work. ODK software was used for tablet-based data collection. The merits of the tablet-based data collection were that the obtained data were sent to the central server at the same day of data collection and the collected data were available for observation to the central survey team for assessing the progress. The field coordinators were responsible for checking any inconsistency and for correcting the errors.

Furthermore, the electronic data was extracted into MS Excel for verification and transferred into Statistical Package for the Social Sciences (SPSS). A number of quality check mechanisms including range checks, logical checks, and skip instructions were developed to detect the errors during the data entry stage.

To ensure confidentiality, each FSW was given a unique identity number. The numbers were coded in each questionnaire. The numbers, however, did not correspond to the names, contact numbers or addresses of the participants of the survey. The trained staff of Intrepid Nepal performed data entry and coding. All entered data was kept secure in encrypted, password protected computers at the research organization to ensure anonymity of the participants.

2.18 Data analysis

Data was analyzed using descriptive statistics and bivariate analysis. Data was analyzed using SPSS and R programs for statistical analysis. Descriptive analysis of background characteristics, sexual behavior and sexual intercourse history, HIV risk related behaviors and knowledge of HIV/STIs, use and availability of condoms, knowledge of HIV and AIDS awareness programs, and drug injecting behaviors were explored. Bivariate analysis of the key indicators of HIV related risk behaviors were performed. Chi square test values were also calculated to measure the statistical association between cross tabulated categorical variables. Trend analysis of key indicators such as HIV prevalence, sexual behavior, use of condoms, and comprehensive knowledge of HIV and AIDS were also performed using Chi square test for trends. A p value of less than 0.05 was considered as statistically significant. R program was used to create graphs.

2.19 Ethical Considerations

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

The procedure of the survey was designed to protect the privacy of the participants, allowing for anonymous and voluntary participation. All the respondents were provided with a unique identification (ID) number written on a colored printed card. The same identifier was marked on the questionnaire, medical records, and all biological specimens collected from that particular respondent. This card was also used for the distribution of the test results. Trained counselors provided lab test results during the post-test counseling to only those respondents who produced the card. The survey team maintained the confidentiality of the data collected throughout the survey. They were informed about the risks, confidentiality, and compensation. The participants were given the opportunity to ask questions about the survey and to decide whether they would like to participate in the survey.

All the field staffs were strictly prohibited from recording any personal identifiers in the tablet-based questionnaire. However, we used written informed consent and requested participants to write their short name or nickname with signature (signature should not be a real one which they use for the official purpose). We requested FSW with no formal education to cross ‘X’ sign in the informed consent document instead of their signature. We did not link informed consent with the tablet-based questionnaire. During the consent process, the participants were told that they were free to refuse or decline to participate at any stage during the survey. Although the risk of participating in this survey was minimal, some questions could make the survey subjects uncomfortable. They were clearly informed that in such a situation, they were free to decline answering such questions and could also withdraw from the survey at any time. Best efforts (confidential, free to withdraw form survey any time) were made to minimize associated risks to survey participants. During the analysis and presentation of the survey findings, the names or addresses of the FSWs were not mentioned.

2.20 Post Test Counseling and Distribution of Test Result

All FSWs (100%) who were tested obtained their individual test results. All of the respondents, who wanted their test results and showed their ID card, were given access to their individual HIV and syphilis test results, along with free posttest counseling. Posttest counseling and individual report dissemination programs were conducted for the FSWs on the same day of the interview. The counseling session was provided by trained counselors and focused on high risk behaviors and other aspects related to STIs and HIV. Some participants were also referred to other health facilities for further HIV prevention and treatment services.

2.21 Limitations of the survey

- This survey was conducted in 22 highway districts in Nepal. The analysis and results presented in this report are, therefore, confined to these districts, and may not be generalized to other districts or any other parts of the country.
- So far IBBS has adopted descriptive serial cross sectional sampling designs, which survey limits the cause-effect relationship.
- Few sensitive responses or questions that require to remember past information might be biased. Survey participants are expected to provide honest responses to the survey questions asked. However, in some circumstances, this assumption may be breached due to factors such as social desirability or recall bias.
- This survey could only recruit a percentage of FSWs based on the hard to reach or underground characteristic of the survey population. Most of the FSWs were listed in the sampling frame with the help of community motivators.

CHAPTER III: Findings

3. Results

The results are comprised of biological and behavioral components. The biological components include prevalence of HIV, syphilis, gonorrhea, and chlamydia. The behavioral component consists of background characteristics, sexual behaviors, use of condoms with different partners, experience of violence, knowledge of HIV, and exposure to HIV programs, drug injecting behaviors, stigma, and discrimination among FSWs.

3.1 Key Socio-demographic Characteristics

The survey explored the socio-demographic characteristics of FSWs in the survey districts. Most of the respondents interviewed were establishment based (87.2%) and the remaining were street based (12.8%). Most of the respondents were of age group 25-29 years (20.5%) and the mean age calculated was 30.6 years. In the same way, more than one-third (36.2%) of the FSWs had obtained a basic level of education and 38.9 percent of them were disadvantaged *Janajatis*. The majority of FSWs (77.5%) were married and among them, 68.3 percent were married at the age of 15-19 years. Additionally, 5.1 percent of the FSWs were divorced/permanently separated and 5.4 percent of them were widowed. Out of those, more than half (53.1%) were divorced/separated/widowed at the age of 25-29 years. Also, most of the respondents were currently living with their family (90.7%).

Table 4: Background Characteristics of FSWs

Socio-Demographic Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total (22 Districts) (N=610)	
	n	%	n	%	N	%
Types of FSW						
Establishment based	208	99.0	324	81.0	532	87.2
Street based	2	1.0	76	19.0	78	12.8
Age						
16-19yrs	21	10.0	44	11.0	65	10.7
20-24yrs	45	21.4	45	11.3	90	14.8
25-29yrs	55	26.2	70	17.5	125	20.5
30-34yrs	32	15.2	89	22.3	121	19.8
35-39yrs	30	14.3	66	16.5	96	15.7
40 yrs and above	27	12.9	86	21.5	113	18.5
Mean age± S.D	**29.0 ± 7.5**		**31.5 ± 8.4**		**30.6± 8.2**	
Age range	**16yrs - 45yrs**		**17yrs – 56yrs**		**16yrs – 56yrs**	
Median age	**28.0**		**31.0**		**30.0**	
Level of education						
Basic education (grate 1-8)	69	32.9	152	38.0	221	36.2
Secondary (9-10)	22	10.5	47	11.8	69	11.3

SLC passed	41	19.5	33	8.3	74	12.1
Intermediate passed and above	10	4.8	10	2.5	20	3.3
Literate	23	11.0	62	15.5	85	13.9
Illiterate	45	21.4	96	24.0	141	23.1
Caste/ethnicity						
Dalit	64	30.5	105	26.3	169	27.7
Disadvantaged Janajatis	74	35.2	163	40.8	237	38.9
Disadvantaged non-dalit Terai caste groups:	3	1.4	24	6.0	27	4.4
Religious Minorities	2	1.0	2	0.5	4	0.7
Relatively advantaged Janajatis	4	1.9	17	4.3	21	3.4
Upper caste groups	63	30.0	89	22.3	152	24.9
Marital Status						
Married	146	69.5	327	81.8	473	77.5
Divorced/Permanently Separated	15	7.1	16	4.0	31	5.1
Widow	15	7.1	18	4.5	33	5.4
Never married	34	16.2	39	9.8	73	12.0
Age at marriage(n=537)						
10-14 yrs	39	22.2	48	13.3	87	16.2
15-19 yrs	111	63.1	256	70.9	367	68.3
20-24 yrs	25	14.2	51	14.1	76	14.2
25 yrs and above	1	0.6	6	1.7	7	1.3
Mean	**16.5**		**17.3**		**17.1**	
Median	**16.0**		**17.0**		**17.0**	
Age when divorced /separated /widowed (n=64)						
15-19 yrs	2	6.7	5	14.7	7	10.9
25-29 yrs	19	63.3	15	44.1	34	53.1
30 yrs and above	9	30.0	14	41.2	23	35.9
Living Status of FSW						
Family	179	85.2	374	93.5	553	90.7
Male friend	14	6.7	9	2.3	23	3.8
Relatives	6	2.9	3	0.8	9	1.5
Other females	1	0.5	3	0.8	4	0.7
Alone	10	4.8	11	2.8	21	3.4

3.2 Child birth, Abortion and Pregnancy History of ever married FSWs

The table below shows the findings regarding child birth, abortion and pregnancy history of ever married FSWs. Most of the FSWs (81.3%) had given birth to a child before and 40.3 percent had two children. Moreover, 19.0 percent had a history of miscarriage, with nearly three-fourths having one miscarriage (73.3%) and 9.5 percent having three and more miscarriage. Moreover, 34.6 percent of FSWs had ever terminated/aborted any pregnancies, with 17.1 percent of those with a previous abortion having terminated/aborted more than once. Most of the abortions were assisted by a doctor (38.4%) or a nurse (35.5%). Furthermore, most of the FSWs (80.8%) exhibited no desire for children in the future.

Table 5: Child birth, Abortion and Pregnancy History of ever married FSWs

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total (22 Districts) Total N=610	
	n	%	n	%	N	%
Ever given birth						
Yes	160	76.2	336	84.0	496	81.3
No	50	23.8	64	16.0	114	18.7
Number of live births(n=496)						
None	1	0.6	1	0.3	2	0.4
One	39	24.4	74	22.0	113	22.8
Two	70	43.8	130	38.7	200	40.3
Three and more	50	31.3	131	39.0	181	36.5
Ever had miscarriage						
Yes	39	18.6	77	19.3	116	19.0
No	171	81.4	323	80.8	494	81.0
Number of miscarriage(n=116)						
One	33	84.6	52	67.5	85	73.3
Two	5	12.8	15	19.5	20	17.2
Three and more	1	2.6	10	13.0	11	9.5
Ever terminated/aborted any pregnancies						
Yes	112	53.3	99	24.8	211	34.6
No	98	46.7	301	75.3	399	65.4
Number of pregnancies terminated/aborted(n=211)						
One	50	44.6	59	59.6	109	51.7
Two	38	33.9	28	28.3	66	31.3
Three and more	24	21.4	12	12.1	36	17.1
Person who assisted in last abortion (n=211)						
Doctor	37	33.0	44	44.4	81	38.4
Nurse	43	38.4	32	32.3	75	35.5

Midwife	1	0.9	-	-	1	0.5
Friend	10	8.9	8	8.1	18	8.5
Nobody	13	11.6	7	7.1	20	9.5
Medicine only	8	7.1	8	8.1	16	7.6
Desire for child in the future						
In the next 6 months	2	1.0	6	1.5	8	1.3
In the next two years	40	19.0	69	17.3	109	17.9
No	168	80.0	325	81.3	493	80.8

3.3 Sexual History of FSWs

The table below presents the findings regarding the sexual history of FSWs from the 22 Terai highway districts. The survey showed that most of the FSWs (65.2%) worked in a hotel or lodge, followed by a house settlement (17.5%). Exactly 62.0 percent of FSWs had their first sexual intercourse at the age of 15-19 years. Moreover, most of the FSWs were found to have worked as a sex worker for 13-24 months (28.7%) and 49-60 months (17.0%), respectively.
Additionally, about 10.3 percent of the FSWs reported that they have worked as a sex worker in other locations too, and about 3.1 percent had travelled into India for sexual purposes. Most of the respondents (27.2%) also reported their income from sex work as Rs.501- Rs.1000. However, 32.0 percent were involved in other work, in addition to sex work, and their average income ranged from Rs.2001 to Rs.5000. The sex workers who were involved in other professions outlined the major profession involved as wage laborer (30.3%) and in business (24.1%).

Table 6: Sexual history of FSWs

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Place of sex work						
Dance Restaurant	1	0.5	1	0.3	2	0.3
Cabin Restaurant	8	3.8	2	0.5	10	1.6
Call Girl	7	3.3	9	2.3	16	2.6
Massage Parlor	4	1.9	11	2.8	15	2.5
House Settlement	26	12.4	81	20.3	107	17.5
Bhatti Pasal	3	1.4	4	1.0	7	1.1
Street/Park	-	-	1	0.3	1	0.2
Restaurant/Tea shop	22	10.5	13	3.3	35	5.7
Dohori Restaurant	1	0.5	2	0.5	3	0.5
Hotel/Lodge	136	64.8	262	65.5	398	65.2
Brick Factory	2	1.0	14	3.5	16	2.6
Age of first sexual intercourse						
10-14 yrs	51	24.3	49	12.3	100	16.4
15-19yrs	103	49.0	275	68.8	378	62.0
20-24yrs	32	15.2	46	11.5	78	12.8

More than 24 yrs	24	11.4	30	7.5	54	8.9
Duration of sexual exchange for money						
6- 12 months	50	23.8	46	11.5	96	15.7
13-24 months	52	24.8	123	30.8	175	28.7
25-36 months	22	10.5	70	17.5	92	15.1
37-48 months	9	4.3	39	9.8	48	7.9
49-60 months	30	14.3	74	18.5	104	17.0
more than 60 months	47	22.4	48	12.0	95	15.6
Ever worked as a sex worker in other location						
Yes	44	21.0	19	4.8	63	10.3
No	166	79.0	381	95.3	547	89.7
Ever crossed Nepal to India for sexual activity						
Yes	14	6.7	5	1.3	19	3.1
No	196	93.3	395	98.8	591	96.9
Income from sex work						
Rs 200- Rs500	11	5.2	135	33.8	146	23.9
Rs 501-Rs1000	41	19.5	125	31.3	166	27.2
Rs 1001- Rs1500	24	11.4	57	14.3	81	13.3
Rs 1501-2000	33	15.7	31	7.8	64	10.5
Rs 2000 and above	101	48.1	52	13.0	153	25.1
Have Other Jobs besides Sex Work						
Yes	93	44.3	102	25.5	195	32.0
No	117	55.7	298	74.5	415	68.0
Type of works(n=195)						
Housemaid/restaurant employee (dish cleaner, cook, washer woman, etc.)	4	4.3	21	20.6	25	12.8
Wage laborer	28	30.1	31	30.4	59	30.3
Own restaurant/*bhatti pasal*	7	7.5	12	11.8	19	9.7
Masseuse	-	-	2	2.0	2	1.0
Business (retail store, fruit shop etc.)	28	30.1	19	18.6	47	24.1
Knitting /tailoring	12	12.9	12	11.8	24	12.3
Peer educator	2	2.2	-	-	2	1.0
Job (teacher, peon etc)	12	12.9	5	4.9	17	8.7
Average Weekly Income from Other Sources Besides Sex Work(n=195)						
Up to Rs 500	8	8.6	8	7.8	16	8.2
Rs 501- Rs1001	11	11.8	7	6.9	18	9.2
Rs 1001- Rs 2000	32	34.4	32	31.4	64	32.8
Rs 2001-Rs 5000	31	33.3	40	39.2	71	36.4
Rs Rs5001 and more	11	11.8	15	14.7	26	13.3
Mean weekly income	**3315.9**		**3669.1**		**3500.6**	

3.4 Sex workers and their clients

The findings show the sexual work of FSWs with their clients and the sexual practices with different sexual partners. The sex partners of the FSWs were categorized as sexual partner, including nonpaying partners and paying partners. Nonpaying partners included boyfriends, husbands, or those who did not pay for sexual services, while clients and regular partners included those who paid for sexual contact. Partners other than clients, husbands, and male friend(s) were categorized as other partners. The survey showed that most of the FSWs (89.7%) had one to two clients per day. About half of the FSWs (50.5%) had more than one to two clients the day before they were interviewed and 46.9 percent of them had one to two clients in the previous week. Most of the FSWs reported that they worked for four and more days in a week (39.0%). Furthermore, the survey assessed the occupation of the FSW clients and the results showed that most of the clients were a taxi, jeep, microbus or minibus worker (42.6%), followed by an industrial/wage worker (38.2%) and a bus, truck or tanker worker (35.9%).

Table 7: Sex worker and their clients

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Average number of client per day						
1-2	194	92.4	353	88.3	547	89.7
3-4	15	7.1	47	11.8	62	10.2
More than 4	1	0.5	-	-	1	0.2
Number of clients on the previous day						
None	117	55.7	179	44.8	296	48.5
1-2	89	42.4	219	54.8	308	50.5
3-4	4	1.9	2	0.5	6	1.0
Number of clients in the past week						
None	14	6.7	52	13.0	66	10.8
1-2	118	56.2	168	42.0	286	46.9
3-4	58	27.6	120	30.0	178	29.2
More than 4	20	9.5	60	15.0	80	13.1
Average number of days worked in a week						
One	13	6.2	10	2.5	23	3.8
Two	71	33.8	57	14.3	128	21.0
Three	71	33.8	150	37.5	221	36.2
Four and +	55	26.2	183	45.8	238	39.0
Occupation of clients*						
Bus, truck or tanker worker	70	33.3	149	37.3	219	35.9
Taxi, jeep, microbus or minibus worker	37	17.6	223	55.8	260	42.6
Industrial/wage worker	38	18.1	195	48.8	233	38.2

Police	37	17.6	60	15.0	97	15.9
Soldier/Army	39	18.6	49	12.3	88	14.4
Student	31	14.8	29	7.3	60	9.8
Rickshawala	11	5.2	52	13.0	63	10.3
Service holder	29	13.8	38	9.5	67	11.0
Businessmen	29	13.8	41	10.3	70	11.5
Mobile Businessmen	78	37.1	122	30.5	200	32.8
Migrant worker/lahurey	23	11.0	39	9.8	62	10.2
Contractor	31	14.8	29	7.3	60	9.8
Foreigner (Indian and other Nationals)	13	6.2	11	2.8	24	3.9
Farmer	16	7.6	41	10.3	57	9.3

* Multiple responses

3.5 Use of condom with Different Partners

3.5.1 Use of condom with Sexual Partner

The table below depicts the findings regarding use of condoms by the FSWs with their sexual partners. Most of the FSWs (67.7%) used condoms with clients in their last sexual encounter and in most of cases; the suggestion to use the condom was made by the FSWs themselves (73.4%). The respondents who reported that they didn't use a condom in their last sexual encounter were asked about the reasons behind it and the reasons reported by most of the FSWs were: partner objection (45.2%) and use of other contraceptives (34.5%). About 31.1 percent of the respondents had used condoms with their clients consistently in the past year. Regarding the reasons for not using a condom in the last year, most FSWs mentioned partner's objection (50.7%) and didn't think it was necessary (41.7%) as the primary reasons.

Table 8: Condom use with Sexual Partner

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Use of condom with sexual partner in the last sex						
Yes	141	67.1	272	68.0	413	67.7
No	69	32.9	128	32.0	197	32.3
Condom use suggested in the last sex (n=413)						
Myself	81	57.4	222	81.6	303	73.4
My Partner	60	42.6	50	18.4	110	26.6
Reasons for not using condom (n=197)						
Not available	2	2.9	2	1.6	4	2.0
Partner objected	21	30.4	68	53.1	89	45.2
I didn't like to use it	13	18.8	24	18.8	37	18.8

Used other contraceptive	28	40.6	40	31.3	68	34.5
Didn't think it was necessary	34	49.3	29	22.7	63	32.0
Didn't think of it	10	14.5	3	2.3	13	6.6
Client offered more money	3	4.3	7	5.5	10	5.1
Didn’t know / not aware about condom	2	2.9	4	3.1	6	3.0
Consistent use of condom with sexual partner in the past year						
All of the time	42	20.0	148	37.0	190	31.1
Most of the time	97	46.2	131	32.8	228	37.4
Some of the time	49	23.3	44	11.0	93	15.2
Rarely	20	9.5	10	2.5	30	4.9
Never	2	1.0	67	16.8	69	11.3
Reasons for not using condom in the past year*(n=420)						
Not available	3	1.8	5	2.0	8	1.9
Too expensive	1	0.6	-	-	1	0.2
Partner objected	85	50.6	128	50.8	213	50.7
I didn't like to use it	49	29.2	97	38.5	146	34.8
Used other contraceptive	78	46.4	87	34.5	165	39.3
Didn't think it was necessary	101	60.1	74	29.4	175	41.7
Didn't think of it	34	20.2	28	11.1	62	14.8
Client offered more money	24	14.3	14	5.6	38	9.0
Didn’t know / not aware about condom	3	1.8	4	1.6	7	1.7

*Multiple responses

3.5.2 Use of condom for Regular non-paying partner (Including Husband)

The table below presents the findings regarding use of condoms by the FSWs with their regular non-paying partners, including their husbands. Most of the FSWs (72.6%) had sexual intercourse with regular non-paying partners/clients (including husbands). Nearly one-fourth of the clients reported using condoms with their regular clients (23.3%) and the condom use was suggested by the FSWs themselves in 71.8 percent of the cases. The reasons for not using condoms was also assessed and the primary reasons outlined were use of other contraceptives (40.0%), didn’t think it was necessary (28.2%) and partner’s objection (18.5%). Furthermore, nearly half of the FSWs (46.8%) were found to have never used a condom during sexual intercourse with their regular non-paying partners in the past year. And the most common reasons behind it were “Didn’t think it was necessary” and “use of other contraceptives”. The FSWs were also asked if they took any actions when the client refused to use a condom and most of them mentioned that they would still have sex with the client in such cases (49.8%). Whereas, some of them reported that they would explain the advantage of using a condom (18.9%). In more than half of the cases (66.4%), the FSWs were found to have faced such situation.

Table 9: Condom use with Regular non- paying partner (Including Husband)

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Sex with regular non-paying partner/client(including husband)						
Yes	171	81.4	272	68.0	443	72.6
No	39	18.6	128	32.0	167	27.4
Use of condom with regular clients (n=443)						
Yes	66	38.6	37	13.6	103	23.3
No	105	61.4	235	86.4	340	76.7
Condom use suggested in the last sex (n=103)						
Myself	42	63.6	32	86.5	74	71.8
My Partner	24	36.4	5	13.5	29	28.2
Reasons for not using condom (n=340)						
Too expensive	1	1.0	-	-	1	0.3
Partner objected	16	15.2	47	20.0	63	18.5
I didn't like to use it	5	4.8	34	14.5	39	11.5
Used other contraceptive	52	49.5	84	35.7	136	40.0
Didn't think it was necessary	28	26.7	68	28.9	96	28.2
Didn't think of it	2	1.9	-	-	2	0.6
Client offered more money	-	-	1	0.4	1	0.3
Didn’t know / not aware about condom	1	1.0	1	0.4	2	0.6
Consistent use of condom with regular non-paying client in the past year (n=443)						
All of the time	21	12.3	20	7.4	41	9.3
Most of the time	45	26.3	16	5.9	61	13.8
Some of the time	28	16.4	24	8.8	52	11.7
Rarely	52	30.4	34	12.5	86	19.4
Never	25	14.6	178	65.4	203	46.8
Reasons for not using condom in the past one year* (n=402)						
Not available	2	1.3	-	-	2	0.5
Too expensive	1	0.7	-	-	1	0.2
Partner objected	50	33.3	98	38.9	148	36.8
I didn't like to use it	40	26.7	98	38.9	138	34.3
Used other contraceptive	75	50.0	97	38.5	172	42.8
Didn't think it was necessary	89	59.3	133	52.8	222	55.2
Didn't think of it	33	22.0	7	2.8	40	10.0
Client offered more money	6	4.0	2	0.8	8	2.0
Action taken by FSWs if client reject to use condom (n=402)						
Refuses to have sex with the client	6	4.0	12	4.8	18	4.5
Forces the client to use a condom	4	2.7	49	19.4	53	13.2
Explains the advantages of condoms	25	16.7	51	20.2	76	18.9

Still has sex with the client	88	58.7	112	44.4	200	49.8
Only takes medication/treatment after sex	26	17.3	28	11.1	54	13.4
Don't know	1	0.7	-	-	1	0.2
Occur in the past 30 days (n=402)						
Yes	121	80.7	146	57.9	267	66.4
No	29	19.3	106	42.1	135	33.6

*Multiple responses

3.5.3 Use of Condom with Paying Partner/Clients

The majority of the FSWs had used condoms during sexual intercourse with their paying partners in the past one year (95.2%). The proportion of women who used a condom in their last sexual encounter was reported as 77.3%. In more than three-fourths of the cases (78.2%), the use of a condom was suggested by the FSWs themselves. The respondents who reported not using condoms in the last sexual encounter were also asked about the possible reasons behind it and the primary reason was partner's objection (55.3%).

In 34.8 percent of the cases, a condom was used consistently at all times. However, in 10.2 percent of the cases, a condom was never used and the reasons mentioned were: partner's objection (58.6%) and not liking its use by the FSWs themselves (36.9%). Most of the respondents were found to have continued having sex in cases where condom use was objected to (29.3%) and in more than half of the cases (58.9%), it has happened within the last 30 days. Only 0.7 percent of the FSWs always had sexual intercourse with the client without using a condom just for the sake of more money within past six months.

Table 10: Condom use with Paying Partner/Clients

Characteristics	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Sex with paying partner in the past one year						
Yes	201	95.7	380	95.0	581	95.2
No	9	4.3	20	5.0	29	4.8
Use of condom with paying partner in the last sex (n=581)						
Yes	166	82.6	283	74.5	449	77.3
No	35	17.4	97	25.5	132	22.7
Condom use suggested on that sex (n=449)						
Myself	118	71.1	233	82.3	351	78.2
My Partner	48	28.9	50	17.7	98	21.8
Reasons for not using condom on that time by the partner (n=132)						
Not available	1	2.9	1	1.0	2	1.5
Partner objected	13	37.1	60	61.9	73	55.3
I didn't like to use it	5	14.3	18	18.6	23	17.4
Used other contraceptive	10	28.6	12	12.4	22	16.7

Didn't think it was necessary	5	14.3	4	4.1	9	6.8
Didn't think of it/forgot	1	2.9	2	2.1	3	2.3
Consistent use of condom with paying partners in the last 12 months?(n=581)						
All of the time	50	24.9	152	40.0	202	34.8
Most of the time	112	55.7	135	35.5	247	42.5
Some of the time	23	11.4	25	6.6	48	8.3
Rarely	15	7.5	10	2.6	25	4.3
Never	1	0.5	58	15.3	59	10.2
Reasons for not using condom regularly by paying partner?(n=379)						
Not available	5	3.3	2	0.9	7	1.8
Too expensive	1	0.7	-	-	1	0.3
Partner objected	83	55.0	139	61.0	222	58.6
I didn't like to use it	46	30.5	94	41.2	140	36.9
Used other contraceptive	60	39.7	74	32.5	134	35.4
Didn't think it was necessary	73	48.3	49	21.5	122	32.2
Didn't think of it/forgot	29	19.2	14	6.1	43	11.3
Action taken by FSWs if paying client reject to use condom (n=581)						
Refuses to have sex with the client	47	23.4	49	12.9	96	16.5
Forces the client to use a condom	14	7.0	82	21.6	96	16.5
Explains the advantages of condoms	40	19.9	118	31.1	158	27.2
Still has sex with the client	66	32.8	104	27.4	170	29.3
Only takes medication/treatment after sex	34	16.9	27	7.1	61	10.5
Occurred within 30 day by paying clients (n=581)						
Yes	116	57.7	226	59.5	342	58.9
No	85	42.3	154	40.5	239	41.1
Sex without using condom for more money (in past 6 months) (n=581)						
Always	-	-	4	1.1	4	0.7
Most of the time	16	8.0	21	5.5	37	6.4
Sometimes	106	52.7	79	20.8	185	31.8
Never	79	39.3	275	72.4	354	60.9
Don't remember /know	-	-	1	0.3	1	0.2

*Multiple responses

3.6 Availability of Condoms

Most of the respondents (78.4%) surveyed didn't carry condoms. In nearly one-fourth of the cases, the practice of carrying condoms was reported. Out of those who carried condoms, more than one-third got the condoms free of cost every time (34.1%) and the most common locations for obtaining condoms were: NGOs/health workers/volunteers (52.4%) and peers/friends (48.1%).

Most of the respondents (53.4%) outlined peers/friends as the most convenient place to obtain a condom free of cost. Other places to access condoms free of cost were NGOs/health workers/volunteers (52.1%), clients/other sex partners (39.3%), hotels/lodges/restaurants (28.8%) and hospitals (18.0%). More than half of the respondents were provided condoms free of cost by the organization (51.3%). Whereas, the rest hadn't received any such service.

Table 11: Condom Accessibility

Condom Acquisition	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Usually carry condom						
Yes	83	39.5	49	12.3	132	21.6
No	127	60.5	351	87.8	478	78.4
FSWs usually obtain condoms						
Always free of cost	87	41.4	121	30.3	208	34.1
Purchase	27	12.9	30	7.5	57	9.3
Obtain both ways	89	42.4	102	25.5	191	31.3
Condom never used	7	3.3	147	36.8	154	25.2
Place /person where condom can be obtained for free (n=399)						
Health Post/Health Center	78	44.3	41	18.4	119	29.8
Hospital	12	6.8	71	31.8	83	20.8
FPAN clinics	46	26.1	45	20.2	91	22.8
Peers/friends	76	43.2	116	52.0	192	48.1
Community events	9	5.1	33	14.8	42	10.5
NGO/Health Workers/Volunteers	109	61.9	100	44.8	209	52.4
Client/other sex partner	86	48.9	70	31.4	156	39.1
Massage parlor	1	0.6	1	0.4	2	.5
Hotel/lodge/restaurant	8	4.5	80	35.9	88	22.1
Bhatti pasal	-	-	30	13.5	30	7.5
Convenient place/s to get free condom (n=399)						
Health Post/Health Center	101	57.4	48	21.5	149	37.3
Hospital	23	13.1	49	22.0	72	18.0
Peers/friends	99	56.3	114	51.1	213	53.4
Community events	7	4.0	37	16.6	44	11.0
NGO/Health Workers/Volunteers	114	64.8	94	42.2	208	52.1
Client/other sex partner	91	51.7	66	29.6	157	39.3
Massage parlor	2	1.1	4	1.8	6	1.5
Hotel/lodge/restaurant	26	14.8	89	39.9	115	28.8
Bhatti pasal	1	0.6	26	11.7	27	6.8
Condom provided by organization In the last 12 months (n=456)						
Yes - free	114	56.2	120	47.4	234	51.3

Yes – on cash	1	0.5	1	0.4	2	0.4
No	88	43.3	132	52.2	220	48.2

*Multiple responses

3.7 Alcohol and Drug Use

Almost thirty-six percent of FSWs had never consumed alcohol during the past month and 3.6 percent of FSWs consumed alcohol daily. Moreover, 5.2 percent of FSWs had used drugs in the past 30 days. None of the respondents had used injecting drugs. It was also found that 3.1 percent of the FSW sex partners were injectable drug users.

Table 12: Use of alcohol, Drugs and Injection of FSWs

Consumption of alcohol and Drugs	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Consumption of alcohol during past one month						
Everyday	9	4.3	13	3.3	22	3.6
2-3 times a week	46	21.9	34	8.5	80	13.1
At least once a week	36	17.1	47	11.8	83	13.6
Less than once in a week	63	30.0	142	35.5	205	33.6
Never	56	26.7	164	41.0	220	36.1
Drug use in the past 30 days						
Yes	15	7.1	17	4.3	32	5.2
No	195	92.9	383	95.8	578	94.8
Ever-injected drugs (n=32)						
Yes	-	-	-	-	-	-
No	15	100.0	17	100.0	32	100.0
Any sex partners injected drugs (n=32)						
Yes	1	6.7	-	-	1	3.1
No	14	93.3	17	100.0	31	96.9

3.8 Comprehensive Knowledge of HIV

The table below shows the comprehensive knowledge of HIV among the FSWs. The proportion of FSW reporting to be aware of **A** (abstinence from sex), **B** (monogamy or being faithful to one partner or avoiding multiple sex partners), and **C** (consistent and correct condom use or use of a condom during every sex act) as HIV preventive measures was 44.9 percent, 72.3 percent and 68.7 percent respectively. Additionally, 89.2 percent of FSWs knew that a healthy looking person can be infected with HIV **(D)**, 51.3 percent of them identified that a person cannot get HIV from a mosquito bite **(E),** and 81.6 percent knew that one cannot get HIV by sharing a meal with an HIV infected person **(F)**. Overall, 28.9 percent of FSWs correctly identified all three (**A, B,** and **C)** as HIV preventive measures, while 27.4 percent of FSWs were aware of all five major indicators (**BCDEF)**. Only 9.7 percent of the FSWs knew about the six major indicators of HIV/AIDS.

Table 13: Comprehensive knowledge on HIV and AIDS

Knowledge of Six Major Indicators on HIV/AIDS	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
A. Can protect themselves through abstinence from sexual contact	70	33.3	204	51.0	274	44.9
B. Can protect themselves through monogamous sexual contact	142	67.6	299	74.8	441	72.3
C. Can protect themselves through condom use every time during sex	134	63.8	285	71.3	419	68.7
D. A healthy looking person can be infected with HIV	189	90.0	355	88.8	544	89.2
E. A person cannot get the HIV virus from mosquito bite	109	51.9	204	51.0	313	51.3
F. Cannot get HIV by sharing a meal with an HIV infected person	180	85.7	318	79.5	498	81.6
Knowledge of all the three indicators: ABC	38	18.1	138	34.5	176	28.9
Knowledge of Six Major Indicators on HIV/AIDS	17	8.1	42	10.5	59	9.7
Knowledge of all five indicators: BCDEF	56	26.7	112	28.0	168	27.4

3.9 Awareness about Modes of HIV Transmission

The understanding of FSWs about HIV and different modes of transmission were further tested with the help of different questions. Nearly all (98.7%) FSWs perceived that HIV could be transmitted through the transfusion of blood from an infected person to another and through the use of pre-used needles/syringes (92.6%). A majority of them (93.1%) mentioned that holding the hand of an HIV infected person does not pose a risk of HIV transmission. Additionally, 62.5 percent of them mentioned that an HIV infected mother could transmit the virus to her child during breastfeeding, while 83.9 percent said that an infected pregnant woman could transmit the virus to her unborn child. Furthermore, among those FSWs who mentioned that an infected mother could transmit the virus to her unborn child, nearly three-fourths of them mentioned that taking medication could minimize the risk of transmission of the virus from an infected mother to her unborn child.

Table 14: Awareness of modes of HIV transmission

Awareness of Modes of HIV Transmission	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
A person cannot get HIV by shaking hands with an HIV infected person's hand	191	91.0	377	94.3	568	93.1
A person can get HIV, by using previously used needle/syringe	202	96.2	363	90.8	565	92.6
Blood transfusion from an infected person to transmit HIV	208	99.0	394	98.5	602	98.7

A woman with HIV can transmit the virus to her new born child through breastfeeding	102	48.6	279	69.8	381	62.5
A pregnant woman infected with HIV can transmit the virus to her unborn child	171	81.4	341	85.3	512	83.9
Ways by which a pregnant woman can reduce the risk of transmission of HIV to her unborn child (n=512)						
Cannot do anything/cannot protect the child	3	1.8	4	1.2	7	1.4
Take Medication	123	71.9	247	72.4	370	72.3
Abort the child	13	7.6	49	14.4	62	12.1
Consult with doctor	9	5.3	2	.6	11	2.1
Don't know	23	13.5	39	11.4	62	12.1

3.10 Awareness and Availability of HIV Testing facility and HIV testing

The survey also assessed the awareness among FSWs regarding HIV testing facilities and HIV testing practices. Most of the FSWs (77.4%) knew about a confidential HIV testing facility in the community. Additionally, 71.8 percent of FSWs knew about an HIV testing facility and among them, 66.9 percent had taken an HIV test. Among the FSWs who ever had an HIV test, 58.4 percent had taken a test within the last six months preceding the survey and 80.2 percent had taken the test voluntarily. One of the FSWs was found positive from prior test results.

Table 15: Awareness and Availability of HIV Testing Facility and HIV Testing

Awareness and Availability of HIV Testing Facility and HIV Testing Status	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Confidential HIV test facility available in the community						
Yes	191	91.0	281	70.3	472	77.4
No	15	7.1	90	22.5	105	17.2
Don't know	4	1.9	29	7.3	33	5.4
Knowledge of HIV testing place						
Yes	178	84.8	260	65.0	438	71.8
No	32	15.2	140	35.0	172	28.2
Ever had an HIV test						
Yes	136	76.4	157	60.4	293	66.9
No	42	23.6	103	39.6	145	33.1
Most recent HIV test(n=293)						
Within 6 months	76	55.9	95	60.5	171	58.4
Between 1-2 years	54	39.7	50	31.8	104	35.5
Between 2-4 years	4	2.9	7	4.5	11	3.8
More than 4 years ago	2	1.5	5	3.2	7	2.4
Voluntarily underwent the HIV test or because it was required (n=293)						

Voluntarily	120	88.2	115	73.2	235	80.2
Required	16	11.8	42	26.8	58	19.8
Result of HIV last test?(n=293)						
Positive	-	-	1	0.6	1	0.3
Negative	135	99.3	155	98.7	290	99.0
Unclear / neither positive or negative	-	-	1	0.6	1	0.3
Did not receive result	1	0.7	-	-	1	0.3

3.11 Knowledge of STIs, Experienced Symptoms and Treatment in Past Year

FSWs are at high risk of STIs due to the nature of their work. To explore the knowledge of STIs, experience of symptoms, and treatment sought in the past year, the FSWs were interviewed about their understanding of STIs and whether they had experienced STI symptoms during the past year. The majority of the FSWs knew about symptoms of STIs, such as white genital discharge (80.3%), vaginal itching (77.0%), and lower abdominal pain (47.9%). When the FSWs were asked about the symptoms of STIs they had experienced in the past year, 19.5 percent had experienced lower abdominal pain and 18.2 percent reported vaginal itching. Other symptoms were also reported, such as unusual heavy, foul smelling vaginal discharge (16.6%), pain during urination (9.2%), pain during sex (8.5%), and frequent urination (7.5%). Only 19.2 percent of the participants who experienced these symptoms received medical treatment and the major locations for treatment were private entities (35.3%), NGOs (33.3%) and government agencies (31.4%). The majority of the participants (90.2%) had received treatment counselling for avoiding the problems experienced and the most common suggestions they received were to take medicine regularly (87.0%), use condoms and go for regular checkups (58.7%).

Table 16: Knowledge of STIs, Experienced Symptoms and Treatment in Past Year

Perception of STI, Reported STI symptoms and Treatment among FSWs	**6 Districts (n=210)**		**16 Districts(n=400)**		**Total N=610**	
	n	**%**	**n**	**%**	**N**	**%**
FSWs understanding STI*						
White discharge/discharge of pus/dhatu flow	148	70.5	342	85.5	490	80.3
Itching around vagina	130	61.9	340	85.0	470	77.0
Lower abdominal pain	81	38.6	211	52.8	292	47.9
Syphilis (Bhiringi)/gonorrhea	86	41.0	87	21.8	173	28.4
HIV/AIDS	119	56.7	84	21.0	203	33.3
Painful urination	13	6.2	50	12.5	63	10.3
Swelling of vagina	18	8.6	45	11.3	63	10.3
Pain in vagina	17	8.1	27	6.8	44	7.2
Unusual bleeding from vagina	32	15.2	29	7.3	61	10.0
Ulcer or sore around vagina	118	56.2	103	25.8	221	36.2

Fever	20	9.5	11	2.8	31	5.1
Burning during urination	14	6.7	11	2.8	25	4.1
Weight loss/ get thinner	19	9.0	1	0.3	20	3.3
Don't know	1	0.5	3	0.8	4	0.7
STI Symptoms Experienced in Past Year						
Pain in the lower abdomen	56	26.7	63	15.8	119	19.5
Pain during urination	34	16.2	22	5.5	56	9.2
Frequent urination	34	16.2	12	3.0	46	7.5
Pain during sex	37	17.6	15	3.8	52	8.5
Ulcer or sore in the genital area	13	6.2	5	1.3	18	3.0
Itching in or around the vagina	46	21.9	65	16.3	111	18.2
Vaginal odor or smell	33	15.7	11	2.8	44	7.2
Vaginal bleeding (unusual)	9	4.3	4	1.0	13	2.1
Unusual heavy, foul smelling vaginal discharge	47	22.4	54	13.5	101	16.6
Genital Warts	9	4.3	-	-	9	1.5
Medical treatment received on STI symptoms?(n=265)						
Yes	25	20.2	26	18.4	51	19.2
No	99	79.8	115	81.6	214	80.8
Places for treatment (n=51)						
Government agency	7	28.0	9	34.6	16	31.4
Private	7	28.0	11	42.3	18	35.3
NGO	11	44.0	6	23.1	17	33.3
Treatment counseling about how to avoid the problem?(n=51)						
Yes	23	92.0	23	88.5	46	90.2
No	2	8.0	3	11.5	5	9.8
Suggested in the treatment places*(n=46)						
Told me to use condom	18	78.3	9	39.1	27	58.7
Told me to reduce number of sexual partners	9	39.1	8	34.8	17	37.0
Told me to take medicine regularly	21	91.3	19	82.6	40	87.0
Told me not to have sexual contact during medicine taking period	4	17.4	4	17.4	8	17.4
Advised me to come for regular check up	16	69.6	11	47.8	27	58.7

*Multiple responses

3.12 Knowledge of PMTCT, ART, Viral Load Services and CHBC services

The table below illustrates the result regarding the FSW knowledge of PMTCT, ART, Viral Load Services and CHBC services. Only 16.6 percent of the women knew about PMTCT service for pregnant women. Among them, most participants (72.3%) knew a place to access PMTCT services. More than one-fourth of the FSWs (27.2%) had heard about antiretroviral therapy

(ART) services for PLHIV. Among them, most (72.3%) knew about the locations to obtain ART services. Likewise, only 13.0 percent of FSWs had heard of viral load testing services for PLHIV and 23.8 percent of FSWs mentioned that they had heard about CHBC services provided for PLHIV.

Table 17: Knowledge on PMTCT, ART, Viral Load Services and CHBC services

Knowledge on HIV service	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Heard about PMTCT for pregnant women						
Yes	32	15.2	69	17.3	101	16.6
No	178	84.8	331	82.8	509	83.4
Know the place where pregnant women can get PMTCT services (n=101)						
Yes	18	56.3	55	79.7	73	72.3
No	14	43.8	14	20.3	28	27.7
Ever heard about ART services for PLHIV						
Yes	69	32.9	97	24.3	166	27.2
No	141	67.1	303	75.8	444	72.8
Know the place where PLHIV can get ART services (n=166)						
Yes	44	63.8	76	78.4	120	72.3
No	25	36.2	21	21.6	46	27.7
Heard about viral load testing services for PLHIV						
Yes	23	11.0	56	14.0	79	13.0
No	187	89.0	344	86.0	531	87.0
Heard of CHBC services for PLHIV						
Yes	52	24.8	93	23.3	145	23.8
No	158	75.2	307	76.8	465	76.2

3.13 Exposure to Peer/Outreach Educator/Community Mobilizer

One of the major components of the ongoing STI and HIV/AIDS intervention strategies is the mobilization of outreach and peer educators (OEs and PEs) to inform the target population about preventive measures for STIs and HIV/AIDS. About 42.5 percent of FSWs reported to have met a PE/OE. During their interaction, 88.4 percent of FSWs had discussed transmission of HIV, while 79.9 percent of them discussed how STIs are/are not transmitted. Additionally, 49.0 percent of FSWs had met with an OE/PE/CM 2-3 times in last 12 months; whereas 19.7 percent had met OE/PE/CM only once.

Table 18: Meeting /Interaction of FSWs with Peer Educators/Outreach Educator

Exposure to PE/OE/CM	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Met or discussed on Interacted with PEs						
Yes	141	67.1	118	29.5	259	42.5
No	69	32.9	282	70.5	351	57.5
Interval of met or discussed/interacted with PE/OE (n=259)						
Within 3 months	97	68.8	42	35.6	139	53.7
In past 12 months	44	31.2	76	64.4	120	46.3
Activities involved with PEs or OEs *(n=259)						
Discussion on how HIV/AIDS is/isn't transmitted	127	90.1	102	86.4	229	88.4
Discussion on how STI is/isn't transmitted	112	79.4	95	80.5	207	79.9
Regular/non-regular use of condom	74	52.5	79	66.9	153	59.1
Demonstration on using condom correctly	89	63.1	69	58.5	158	61.0
STI treatment/cure after treatment	28	19.9	28	23.7	56	21.6
Counseling on reducing number of sex partner	58	41.1	16	13.6	74	28.6
Training on HIV and STI, Condom day, AIDS day, participation in discussions and interaction program	48	34.0	39	33.1	87	33.6
Number of visits in the last12 months (n=259)						
Once	27	19.1	24	20.3	51	19.7
2-3 times	53	37.6	74	62.7	127	49.0
4-6 times	39	27.7	18	15.3	57	22.0
7-12 times	15	10.6	1	.8	16	6.2
More than 12 times	7	5.0	1	.8	8	3.1

*Multiple responses

3.14 Drop In Center (DIC)

Almost Fifteen percent of FSWs had visited a DIC in the last 12 months and among them, 86.1% had visited more than once. Additionally, majority of the FSWs (80.6%) had been to a DIC to participate in discussions on HIV transmission and 71.0% were also given instructions about correct use of condoms (71.0%).

Table 19: DIC Visiting Practices of FSWs

DIC	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
DIC visit in the last 12 months						
Yes	30	14.3	63	15.8	93	15.2
No	170	81.0	333	83.3	503	82.5
Don't know	10	4.8	4	1.0	14	2.3
Activities involved at DIC?* (n=93)						
Went to collect condoms;	9	30.0	15	23.8	24	25.8
Went to learn the correct way of using condom;	20	66.7	46	73.0	66	71.0
Went to watch film on HIV/AIDS;	8	26.7	57	90.5	65	69.9
Participated in discussion on HIV transmission ;	20	66.7	55	87.3	75	80.6
Participated in discussion on STI transmission;	15	50.0	45	71.4	60	64.5
Participated in training, interaction and discussion programs on HIV/AIDS and STI	15	50.0	34	54.0	49	52.7
Went to collect IEC materials	12	40.0	6	9.5	18	19.4
Went for STI treatment	5	16.7	-	-	5	5.4
Took friend with me	1	3.3	-	-	1	1.1
Number of visit at DIC in the last 12 months?(n=93)						
Once	6	20.0	7	11.1	13	14.0
2-3 times	13	43.3	51	81.0	64	68.8
4-6 times	9	30.0	5	7.9	14	15.1
7-12 times	2	6.7	-	-	2	2.2

*Multiple response

3.15 STI Clinic Visiting Practices of FSWs

The table below presents the findings regarding FSW clinic visiting practices. The results showed that 23.8 percent of FSWs had visited a STI clinic in the last 12 months. Among them, 49.7 percent visited the STI clinic every three months. Whereas, 50.3 percent visited the STI clinic in past 12 months. During the visit, 87.6 percent conducted physical examinations for STI identification, 71.0 percent were advised to take complete and regular medicines and 53.8 did a blood test for STIs. More than half of the respondents had visited an STI clinic only once (53.1%).

Table 20: STI Clinic Visiting Practices of FSWs

STI Clinic Visiting Practices	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Visited STI clinic in the last 12 months						
Yes	95	45.2	50	12.5	145	23.8
No	115	54.8	350	87.5	465	76.2
Time interval of visiting STI Clinic (n=145)						
Within 3 months	49	51.6	23	46.0	72	49.7
In past 12 months	46	48.4	27	54.0	73	50.3
Activities Involved in STI Clinic*(n=145)						
Blood tested for ST	53	55.8	25	50.0	78	53.8
Physical examination conducted for STI identification	80	84.2	47	94.0	127	87.6
Was advised to use condom in each sexual intercourse	18	18.9	16	32.0	34	23.4
Was advised to take complete and regular medicine	74	77.9	29	58.0	103	71.0
Was suggested to reduce number of sexual partners	11	11.6	1	2.0	12	8.3
Took friend with me	10	10.5	-	-	10	6.9
Number of visits to STI clinic in the last 12 months(n=145)						
Once	49	51.6	28	56.0	77	53.1
2-3 times	38	40.0	17	34.0	55	37.9
4-6 times	7	7.4	4	8.0	11	7.6
More than 12 times	1	1.1	1	2.0	2	1.4

*Multiple responses

3.16 HTC visiting practices of FSWs

The survey showed that nearly one-third of FSWs (31.3 %) had visited HTC centers in the last 12 months. Exactly 36.6 percent of FSWs visited the HTC clinic within last three months and 63.4 percent reported that they visited within last 12 months. Among them, 96.3 percent had visited the center to give a blood sample for an HIV test. Furthermore, the survey showed that almost half of participants (52.9%) visited the clinic 2-3 times in the last 12 months. The participants who hadn't made any visits to HTC centers were asked about the possible reasons for this behavior and the most common reason (91.9%) was not knowing about the HTC center.

Table 21: HTC Visiting Practices of FSWs

HTC Visiting Practice of FSWs	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Visited HTC centers in the last 12 months						
Yes	88	41.9	103	25.8	191	31.3
No	122	58.1	297	74.3	419	68.7
Time interval of visiting HTC Clinic (n=191)						
Within 3 months	39	44.3	31	30.1	70	36.6
In past 12 months	49	55.7	72	69.9	121	63.4
Activities Involved at HTC centers* (n=191)						
Received pre-HIV/AIDS test counseling	82	93.2	82	79.6	164	85.9
Blood sample taken for HIV/AIDS test	85	96.6	99	96.1	184	96.3
Received post HIV/AIDS test counseling	74	84.1	84	81.6	158	82.7
Got information on HIV/AIDS window period	17	19.3	39	37.9	56	29.3
Received HIV/AIDS test result	80	90.9	72	69.9	152	79.6
Received counseling on using Condom correctly in each sexual intercourse	18	20.5	12	11.7	30	15.7
Took a friend with me	9	10.2	2	1.9	11	5.8
Number of visits in HTC center in the last 12 months (n=191)						
Once	42	47.7	30	29.1	72	37.7
2-3 times	35	39.8	66	64.1	101	52.9
4-6 times	11	12.5	7	6.8	18	9.4
Total	88	100.0	103	100.0	191	100.0
Reasons for not visiting HTC in the last 12 months*(n=419)						
Do not know about HTC center	105	86.1	280	94.3	385	91.9
I do not think I need to be tested	17	13.9	88	29.6	105	25.1
I have no symptoms of HIV	8	6.6	68	22.9	76	18.1
No HTC nearby	-	-	33	11.1	33	7.9
I have already tested and know my status	1	0.8	4	1.3	5	1.2
Fear that people will see me visiting HTC	3	2.5	4	1.3	7	1.7
Fear that family members/friend/ clients will know it	3	2.5	1	0.3	4	1.0

*Multiple responses

3.17 Violence

The survey assessed the events of violence experienced by the FSWs and the results have been presented in Table 22. Around two percent of the respondents had history of being beaten because of their profession. Among those respondents, more than half were beaten by their clients (53.8%) and sexual partners (53.8%). Additionally, 3.3 percent of the participants reported that they were forced to have sex against their wish in the past 12 months and the person

responsible for such activity was a sexual partner (50.0%), client (40.0%), hooligan group (15.0%), military (5.0%) and regular partner (5.0%). Moreover, about 5.6 percent of the respondents were cheated/threatened because of their profession within the last 12 months.

Table 22: Violence

Violence	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Beaten history in the past 12 months due to profession						
Yes	9	4.3	4	1.0	13	2.1
No	201	95.7	395	98.8	596	97.7
Don't remember/don't know	-	-	1	0.3	1	0.2
People responsible for beating n=13)						
Police	2	22.2	-	-	2	15.4
Military	1	11.1	-	-	1	7.7
Client	6	66.7	1	25.0	7	53.8
Sexual Partner	4	44.4	3	75.0	7	53.8
Hooligans group	-	-	2	50.0	2	15.4
Forced to have sex against will in the past 12 months						
Yes	16	7.6	4	1.0	20	3.3
No	194	92.4	394	98.5	588	96.4
Don't remember/don't know	-	-	1	0.3	1	0.2
No response	-	-	1	0.3	1	0.2
People responsible *(n=20)						
Military	1	6.3	-	-	1	5.0
Client	8	50.0	-	-	8	40.0
Regular Partner	1	6.3	-	-	1	5.0
Sexual Partner	7	43.8	3	75.0	10	50.0
Hooligans group	1	6.3	2	50.0	3	15.0
Don't remember	1	6.3	1	25.0	2	10.0
Cheated /Threatened due to profession						
Yes	27	12.9	7	1.8	34	5.6
No	183	87.1	391	97.8	574	94.1
Don't remember/don't know	-	-	1	0.3	1	0.2
No response	-	-	1	0.3	1	0.2

***Multiple responses**

3.18 Stigma and Discrimination

Perceptions of FSWs about PLHIV and the stigma associated with them were examined through a series of questions. Table 23 below mainly presents findings related to stigma and discrimination. It was noted that almost 9 out of 10 FSWs were willing to take care of an HIV positive relative, a male relative (89.7%) or a female relative (91.5%) at their home, if necessary.

About half of the FSWs (50.8%) said that if a family member had HIV, they were willing to maintain his/her confidentiality. Most of the FSWs (93.3%) would buy food from a shopkeeper who was HIV positive. Additionally, 44.4 percent of them said that PLHIV need the same care as other people living with chronic diseases. Whereas, about half of the FSWs (50.8%) said that PLHIVs need more care than people living with other chronic disease. Likewise, more than half of the FSWs (58.2%) also agreed that PLHIV should continue to participate in societal duties, unless he/she is too sick to do so.

Table 23: Stigma and Discrimination

STIGMA AND DISCRIMINATION	6 Districts (n=210)		16 Districts(n=400)		Total N=610	
	n	%	n	%	N	%
Willing to take care of HIV Positive Male Relative in the household						
Yes	197	93.8	350	87.5	547	89.7
No	13	6.2	50	12.5	63	10.3
Willing to take care of HIV positive Female Relative in the household						
Yes	200	95.2	358	89.5	558	91.5
No	10	4.8	42	10.5	52	8.5
Willing to Maintain Confidentiality of HIV Positive Family Member						
Yes	85	40.5	225	56.3	310	50.8
No	125	59.6	175	43.8	300	49.2
Buying Food from shopkeeper with HIV						
Yes	199	94.8	370	92.5	569	93.3
No	11	5.2	30	7.5	41	6.7
HIV should take same care as other chronic disease						
Same	119	56.7	152	38.0	271	44.4
More	72	34.3	238	59.5	310	50.8
Don't know	19	9.0	10	2.6	29	4.8
Continuation of work if PLHIV is not sick						
Yes	143	68.1	212	53.0	355	58.2
No	67	31.9	188	47.0	255	41.8

3.19 Prevalence

Among all respondents, 0.7 percent of FSWs were tested HIV positive. Syphilis history was found among 1.1 percent of the FSWs and 1.6 percent were diagnosed positive for active syphilis. Likewise, the prevalence of Gonorrhea and chlamydia was calculated as 0.001 percent.

Table 24: Prevalence

Prevalence	6 Districts (n=210)		16 Districts (n=400)		Total (22 Districts) (N=610)	
	n	%	n	%	N	%
HIV	-	-	4	1.0	4	0.7
Active Syphilis	4	1.9	6	1.5	10	1.6
Syphilis History	3	1.4	4	1.0	7	1.1
Gonorrhea	-	-	1	0.0025	1	0.001
Chlamydia	-	-	1	0.0025	1	0.001

CHAPTER VI: Comparison of selected Behavioral indicators of HIV and STI with the year 2003 to 2018

4: Comparative analysis of key indicators

This chapter analyzes the trend in the selected indicators by comparing the data obtained from all rounds of IBBS survey conducted in the 22 highway districts except the survey conducted in 1999. It focuses on prevalence of HIV and syphilis, comprehensive knowledge of HIV and AIDS and consistent use of condoms among FSWs with different partners.

4.1 Prevalence of HIV

The figure 5 shows trends in prevalence of HIV among FSWs in the 22 highway districts over time. The "Y" axis refers to prevalence of HIV among FSWs. HIV prevalence among FSWs soared from 2 percent in 2003 to 2.3 percent in 2009. However, HIV prevalence since then has shown a decrease, dropping to 0.7 percent in 2018. There was no significant association in trend of HIV prevalence.

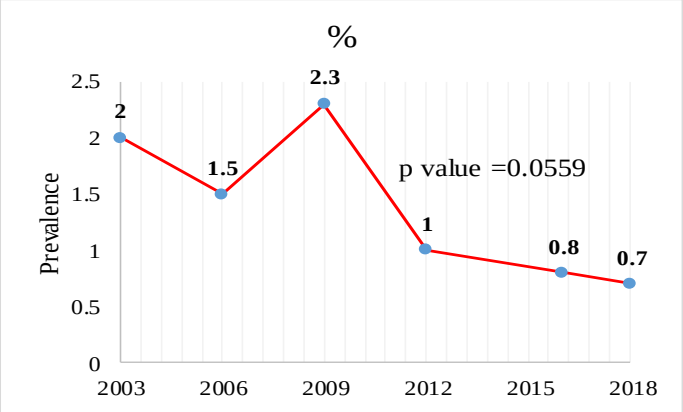

Figure 5: Prevalence of HIV

4.2 Prevalence of Syphilis

The figure 6 shows the trends of active syphilis prevalence among FSWs from 2003 to 2018. The "Y" axis refers to prevalence of HIV among FSWs. Trends in current syphilis among FSWs have shown a sharp increase from 0.3 percent in 2012 to 10.3 percent in 2016. However, syphilis prevalence significantly dropped to 1.6 percent in the year 2018. No significant association was observed in trend analysis of active syphilis.

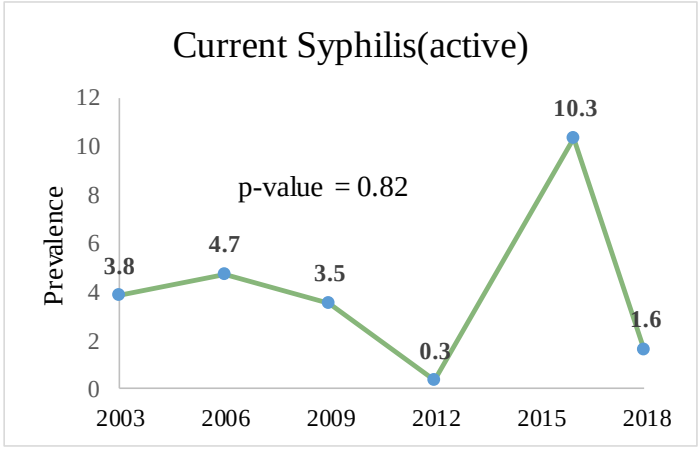

Figure 6: Prevalence of Syphilis

4.3 Prevalence of History of Syphilis

The figure 7 shows the trends of history of syphilis from 2003 to 2018. The history of prevalence of syphilis among FSWs has significantly decreased in 2003 from 10.0 percent to 0.5 percent in 2016 (p value <0.05). However, it has increased to 1.1 percent in the year 2018. Significant association was observed in trend analysis of history of syphilis.

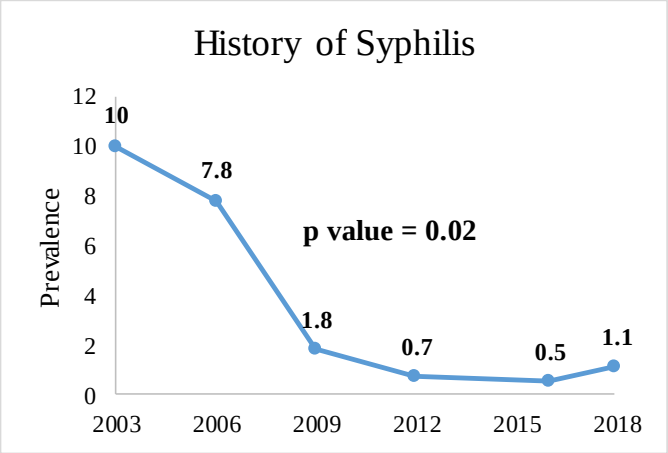

Figure 7: Prevalence of History of Syphilis

4.4 Consistent Condom Use (CCU) with different partners

The figure 8 shows trends in consistent use of condom with different partners. The lowest condoms reported between FSWs and their non-paying partners in all rounds of IBBS surveys. The use of condoms consistently with non-paying partners has decreased from 11.5 percent in 2016 to 9.3 percent in 2018. The consistent use of condoms with clients, regular clients and others has decreased slightly from 35.9 percent to 2016 to 34.8 percent in 2018. However, the use of condoms with sexual partners has increased from 28.2 percent in 2016 to 31.1 percent in 2018.

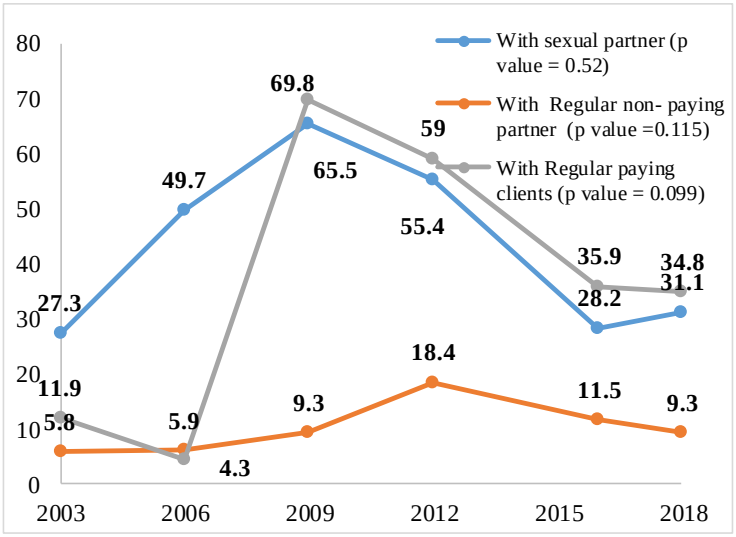

Figure 8: Consistent Condom use with different partners

4.5 Comprehensive Knowledge of HIV

Comprehensive knowledge was measured by correct responses to knowledge of abstinence (A), being faithful (B), consistent and correct condom use for infection prevention (C), and of three misconceptions related to food sharing (D), mosquito bite (E), and infection of healthy looking person (F). The figure 9 shows the trends of comprehensive knowledge of HIV and AIDs among FSWs. The percent of FSWs who were aware of all three ABCs has reduced drastically from 60 percent in 2006 to 28.9 percent in 2018.

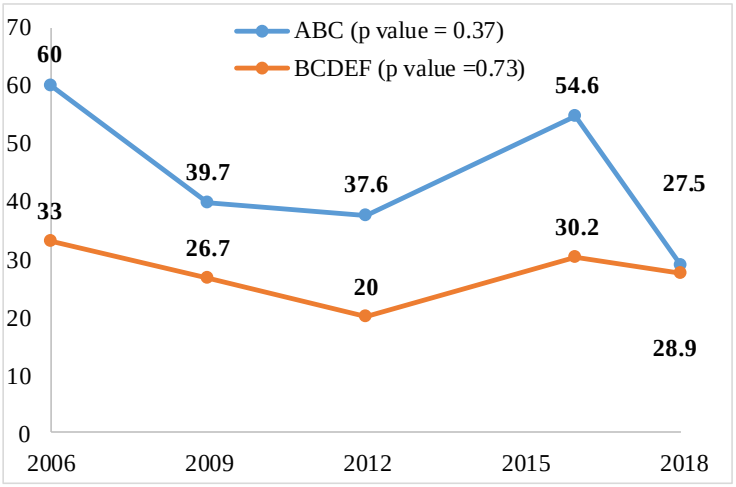

Figure 9: Comprehensive Knowledge of HIV

Similarly, comprehensive knowledge about HIV and AIDS (BCDEF) also decreased from 33 percent in 2006 to 27.4 percent in 2018. However, no significant change was observed in trend analysis of comprehensive knowledge of HIV.

4.6 Exposure to programs related to HIV

The figure 10 shows the trends of exposure to programs related to HIV among FSWs between 2006 and 2018. Data shows that FSWs who interacted with an outreach educator (OE) or peer educator (PE) or community motivator (CM) decreased from 47 percent in 2012 to 42.5 percent in 2018. The ratio of FSWs visiting drop in centers (DICs) has decreased significantly from 44.8 percent in 2012 to 15.2 percent in 2018. Moreover, FSWs visiting HTC centers decreased from 45.9 percent in 2012 to 31.3 (191/610) percent in 2018.

FSWs visiting STI clinics remained very low in all rounds of IBBS surveys (31.1% in 2006, 45.3% in 2009, 44.9% in 2012, 37.3% in 2016 and 23.8% in 2018). The FSWs visiting STI clinics have decreased throughout the years and the rate observed was lower than it was in the year 2016. No significant association was observed in trend analysis of exposure of FSWs to programs related to HIV.

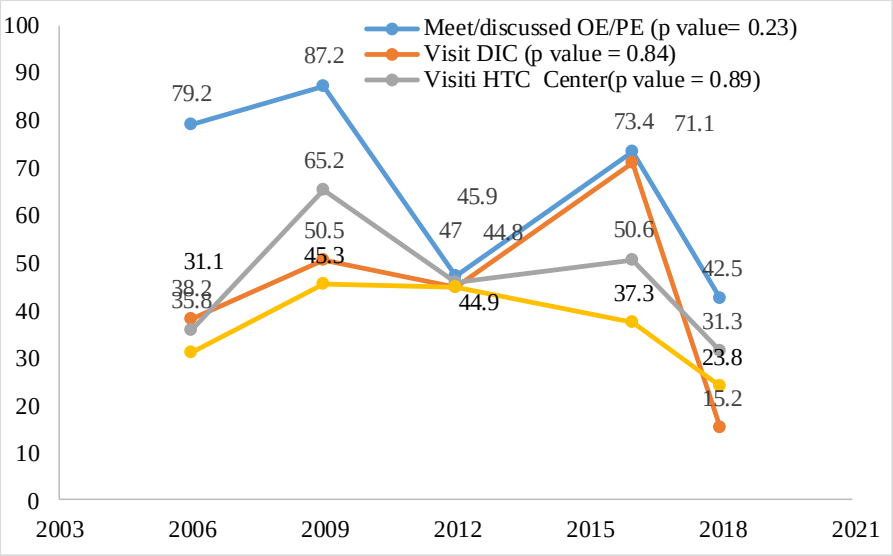

Figure 10: Exposure to programs related to HIV

CHAPTER V: CONCLUSION AND RECOMMENDATION

Summary of Major Findings and Recommendations

This section presents a brief discussion on major findings of the IBBS survey among FSWs in the survey districts. This is the seventh round of the IBBS survey among FSWs in the 22 Highway Districts of Nepal. The objectives of the survey was to determine trend of prevalence of HIV and STIs and to assess HIV and STI-related risk behaviors among FSWs in the 22 Terai Highway Districts. This section briefly summarizes the key findings of the biological and behavioral data and other indicators based on the scope of the survey.

FSWs were younger, literate, and married

Most of the FSWs were below 34 years old (65.8%) and had obtained a basic level of education (36.2%). The representation of disadvantaged Janajatis (38.9%) and Dalit (27.7%) was greater, in comparison to other ethnic groups. Most of the FSWs were married (77.5%) and among them, 68.3 percent had gotten married at the age group of 15-19 years.

Child birth, miscarriage and abortion were common among FSWs

Among FSWs who were married, the majority (81.3 %) had ever given birth to a child. Nineteen percent had experienced a miscarriage of a child and 34.6 percent had ever terminated/aborted a pregnancy or pregnancies deliberately. Most of the FSWs (80.8%) had no desire for children in the future.

Consistent use of condoms with different partners was considerably low

The practice of using condoms consistently with sexual partner was observed to be considerably lower (31.1%), regular non-paying partners including husbands (9.3%) and paying partners (34.8%). Moreover, there was a certain proportion of FSWs who had never used a condom with clients (11.3%), regular non-paying partners (46.8%) and paying partners (10.2%).

Comprehensive knowledge of HIV is considerably low; Most of the FSWs were aware of HIV testing centers and have undergone HIV testing

Exactly 28.9 percent of FSWs correctly identified all three major knowledge indicators (i.e. ABC) as HIV preventive measures. In addition, 27.4% percent of FSWs were aware of all five major indicators (i.e. BCDEF). The trend analysis revealed that comprehensive knowledge (ABC) and knowledge of HIV and misconceptions (BCDEF) have significantly decreased from recent rounds of IBBS surveys. A high proportion of FSWs (77.4%) knew about a confidential HIV testing facility in the community and about 66.9 percent had ever undergone HIV testing.

Physical violence against FSWs was higher by clients. Whereas, sexual violence against FSWs was higher by sexual partner.

More than half of the FSWs who had been beaten in past 12 months, stated client and sexual partner as the responsible one. It was found that 5.6% of FSWs were either cheated/threatened due to their profession.

Exposure to OE/PE, DIC, STI clinic and HTC was considerably lower and needs to be improved

Nearly half (42.5%) of the FSWs had met with a PE/OE and only 15.2 percent had visited a DIC in the past year. Additionally, 23.8 percent of FSWs had visited a STI clinic in the past year and 31.3 percent had visited an HTC center. The proportion of FSWs who visited an OE/PE, DIC, STI clinic and HTC has significantly decreased throughout the years.

Knowledge of PMTCT, ART, Viral Load and CHBC Services was lower and needs to be scaled up

Only 16.6 percent of FSWs had heard about prevention of mother to child transmission (PMTCT) services and 27.2 percent of FSWs had heard about antiretroviral therapy (ART) services for PLHIV. Additionally, 23.8 percent of FSWs had heard about CHBC services for PLHIV.

Stigma among PLHIV is considerably low

The findings revealed that most FSWs were willing to take care of an HIV positive relative, a male relative (89.7%) or a female relative (91.5%) at their home if necessary. Half of the FSWs (50.8%) also said that if a family member had HIV, they would talk about it rather than keeping it a secret. Most of the FSWs (93.3%) expressed no issues in buying food from an HIV positive shopkeeper. Additionally, 44.4 percent of FSWs said that PLHIV need the same care as those living with any other chronic disease. Whereas, more than half of the FSWs (50.8%) said that PLHIV need more care than those living with any other chronic disease. A majority of FSWs (58.2%) agreed that PLHIV should continue to participate in societal duties if he/she is not very sick.

HIV prevalence has increased in comparison to previous year. However, syphilis prevalence decreased in same period.

HIV prevalence among FSWs was 0.7 percent. These results suggest trends in HIV prevalence have decreased from 2 percent in 2003 to 0.7 percent in 2018. Syphilis history was detected among seven FSWs (1.1%). History of syphilis has also declined from 10 percent to 0.5 percent in 2016 and has again risen slightly to 1.1 percent in 2018.

The trend of active syphilis among FSWs has declined from 10.3 percent in 2016 to 1.6 percent in 2018.

Program Implications and Recommendations

Based on the findings from this survey, the following implications and recommendations are discussed below:

- Although the prevalence of HIV is on a decreasing trend in recent rounds of IBBS surveys, there are still a significant proportion of FSWs suffering from HIV. ***Programs are needed to target FSWs living with HIV and bring them in for HIV treatment.***
- The incidence of syphilis has uneven over time. ***Comprehensive and focused programming on STI awareness needs to be prioritized and implemented in terai highway region.***
- Use of condom is still relatively low among FSWs with non-paying partners. ***Condom negotiation skills need to be improved among FSW with non-paying partner***.
- The survey found that there is a decrease in uptake of HIV prevention interventions (PE/OE, DICs, HTC clinics etc.) than previous rounds of IBBS surveys**.** ***Incessant delivery of Targeted interventions needs to be prioritized and implemented in survey area.***
- Comprehensive knowledge and understanding regarding HIV has decreased in comparison to previous years. ***Comprehensive materials promoting knowledge and understanding of HIV should be communicated and promoted through multiple channels including social media.***
- NGO/health workers, health post and other public health service centers were frequently reported as the most convenient places/person(s) for obtaining free condoms and educational materials. ***Free condom distribution through these sites should be continued and promoted.***
- The practice of seeking STI treatment among FSWs is not common. Therefore, ***behavior to seek treatment should be promoted among those FSWs who are engaged in risky sexual behaviors or experiencing STIs.***

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ANNEXURE

Annex 1 Formula for Sample Size Calculation for the IBBS Surveys

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

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

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

P1 = the estimated number of an indicator measured as a proportion at the time of the first survey or for the control area

P2 = the expected level of the indicator either at some future date or for the project area such that the quantity (P2P1) is the size of the magnitude of change it is desired to be able to detect

Zα= the Z score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size (P2P1) would not have occurred by chance (α– the level of statistical significance), and

Zβ= the Z score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P1P2) if one actually occurred (β– statistical power).

ANNEX 2: QUESTIONAIRE

Integrated Biological and Behavioral Surveillance Survey among Female Sex Workers in 22 Terai Highway Districts

CONFIDENTIAL

FSW Questionnaire

Namaste! My name is ....., I am here to collect data for a research survey. This survey is being conducted by …… for National Centre for AIDS and STD Control (NCASC), Ministry of Health and Population. As explained in the consent taking process during this data collection, I will ask you some questions that will be about sexual behavior, use and promotion of condoms, STI/HIV/AIDS, drugs and migration pattern. I believe that you will provide correct information. We will also draw a few drops of blood for HIV testing. If you have any STI symptoms, we will provide treatment free of charge. The information given by you will be strictly treated as confidential. Nobody will know whatever we talk because your name will not be mentioned in this form and blood sample. It will take about 60 minutes to complete the interview and blood sample collection.

It depends on your willingness to participate in this survey or not. You are free to quit the survey any time you want to. You do not have to answer questions that you do not want to answer. But I hope, you will participate in this survey and make it success by providing correct answers of all the questions.

Would you be willing to participate?

1. Yes 2. No

Signature of Interviewer::_____ Date: 2018/____/____

Establishment based: **1** Street based: **2**

Definition of Respondent

"Women aged 16 years and above reporting having been paid in cash or kind for sex with a male within the last 6 months."

Has someone interviewed you from …… with a questionnaire in last few weeks?

1. Yes 2. No (Continue Interview)

↓

When?

_____Days ago **(STOP INTERVIEW)**

Name of interviewer: _____ Code No. of Interviewer: _____

1.0 GENERAL INFORMATION

Q. N.	Questions and Filters	Coding Categories	Skip to
101	Respondent ID No.	_____	
101.1	Write down how you contacted the respondent?	Met personally..... 1 Through known FSW..... 2 Through PE..... 3 Through OE/CM……..... 4 Other (Specify)…… 96	
102	Where is the respondent (sex worker) based?	Disco ..... 1 Dance Restaurant ..... 2 Cabin Restaurant..... 3 Call Girl..... 4 Massage Parlor..... 5 House Settlement ..... 6 Bhatti Pasal ..... 7 Street/Park..... ……..….8 Garment/Carpet Factory…… 9 Restaurant/Tea shop..... 10 Dohori Restaurant ..... 11 Hotel/Lodge ..... 12 Brick Factory……13 Other (Specify)……..96	
103	Interview Starting Time: Interview Completion Time (fill at the end of interview)	Hr: ☐ Min: ☐☐ Hr: ☐☐ Min: ☐☐	
104	Where were you born?	District_____	
105	Where do you live now?	District _____	
106	How long have you been living continuously at this location?	Month..... Always (since birth) .....0→ 201 Since less than a month..... 995	
107	Before you moved here, where did you live?	District _____	

2.0 PERSONAL INFORMATION

Q. N.	Questions and Filters	Coding Categories	Skip to
201	How old are you? **(If less than 16 years, stop interview)**	Age _____ ☐☐ **(Write the completed years)**	
202	What is your caste? ***(Specify Ethnic Group/Caste)***	Ethnicity/Caste_____ (Specify) Code No: ☐☐	
203	What is your educational status? *Code:* (Circle '00' if illiterate, '19' for the literate without attending the school, and write exact number of the completed grade)	Illiterate.....00 Literate ..... 19 SLC Passed……..… 13 Grade…… ☐☐ **(Write the completed grade)** Intermediate passed…… 14 Graduated and above……..….. 15	
204.	What is your present marital status?	Married.……1 Divorced/Permanently Separated .....2 Widow .....3 Never married .....4 →	204.2
	At what age were you married for the first time?	Age _____ **(Write the completed years)**	
204.1	How old were you when you got divorced/separated/widowed?	Age _____ **(Write the completed years)**	
204.2	Who are you living with now? ***(Multiple answers. DO NOT READ the possible answers)***	Family..... 1 Male friend ..... 2 Relatives ..... 3 Other females ..... 4 Alone ..... 5 Others (Specify)_____96	
205.1	Have you ever given birth to children? (Include all live births even those who died after sometime, and also still births)	Yes ..... 1 No..... 2 →	205.3
205.2	If yes, how many were live births? (Include all live births even those who died after sometime but don't include still births)	Sons .....1 Daughters 2	
205.3	Have you had miscarriage during your any pregnancies?	Yes ..... 1 No..... 2 →	205.5
205.4	If yes, total number of miscarriage	# Miscarriages….....	
205.5	Have you done termination/abortion of your any pregnancies?	Yes ..... 1 No..... 2 →	205.8
205.6	If yes, total number of pregnancy terminated/aborted	Terminations..... ☐☐	

Q. N.	Questions and Filters	Coding Categories	Skip to
205.7	Who assisted you at last abortion?	Doctor…….....1 Nurse…….....2 Midwife…….....3 TBA…….....4 Traditional healer…….....5 Friend……..…….....6 Nobody…….…….....7 Others (Specify) …….…….....96 Don't know……..….....98	
205.8	Do you want to have a child in future?	In the next 6 months..... 1 In the next two years.....2 No.....3	
205.9	Are you currently using any method that women or men can use to avoid pregnancy?	Yes ..... 1 No 2	
206	Are there people who are dependent on your income?	Yes ..... 1 No ..... 2 →	207
206.1	How many are dependent on your income? **(Adults are those who have completed 18 years)**	Adults…… Children.	
207	How long have you been exchanging sexual intercourse for money or other things? **(If answer is less than 6 months stop interview)**	Months…… Don't know..... 98	
207.1	Did you have any sexual intercourse during past 12 months?	Yes..... 1 No..... 2 →	**Stop Interview**
208	Have you ever been engaged in this profession in other locations too?	Yes.....1 No..... 2	
209	Have you ever crossed Nepal to India for as sexual activity?	Yes ……..1 No…….2	
210	What is your average income per sexual transaction? **[Note: If there is '0' in both cash and gift equivalent, probe for the reasons]**	Cash……Rs. Gift equivalent to……Rs. Others (Specify) …… 96 Total……Rs.	
211	Do you have any other work besides sex work?	Yes ..... 1 No..... 2 →	301
211.1	What are the other works in which you are involved?	Waiter .....1 Housemaid/restaurant employee (dish cleaner, cook, washerwoman, etc.) ..... 2 Wage laborer..... 3 Own restaurant/bhatti pasal ..... 4 Masseuse..... 5 Dancer..... 6 Business (retail store, fruit shop etc.) .. 7 Knitting /tailoring ..... 8 Peer educator ..... 9 Job (teacher, peon etc) ..... 10 Others (Specify)_____96	

Q. N.	Questions and Filters	Coding Categories	Skip to
211.2	What is your average weekly income from the above-mentioned sources?	_____Rupees	

3.0 INFORMATION ON SEXUAL INTERCOURSE

Q. N.	Questions and Filters	Coding Categories	Skip to
301	How old were you at your first sexual intercourse?	Year's old _____ Don't know/Can't recall 98	
302	With how many different sexual partners in total have you had sex during the past week? **(Include both paid and unpaid sex)**	Number..... ☐☐ Don't know.....98	
302.1	With how many different sexual partners (not clients) in total have you had **unpaid** sex during the past week?	Number..... ☐☐ Don't know.....98	
302.2	With how many different clients in total have you had sex **(paid)** during the past week?	Number..... ☐☐ Don't know.....98	
303	Usually, how many clients visit you in a day?	Number..... ☐☐	
303.1	With how many clients did you have sexual intercourse yesterday?	Number..... ☐☐	
304	In the past month, with which profession's client did you mostly have sex? **(Encircle three most reported types of client. DO NOT READ the possible answers**)	Bus, truck or tanker worker.....1 Taxi, jeep, microbus or minibus worker .....2 Industrial/wage worker .....3 Police.....4 Soldier/Army.....5 Student .....6 Rickshawala .....7 Service holder.....8 Businessmen.....9 Mobile Businessmen.....10 Migrant worker/lahurey .....11 Contractor .....12 Foreigner (Indian and other Nationals) .....14 Farmer.....15 Others (Specify) _____.96 Don't know 98	
305	How many days in a week (on an average) do you work as a sex worker?	Days..... ☐☐	

4.0 USE OF CONDOM AND INFORMATION ON SEX PARTNERS

Condom use with Sexual Partner

Q. N.	Questions and Filters	Coding Categories	Skip to
401	The last time you had sex with your client, did he use a condom?	Yes ..... 1 No ..... 2 →	401.2
401.1	Who suggested condom use at that time?	Myself ..... 1 My Partner ..... 2 → Don't know 98	402
401.2	Why didn't your client use a condom at that time? **(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 Used other contraceptive ..... 5 Didn't think it was necessary ..... 6 Didn't think of it ..... 7 Client offered more money ..... 8 Didn't know / not aware about condom ..... 9 Other (Specify) _____ ..... 96 Don't know 98	
402	How often did your clients use condom over the past 12 months?	All of the time ..... 1 → Most of the time ..... 2 Some of the time ..... 3 Rarely ..... 4 Never 5	403
402.1	Why didn't your client 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 Used other contraceptive ..... 5 Didn't think it was necessary ..... 6 Didn't think of it ..... 7 Client offered more money ..... 8 Didn't know / not aware about Condom ..... 9 Other (Specify) _____ ..... 96 Don't know 98	

Condom use with Regular non- paying partner (Including Husband)

Q. N.	Questions and Filters	Coding Categories	Skip to
403	Do you have any client who visits you on regular basis?	Yes ..... 1 No ..... 2 →	406
404	Did your regular client use condom in the last sexual contact with you?	Yes ..... 1 No ..... 2 →	404.2

Q. N.	Questions and Filters	Coding Categories	Skip to
404.1	Who suggested condom use at that time?	Myself ..... 1 My Partner ..... 2 Don't know 98	→ 405
404.2	Why didn't your regular client use a condom at that time?	Not available..... 1 Too expensive..... 2 Partner objected ..... 3 I didn't like to use it..... 4 Used other contraceptive..... 5 Didn't think it was necessary ..... 6 Didn't think of it..... 7 Client offered more money ..... 8 Didn't know / not aware about condom..... 9 Other (Specify)_____ 96 Don't know 98	
405	How often did your regular clients use condom with you over the past 12 months?	All of the time..... 1 Most of the time ..... 2 Some of the time ..... 3 Rarely ..... 4 Never..... 5	→ 406
405.1	Why didn't they 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 Used other contraceptive..... 5 Didn't think it was necessary ..... 6 Didn't think of it..... 7 Client offered more money ..... 8 Other (Specify)_____96 Don't know 98	
405.1.1	If a client (regular or casual) refuses to use a condom, what do you usually do?	Refuses to have sex with the client…...1 Forces the client to use a condom…….2 Explains the advantages of condoms…3 Still has sex with the client……..4 Only takes medication/treatment after sex…….5 Other (Specify)_____96 Don't know.....98	
405.1.2	Whether this happened in the past 30 days?	Yes…….1 No……..…2	

Condom use with Paying Partner/Clients

Q. N.	Questions and Filters	Coding Categories	Skip to
406	Did you have sexual intercourse with your clients in past six months?	Yes ..... 1 No 2	→ 409
407	The last time you had sex with client staying to gether, did your sex partner use a condom?	Yes ..... 1 No 2	→ 407.2

Q. N.	Questions and Filters	Coding Categories	Skip to
407.1	Who suggested condom use that time?	Myself..... 1 My Partner ..... 2 Don't know..... 98	→ 408
407.2	Why didn't your partner use a condom that time?	Not available..... 1 Too expensive..... 2 Partner objected ..... 3 I didn't like to use it..... 4 Used other contraceptive..... 5 Didn't think it was necessary ..... 6 Didn't think of it/forgot..... 7 Other (Specify)_____96 Don't know 98	
408	How often did all of your paying partners use condoms over the last 12 months?	All of the time ..... 1 Most of the time ..... 2 Some of the time ..... 3 Rarely ..... 4 Never..... 5	→ 408.2
408.1	Why didn't they 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 Used other contraceptive..... 5 Didn't think it was necessary ..... 6 Didn't think of it..... 7 Other (Specify) ..... 96 Don't know 98	
408.2	If a client (regular or casual) refuses to use a condom, what do you usually do?	Refuses to have sex with the client…..1 Forces the client to use a condom……2 Explains the advantages of condoms...3 Still has sex with the client……..4 Only takes medication/treatment after sex…….…5 Other (Specify)_____96 Don't know.....98	
408.3	In the past 6 months, how often did you have sex without using a condom for more money?	Always……..……1 Most of the time…….……2 Sometimes…….……3 Never…….……4 Don't remember/know…….…….98 Didn't answer……99	

Condom Accessibility

Q. N.	Questions and Filters	Coding Categories	Skip to
409	Do you usually carry condoms with you?	Yes ..... 1 No..... 2	
410	How do you usually obtain condoms? **(Buy, obtain free of cost or both ways)**	Always free of cost ..... 1 Purchase..... 2 Obtain both ways ..... 3 Condom never used 4	 → 410.3 → 501
410.1	From where do you often obtain free condoms? **(Multiple answers. DO NOT READ the possible answers)**	Health Post/Health Center ..... 1 Hospital..... 2 NGOs clinics..... 3 Peers/friends.. ..... 4 Community events ..... 5 NGO/Health Workers/Volunteers..... 6 Client/other sex partner ..... 7 Massage parlor..... 8 Hotel/lodge/restaurant..... 9 Bhatti pasal……10 Others (Specify)_____ 96	
410.2	Which would be the most convenient place/s for you to obtain free condoms? (Multiple answers. DO NOT READ the possible answers)	Health Post/Health Center ..... 1 Hospital..... 2 NGOs clinics..... 3 Peers/friends.. ..... 4 Community events ..... 5 NGO/Health Workers/Volunteers..... 6 Client/other sex partner .....7 Massage parlor..... 8 Hotel/lodge/restaurant..... 9 Bhatti pasal ..... 10 Others (Specify)_____96	
410.3	In the last 12 months, have you been given condoms by any organizations?	Yes - free ..... 1 Yes – on cash ..... 2 No 3	

5.0 Violence

Q. N.	Questions	Coding Categories	Skip to
501.	In the past 12 months, were you ever beaten due to your profession?	Yes..... 1 No..... 2 Don't remember/don't know .....98 No response 99	Q.503
502.	Who was/were the people who beat you? **(Multiple answers possible don't read possible answer)**	Police .....1 Military .....2 Client.....3 Regular Partner.....4 Sexual Partner.....5 Hooligans group .....6 Others (Specify)_____ 96 Don't remember 98	

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
503.	In the past 12 months, were you forced to have sex with someone against your wishes?	Yes..... 1 No..... 2 Don't remember/don't know .....98 No response.....99	→ If response 2, 98,99 skip to 505

504	Who were these people who forced you to have sex against your will? **(Multiple answer possible)**	Police .....1 Military.....2 Client .....3 Regular Partner.....4 Sexual Partner .....5 Hooligans group .....6 Others (Specify)_____.....96 Don't remember.....98 No response.....99	
505	In the past 12 months, have you been cheated /threatened due to your profession?	Yes .....1 No.....2 Don't remember.....98 No response.....99	

6.0 AWARENESS OF HIV/AIDS

Knowledge, Opinion and Misconception about HIV/AIDS

Q. N.	Questions and Filters	Coding Categories	Skip to
601	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	
602	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	
603	Do you think a healthy-looking person can be infected with HIV?	Yes ..... 1 No ..... 2 Don't know..... 98	
604	Can a person get the HIV virus from mosquito bite?	Yes ..... 1 No ..... 2 Don't know..... 98	
605	Can a person get HIV by sharing a meal with an HIV infected person?	Yes ..... 1 No ..... 2 Don't know..... 98	
606	Can a pregnant woman infected with HIV/AIDS transmit the virus to her unborn child?	Yes ..... 1 No ..... 2 Don't know..... 98 →	608

607	What can a pregnant woman do to protect her child from HIV transmission?	Cannot do anything/cannot protect the child ..... 0 Take Medication ..... 1 Abort the child ..... 2 Other (Specify)_____96 Don't know..... 98	
608	Can a woman with HIV/AIDS transmit the virus to her new-born child through breastfeeding?	Yes ..... 1 No 2	
609	Can people protect themselves from HIV virus by abstaining from sexual intercourse?	Yes ..... 1 No 2	
610	Can a person get HIV by holding an HIV infected person's hand?	Yes ..... 1 No 2	
611	Can a person get HIV, by using previously used needle/syringe?	Yes ..... 1 No 2	
612	Can blood transfusion from an infected person to the other transmit HIV?	Yes ..... 1 No 2	
613	Is it possible in your community for someone to have a confidential HIV test?	Yes ..... 1 No 2	
613.1	Do you know where can you go for HIV testing?	Yes ..... 1 → 701	
614	Have you ever had an HIV test?	Yes ..... 1 → 701	
614.1	When did you have your most recent HIV test?	Within 6 months…….1 Between 1-2 years……... 2 Between 2-4 years ..3 More than 4 years ago……4	
615	Did you voluntarily undergo the HIV test or because it was required?	Voluntarily…….1 Required…… 2	
616	What was the result of your last test?	Positive..... 1 Negative .....2 → 701 Unclear / neither positive or negative ...3 Did not receive result..... 4 → 619 Don't know..... 98 Refuse to answer……99	
617	After you tested HIV positive, were you linked with HIV care by HTC service?	Yes ..... 1 → 620 No..... 2 Don't know ..... 98 Refuse to answer..... 99	

618	What is the main reason you have never went for HTC care after you tested positive?	Feel healthy ..... 1 Stigma, don't want others to know .. 2 Cost .....3 Poor attitude of health care workers ..4 Waiting time or clinic hours not good5 Other ..... 98 Don't know .....97 Refuse to answer..... 99	620
619	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	
620	After you tested positive, have you gone for HIV treatment in the past 12 months?	Yes……1 → 701 No…….2	
620.1	Why didn't you go to HIV treatment care even after knowing you were HIV positive?	Felt I was healthy……...1 Others might know……..2 Had to pay…….……..….3 Bad attitude of healthcare provider…..4 Long waiting time/Could not manage with Clinic opening time…….…….5 Others (Specify)……..……96 Don't know…….……98 No response…….99	

7.0 PROMOTION OF CONDOM

Knowledge of and Participation in STI and HIV/AIDS Programs

Q. N.	Questions and Filters	Coding Categories	Skip to
701	Have you met or discussed or interacted with peer educators (PE) or outreach educators (OE)?	Yes ..... 1 No ..... 2 → 704 No response 99	
701.1	If yes, when did you met or discussed or interacted with peer educators (PE) or outreach educators (OE)?	Within 3 months……..1 In past 12 months……2	

Q. N.	Questions and Filters	Coding Categories	Skip to
702	When you met/discussed/interacted with PE or OE, what activities did they involve you in? **(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 Regular/non-regular use of condom . 3 Demonstration on using condom correctly ..... 4 STI treatment/cure after treatment…. 5 Counseling on reducing number of sex partner..... 6 Training on HIV and STI, Condom day, AIDS day, participation in discussions and interaction programs ..... 7 Others (Specify)_____96	
703	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	
704	Have you visited or been to any drop in center (DIC) in the last 12months?	Yes ..... 1 No ..... 2 →	707
704.1	If yes, when did you visit in DIC?	Within 3 months……..1 In past 12 months……2	
705	What did you do at DIC? **(Multiple answers. do not read the possible answers)**	Went to collect condoms ..... 1 Went to learn the correct way of using condom. ..... 2 Went to watch film on HIV/AIDS…3 Participated in discussion on HIV transmission… …..... 4 Participated in discussion on STI transmission…. ..... 5 Participated in training, interaction and discussion programs on HIV/AIDS and STI…… …... 6 Went to collect IEC materials..... 7 Went for STI treatment ..... 8 Took friend with me…… ..... 9 Other (Specify)_____96	
706	How many times have you visited such 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	
707	Have you visited any STI clinic in the last 12 months?	Yes ..... 1 No ..... 2 →	710
707.1	If yes, when did you visit STI Clinic?	Within 3 months……..…..1 In past 12 months……..……2	

Q. N.	Questions and Filters	Coding Categories	Skip to
708	What did you do at such STI clinics? **(Multiple answers. do not read the possible answers given below)**	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	
709	How many times have you visited such STI clinic in the last 12 months?	Once ..... 1 2-3 times ..... 2 4-6 times ..... 3 7-12 times ..... 4 More than 12 times 5	
710	Have you visited any voluntary counseling and testing (HTC) centers in the last 12 months?	Yes ..... 1 No ..... 2 →	712.1
710.1	If yes, when did you visit HTC Clinic?	Within 3 months……..1 In past 12 months……2	
711	What did you do at such HTC centers? **(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	
712	For how many times have you visited HTC center in the last 12 months?	Once..... 1 2-3 times ..... 2 4-6 times ..... 3 7-12 times ..... 4 More than 12 times 5	Q. 713

Q. N.	Questions and Filters	Coding Categories	Skip to
712.1	If not visited HTC in the last 12 months, what is the reason for this? **(Multiple answers. DO NOT READ the possible answers)**	Do not know about HTC center..... 1 I do not think I need to be tested ..... 2 I have no symptoms of HIV ..... 3 No HTC near by..... 4 I have already tested and know my status ..... 5 No money to go to HTC center……6 Fear that people will see me visiting HTC ..... 7 Fear that family members/friend/ clients will know it..... 8 Due to discriminatory behaviors of health workers…… 9 Others (Specify)_____96	
713	Have you ever heard about prevention of mother to child transmission services (PMTCT) for pregnant women?	Yes.....1 No .....2 No response ……..99	714
713.1	Do you know from where pregnant women can get PMTCT services?	Yes.....1 No .....2 No response ……..99	
714	Have you ever heard about anti-retroviral therapy (ART) services for HIV positive individuals?	Yes.....1 No .....2 No response ……..99	715
714.1	Do you know from where HIV positive individuals can get ART services?	Yes.....1 No .....2 No response ……..99	
715	Have you heard of viral load testing services for HIV positive individuals ?	Yes.....1 No .....2 No response ……..99	716
715.1	Do you know from where HIV positive individuals can get viral load testing services?	Yes.....1 No .....2 No response ……99	716
715.2	If Yes, please specify	_____	
716.	Have you heard of any Community Home Based Care (CHBC) services that are provided for HIV Positive people?	Yes.....1 No 2	

8.0 STI (SEXUALLY TRANSMITTED INFECTION)

Q. N.	Questions and Filters	Coding Categories	Skip to

801	Which diseases do you understand by STI? **(Multiple answers. DO NOT READ the possible answers)**	White discharge/discharge of Pus/dhatu flow ..... 1 Itching around vagina ..... 2 Lower abdominal pain ..... 3 Syphilis (Bhiringi)/gonorrhea ..... 4 HIV/AIDS ..... 5 Painful urination…….. ..... 6 Swelling of vagina ..... 7 Pain in vagina ..... 8 Unusual bleeding from vagina ..... 9 Ulcer or sore around vagina…. ..... 10 Fever ..... 11 Burning during urination ..... 12 Weight loss/ get thinner ..... 13 Don't know ..... 98 Other (Specify)_____96	
802			

Symptoms	Yes	No
1. Pain in the lower abdomen	1	2
2. Pain during urination	1	2
3. Frequent urination	1	2
4. Pain during sex	1	2
5. Ulcer or sore in the genital area	1	2
6. Itching in or around the vagina	1	2
7. Vaginal odor or smell	1	2
8. Vaginal bleeding (unusual)	1	2
9. Unusual heavy, foul smelling vaginal discharge	1	2
10. Genital Warts	1	2
96. Others (Specify) _____	1	2

803	Have you gone through medical treatment for any of these symptoms?	Yes ..... 1 No ..... 2 →	901
804	Where did you go for treatment?	Government facility…….1 (specify)_____ Private facility……..2 (specify)_____ NGO…….3 (specify)_____ Others…….96 (specify)_____	
805	Did anyone from the place where you went for treatment counsel you about how to avoid the problem?	Yes ..... 1 No ..... 2 →	901
806	What did he/she tell you? **(Multiple answers, DONOT READ the possible answers)**	Told me to use condom..... 1 Told me to reduce number of sexual partners ..... 2 Told me to take medicine regularly 3 Told me not to have sexual contact during medicine taking period ..... 4 Advised me to come for regular check up ..... 5 Others (Specify)_____96	

Use of alcohol, Illicit Drugs and Injection

Q. N.	Questions and Filters	Coding Categories	Skip to
901	During the last 30 days how often did you have 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	
901.1	How often are you drunk when you have sex (anal/vaginal) with clients in last 6 months?	Always…….....…1 Most of the time….....……2 Sometimes…….....……3 Never…….....……4 don't know …….....……98 no answer …….....……99	
902	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	1001
903	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	907
904	Are you currently injecting drugs?	Yes ..... 1 No 2	
905	Have you ever exchanged sex for drugs?	Yes ..... 1 No 2	
906	Have you ever exchanged sex for money so that you can buy drug?	Yes ..... 1 No 2	
907	To your knowledge, have any of your sex partners injected drugs?	Yes ..... → 1 No 2	

10.0 STIGMA AND DISCRIMINATION

Q. N.	Questions and Filters	Coding Categories	Skip to
1001	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	
1002	If a female relative of yours gets HIV, would you be willing to take care of her in your household?	Yes ..... 1 No ..... 2 Don't know..... 98	
1003	If a member of your family gets HIV, would you want it to remain a secret?	Yes ..... 1 No ..... 2 Don't know..... 98	
1004	If you knew a shopkeeper or food seller had HIV, would you buy food from him/her?	Yes .....1 No .....2 Don't know.....98 No response 99	

1005	Do you think a person with HIV should get the same, more or less health care than someone with any other chronic disease?	Same .....1 More .....2 Less .....3 Don't know.....98 No response 99	
1006	If one of your colleagues has HIV but he/she is not very sick, Do you think he/she should be allowed to continue working?	Yes.....1 No .....2 Don't know.....98 No response 99	

ANNEXURE 3: INDICATORS

Indicators	Indicator Titles		Formula
3.3A	Percentage of sex worker who are living with HIV	**0.7% (n=4) (N=610)** Under 25 yrs= 0% (0/155) 25 yrs and above = 0.9% (4/455)	Numerator: Number of sex workers who test positive for HIV Denominator: Number of sex workers tested for HIV
3.4A	Percentage of sex workers who know their HIV status	**(61.8% (n=181) N=293** Under 25 yrs= 71.7% (38/53) 25 yrs and above= 63.8% (153/240)	Numerator(A+B): Number of sex workers who know their HIV status A= Number of sex workers who have been tested and whose result is positive B= Number of sex workers who have been tested in the last 12 months and whose result is negative Denominator: Number of sex workers who answered the question "Do you know your HIV status from an HIV test?"
3.6A	Percentage of sex workers reporting using a condom with their most recent client	**67.7 (n=413) (N=610)** Under 25 yrs= 74% (115/155) 25 yrs and above= 65.5% (298/455)	Numerator: Number of sex workers who reported using a condom was used with their last client Denominator: Number of sex worker who reported having commercial sex in the last 12 months
3.7A	Percentage of sex workers reporting having received a combined set of HIV prevention interventions	**52% (n=317) (N=610)** Under 25 yrs= 44.5% (69/155) 25 yrs and above= 54.5% (248/455)	Numerator: Number of people in a key population who report receiving two or more of the prevention interventions listed Denominator: Number of people in a key population responding *Percentage of respondents who report receiving at least two of the following HIV prevention services from an NGO, health-care provider or other sources:* *In the past three months, have you been given condoms and lubricant? (for example, through an outreach service, drop-in centre or sexual health clinic)* *In the past three months, have you received counselling on condom use and safe sex? (for example, through an outreach service, drop-in centre or sexual health clinic)* *Have you been tested for sexually transmitted infections in the past three months? (sex workers, transgender people and men who have sex with men)*

3.11	Percentage of sex workers with active syphilis	**1.6% (n=10) (N=610)** Under 25 yrs= 1.3% (2/155) 25 yrs and above= 1.8% (8/455)	Numerator: Number of sex workers who tested positive for active syphilis Denominator: Number of sex workers who were tested for active syphilis