

**Integrated Biological and Behavioral Surveillance (IBBS)
Survey among Men who have Sex with Men (MSM)
and Transgender (TG) in
Kathmandu Valley**

Final Report

Round VI



**Ministry of Health
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 NCASC. The field work of this survey was carried out by School of Planning, Monitoring, Evaluation and Research (SPMER) and the quality assurance by National Public Health Laboratory with technical and financial assistance from the Save the Children.

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This is the sixth round of IBBS survey conducted among men who have sex with men (MSM) and Transgender (TG) population in the Kathmandu valley of Nepal. The survey was conducted with the technical and financial support from GF/Save the children under National Centre for AIDS and STD Control (NCASC). It aimed at generating the evidences about the prevalence of HIV among the MSM-TG; their high risk behaviors; program exposures and exploring strategic information on HIV and STI needed to monitor and guide the National HIV and AIDS program.

We would like to acknowledge Save the Children US/Global Fund technical team for their valuable technical support for conducting this survey. We are very grateful to survey consultant Sampurna Kakchapati and the entire survey monitoring team and SITWG for their support throughout the survey. We would like to thank School of Planning Monitoring Evaluation and Research (SPMER) and its survey team members for their commitment and enthusiastic work that led to the successful completion of this survey. We would like to thank the National Public Health Laboratory for conducting external quality assessments of the biological specimens.

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We believe that the findings of this survey will be valuable for the policy makers, program planners and implementing agencies to plan the new programs and revise the strategies to address the HIV epidemic of Nepal.

Dr. Tarun Paudel
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ABBREVIATIONS

AIDS	Acquired Immuno-Deficiency Syndrome
DIC	Drop-in-Centre
EQA	External Quality Assessment
EQAS	External Quality Assurance Scheme
FSW	Female Sex Worker
GOs	Governmental Organizations
HIV	Human Immuno-Deficiency Virus
HTC	HIV Testing and Counseling
IBBS	Integrated Biological and Behavioral Surveillance
KP	Key Populations
MSM	Men who have Sex with Men
NCASC	National Centre for AIDS and STD Control
NGO	Non-Governmental Organization
NHRC	Nepal Health Research Council
NPHL	National Public Health Laboratory
OE	Outreach Educator
PE	Peer Educator
PLHIV	People living with HIV
PMTCT	Prevention of Mother to Child Transmission
PWID	People Who Inject Drugs
RDS	Respondent Driven Sampling
RDSAT	Respondent Driven Sampling Analysis Tool
RDT	Rapid Diagnostic Test
RPR	Rapid Plasma Regain
SI	Strategic Information
SW	Sex worker
SITWG	Strategic Information Technical Working Group
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
TG	Trans Gender

EXECUTIVE SUMMARY

This is the sixth round of IBBS survey conducted among men who have sex with men (MSM) and Transgender (TG) population in the Kathmandu valley of Nepal. Previously, the survey was carried out in 2004, 2007, 2009, 2012, 2015 and 2017 in the same location among the same population. In line with the objectives of previous rounds of IBBS, this survey was undertaken primarily with the objectives to: a) determine the trend of HIV, Syphilis, Chlamydia Trachomati (CT) and Neisseria Gonorrhoea (NG) and associated risk behaviors among MSM/ Transgender (TG), b) to assess socio-demographic characteristics, and, c) explore the association between the risk behaviors and HIV and other specific STIs among the MSM and TG population. The survey was carried out by School of Planning Monitoring Evaluation and Research (SPMER) under the leadership of the National Centre for AIDS and STD Control (NCASC) with financial and technical assistance from the Save the Children.

METHODOLOGY

A serial cross-sectional research design and Respondent Driven Sampling (RDS) method was applied to enrol MSM-TG in the survey. The total sample size was 400. The survey was started with four seeds and went up to ten waves. Respondents were interviewed after obtaining witnessed oral informed consent followed by pre-test counseling and blood sample, urine and anal swab sample collection. A structured questionnaire was used to collect background characteristics, knowledge on HIV and AIDs and STIs, sexual behavior, exposure and access to HIV services and stigma and discrimination.

Rapid test kits: Determine HIV 1/2 test, Uni-Gold test and Stat pack test kits were used for testing the presence of antibodies against HIV in the serum. Syphilis was tested using Rapid Plasma Regain (RPR), and it was confirmed by Treponema Pallidum Particle Agglutination (TPPA) tests. Real-time PCR, using Goffin Molecular Technologies Presto Chlamydia trachomatis (CT)-Neisseria gonorrhoea (NG) Anyplex kit was used for testing Gonorrhoea and Chlamydia (result not shown). Participants received test results, with post-test counseling and treatment, when required. Participants received test results, with post-test counseling and treatment, when required. The SPSS(16) and RDSAT (5.6) software were used for data analysis. Ethical approval for this survey was sought from Nepal Health Research Council.

KEY FINDINGS

Prevalence of HIV: The overall prevalence of HIV in MSM-TG is 6.2 percent. The prevalence of HIV was high among sex worker (SW) group (8.3%) whereas it was 2.7 percent in the Non-SW group. Comparison of the previous year 2015 the prevalence of HIV has increased by 3.8 in the case of MSM-TG group.

Prevalence of Active Syphilis has increased: The prevalence of active syphilis among MSM had been decreased from 0.8% in 2012 to 0.5% in 2015, but it has been increased by a small proportion (1.5%) in 2017. Active syphilis had decreased from 3% in 2012 to 1.1% in 2015 and had increased to 1.6 percent and 1.4 percent among SW and Non-SW group respectively in 2017.

A large proportion of MSM-TG were young: Almost two in five of the MSM-TG (37.2%) were <25 years old (SW 38% and Non-SW 34%). The median age of the SW and Non-SW was 28.0 years.

The majority of MSM had SLC or more education: More than half TG (52%) and three in five MSM had SLC and above education.

A considerable proportion of MSM-TG were married. A fifth of TG (20%) and more than a third of MSM (34%) were married. More than a third of both TG (33%) and MSM were living with a regular sex partner.

Drinking alcohol is common among MSM than TG. More than three in four MSM (76%) and less than two in three TG (56%) had consumed alcohol. It is notable that 12 percent of TG and 15 percent of MSM consumed alcohol every day. Almost half of those who had ever consumed alcohol also consumed alcohol at the last sex. Similarly, 7 percent of MSM and 3 percent of TG tried oral drugs in the last 12 months.

Mean age at first sex was lower among SW than non-SW. Mean age at first sex among SW and non-SW was 15 years and 17 years respectively. The majority of the MSM reported that they had first sex with male/*Meti* (75%) and a fifth of them reported had first sex with a female partner (20%). Almost a fifth (17%) SW had sex for money on the day of the interview.

Consistent condom use was not satisfactory among MSM-TG. Less than three in four MSM used condoms always while having anal sex with non-paying male sex partner (73%) and paying male sex partner (67%) in the last month. Similarly, only three in five MSM reported that they used condoms while having vaginal, oral or anal sex with non-paying female sex partner (61%), and with paying female sex partner (65%) in the last month. Furthermore, four in five MSM (80%) reported that they used condoms always while having sex with regular male/TG women in the last month.

Use of lubricant is high among SW than non-SW.: An overwhelming majority of SW (94%) and about two-third Non-SW (69%) used lubricant while having anal sex. Four-fifth of the MSM used water based lube while having sex. Use of lubricant was 44% in 2004 which has increased to 85% in 2017 for MSM-TG.

Discrimination and violence are still high among MSM-TG, especially among SW. Almost a fifth of the SW (19%) reported facing discrimination in jobs and daily life. The level of discrimination among SW has not changed in 2004 and 2017. However, the percent of SWs facing discrimination in jobs and daily life has decreased during 2015 and 2017 (42% vs. 19%). More than a tenth (11%) MSM-TG (16% TG and 8% MSM) had experience of physical violence. Similarly, 6 percent of MSM-TG had experience of sexual violence.

Comprehensive knowledge has increased over time but still low among MSM-TG. The knowledge of ABC among MSM-TG represents that it was in declining trend before 2015, but it has gradually increased by 2% in 2017. In 2004 it was 89%, which had decreased by more than 40% and reached 48.6% in 2015 and 58 % in 2017. The knowledge on BCDEF was

highest in 2009 (64.3%), it started to decline from 2012 and has come down to 50.5% in 2015. However, it has slightly increased to 53% in 2017. In the case of SW, their knowledge of BCDEF was at the peak (80.7%) in 2009 and then remained constant (60.7%) in 2012 and 2015. The knowledge of BCDEF has declined to 53.9% in 2017. Similarly, the knowledge of BCDEF among the Non-SW was fluctuated and found approximately same in 2007 and 2015 (i.e. around 45%), but it is increased to 51.4% in 2017.

Exposure to STI, HIV and AIDS programs among MSM was satisfactory. Overall, almost three in four MSM-TG had met or discussed with PE or OE and visited any HTC (73%) in the last 12 months. A slightly higher than two-thirds visited any outreach center (DIC/IC or CC) in the last 12 months. An overwhelming majority who visited HTC went there for HIV test (95%) followed by pre-HIV test counseling (21%).

IMPLICATIONS FOR PROGRAM

The findings of the survey might be instrumental in the formulation and modification of evidence-based policies and strategies to fight against HIV and AIDS in Nepal. Its implications could be as follows:

- MSM especially SWs are involved in risky sexual behaviour that leads to HIV transmission. Targeted interventions and strategies are necessary for SWs to minimize the risk behavior that leads to HIV infection.
- Consistent condom use is not satisfactory. It is necessary to spread the message of consistent condom use with different sex partners.
- Comprehensive knowledge of HIV prevention is not satisfactory and fluctuated over time. A qualitative study should be conducted to find out the reason for its decline.
- Access to structured HIV programs (Peer education, DIC, HCT/STI clinics) is satisfactory but still need to be improved/scaled up.
- Special advocacy and awareness programs should be implemented to reduce the existing stigma and discrimination at the potential workplace of the MSM-TG population.

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CHAPTER I: INTRODUCTION

1.1 Background

The HIV epidemic remains concentrated among key populations [people who inject drugs (PWID), gay men and other men who have sex with men (MSM), transgender people (TG), female sex workers (FSW), clients of sex workers, such as male labor migrants (MLM)] in Nepal. The estimated prevalence of HIV in Nepal was 0.17 percent among adults aged 15–49 years in 2016. Among the estimated 32735 people are living with HIV and estimated number of new HIV infections in 2016 was 942 (NCASC, 2016).

The reported HIV prevalence among MSM-TG in Kathmandu valley has remained similar since the commencement of Round 1 (2004); 3.9%; Round 2 (2007) 3.3%; Round 3 (2009) 3.8%; Round 4 (2012) 3.8% and Round 5 (2015) 2.4%. However, some differences were observed in HIV prevalence among sex workers (SWs) and non-SW. In 2009, HIV prevalence among SW was 5.2% compared with 3% among non-SW. Criminalization, cultural taboo, stigma, and discrimination have hindered MSM and TG populations from enjoying their human rights, and created obstacles for accessing health-care services and other interventions to protect themselves from HIV and STIs. Despite the ongoing high risk and vulnerability to HIV infection, access and use of HIV services seem limited among MSM and TG populations.

Integrated Biological and Behavioural Surveillance (IBBS) surveys, one key component of second-generation HIV surveillance, have been used in many concentrated epidemic contexts. More recently, IBBS survey has also been recommended in generalized epidemic settings (NCASC, 2003). IBBS surveys help to collect two distinct types of data (HIV/STI biological and behavioral) from a single set of participants and also help to understand the existing/emerging dynamics of epidemic HIV so that appropriate interventions can be designed to prevent the spread of the virus. By linking biological data with behavioral data, IBBS survey is very effective in helping to understand the emerging trends in HIV and HIV-related risk behaviors among the KP very effectively.

In the early 1990s, a national HIV surveillance system was established in Nepal to monitor the HIV epidemic and to inform evidence-based HIV prevention efforts (NCASC, 2013). Since then, Integrated Biological and Behavioral Surveillance (IBBS) surveys have been conducted every 2-3 years among KPs of the identified epidemic zones. Nepal has had great experience of conducting IBBS surveys successfully among KP for almost 10 years. IBBS surveys are regularly conducted among MSMs/TGs. This is the sixth round of the IBBS study conducted among MSMS/TGSs in Kathmandu Valley.

1.2 Objectives

This survey was carried out to fulfill the following objectives:

Primary objectives:

- To track the trend in the prevalence of STI and HIV infection among MSM-TG;
- To measure the prevalence of Gonorrhoea and Chlamydia among MSM-TG;
- To estimate the prevalence of sexual behaviors related to HIV among MSM-TG.

Secondary objectives:

- To estimate the knowledge of HIV/STI as well as sexual behaviors among MSM-TG;
- To explore associations between risk behaviors and infections with HIV or STI among MSM-TG;
- To estimate the prevalence of STI syndromes among MSM-TG.

1.3 Rationale

IBBS surveys are considered the powerful tools to generate evidence-based data. Findings of these surveys are widely used for designing HIV interventions, to monitor HIV programs, and for estimation and to project the epidemic of HIV in many countries including Nepal. Estimation and projection of HIV prevalence in the country are also based on IBBS survey data. Data on key National HIV Indicators are determined using IBBS survey results. Furthermore, results of these surveys have wider application as these are utilized by different communities, donors, policy makers, program designers and implementers, academicians, and civil society organizations to track the level of HIV epidemic and related risk behaviors in Nepal. Hence, the present survey will also serve as an important milestone to guide the national HIV prevention and control program.

The National HIV Strategic Plan 2016-2021 and (NHSP) identifies people who inject drugs (PWIDs), sex workers (Male/Female/Transgender) and their clients, migrant workers and their spouses and men who have sex with men (MSM) as key populations (KPs) at higher risk of spreading the epidemic. Nepal Health Support Program (NHSP) also strongly recommend for investing in the collection, generation, analysis, translation and use of strategic information to strengthen surveillance of HIV and Sexually Transmitted Infections (STI) in Nepal. The second-generation surveillance guidelines also suggest conducting Integrated Biological and Behavioral Surveillance (IBBS) Survey among KPs at higher risk for HIV in selected high-risk areas in the regular interval based on the National Guidelines on HIV and STI surveillance in Nepal- 2012. These surveillance surveys help in assessing health risk behaviors, measuring the prevalence of HIV and STI among key populations, monitoring epidemic trends, and ultimately assisting in plans to respond to HIV epidemic in Nepal.

CHAPTER II: METHODOLOGY

2.1 Survey design

This survey was a serial cross sectional study. Similar methods that were used in the previous rounds of survey were followed in this survey.

2.2 Survey Population

This survey was conducted among MSM-TG; identified as one of the key population at high-risk for transmitting HIV and STI infection. The definition of the MSM-TG used in the survey was:

Men who have Sex with Men(MSM): Male aged 16 years and above who have had sexual relations (either oral or anal) with another male in the 12 months preceding the survey without receiving a cash payment or other commodities and self-identified MSM.

Male Sex Workers (MSW): Male aged 16 years and above who have had sexual relations, (either oral or anal) with another male in the 12 months preceding the survey in exchange for money or other commodities.

Transgender (TG): Biological Male aged 16 years and above who have had sexual relations (either oral or anal) with another male within 12 months preceding the survey and who identified themselves in a different gender than that assigned to them at birth or identified themselves belonging to a transgender community.

Transgender Sex Worker (TGSW): Biological male aged 16 years and above reporting have been paid in cash or kind for sex with male within 12 months and who identified themselves in a different gender than that assigned to them at birth or identified themselves belonging to a transgender community.

2.3 Survey District

The survey was conducted in Kathmandu Valley, which included Kathmandu, Bhaktapur and Lalitpur districts.

2.4 Survey Period

This survey was carried during February 2016 to July 2017. The data collection took 20 days (22 May to June 10) to complete the desired sample size.

2.5 Sample Design/Sample Size

The sample size for the survey was 400 MSM-TG of Kathmandu Valley. Biological and Behavioral data was successfully collected with the enrollment of 400 MSM-TG. Respondent-driven sampling (RDS) is a network-based chain-referral technique for estimating traits in hard-to-reach populations, for example, the prevalence of HIV among

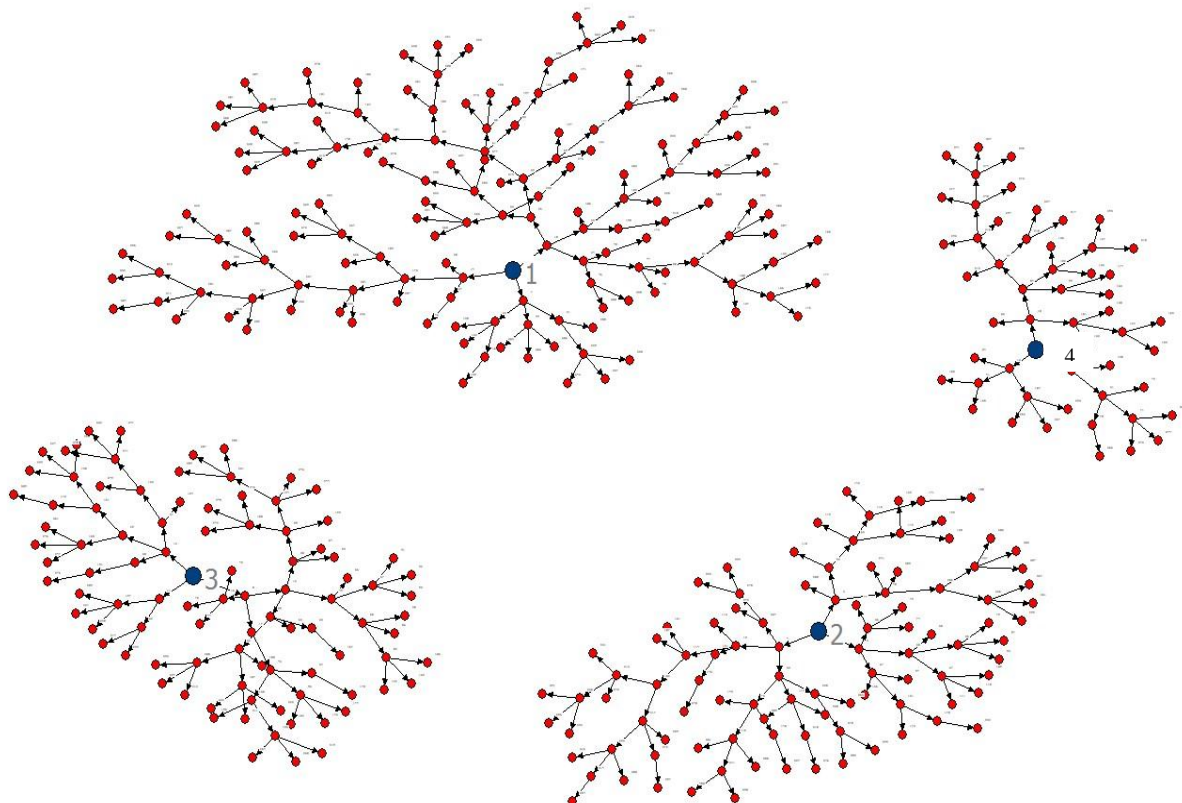
men who have sex with men (MSM), MSM-TG and sex workers (SWs). This survey utilised RDS to recruit the study participants.

RDS population estimates are based on the recruiter and recruit knowing one another; RDS design includes means for encouraging participants to recruit those they already know. This involves offering rewards for recruiters and making recruitment rights scarce through quotas so that recruitment is not wasted on strangers (Ramirez-Valles et. al., 2005).

The sampling process began with the selection of a set of MSM-TG people from the target population to serve as 'seeds.' A preliminary mapping exercise before the field survey carried out with help from the local NGO partners helped acquaint the survey team with several MSM-TG, their gathering locations and their networks. This information helped to recruit 5 MSM-TG as "seeds" from Kathmandu, Bhaktapur and Lalitpur district.

Seeds were informed of the survey protocol and procedures and were encouraged to recruit other eligible individuals from their social networks to participate in the survey. In some cases, local key informants helped in the seed recruitment process. After participating in the survey, each seed was provided with a maximum of three recruitment coupons, which were used to recruit subsequent three MSM-TG within their networks. This process was repeated with each willing subsequent survey participants till the required sample size was met. The referral coupon had a unique serial number that linked the recruiter to his recruit. Reward (travel allowance of Rs.350) was provided to each participant for their participation. Those participants who recruit other three of their eligible peers from their network were further provided with incentives (Rs=150*3=450 for recruiting three participants).

Figure 2. 1 Wave of recruitment MSM-TG by seeds



2.6 Data collection tools and techniques

A quantitative research approach was adopted in this survey. The same questionnaire used in the previous rounds of IBBS among the MSM-TG was used as a survey tool after making relevant modifications following the tool finalization workshop. The survey team provided syndromic treatment for STI problems to the MSM-TG, and a lab technician collected blood samples for HIV/Syphilis/CT/NG testing. Tablet-based data collection was utilized in the survey.

2.7 Training of Field Team and Pretesting

2.7.1 Training of Field Team

The experienced field researchers who had been involved in a previous round of IBBS surveys and other similar types of serosurveys were given priority during the recruitment of the research team. A five-day intensive training program was organized from 25th -29th April, 2017 to the field researchers at Martin Chautari, Thapathali by the trainers from NCASC, Save the Children, NPHL, representatives from MSM-TG communities and SPMER to familiarize them about the study. The field researchers in lab team were given practical exposures and practices in accordance with the national algorithm.

Training sections were based on the curriculum of IBBS surveys. It covered the objectives and the purpose of the IBBS survey, sampling and sample recruitment process, administration of the questionnaire, techniques of approaching MSM-TG, record keeping, counseling, techniques of HIV test and kit used on IBBS survey, reporting and ethical issues. The training session also focused on the research protocol, informed consent, rapport building, sharing of previous experiences from the stakeholders. Mock interviews, role-play based on actual field situations, participatory class lectures and open discussion were the integral parts of the training sessions.

2.7.2 Pretesting

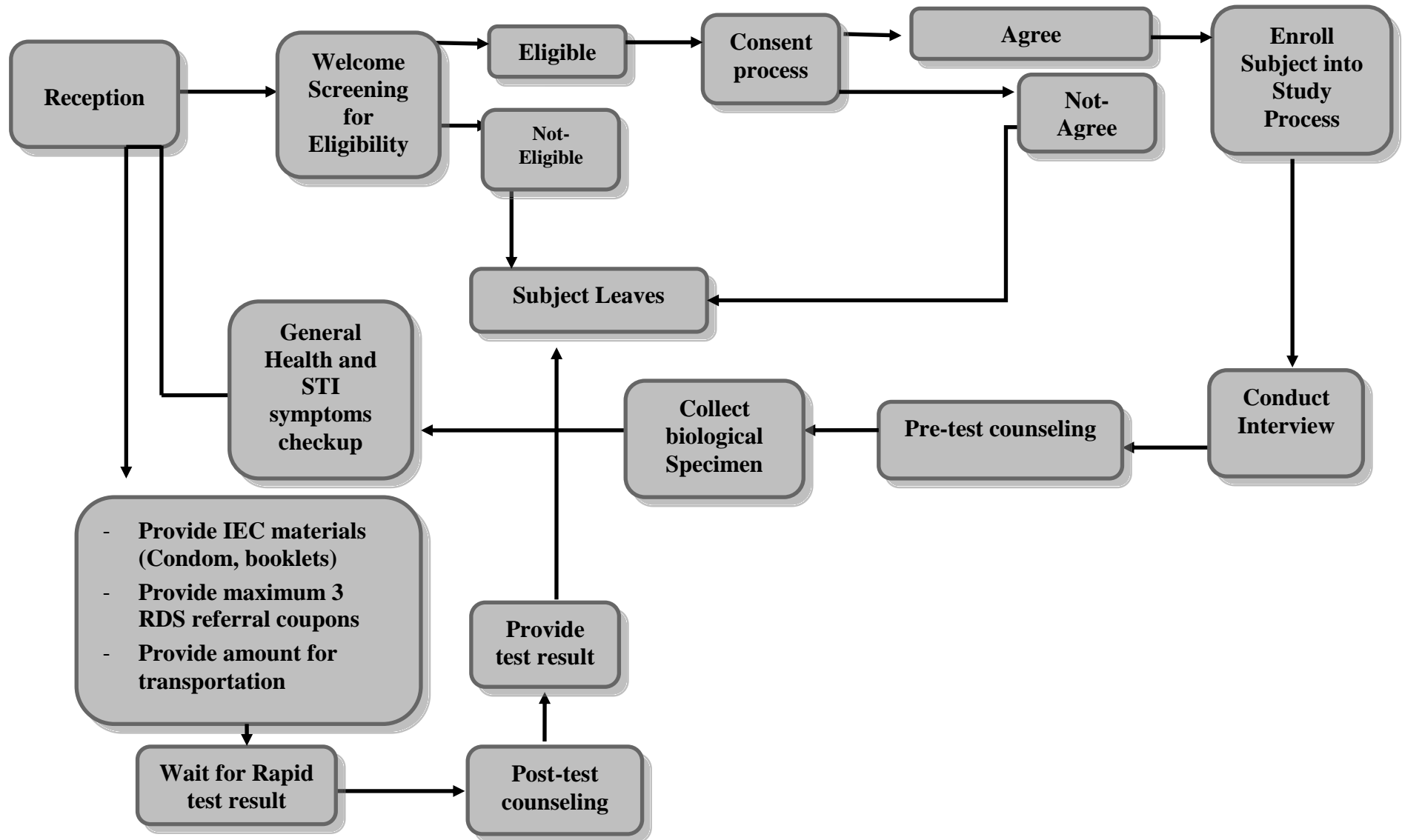
The researchers from School of PMER conducted pretesting of the survey tools among the study population. Altogether, two questionnaires were tested with two of the eligible MSM-TG at one of the outreach centers of BDS Nepal situated at Baluwatar, Kathmandu. Response categories were updated after the pre testing.

2.8 Fieldwork

The clinic was established in a hotel at Sundhara, Kathmandu. The clinic comprised of one welcome room, three interview rooms, one counseling room, one STI clinician room, one laboratory room and one waiting room. The flow chart displaying the survey procedure was posted on the walls of each room. The field manager greeted the MSM-TG in the welcome room where they were briefed on the overall survey process. Consent was taken in the presence of community motivator and assigned a unique code for the enrollment in the survey.

Then they were interviewed using the structured questionnaire in the tablets in the interview room. After completion of the interview, they were guided to pre-test counseling room. After the pre-test counseling, they were directed to the laboratory room. In the laboratory, blood was drawn, centrifuged for separating the serum and undergone all the tests designated for the survey. Then MSM-TGs were sent to the STI Clinician room where necessary syndromic treatment of STIs was provided as per National Guidelines on Case Management of STI (2014). Then they were sent to the waiting room until the test was performed. The test result was provided to them with post-test counseling. The positive cases were linked to concerned program authorities. After finishing all the process, MSM-TG were guided to the welcome room again to receive their travel allowance for participating in the survey. Similarly, they were asked if they could bring their peers who meet the study definition to participate in the survey. Those who were confident to bring their peers were given with RDS coupons with a unique code (maximum of 3 coupons each) to distribute to their eligible friends and request them to visit the clinic within the valid date (within the date printed on the coupon).

Figure 2. 2 Flow chart of the survey procedure



Post-Test Counseling and Test Result Distribution

Pre-Test counseling was given to the MSM-TG before drawing their biological sample (blood). They were counseled that other than a very little bearable pain to them while drawing blood; they do not have any other risks associated with their test. They were informed about 5 ml of their blood to be drawn for testing. They were also informed that they could collect their test results by showing the ID card that was provided to them by the survey team. All the MSM-TG were informed that they could retrieve their test result at the same site after some time. They were briefed about the importance of receiving the test result and requested to wait in the waiting room till the research team accompany them to reveal their result in the counseling room. The test result which is highly confidential was disseminated from the lab to the counselor in a sealed envelope. The counselor revealed the result to the participant and provided Post-test counseling according to the result.

2.9 Sample Recruitment process

In accordance with the RDS methodology, the survey team, in consultation with community motivators and relevant stakeholders first recruited four MSM-TG as 'seed'. Out of the four seeds, maximum and minimum completed waves were 10 and 2 respectively.

Seeds are having heterogeneous characteristics in terms of age, ethnicity and geographical distribution were selected. Those seeds were informed about the survey protocols and procedures and were encouraged to recruit other eligible individuals from their social networks randomly to participate in the survey. The initial "seeds" used their three recruitment coupons to pass along to their peers eligible for the survey. Hence, the first wave of participants was recruited by the seeds.

Upon arrival to the survey site (clinic set up at Sundhara), the new recruits presented their coupon to the survey team. Those eligible for the survey after necessary screening further acted as a new seed. Each uniquely coded coupon was used to monitor recruitment and was also recorded in the questionnaires.

The dual incentive was provided to the MSM-TG. Initially, each participant was provided with an incentive (as travel allowance) for their participation in the survey and additional incentive for each individual they recruited. All MSM-TG participated voluntarily in the survey. An inclusion criterion was developed for participation in the survey. Those who failed to meet the criteria or those not willing to participate were not enrolled in the survey.

MSM-TG who agreed and satisfactorily answered all the screening questions were briefed about the purpose, objectives, and methodology of the survey. The researchers invited them into the clinic for an interview and collection of a blood samples required for the testing of HIV and Syphilis. Similarly, anal/oral/urethral swab was collected for testing Chlamydia trachomatis (CT) and Neisseria gonorrhoea (NG) from the syndromatic MSM-TG. We have not presented the findings of CT and NG in this report and results will be added when the report is available online.

2.10 Refusal

One MSM-TG who was eligible for interview (who got the ID card and completed the consent procedure in the welcome room) left the interview at the middle being restless saying it is taking too long and he did not want to stay for that long time. On the other hand, two MSM-TG who were given the RDS coupon by their peers said that they recently tested for HIV in the DIC during the consent process and disagreed to have the biological test again and refused to participate in the survey. All these refusals were replaced to full fill the required sample.

2.11 Clinical and Laboratory Procedure

2.11.1 Clinical Set-up

The clinic set-up was done in Dharahara hotel situated at Sundhara, Kathmandu. There were separate rooms for waiting, counseling, laboratory process, physical examinations, and conducting interviews.

2.11.2 Clinical Procedures

A trained clinician examined the MSM-TG for any signs and symptoms of STI and other general health problems after completion of the interview, pre test counseling and lab test. The syndromic management of visible symptoms of STI was done providing some essential medicines according to the National Guidelines on Case Management of Sexually Transmitted Infections, 2015. The Clinicians made appropriate referrals of the identified cases that required additional treatment to concerned government hospitals/health centers or nearby DIC where STI treatment options were available. Clinicians collected anal/urethral/oral swab from the suspected syndromic STI cases for Chlamydia Trachomatis(CT) and Neisseria Gonorrhoea (NG) test.

2.11.3 Laboratory Procedures

Blood Sample Collection

National HIV testing and counseling protocol was followed before collecting blood. After pre-test counseling, the lab technician briefly explained to the MSM-TG about the HIV and Syphilis testing process and offered for consent for drawing blood. The samples were tested for HIV and Syphilis on the spot within 30 minutes. This survey was designed to provide test results with pre- and post-counseling in the shortest possible time. Blood samples were taken from each participant using a 5ml disposable syringe. Each sample was labeled with the respondent's ID number. Collected sample was placed in a centrifuge to separate the blood cells from the serum. All the necessary reagents were stored in a fridge at 2-8°C. The specimens separated for EQAS were placed in a deep fridge throughout the day and transferred to a cold box and sent to Intrepid lab by maintaining cold-chain at the end of the day for storage. The lab technician as well as the field coordinator regularly monitored the temperature with a digital thermometer inside the refrigerator and maintained the logbook of the measured temperature.

2.11.4 HIV Rapid Testing

HIV rapid testing method was conducted at the survey site after completion of pre-test counseling by certified laboratory technicians. Rapid testing was conducted by using a serial testing scheme based on the NCASC national guideline algorithm and approved commercial test kits. Blood serums that were diagnosed reactive on test with the first kit (Determine HIV ½) was confirmed with a second kit (Uni-Gold HIV) and then by a third Kit (Stat Pak). Samples that were found reactive on all three tests were considered HIV-positive. Samples that were non-reactive on the first test were considered HIV-negative. Any sample that was reactive on the first, second test and nonreactive on the third test was then repeated with all three test (with same individual sample) and if the result was still same on the retest was then considered HIV inconclusive. In that condition, that individual (sample) was suggested to repeat the test after 14 days. All MSM-TG received post-test counseling, with specific messages tailored to their test result. Persons with any reactive result, or indeterminate result, were given a referral to HIV care services and further counseling and testing. For quality assurance, all positive samples and 10% of the negative samples were sent to National Public Health Laboratory (NPHL).

Interpretation of the Test Results

- All samples negative by the first test were reported as negatives.
- All samples positive by the first test were subjected to the second and the third test.
- All samples that were positive by all three tests were reported positive.
- Any sample that was positive on the 1st and 2nd test and negative on the 3rd test was then repeated with all three tests, and if gives the same result was reported inconclusive. Such sample was suggested to repeat the test after 14 days.

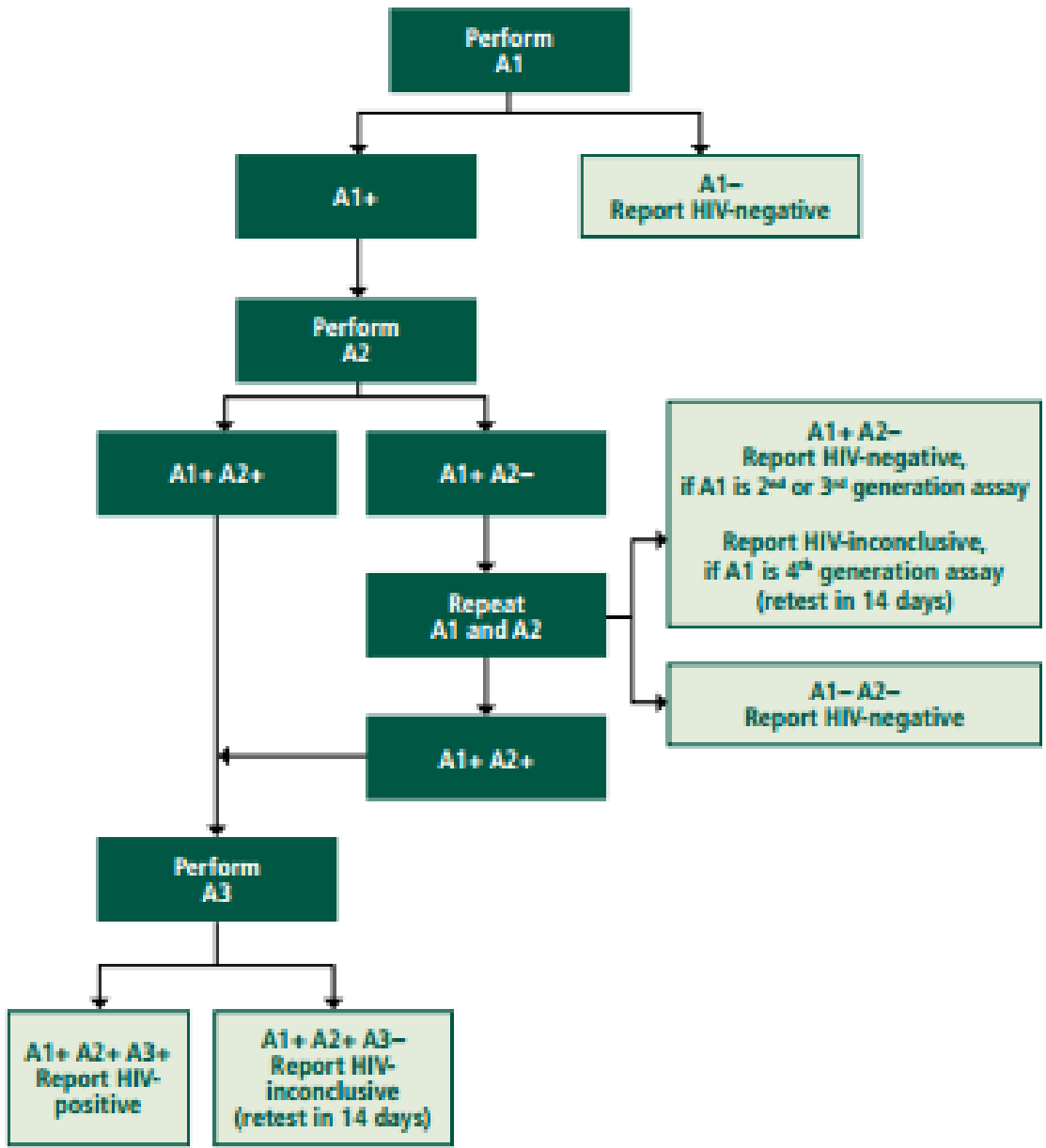


Figure 2.3 HIV Testing Strategy II Algorithm

NOTE:

A1(First test)
 A2 (Second test)
 A3(Third test)
 "+"
 "-"

Determine HIV ½
 Uni Gold HIV
 Statpak HIV ½
 Reactive
 Non-reactive

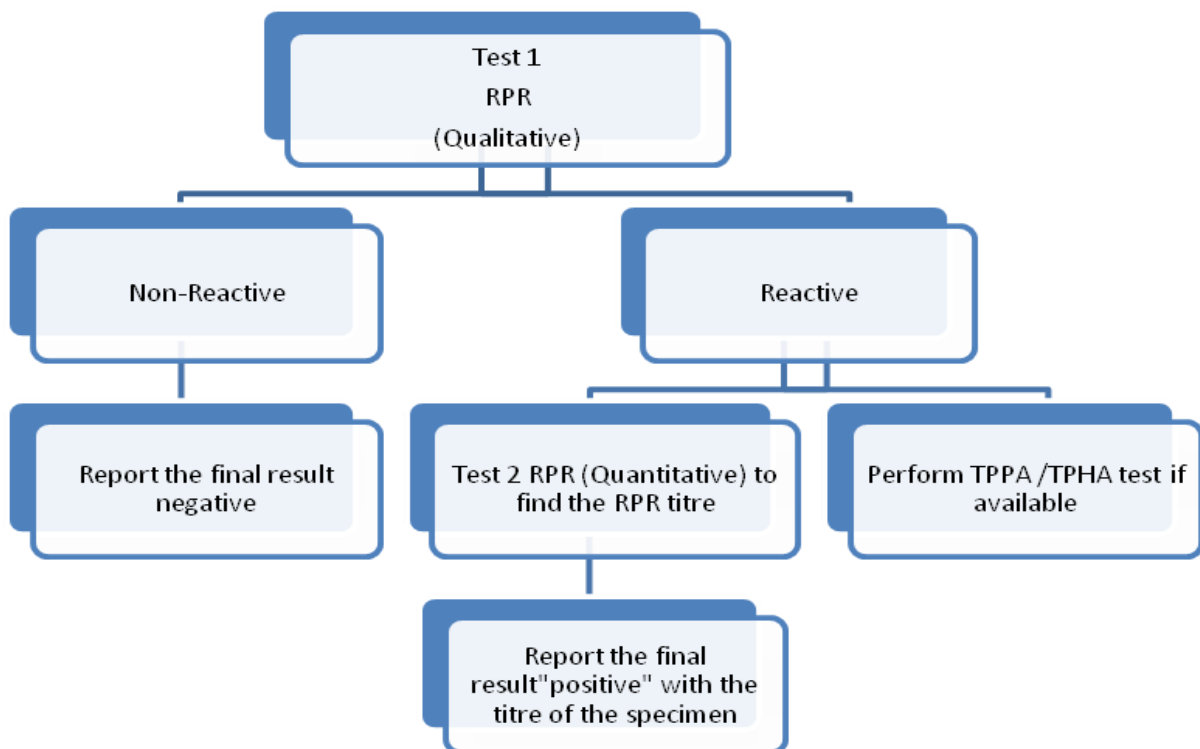
Table 2.1: Sensitivity and Specificity

Test Kits	Company	Initial	Confirm	Tie	Antigen Type	Spec.	Sens.
Determine	Allere	X			Recom HIV-1 and HIV-2	99.4%	100.0%
Uni-Gold	Trinity Biotech		X		HIV-1 and HIV-2	100.0%	100.0%
STAT-PAK	CHEM BIO			X	HIV-1 (gp41; p24) -2 (gp36)	99.3%	100.0%

Syphilis Testing:

Rapid Plasma Reagin (RPR), a blood-screening test was conducted to detect the presence of antibodies for syphilis among the MSM-TG. A reactive syphilis result denotes that the respondent has been exposed to T. palladium at some point in life. However, this testing may remain reactive for life in the majority of people who have had syphilis, even if they have been treated properly. Therefore, a positive result does not indicate that the respondent currently has untreated syphilis thus it was further confirmed with a non-specific treponemal test, Rapid Plasma Reagin (RPR) to assess disease activity. The standard Algorithm followed for Syphilis Testing is shown below:-

Figure 2.4 Syphilis testing algorithm



Syphilis RPR and TPPA test:

The combination of RPR Qualitative, RPR titre and TPPA test result were used for interpretation of the syphilis status of the MSM-TG as follows:

- RPR is positive with more than or equal to 1:8 titre value and positive TPPA test confirms the Active Syphilis cases.
- RPR is positive with less than 1:8 titre values with positive TPPA test confirms the History Syphilis cases.
- RPR is 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.

Anal Swab Sample Collection for testing Chlamydia trachomatis (CT)- Neisseria gonorrhoea (NG)

The anal swab was collected by inserting the swab stick about 2.5 cm deep into the anal canal, the stick was rotated and moved gently from side to side for 3-5 seconds before removing. Collected swab was placed in the Amplicor STM tube. Both urethral and anal swab container was immediately marked with ID number, collection date and time and sent to Intrepid lab in a cold-chain box in order to store there in required temperature till the end of the data collection. As soon as after the end of data collection, the total samples collected were taken out from the Intrepid and transported to NPHL in a cold-chain box for PCR testing.

2.12 Precautions, Disposal Mechanism and Post-Exposure Management

The universal precautions and post-exposure management were followed in the laboratory and STI clinic. Proper waste disposal mechanisms were followed to minimize the spread of infection. Gloves and mask were used by a laboratory technician and STI clinician. Waste produced in the lab was collected in different color-coded and labeled containers. Needles were destroyed using needle destroyer. Waste products formed as a result of laboratory and clinical procedure was managed in accordance with the standard disposal procedures in collaboration with the nearby hospital (Kathmandu Valley Hospital, Sundhara). All materials were decontaminated (using disinfectants) before disposal. Contaminated materials including specimens of body fluids, cotton gauze and broken glassware and used needles were decontaminated in 0.5% Sodium Hypochlorite each day. The plastic material, papers, cotton were incinerated. Researchers were prepared for possible Post-exposure management. They were provided with contact numbers of the concerned authorities in case if an emergency.

2.13 Fieldwork Supervision and Monitoring

The team of NCASC and SC/GF did the overall monitoring and supervision of the survey and provided feedback to maintain the quality of data collection work. The study team adopted their feedback and suggestions.

Internally, SPMER followed the result based participatory monitoring and supervision

process for this survey. Since the beginning of the survey, team leader and research officer did regular monitoring and supervision of the field progress. The field coordinator and field manager were responsible for ensuring that the survey was implemented in the field according to the protocol. Team meetings were held every day to plan ahead and solve any field-level problems. The field coordinator in the field updated each day's field progress to the research officer.

2.14 Quality Control and Quality Assurance Scheme

On-site quality assurance of the samples was maintained while testing which included quality control of test kits, record-keeping, and observation of staff performance. The on-site quality control of the kit was assessed by in-built control mechanism mentioned in the kit. The trained laboratory personnel was responsible for maintaining the required temperature of the samples in the refrigerator and record-keeping on a daily basis. The field coordinator who was stationed in the field supervised the performance of lab personal.

External Quality Assurance Scheme (EQAS) is the evaluation of the performance of a testing laboratory by an external agency. An EQAS is very essential in such studies to determine the quality of testing. All the HIV-positive samples and 10 percent of all the HIV-negative samples were sent to retest at NPHL in this survey as an EQA of HIV/HCV/HBV/Syphilis testing.

2.15 Data Management and Data Analysis

The behavioral and biological data were collected through the tablets and were uploaded to a server after completion of each questionnaire every day. The uploaded data were downloaded by an authorized person of SPMER (Research Officer of the survey) and were saved in password-protected computers every day. The inconsistencies identified in the data collection procedures were noted on a daily basis and finally were rechecked and verified in consultation with survey consultant, application and data management team and other experts. These data downloaded in the Excel sheets were cleaned and coded. Then, the data were transferred to the SPSS version for the final data analysis. RDSAT software was used to estimate the proportion of key variables. Descriptive statistics such as percent, mean, median, standard deviation and inferential statistics like chi-square test for trend analysis were used to establish an association to infer findings. The associations are having a p-value less than 0.05 were taken as a significant association.

2.16 Ethical Considerations

Ethical approval was obtained from the Nepal Health Research Council (NHRC) to ensure adherence to ethical aspects of the study. The MSM-TG enrolled in the survey were fully informed about the nature of the study. They were informed that their participation was voluntary and that they were free to refuse to answer any question or to withdraw from the interview at any time.

A consent form describing the objectives of the study, the nature of the participant's involvement, the benefits, and confidentiality issues was clearly read aloud to them. An ID

card with a unique ID number was provided to each of the MSM-TG so that their names and addresses were not recorded anywhere. HIV test results along with post-test counseling were provided to the individual participants in a confidential manner. A travel allowance of NRs 350 was provided to each of the MSM-TG as transportation costs along with a fruit juice. The research team maintained the confidentiality of the data collected throughout the survey.

2.17 Limitations of the survey

The initial seeds were selected purposively and this in itself could be one of the limitations of the survey. However, the subsequent waves were adequate to exclude any bias introduced through this.

CHAPTER III: RESULTS

This section presents findings based on interviews with MSM-TG and biological test results.

3.1 HIV/STI Prevalence

Table 3.1 presents HIV and STI prevalence data as per the clinical test results. The data are calculated using SPSS. The data shows that 6.2% of the MSM-TG were tested HIV positive, which was comparatively highest among SW (8.3%) than Non-SW group (2.7%). HIV prevalence was highest in the SW-TG (9.4%) followed by SW-MSM (7.0%). Active syphilis was found among 1.5% MSM-TG while history syphilis was found among 3% of MSM-TG.

Table 3.1 HIV and Syphilis Prevalence

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
HIV									
Negative	90.6	93.0	91.7	100.0	97.0	97.3	91.4	95.2	93.8
Positive	9.4	7.0	8.3	0	3.0	2.7	8.6	4.8	6.2*
Syphilis									
Non-Reactive	97.1	95.7	96.5	100.0	93.3	93.8	97.4	94.4	95.5
Active Syphilis	0.7	2.6	1.6	0	1.5	1.4	0.7	2.0	1.5
History Syphilis	2.2	1.7	2.0	0	5.2	4.8	2.0	3.6	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

* RDS Weighted

3.2 Background Characteristics of MSM-TG

3.2.1 Sexual identity and orientation

More than one-third respondents were TG women while almost a third were Gay (30%). Similarly, more than a fifth (20%) self categorized as Man/Mard. Among SW, more than half reported themselves as TG Women while more than a quarter (27%) categorized themselves as Gay (27%). Among non-SW, almost half of them categorized as Man/Mard and almost two in five categorized as Gay (34%).

Table 3.2 Self-categorization of sexual orientation

Identification on the basis of sexual orientation	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
TG women	92.8	-	50.8	66.7	-	5.5	90.7	-	34.2
Dohori	4.3	19.1	11.0	33.3	9.0	11.0	6.6	13.7	11.0
Ta	1.4	6.1	3.5	-	5.2	4.8	1.3	5.6	4.0
Man/Mard	-	14.8	6.7	-	47.8	43.8	-	32.5	20.2
Gay	-	59.1	26.8	-	37.3	34.2	-	47.4	29.5
Meta/meti	1.4	0.9	1.2	-	0.7	0.7	1.3	0.8	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.2.2 Demographic characteristics

The mean age and median age of the MSM-TG was 29 years and 28 years respectively. The age varied from 17 to 58 years. More than a quarter of the MSM-TGs (27.5%) were from the age of 20-24 years while nearly a quarter belonged to 25-29 years. The sample also comprised adults 40 years or above (13.2%).

By caste/ethnicities, more than half (53%) were from Janajati group followed by Brahmin/Chhetri/Thakuri (35%) where as Dalits were 7.5% and Terai Madhesi 4.5%. According to religion, the majority (80%) followed Hindu religion while 14.5% were Buddhists. Christians and Muslims were only 3% and 1.8% respectively.

Education status shows that more than half (57%) had passed SLC and above and about one-fifth (20.5%) had completed grades 6 to 9. Only 2.5% were illiterate. SW-TG had a slightly low education than other categories.

A little more than a quarter (28.8%) was currently married; lowest in SW TG group (18 %) and highest among Non-SW TG (41.7%). For over three-quarters (78.3%) had married female sex partner while one-fifth (21.7%) had male/meti sex partner. Only a little more than one-fourth (34%) was currently living with a regular sex partner. By gender/type of regular sexual partner living with, more than half (57.4%) was living with male/meti while 38.2% was living with wife.

Table 3. 3 Socio-demographic Characteristics of MSM-TG

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Age group									
17-19	6.5	7.8	7.1	0	13.4	12.3	6.0	10.8	9.0
20-24	33.1	27.8	30.7	8.3	23.1	21.9	31.1	25.3	27.5
25-29	22.3	24.3	23.2	16.7	25.4	24.7	21.9	24.9	23.8
30-34	16.5	14.8	15.7	33.3	11.9	13.7	17.9	13.3	15.0
35-39	9.4	12.2	10.6	41.7	10.4	13.0	11.9	11.2	11.5
40 or above	12.2	13.0	12.6	0	15.7	14.4	11.3	14.5	13.2
Descriptive statistics of Age									
<i>Mean</i>	28.7	29.3	29.0	31.3	29.0	29.2	28.9	29.2	29.1
<i>Std.dev</i>	7.9	8.5	8.2	5.1	8.8	8.6	7.7	8.7	8.3
<i>Median</i>	27.0	28.0	28.0	32.5	27.0	28.0	28.0	28.0	28.0
<i>Min</i>	17.0	18.0	17.0	21.0	17.0	17.0	17.0	17.0	17.0
<i>Max</i>	56.0	58.0	58.0	37.0	55.0	55.0	56.0	58.0	58.0
Ethnicity									
Brahmin/Chhetri/Thakuri	28.1	39.1	33.1	33.3	38.8	38.4	28.5	39.0	35.0
Dalit	2.2	11.3	6.3	0	10.4	9.6	2.0	10.8	7.5
Terai Madhesi	4.3	4.3	4.3	0	5.2	4.8	4.0	4.8	4.5
Janajati	65.5	45.2	56.3	66.7	45.5	47.3	65.6	45.4	53.0
Religion									
Hindu	74.8	87.8	80.7	75.0	79.1	78.8	74.8	83.1	80.0

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Buddhist	20.1	8.7	15.0	25.0	12.7	13.7	20.5	10.8	14.5
Christian	2.9	2.6	2.8	0	3.7	3.4	2.6	3.2	3.0
Muslim	1.4	0.9	1.2	0	3.0	2.7	1.3	2.0	1.8
Kirat	0.7	0	0.4	0	1.5	1.4	0.7	0.8	0.8
Education									
Illiterate	2.9	.9	2.0	0	3.7	3.4	2.6	2.4	2.5
Literate, no schooling	10.1	9.6	9.8	8.3	7.5	7.5	9.9	8.4	9.0
Grade 1-5	12.2	10.4	11.4	25.0	9.0	10.3	13.2	9.6	11.0
Grade 6-9	23.7	18.3	21.3	8.3	20.1	19.2	22.5	19.3	20.5
SLC and above	51.1	60.9	55.5	58.3	59.7	59.6	51.7	60.2	57.0
Currently married									
Yes	18.0	35.7	26.0	41.7	32.8	33.6	19.9	34.1	28.8
No	82.0	64.3	74.0	58.3	67.2	66.4	80.1	65.9	71.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Married sex partner									
Male/Meti	68.0	14.6	34.8	40.0	0	4.1	63.3	7.1	21.7
Female	32.0	85.4	65.2	60.0	100.0	95.9	36.7	92.9	78.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	25	41	66	5	44	49	30	85	115
Currently living with a regular sexual partner									
Yes	32.4	35.7	33.9	41.7	33.6	34.2	33.1	34.5	34.0
No	67.6	64.3	66.1	58.3	66.4	65.8	66.9	65.5	66.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Gender/type of regular sexual partner living with									
Male/Meti	93.3	51.2	73.3	80.0	24.4	30.0	92.0	37.2	57.4
Wife	6.7	46.3	25.6	20.0	64.4	60.0	8.0	55.8	38.2
T.G	0	2.4	1.2	0	11.1	10.0	0	7.0	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	45	41	86	5	45	50	50	86	136

3.2.3 Living conditions

Overall, nearly eight out of ten (78.2%) MSM-TG were living in a rented apartment/room (more TG than MSM) whereas 17.2 % (11% TG and 21% MSM) reported that they were living in the own home.

Table 3. 4 Living situation of the MSM-TG

Current living situation	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Rented apartment/room	84.2	73.9	79.5	91.7	74.6	76.0	84.8	74.3	78.2
Living in own home	11.5	20.9	15.7	8.3	20.9	19.9	11.3	20.9	17.2
Living in a residential hotel	3.6	4.3	3.9	0	2.2	2.1	3.3	3.2	3.2
Homeless on the street	0.7	0.9	0.8	0	2.2	2.1	0.7	1.6	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.2.4 Occupation and income

Overall, four out of ten (42.2%) of the MSM-TG rely on sex work; the proportion was 72.2% for TG and 24.1% for MSM. Among SW 77% TG and 51.3% MSM are involved in sex work. MSM-TG are also involved in private company job (16.5%), labor/wage labor (15.2%) and business (9.5%). Other 8% MSM-TG interviewed are students while only 1.8% is unemployed.

The monthly income of MSM-TG ranges from NRs 2000 to 110000. A higher percentage of TGSW earn more than 10000 per month than MSM-SW (13%). The MSM-TG have varied income levels; Rs 3001-6000 (40.5%), Rs 6001-10000 (26.7%) and above Rs 10000 (20.6%). In total, 12.3% MSM-TG have income less than Rs 3000.

Table 3. 5 Occupational background and income of the respondent

Main Profession	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Sex worker	77.0	51.3	65.4	16.7	0.7	2.1	72.2	24.1	42.2
Private company staff	7.9	19.1	13.0	25.0	22.4	22.6	9.3	20.9	16.5
Laborer/wage labor	2.9	10.4	6.3	16.7	32.1	30.8	4.0	22.1	15.2
Business	5.0	5.2	5.1	8.3	17.9	17.1	5.3	12.0	9.5
Student	2.2	7.8	4.7	8.3	14.2	13.7	2.6	11.2	8.0
Unemployed	0.7	1.7	1.2	8.3	2.2	2.7	1.3	2.0	1.8
Artist	2.2	0	1.2	16.7	1.5	2.7	3.3	0.8	1.8
Driver	0	1.7	0.8	0	2.2	2.1	0	2.0	1.2
Other civil servant	1.4	0	0.8	0	1.5	1.4	1.3	0.8	1.0
Military	0	0	0	0	1.5	1.4	0	0.8	0.5
Others	0.7	2.7	1.6	0	3.5	3.5	0.7	3.2	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Income									
Below 3000	8.1	7.4	7.8	33.3	18.8	19.8	10.0	13.6	12.3
3001-6000	27.0	50.0	37.6	44.4	45.5	45.5	28.3	47.6	40.5

Main Profession	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
6001-10000	27.0	29.8	28.3		25.9	24.0	25.0	27.7	26.7
Above 10000	37.8	12.8	26.3	22.2	9.8	10.7	36.7	11.2	20.6
Mean	39108	24557	32519	22750	21754	21836	37808	23048	28620
Std.dev	27123	17001	24170	26185	15862	16819	27328	16424	22355
Median	30000	20000	25000	13500	17000	16500	30000	20000	20000
Min	2000	5000	2000	2000	2000	2000	2000	2000	2000
Max	110000	90000	110000	96000	99000	99000	110000	99000	110000
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.2.5 Sources of Income and Number of Dependents

The main sources of income of MSM-TG include sex work (52.5%), salaried job (28.5%), wage labor (20 %) and business (16.5%). Nearly one in ten (8.8%) rely on family income. It is found that 91% SW-TG and 72% SW-MSM had the main source of income from sex work. Almost a third Non-SW had wage labor as their main source of income.

Almost three out of five SW-TG (59%) and two in five SW-MSM (40%) earned Rs 1001 to Rs 9000 in the last sex while a third SWTG (33%) earned Rs 401 to Rs 1000 in the last sex. Almost a third MSM-TG did not have any dependent on their income. However, 44 percent of the MSM-TG reported that 3 or more dependents rely on their income.

Table 3. 6 Sources of income and number of dependents

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Income sources*									
Sex work	91.4	72.2	82.7	-	-	-	84.1	33.3	52.5
Salaried job	17.3	30.4	23.2	41.7	37.3	37.7	19.2	34.1	28.5
Wage labor	9.4	19.1	13.8	25.0	31.3	30.8	10.6	25.7	20.0
Own business	10.8	8.7	9.8	50.0	26.1	28.1	13.9	18.1	16.5
Money from family	2.9	7.0	4.7	8.3	16.4	15.8	3.3	12.0	8.8
Other	0.7	1.8	1.2	0	0.7	0.7	0.7	1.2	0.9
N	139	115	254	12	134	146	151	249	400
Earning from last sex									
100-400	3.6	5.2	4.3	NA	NA	NA	3.6	5.2	4.3
401-1000	33.1	47.0	39.4	NA	NA	NA	33.1	47.0	39.4
1001-9000	59.0	40.0	50.4	NA	NA	NA	59.0	40.0	50.4
Don't know	4.3	7.8	5.9	NA	NA	NA	4.3	7.8	5.9
Total	100.0	100.0	100.0	NA	NA	NA	100.0	100.0	100.0
N	139	115	254	NA	NA	NA	139	115	254

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Total number of dependents									
None	30.9	33.0	31.9	58.3	40.3	41.8	33.1	36.9	35.5
1-2	25.9	25.2	25.6	0	11.9	11.0	23.8	18.1	20.2
3-4	30.2	33.0	31.5	33.3	23.9	24.7	30.5	28.1	29.0
5-6	10.1	6.1	8.3	8.3	17.9	17.1	9.9	12.4	11.5
7 +	2.9	2.6	2.8	0	6.0	5.5	2.6	4.4	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

*Percent total may exceed 100 due to multiple responses

3.2.6 Use of Alcohol and Drugs

Table 3.7 shows data on alcohol consumption. The data indicate that more than two-thirds (68.5%) use alcohol and is higher among MSM (75.9%) than TG (56.3%). In total, 14.2% use alcohol every day, and 42.3% use alcohol 3-4 times a week. One out of ten (12.8%) did not use alcohol last week, as reported. Almost half of both TG (44%) and MSM (45%) had consumed alcohol in the last sex.

Table 3.7 Alcohol consumption

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever had any drinks containing alcohol									
Yes	55.4	73.9	63.8	66.7	77.6	76.7	56.3	75.9	68.5
No	44.6	26.1	36.2	33.3	22.4	23.3	43.7	24.1	31.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Frequency of having drinks containing alcohol during the last one month									
Every day	10.4	10.6	10.5	25.0	19.2	19.6	11.8	15.3	14.2
3-4 days a week	40.3	37.6	38.9	37.5	48.1	47.3	40.0	43.4	42.3
At least once a week	32.5	40.0	36.4	-	24.0	22.3	29.4	31.2	30.7
Did not drink alcohol in the last week	16.9	11.8	14.2	37.5	8.7	10.7	18.8	10.1	12.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	77	85	162	8	104	112	85	189	274
Had any drinks containing alcohol in the last sex									
Yes	40.3	44.7	42.6	75.0	45.2	47.3	43.5	45.0	44.5
No	59.7	55.3	57.4	25.0	54.8	52.7	56.5	55.0	55.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	77	85	162	8	104	112	85	189	274

One out of twenty (5.5%) MSM-TG reported that they used illicit drugs in the last 12 months; it was little higher in the MSM group (7.2%) than in TG (2.6%).

Table 3. 8 Use of illicit drugs

Tried drugs (oral drugs) in the last 12 months	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Yes	2.9	7.0	4.7	0	7.5	6.8	2.6	7.2	5.5
No	97.1	93.0	95.3	100.0	92.5	93.2	97.4	92.8	94.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.3 Sexual Behavior, Types of Sex Partners, Condom and Lubricant Use

3.3.1 Age at first sex

The mean age at first sex was 16.1 years for MSM-TG. It varied from 9 years to 28 years. It is notable that six out of ten (59.2%) had sexual debut between the age of 10 to 16 years. A Higher percent of TG (74.2%) had an early start of sexual activity as compared to MSM (50.2%). For the majority (75.2%) first sex partner was male/meti. Almost all (96.7 %) of the TG reported they had first sex with male/meti. About two-thirds (63.5%) ever had sex with a male/ TG woman in exchange for money or any other commodities. The age at first sex with a male/TG woman in exchange for money varied from 13 to 35 years. The time of last sex with male in exchange for money within last 7 days was 77.6%, which was followed by a same day of the interview (16.5%).

Table 3. 9: Age at first sex

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Age at first sex									
10-16	74.8	54.8	65.7	66.7	46.3	47.9	74.2	50.2	59.2
17-20	22.3	39.1	29.9	16.7	37.3	35.6	21.9	38.2	32.0
21-30	2.9	6.1	4.3	16.7	16.4	16.4	4.0	11.6	8.8
<i>Mean</i>	14.8	16.2	15.4	16.7	17.3	17.3	15.0	16.8	16.1
<i>Std.dev</i>	2.9	3.0	3.0	4.0	3.4	3.4	3.0	3.3	3.3
<i>Median</i>	14.0	16.0	15.0	16.0	17.0	17.0	15.0	16.0	16.0
<i>Min</i>	9.0	9.0	9.0	12.0	9.0	9.0	9.0	9.0	9.0
<i>Max</i>	27.0	27.0	27.0	25.0	28.0	28.0	27.0	28.0	28.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Gender/type of first sexual partner									
Male/Meti	97.1	84.3	91.3	91.7	43.3	47.3	96.7	62.2	75.2
Female	2.2	13.9	7.5	8.3	45.5	42.5	2.6	30.9	20.2
TG, homosexual, bisexual	0.7	1.7	1.2	0	11.2	10.3	0.7	6.8	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever had sex with a male/ TG woman in exchange for money or any other commodities									
Yes	100.0	100.0	100.0	0	0	0	92.1	46.2	63.5
No	0	0	0	100.0	100.0	100.0	7.9	53.8	36.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Age at first sex with a male/ TG woman in exchange for money									
13-16	10.1	9.6	9.8	NA	NA	NA	10.1	9.6	9.8
17-20	56.1	53.9	55.1	NA	NA	NA	56.1	53.9	55.1
21-30	32.4	33.9	33.1	NA	NA	NA	32.4	33.9	33.1
Don't know	1.4	2.6	2.0	NA	NA	NA	1.4	2.6	2.0
<i>Mean</i>	20.0	20.8	20.4	20.0	20.8	20.4	20.0	20.8	20.4
<i>Std.dev</i>	3.7	4.3	4.0	3.7	4.3	4.0	3.7	4.3	4.0
<i>Median</i>	19.0	20.0	20.0	19.0	20.0	20.0	19.0	20.0	20.0
<i>Min</i>	13.0	14.0	13.0	13.0	14.0	13.0	13.0	14.0	13.0
<i>Max</i>	33.0	35.0	35.0	33.0	35.0	35.0	33.0	35.0	35.0
Total	100.0	100.0	100.0	NA	NA	NA	100.0	100.0	100.0
N	139	115	254	NA	NA	NA	139	115	254
Time of last sex with male/in exchange for money									
The day of interview	21.6	10.4	16.5	NA	NA	NA	21.6	10.4	16.5
Within last 7 days	72.7	83.5	77.6	NA	NA	NA	72.7	83.5	77.6
8-15 days	3.6	3.5	3.5	NA	NA	NA	3.6	3.5	3.5
16-30 days	0.7	1.7	1.2	NA	NA	NA	0.7	1.7	1.2
Don't remember	1.4	.9	1.2	NA	NA	NA	1.4	0.9	1.2
<i>Median</i>	1.0	4.0	2.0	NA	NA	NA	1.0	4.0	2.0
<i>Min</i>	.0	.0	.0	NA	NA	NA	.0	.0	.0
<i>Max</i>	21.0	21.0	21.0	NA	NA	NA	21.0	21.0	21.0
N	139	115	254	NA	NA	NA	139	115	254

3.3.2 Sex Partners

3.3.2.1 Non Paying sex partner

The MSM-TG, on average, had three non-paying sex partners in the past one month prior to the study. Another one-fifth (19.8%) had five or more non-paying male sex partner. The number of non-paying male sex partners of TG was up to 30 while the number of MSM was 16. More than one-fifth (22.8%) MSM-TG had no any non-paying male sex partner in the past month before the study.

Similarly, nearly half of the MSM-TG (45.6%) had a non-paying female sex partner in the past month prior to the survey. One-third of them (33.3%) had only one non-paying female sex partner. On average, the MSM-TG had only one non-paying female sex partners. They had maximum eight non-paying female sex partners.

Table 3. 10 Non-paying sex partners in the past month

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Number of non-paying male sex partner in past month									
None	35.3	21.7	29.1	8.3	11.9	11.6	33.1	16.5	22.8
One	25.9	10.4	18.9	25.0	20.1	20.5	25.8	15.7	19.5
Two	12.9	14.8	13.8	16.7	14.2	14.4	13.2	14.5	14.0
Three	10.1	12.2	11.0	16.7	22.4	21.9	10.6	17.7	15.0
Four	2.9	16.5	9.1	8.3	9.0	8.9	3.3	12.4	9.0
Five or more	12.9	24.3	18.1	25.0	22.4	22.6	13.9	23.3	19.8
<i>Mean</i>	2.2	3.3	2.7	4.0	3.4	3.4	2.3	3.3	3.0
<i>Median</i>	1.0	3.0	2.0	2.5	3.0	3.0	1.0	3.0	2.0
<i>Min</i>	.0	.0	.0	.0	.0	.0	.0	.0	.0
<i>Max</i>	30.0	15.0	30.0	15.0	16.0	16.0	30.0	16.0	30.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Number of non-paying female sex partner in past month									
None	NA	43.6	43.6	NA	42.5	42.5	NA	42.9	42.9
One	NA	33.3	33.3	NA	35.6	35.6	NA	34.8	34.8
Two	NA	5.1	5.1	NA	9.6	9.6	NA	8.0	8.0
Three	NA	7.7	7.7	NA	5.5	5.5	NA	6.2	6.2
Four	NA	5.1	5.1	NA	2.7	2.7	NA	3.6	3.6
Five or more	NA	5.1	5.1	NA	4.1	4.1	NA	4.5	4.5
<i>Mean</i>	NA	1.2	1.2	NA	1.0	1.0	NA	1.1	1.1
<i>Std.dev</i>	NA	1.7	1.7	NA	1.3	1.3	NA	1.5	1.5
<i>Median</i>	NA	1.0	1.0	NA	1.0	1.0	NA	1.0	1.0
<i>Min</i>	NA	0.0	0.0	NA	0.0	0.0	NA	0.0	0.0
<i>Max</i>	NA	8.0	8.0	NA	6.0	6.0	NA	8.0	8.0
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	39	39	NA	73	73	NA	112	112

3.3.2.2 Anal sex

Table 3.11 displays data on the type of anal sex partners in the past one month by different MSM-TG groups. The data shows that on average they had 3.6 non-paying male anal sex partners. The number of sex partners varied from 0 to 30 in the past month prior to the survey. A quarter of them (25.9%) reported having only one non-paying male anal sex partner followed by five or more (23%), three (19.7%) and two partners (19.4%).

Table 3. 11 Type of anal sex partners in the past month

Number of non-paying male anal sex partner in past month	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
None	1.1	0	0.6	0	2.5	2.3	1.0	1.4	1.3
One	42.2	14.4	28.3	27.3	22.0	22.5	40.6	18.8	25.9
Two	18.9	21.1	20.0	18.2	18.6	18.6	18.8	19.7	19.4
Three	15.6	20.0	17.8	18.2	22.9	22.5	15.8	21.6	19.7
Four	5.6	17.8	11.7	9.1	9.3	9.3	5.9	13.0	10.7
Five or more	16.7	26.7	21.7	27.3	24.6	24.8	17.8	25.5	23.0
Mean	2.9	3.9	3.4	6.2	3.6	3.8	3.2	3.7	3.6
Median	2.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0
Min	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Max	25.0	15.0	25.0	30.0	16.0	30.0	30.0	16.0	30.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	90	90	180	11	118	129	101	208	309

3.3.2.3 Sex Role

The reported sex role indicates that four out of ten (40.5%) played a top role (insertive role) while two out of ten (20.2%) reported they had a bottom role (receptive role). Nearly one out of five (18%) performed both roles.

In response to a question regarding the person with whom MSM-TG had anal sex in the last month among all their male/TG woman sexual partners, again 42% had all insertive role, and 26.8% had all receptive role.

Table 3. 12 Sex Role among surveyed MSM

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Person with whom you had oral sex in the last month among all your male sexual partners									
All receptive (bottom role)	2.2	8.7	5.1	8.3	50.0	46.6	2.6	30.9	20.2
All insertive (top role)	78.4	29.6	56.3	50.0	9.7	13.0	76.2	18.9	40.5
Mostly receptive	0	1.7	0.8	0	3.0	2.7	0	2.4	1.5
Mostly insertive	7.9	18.3	12.6	0	0.7	0.7	7.3	8.8	8.2
Equally receptive and insertive	7.2	31.3	18.1	8.3	18.7	17.8	7.3	24.5	18.0
Didn't have oral sex in the last month	4.3	10.4	7.1	33.3	17.9	19.2	6.6	14.5	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Person with whom you had anal sex in the last month among all your male/TG woman sexual partners									
All receptive (bottom role)	4.3	13.0	8.3	8.3	63.4	58.9	4.6	40.2	26.8
All insertive (top role)	79.9	31.3	57.9	66.7	9.7	14.4	78.8	19.7	42.0
Mostly receptive	0	1.7	0.8	0	3.7	3.4	0	2.8	1.8

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Mostly insertive	7.9	18.3	12.6	0	1.5	1.4	7.3	9.2	8.5
Equally receptive and insertive	6.5	32.2	18.1	16.7	18.7	18.5	7.3	24.9	18.2
Didn't have anal sex in the last month	1.4	3.5	2.4	8.3	3.0	3.4	2.0	3.2	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.3.2.4 Last sex partner

Table 3.13 provides data concerning sex partners. More than one-third (37.5%) had their last sex with non-paying male partner/TG woman. Nearly half of them (48.5%) had their last sex with a male client where as 9.8% had sex with paid male sex worker.

Table 3. 13 Last Sex Partner

Person with whom the last sexual intercourse was done (vaginal or anal)	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Male client	77.7	68.7	73.6	8.3	4.5	4.8	72.2	34.1	48.5
Non-paying male partner/TG woman	15.1	24.3	19.3	91.7	67.2	69.2	21.2	47.4	37.5
Paid male sex worker	7.2	3.5	5.5	0	18.7	17.1	6.6	11.6	9.8
Non paying female partner	0	1.7	0.8	0	6.7	6.2	0	4.4	2.8
Paid female sex worker (FSW)	0	1.7	0.8	0	3.0	2.7	0	2.4	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.3.3 Condom Use Behavior

3.3.3.1 Condom use at last sex

The self-reported condom use behavior with last anal sex (both top and bottom role) suggests that almost all (96.8%) MSM-TG had used condom, a little less among MSM.

Table 3. 14 Condom use behaviors with last sex partners

Use of condom during the last anal sex (receptive, insertive or both) in the last six months	SW (%)		
	TG	MSM	Total
Yes	98.6	94.6	96.8
No	1.4	5.4	3.2
Total	100.0	100.0	100.0
N	138	111	249

Majority (87.2%) of the MSM-TG reported condom use during their last sex with non-paying male sex partner in the last month prior to the survey whereas 73.4% of MSM used condom during the last vaginal, anal or oral sex with a non-paying female sex partner. Similarly, data on the use of condom during the last anal sex with a regular male/TG woman shows that 96.3% MSM-TG had used condom. Almost all MSM used condom during the last vaginal or anal sex with a female client. The majority (88.1%) of the MSM and 100 percent TG groups reported that they used condom during the last anal sex with a paid male sex partner.

Table 3. 15 Use of condom in the last sex with different sex partners

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Use of condom during the last anal sex with non-paying male sex partner in the last month									
Yes	86.5	87.8	87.2	90.9	87.0	87.3	87.0	87.3	87.2
No	13.5	12.2	12.8	9.1	13.0	12.7	13.0	12.7	12.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	89	90	179	11	115	126	100	205	305
Use of condom during the last vaginal, anal or oral sex with a non-paying female sex partner									
Yes	NA	81.8	81.8	NA	69.0	69.0	NA	73.4	73.4
No	NA	18.2	18.2	NA	31.0	31.0	NA	26.6	26.6
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	22	22	NA	42	42	NA	64	64
Use of condom during the last anal sex with a regular male/TG woman									
Yes	98.2	95.7	97.0	100.0	86.7	88.2	98.2	94.4	96.3
No	1.8	3.2	2.5	0	13.3	11.8	1.8	4.6	3.2
Don't remember	0	1.1	0.5	0	0	0	0	0.9	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	109	93	202	2	15	17	111	108	219
Use of condom during the last vaginal or anal sex with a female client									
Yes	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
No	NA	0	0	NA	0	0	NA	0	0
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	6	6	NA	3	3	NA	9	9
Use of condom during the last anal sex with a paid male sex partner									
Yes	100.0	88.2	90.9	100.0	86.1	86.5	100.0	86.8	88.1
No	0	11.8	9.1	0	13.9	13.5	0	13.2	11.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	5	17	22	1	36	37	6	53	59
Use of condom during the last vaginal or anal sex with a paid female sex partner									
Yes	NA	83.3	83.3	NA	82.4	82.4	NA	82.6	82.6
No	NA	16.7	16.7	NA	17.6	17.6	NA	17.4	17.4
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	6	6	NA	17	17	NA	23	23

3.3.3.2 Consistent Condom Use with Different Types of Sex Partners

Nearly three quarters (73.5%) of the MSM-TG used condom always during anal sex with non-paying male sex partner in the last month. The proportion of condom users during anal sex with non-paying partner in the last month was higher among TG (77.2%) as compared to MSM (71.6%). One out of ten (4.5%) MSM-TG never used condom.

Six out ten MSM (60.9%) used condom always while having vaginal, oral or anal sex with non-paying female sex partner in the last month while 15.6% used sometimes only. One out of ten (9.4%) never used condom in such an event. Eight out ten MSM-TG (79.5%) informed that they used condom always while having anal sex with regular male/ TG woman in the last month. Those who used most of the time and sometimes were 16.9% and 3.7% respectively. On the other hand, almost all MSM reported that they always used condom while having vaginal or anal sex with female clients in the last month prior to the study. In the same way, more than two-third (67.8%) MSM-TG reported that they always used condom while having anal sex with paying male sex partners in the last month prior to the survey. One hundred percent TG claimed this. Moreover, nearly two-third of the MSM (65.2%) always used condom while having vaginal or anal sex with paying female sex partners in the last month prior to the survey.

Table 3. 16 Consistent condom use with different sex partners in the past month

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Frequency of using condom while having anal sex with non-paying male sex partner in the last month									
Always	76.7	70.0	73.3	81.8	72.9	73.6	77.2	71.6	73.5
Most of the time	11.1	22.2	16.7	9.1	11.0	10.9	10.9	15.9	14.2
Sometimes	5.6	7.8	6.7	0	10.2	9.3	5.0	9.1	7.8
Never	6.7	0	3.3	9.1	5.9	6.2	6.9	3.4	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	90	90	180	11	118	129	101	208	309
Frequency of using condom while having vaginal, oral or anal sex with non-paying female sex partner in the last month									
Always	NA	59.1	59.1	NA	61.9	61.9	NA	60.9	60.9
Most of the time	NA	18.2	18.2	NA	11.9	11.9	NA	14.1	14.1
Sometimes	NA	9.1	9.1	NA	19.0	19.0	NA	15.6	15.6
Never	NA	13.6	13.6	NA	7.1	7.1	NA	9.4	9.4
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	22	22	NA	42	42	NA	64	64
Frequency of using condom while having anal sex with regular male/ TG woman in the last month									
Always	87.2	74.2	81.2	50.0	60.0	58.8	86.5	72.2	79.5
Most of the time	11.0	22.6	16.3	50.0	20.0	23.5	11.7	22.2	16.9
Sometimes	1.8	3.2	2.5	0	20.0	17.6	1.8	5.6	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	109	93	202	2	15	17	111	108	219

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Frequency of using condom while having vaginal or anal sex with female clients in the last month									
Always	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	6	6	NA	3	3	NA	9	9
Frequency of using condom while having anal sex with paying male sex partners in the last month									
Always	100.0	58.8	68.2	100.0	66.7	67.6	100.0	64.2	67.8
Most of the time	0	23.5	18.2	0	16.7	16.2	0	18.9	16.9
Sometimes	0	11.8	9.1	0	16.7	16.2	0	15.1	13.6
Never	0	5.9	4.5	0	0	0	0	1.9	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	5	17	22	1	36	37	6	53	59
Frequency of using condom while having vaginal or anal sex with paying female sex partners in the last month									
Always	NA	50.0	50.0	NA	70.6	70.6	NA	65.2	65.2
Most of the time	NA	16.7	16.7	NA	23.5	23.5	NA	21.7	21.7
Sometimes	NA	33.3	33.3	NA	5.9	5.9	NA	13.0	13.0
Total	NA	100.0	100.0	NA	100.0	100.0	NA	100.0	100.0
N	NA	6	6	NA	17	17	NA	23	23

3.4 Availability of Condom

Data given in Table 3.17 shows that almost all (97.5%) MSM-TG (99.3% TG and 96.4% MSM) reported that they were able to get condom when in need. They would be able to collect condom from BDS drop-in-center (32.5%), BDS field workers (28%), pharmacy (195), friends (1.85) and shop (2.8%). Only 1.8% received condoms from health facility. A small proportion (1.5%) received condom from client and never received condom (2%).

Table 3. 17 Availability of condom

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ability to obtain a condom every time in need									
Yes	99.3	99.1	99.2	100.0	94.0	94.5	99.3	96.4	97.5
No	0.7	0	0.4	0	0.7	0.7	0.7	0.4	0.5
Don't know	0	0.9	0.4	0	5.2	4.8	0	3.2	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Place to get condom at the last time									
BDS drop-in center	59.0	27.8	44.9	41.7	8.2	11.0	57.6	17.3	32.5
BDS field workers	27.3	39.1	32.7	25.0	19.4	19.9	27.2	28.5	28.0
Pharmacy	5.0	19.1	11.4	16.7	33.6	32.2	6.0	26.9	19.0
Friends	5.0	5.2	5.1	16.7	23.9	23.3	6.0	15.3	11.8
Shop	0	2.6	1.2	0	6.0	5.5	0	4.4	2.8
Health facility	1.4	4.3	2.8	0	0	0	1.3	2.0	1.8
Clients	1.4	0	0.8	0	3.0	2.7	1.3	1.6	1.5
Bar/Guest House/ Hotel	0.7	0	0.4	0	0	0	0.7	0	0.2
Never received condom	0	1.7	0.8	0	4.5	4.1	0	3.2	2.0
Not use	0	0	0	0	1.5	1.4	0	0.8	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.5 Use of lubricant

In total 93.4% TG and 79.5% MSM (overall 84.8%) used lubricant while having anal sex. The majority used a water-based lubricant (79.8%) followed by saliva (11.85) and cream/lotion (6.8%). Almost all who used lubricant believed that it decreases pain/inflammation, decreases the risk of breakage of condom (72%), increases feeling/stamina (45.5%) and prevents from HIV (32%).

Table 3. 18 Use of lubricant

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever used lubricant while having anal sex									
Yes	96.4	90.4	93.7	58.3	70.1	69.2	93.4	79.5	84.8
No	3.6	9.6	6.3	41.7	29.9	30.8	6.6	20.5	15.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Types of lubricant used while having anal sex									
Water based lube	86.3	80.9	83.9	75.0	72.4	72.6	85.4	76.3	79.8
Saliva	5.0	7.8	6.3	25.0	20.9	21.2	6.6	14.9	11.8
Cream/lotion	8.6	7.0	7.9	0	5.2	4.8	7.9	6.0	6.8
Oil	0	4.3	2.0	0	1.5	1.4	0	2.8	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Reasons for use of lubricant*									
Decrease pain/ inflammation	100.0	99.1	99.6	100.0	100.0	100.0	100.0	99.6	99.8
Decrease risk of condom breakage	87.1	76.5	82.3	41.7	55.2	54.1	83.4	65.1	72.0
Increase feeling/ stamina	53.2	40.9	47.6	33.3	42.5	41.8	51.7	41.8	45.5
Prevent HIV/AIDS infection	42.4	25.2	34.6	33.3	26.9	27.4	41.7	26.1	32.0
N	139	115	254	12	134	146	151	249	400

Percent total may exceed 100 due to multiple responses

An overwhelming number of MSM-TG (82.2%) reported not having any problem while using lubricant with condom. The problem was still less reported by non-SW (95.9%). Of those who reported they faced problems included irritation or burning sensation (10.8%), condom slippage (4.5%) and condom breakage (1%). The preferred sources of lubricant were BDS field workers (57.8%) followed by BDS drop-in-center (40.5%), pharmacy/medical hall (37.2%) and shops (6.2%).

It is discouraging to note that one-fifth (20.2%) MSM-TG informed that condom broke while they used it in the past month prior to the study.

Table 3. 19 Problem encountered in using lubricant with condom

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Faced any problems while using lubricants									
No problem	76.3	72.2	74.4	91.7	96.3	95.9	77.5	85.1	82.2
Irritation or burning sensation	12.9	20.0	16.1	0	1.5	1.4	11.9	10.0	10.8
Condom slippage	7.9	6.1	7.1	0	0	0	7.3	2.8	4.5
Condom breakage	2.9	0	1.6	0	0	0	2.6	0	1.0
Not used	0	0	0	0	0.7	0.7	0	0.4	0.2
Don't know	0	1.7	0.8	8.3	1.5	2.1	0.7	1.6	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Preferred sources of lubricant*									
BDS field workers	65.5	72.2	68.5	41.7	38.8	39.0	63.6	54.2	57.8
BDS drop-in center	64.0	41.7	53.9	25.0	16.4	17.1	60.9	28.1	40.5
Pharmacy/Medical hall	31.7	37.4	34.3	66.7	40.3	42.5	34.4	39.0	37.2
Shop	4.3	5.2	4.7	0	9.7	8.9	4.0	7.6	6.2
Customer/friends	2.2	1.7	2.0	0	14.2	13.0	2.0	8.4	6.0
From abroad	0	0	0	0	0.7	0.7	0	0.4	0.2
Don't know	0	0.9	0.4	8.3	7.5	7.5	0.7	4.4	3.0
N	139	115	254	12	134	146	151	249	400
Experience of condom broke while having sex in the last month									
Yes	23.0	28.7	25.6	0	11.9	11.0	21.2	19.7	20.2
No	74.1	66.1	70.5	83.3	79.9	80.1	74.8	73.5	74.0
Condom never used/ didn't use last month	2.9	3.5	3.1	16.7	8.2	8.9	4.0	6.0	5.2
Don't know	0	1.7	0.8	0	0	0	0	0.8	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

*Percent total may exceed 100 due to multiple responses

3.6 Awareness and reported symptoms of STI

3.6.1 Awareness of STI

Overall, 84.8% MSM-TG (87% SW and 80.8% non-SW) had ever heard STIs as a disease transmitted through sexual contact. This awareness seemed to be higher among TG (94%) than in MSM (79.1%). The perceived symptoms included penial discharge (96.8%), genital ulcers/sores (96.2%), burning pain during urination (87%), swelling in the groin area (79.9%), anal discharge (68.1%) and anal ulcer/sores (67.8%).

Table 3. 20 Awareness of STI and reported STI symptoms in the past year

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Heard about STIs which is transmitted from sexual contact									
Yes	93.5	79.1	87.0	100.0	79.1	80.8	94.0	79.1	84.8
No	6.5	20.9	13.0		20.9	19.2	6.0	20.9	15.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Perceived symptoms of male STI*									
Penis discharge	98.5	94.5	96.8	100.0	96.2	96.6	98.6	95.4	96.8
Genital ulcers/sores	97.7	93.4	95.9	100.0	96.2	96.6	97.9	94.9	96.2
Burning pain during urination	88.5	79.1	84.6	83.3	92.5	91.5	88.0	86.3	87.0
Swellings in groin area	85.4	68.1	78.3	91.7	82.1	83.1	85.9	75.6	79.9
Anal discharge	72.3	48.4	62.4	75.0	79.2	78.8	72.5	65.0	68.1
Anal ulcer/sores	76.2	53.8	67.0	66.7	69.8	69.5	75.4	62.4	67.8
Don't know	0	0	0	0	2.8	2.5	0	1.5	0.9
N	130	91	221	12	106	118	142	197	339

*Percent total may exceed 100 due to multiple responses

3.6.2 Reported symptoms of STI

Table 3.21 presents data on reported STI symptoms and treatment sought by the MSM-TG. In total, 1.5% MSM-TG (0.7% TG and 2% MSM) reported currently experiencing urethral discharge. Similarly, 1.2% MSM (1.3% TG and 1.2% MSM) reported that they were currently experiencing anal discharge. MSM who were currently experiencing genital ulcer/sore, anal ulcer/sore, and genital ulcer/discharge/sore (penis and or anal) were 2.8%, 3% and 2% respectively.

The MSM-TG who had experienced symptoms of STIs sought treatment from the hospital (12.5%), chemist (25%) and private doctor/clinician (25%) while 37.5% did nothing even after they experienced symptoms of STIs.

Table 3. 21 Reported STI symptoms (current) and treatment sought

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Currently experienced									
Urethral discharge	0.7	0.9	0.8	0	3.0	2.7	0.7	2.0	1.5
Anal discharge	1.4	1.7	1.6	0	0.7	0.7	1.3	1.2	1.2
Genital ulcer / sore	2.9	.9	2.0	0	4.5	4.1	2.6	2.8	2.8
Anal ulcer / sore	5.0	3.5	4.3	0	0.7	0.7	4.6	2.0	3.0
Genital ulcer / discharge / sore (penis and or anal)	2.2	0.9	1.6	0	3.0	2.7	2.0	2.0	2.0
N	139	115	254	12	134	146	151	249	400

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Treatment seeking when had STI symptoms									
Hospital	0	0	0	0	25.0	25.0	0	20.0	12.5
Chemist	33.3	100.0	50.0	0	0	0	33.3	20.0	25.0
Private doctor/ clinician	33.3	0	25.0	0	25.0	25.0	33.3	20.0	25.0
Nothing	33.3	0	25.0	0	50.0	50.0	33.3	40.0	37.5
Total	100.0	100.0	100.0	0	100.0	100.0	100.0	100.0	100.0
N	3	1	4	0	4	4	3	5	8

3.7 Visit to STI clinic

One-fifth (21.5%) of the MSM-TG visited any STI clinic in the last 12 months. The STI visit tends to be higher in SW (27.2%) as compared to MSM (11.6%). Eight of ten (82.6%) had tested blood for STI, and 87.2 % had undergone a physical examination for STI identification, However, less than half of them (48.8%) only reported that they had discussed on how STI is/isn't transmitted. Discussion on regular/non-regular use of condom was even low (38.4%).

Data on STI clinic visit by the MSM in the last 12 months shows that half of them (50%) visited the STI clinic once whereas a quarter (25.6%) had visited 2-3 times. Those who visited 4-6 times, 7-12 times and more than 12 times were 17.4%, 3.5% and 3.5% respectively.

Table 3. 22 Practice of STI clinic visit

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Visited any STI clinic in the last 12 months									
Yes	21.6	33.9	27.2	16.7	11.2	11.6	21.2	21.7	21.5
No	78.4	66.1	72.8	83.3	88.8	88.4	78.8	78.3	78.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Participated activities at STI Clinic*									
Blood tested for STI	80.0	76.9	78.3	100.0	100.0	100.0	81.2	83.3	82.6
Physical examination conducted for STI identification	90.0	87.2	88.4	50.0	86.7	82.4	87.5	87.0	87.2
Discussed on how STI is/isn't transmitted	56.7	46.2	50.7	50.0	40.0	41.2	56.2	44.4	48.8
Discussed on regular/ non-regular use of condom	53.3	25.6	37.7	50.0	40.0	41.2	53.1	29.6	38.4
Took a friend with me	46.7	35.9	40.6	100.0	60.0	64.7	50.0	42.6	45.3
N	30	39	69	2	15	17	32	54	86

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Frequency of visiting STI clinic in the last 12 months									
Once	36.7	56.4	47.8	50.0	60.0	58.8	37.5	57.4	50.0
2-3 times	23.3	25.6	24.6	50.0	26.7	29.4	25.0	25.9	25.6
4-6 times	23.3	15.4	18.8	0	13.3	11.8	21.9	14.8	17.4
7-12 times	6.7	2.6	4.3	0	0	0	6.2	1.9	3.5
More than 12 times	10.0	0	4.3	0	0	0	9.4	0	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	30	39	69	2	15	17	32	54	86

*Percent total may exceed 100 due to multiple responses

3.8 Visit to DIC

It was found that more than two-third of the MSM-TG (67.5%) had visited any outreach center (DIC, IC or CC) in the last 12 months. The practice of visiting DIC/IC/CC was higher among the TG group (84.1%) than the MSM group (57.4%).

More than eight of ten (85.2%) had visited DIC to collect condom while more than a third visited to learn the correct way of using condom. Furthermore, more than a third (68%) had visited to watch film on HIV/AIDS and for the discussion on HIV transmission.

Table 3. 23 Practice of DIC visit

	SW (%)			Non-SW (%)			MSM (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Visited to any outreach center (DIC, IC or CC) in the last 12 months									
Yes	86.3	76.5	81.9	58.3	41.0	42.5	84.1	57.4	67.5
No	13.7	23.5	18.1	41.7	59.0	57.5	15.9	42.6	32.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Activities carried out in DIC*									
Went to collect condoms	97.5	86.4	92.8	85.7	56.4	59.7	96.9	74.8	85.2
Went to learn the correct way of using condom	70.0	61.4	66.3	85.7	74.5	75.8	70.9	66.4	68.5
Went to watch film on HIV/AIDS	65.0	61.4	63.5	71.4	83.6	82.3	65.4	69.9	67.8
Participated in discussion on HIV transmission	68.3	58.0	63.9	85.7	72.7	74.2	69.3	63.6	66.3
Go for syringe	-	-	-	-	1.8	1.6	-	0.7	0.4
N	120	88	208	7	55	62	127	143	270

*Percent total may exceed 100 due to multiple responses

3.9 Visit to the HCT

Nearly two-thirds (72.5%) reported they had visited to an HCT in the last 12 months (88.7% TG and 62.7% MSM reported it). Two-third (66.9%) had visited a HCT for 2 to 3 times. In the HCT centre, 94.5% had given blood sample for HIV test, 21% received pre-HIV test counseling, 14.8% received post-HIV counseling and 14.8% received HIV test results. Only 9.3% reported that they received counseling on using condom correctly in each sexual intercourse and other 7.6% received information on HIV/AIDS window period. One out of twenty (6.9%) had taken a friend with them while visiting an HCT.

Table 3. 24 HCT Visit Practice

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Visited any HTC (HIV testing and counseling center)									
Yes	88.5	70.4	80.3	91.7	56.0	58.9	88.7	62.7	72.5
No	11.5	29.6	19.7	8.3	44.0	41.1	11.3	37.3	27.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Participated activities at HCT center *									
Received pre-HIV test counseling	18.7	32.1	24.0	18.2	13.3	14.0	18.7	23.1	21.0
Blood sample taken for HIV test	96.7	95.1	96.1	90.9	90.7	90.7	96.3	92.9	94.5
Received post HIV test counseling	15.4	25.9	19.6	-	6.7	5.8	14.2	16.7	15.5
Received HIV test result	15.4	25.9	19.6	-	4.0	3.5	14.2	15.4	14.8
Received counseling on using condom correctly in each sexual intercourse	8.9	17.3	12.3	-	2.7	2.3	8.2	10.3	9.3
Took a friend with the respondent	6.5	13.6	9.3	-	1.3	1.2	6.0	7.7	6.9
Received information on HIV/AIDS window period	8.1	11.1	9.3	9.1	2.7	3.5	8.2	7.1	7.6
N	25	28	53	2	11	13	27	39	66
Frequency of visiting HTC (HIV testing and counseling center) in the last 12 months									
Once	28.5	19.8	25.0	27.3	29.3	29.1	28.4	24.4	26.2
2-3 times	61.8	72.8	66.2	63.6	69.3	68.6	61.9	71.2	66.9
4-6 times	9.8	7.4	8.8	9.1	1.3	2.3	9.7	4.5	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	123	81	204	11	75	86	134	156	290

Percent total may exceed 100 due to multiple responses

3.10 Perception on HIV testing

Almost all (95%) informed that confidential HIV testing facility was available in their community. Nine out of ten (90.2%) knew about the place where HIV testing could be done. Eight out of ten (79.2%) ever had an HIV test. TG group reported HIV test higher (94.7%) as

compared to the MSM group (69.9%). Almost all (99.1%) did the test voluntarily. The majority of the MSM-TG (91.2%) conducted the most recent HIV test within the past 12 months. The frequency of HIV test varied from 1 to 4 times.

Table 3. 25 Perception on HIV Testing

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Confidential HIV test facility available in the community									
Yes	97.1	92.2	94.9	100.0	94.8	95.2	97.4	93.6	95.0
No	2.2	6.1	3.9	0	4.5	4.1	2.0	5.2	4.0
Don't know	0.7	1.7	1.2	0	0.7	0.7	0.7	1.2	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Know about the place where HIV testing can be done									
Yes	97.8	90.4	94.5	100.0	81.3	82.9	98.0	85.5	90.2
No	2.2	9.6	5.5		18.7	17.1	2.0	14.5	9.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Ever had an HIV test									
Yes	94.2	79.1	87.4	100.0	61.9	65.1	94.7	69.9	79.2
No	5.8	20.9	12.6		38.1	34.9	5.3	30.1	20.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Voluntarily underwent the test or because it was required									
Voluntary	98.5	100.0	99.1	91.7	100.0	98.9	97.9	100.0	99.1
Required	1.5	0	0.9	8.3	0	1.1	2.1	0	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	131	91	222	12	83	95	143	174	317
Most recent HIV test done									
Within the past 12 months	93.9	89.0	91.9	91.7	89.2	89.5	93.7	89.1	91.2
Between 13-24 months	3.8	6.6	5.0	8.3	4.8	5.3	4.2	5.7	5.0
Between 25-48 months	.8	4.4	2.3	0	4.8	4.2	0.7	4.6	2.8
More than 48 months	1.5	0	0.9	0	1.2	1.1	1.4	0.6	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	131	91	222	12	83	95	143	174	317
Frequency of undergoing HIV test within the last 12 months									
0	3.1	5.5	4.1	8.3	6.0	6.3	3.5	5.7	4.7
1	29.8	23.1	27.0	25.0	28.9	28.4	29.4	25.9	27.4
2	20.6	31.9	25.2	16.7	34.9	32.6	20.3	33.3	27.4
3	37.4	33.0	35.6	41.7	28.9	30.5	37.8	31.0	34.1
4	9.2	6.6	8.1	8.3	1.2	2.1	9.1	4.0	6.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	131	91	222	12	83	95	143	174	317

3.11 Exposure to outreach/peer educators

Seven out of ten (72.8%) MSM-TG (87.4% TG and 63.9% MSM) had met or discussed with Peer Educators (PE) or Outreach Educators (OE) in the Last 12 months. The frequency of meeting varied from 1 to more than 12 times. The PE/OE/CM/CEs conducted a discussion on how HIV/AIDS is/isn't transmitted (96.6%), how STI is/isn't transmitted (87.6%) and regular/non-regular use of condom (82.8%). More than three quarters (77.7%) reported that there was a demonstration on using condom correctly.

Table 3.26: Met/discussed/ interacted with peer/outreach educators/community mobilize

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Met or discussed with Peer Educators (PE) or Outreach Educators (OE) in the Last 12 months									
Yes	89.9	83.5	87.0	58.3	47.0	47.9	87.4	63.9	72.8
No	10.1	16.5	13.0	41.7	53.0	52.1	12.6	36.1	27.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Activities carried out with/by PE/OE/CM/CEs*									
Discussion on how HIV/AIDS is/isn't transmitted	97.6	94.8	96.4	100.0	96.8	97.1	97.7	95.6	96.6
Discussion on how STI is/isn't Transmitted	89.6	83.3	86.9	100.0	88.9	90.0	90.2	85.5	87.6
Regular/non-regular use of Condom	86.4	78.1	82.8	100.0	81.0	82.9	87.1	79.2	82.8
Demonstration on using Condom correctly	85.6	68.8	78.3	71.4	76.2	75.7	84.8	71.7	77.7
N	125	96	221	7	63	70	132	159	291
Frequency of meeting PE, OE, CM and/or CE in the last 12 months									
Once	8.8	19.8	13.6	0	28.6	25.7	8.3	23.3	16.5
2-3 times	36.8	30.2	33.9	14.3	41.3	38.6	35.6	34.6	35.1
4-6 times	30.4	22.9	27.1	14.3	15.9	15.7	29.5	20.1	24.4
7-12 times	13.6	12.5	13.1	28.6	9.5	11.4	14.4	11.3	12.7
More than 12 times	10.4	14.6	12.2	42.9	4.8	8.6	12.1	10.7	11.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	125	96	221	7	63	70	132	159	291

*Percent total may exceed 100 due to multiple responses

3.12 Knowledge about HIV/AIDS

Regarding the comprehensive knowledge of HIV, 62% knew about A (abstinence from sex), 74.8% knew about B (having one uninfected faithful sex partner) and 79.8% knew about C (Consistent condom use during each sex). Moreover, 85.2% knew that a healthy-looking person could be infected with HIV (D), 85.5 knew that a person cannot get HIV virus from mosquito bites (E) and 94.8% knew that a person does not get the HIV virus by sharing meal with someone who is infected (F). The respondents having composite knowledge on ABC and BCDEF were 58% and 53% respectively.

Table 3. 27 Comprehensive knowledge of ABC and BCDEF

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
(A) Abstinence from sexual contact									
Yes	66.9	52.2	60.2	83.3	63.4	65.1	68.2	58.2	62.0
No	33.1	46.1	39.0	16.7	36.6	34.9	31.8	41.0	37.5
Don't know	0	1.7	0.8	0	0	0	0	0.8	0.5
(B) People can protect themselves from HIV by having one uninfected faithful sex partner									
Yes	78.4	75.7	77.2	75.0	70.1	70.5	78.1	72.7	74.8
No	21.6	24.3	22.8	25.0	29.9	29.5	21.9	27.3	25.2
(C) Consistent condom use during each sex									
Yes	82.0	82.6	82.3	91.7	73.9	75.3	82.8	77.9	79.8
No	18.0	17.4	17.7	8.3	26.1	24.7	17.2	22.1	20.2
(D) A healthy-looking person can be infected with HIV									
Yes	87.8	81.7	85.0	91.7	85.1	85.6	88.1	83.5	85.2
No	12.2	16.5	14.2	8.3	13.4	13.0	11.9	14.9	13.8
Don't know	0	1.7	0.8	0	1.5	1.4	0	1.6	1.0
(E) A person can get the HIV from mosquito bites									
Yes	14.4	17.4	15.7	16.7	11.2	11.6	14.6	14.1	14.2
No	85.6	81.7	83.9	83.3	88.8	88.4	85.4	85.5	85.5
Don't know	0	0.9	0.4	0	0	0	0	0.4	0.2
(F) A person get the HIV by sharing meal with someone who is infected									
Yes	6.5	3.5	5.1	0	6.0	5.5	6.0	4.8	5.2
No	93.5	96.5	94.9	100.0	94.0	94.5	94.0	95.2	94.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Knowledge on ABC									
Yes	64.0	45.2	55.5	75.0	61.2	62.3	64.9	53.8	58.0
No	36.0	54.8	44.5	25.0	38.8	37.7	35.1	46.2	42.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Knowledge on BCDEF									
Yes	57.6	49.6	53.9	58.3	50.7	51.4	57.6	50.2	53.0
No	42.4	50.4	46.1	41.7	49.3	48.6	42.4	49.8	47.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.13 Violence and discrimination

More than one out of ten (11.2%) MSM-TG reported they were ever beaten because of sexual behavior in the past 12 months. It was higher in TG (15.9%) than in MSM (8.4%). Nearly two-thirds (64.4%) reported that police had beaten them. The second most source of violence/beating was the clients (31.1%) whereas hooligan group was the third important source of violence (28.9%). They were equally beaten by regular clients, sexual partners and

partners. One out of twenty (5.8%) informed that he/she was forced to have sex with someone against his/her will in the past 12 months. Client (30.4%), hooligans (30.4%), police (21.7%), colleagues (17.4%), military (8.7%) and sex partners (8.7%) were the key people who had forced them to have sex. Fifteen percent of MSM-TG reported that they were ever cheated /threatened because of their sexual behavior in the past 12 months and another 12.5% faced some kind of discrimination in job or everyday activities because of their sexual behavior in the past 12 months. In total, 4% were fired from the job or forced to leave the job due to sexual orientation/behavior. One-fifth (21%) expressed that they had ever faced any problems due to their sexual identity.

Table 3. 28 Personal Experiences of Violence and Discrimination in the Past 12 Months

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever beaten because of your sexual behavior in the past 12 months									
Yes	17.3	17.4	17.3	0	0.7	0.7	15.9	8.4	11.2
No	82.7	82.6	82.7	100.0	99.3	99.3	84.1	91.6	88.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Was beaten up by *									
Police	58.3	70.0	63.6	0	100.0	100.0	58.3	71.4	64.4
Military	8.3	5.0	6.8	0	0	0	8.3	4.8	6.7
Client	25.0	40.0	31.8	0	0	0	25.0	38.1	31.1
Regular client	12.5	0	6.8	0	0	0	12.5	0	6.7
Sexual Partner	12.5	5.0	9.1	0	0	0	12.5	4.8	8.9
Regular sex partner	8.3	10.0	9.1	0	0	0	8.3	9.5	8.9
Partner	8.3	10.0	9.1	0	0	0	8.3	9.5	8.9
Colleague	0	5.0	2.3	0	0	0	0	4.8	2.2
Hooligans' group	37.5	15.0	27.3	0	100.0	100.0	37.5	19.0	28.9
N	24	20	44	0	1	1	24	21	45
Being forced to have sex with someone against your wishes in the past 12 months									
Yes	8.6	9.6	9.1	0	0	0	7.9	4.4	5.8
No	91.4	90.4	90.9	100.0	100.0	100.0	92.1	95.6	94.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
People who forcefully had sex*									
Client	25.0	36.4	30.4	0	0	0	25.0	36.4	30.4
Hooligans' group	33.3	27.3	30.4	0	0	0	33.3	27.3	30.4
Police	25.0	18.2	21.7	0	0	0	25.0	18.2	21.7
Colleague	16.7	18.2	17.4	0	0	0	16.7	18.2	17.4
Military	8.3	9.1	8.7	0	0	0	8.3	9.1	8.7
Sexual Partner	8.3	9.1	8.7	0	0	0	8.3	9.1	8.7
Regular client	8.3	0	4.3	0	0	0	8.3	0	4.3
N	12	11	23	0	0	0	12	11	23

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever been cheated /threatened because of your sexual behavior in the past 12 months									
Yes	25.9	20.9	23.6	0	0	0	23.8	9.6	15.0
No	74.1	79.1	76.4	100.0	100.0	100.0	76.2	90.4	85.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Faced any kind of discrimination in your job or every day activities because of your sexual behavior in the past 12 months									
Yes	26.6	10.4	19.3	0	0.7	0.7	24.5	5.2	12.5
No	73.4	87.8	79.9	100.0	98.5	98.6	75.5	93.6	86.8
Don't remember	0	1.7	0.8	0	0.7	0.7	0	1.2	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Ever been fired from the job or forced to leave the job due to your sexual orientation/ behavior									
Yes	5.8	4.3	5.1	8.3	1.5	2.1	6.0	2.8	4.0
No	94.2	95.7	94.9	91.7	98.5	97.9	94.0	97.2	96.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Ever faced any problems because of your sexual identity									
Yes	36.7	26.1	31.9	8.3	1.5	2.1	34.4	12.9	21.0
No	62.6	73.9	67.7	91.7	97.8	97.3	64.9	86.7	78.5
Don't remember	0.7	0	0.4	0	0.7	0.7	0.7	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

**Percent total may exceed 100 due to multiple responses*

3.14 Stigma and discrimination

As reported, 98.5% MSM-TG would bought food from HIV-infected shopkeeper or food seller, and 99% believed that children living with HIV should be able to attend school with children who are HIV negative.

Table 3. 29 Stigma and discrimination

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Buy food from an HIV positive shopkeeper or food seller									
Yes	99.3	99.1	99.2	91.7	97.8	97.3	98.7	98.4	98.5
No	0.7	0.9	0.8	8.3	2.2	2.7	1.3	1.6	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Children living with HIV should be able to attend school with children who are HIV negative									
Yes	98.6	100.0	99.2	100.0	98.5	98.6	98.7	99.2	99.0
No	1.4	0	0.8	0	1.5	1.4	1.3	0.8	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400

3.15 Use of Hormone

Questions regarding hormone were asked only with TG. More than a quarter of SWTG (28%) used the hormone. More than two-thirds (67%) reported that their friends advised them in taking hormone. Doctors (11.5%) and self-decision (15.4%) were also reported. The most used hormones as reported by the respondents were Diane-35 (46.2%), OCP (33%), Preme (10.3%).

Almost a quarter (23%) reported physical and mental health effects brought by the hormone. The problems were breast pain (22%), headache (11.1%), weight gain (11.1%), etc (Table 3.30).

Table 3. 30 Information on Hormone

	TG		
	SW (%)	Non-SW (%)	Both
Use hormone			
Yes	28.1	0	25.8
No	71.9	100.0	74.2
Total	100.0	100.0	100.0
N	139	12	151
Person advising to take hormone			
Doctor	15.4	0	15.4
Friend	66.7	0	66.7
Client	2.6	0	2.6
None/Self decided	15.4	0	15.4
Total	100.0	0	100.0
N	39	0	39

	TG		
	SW (%)	Non-SW (%)	Both
Name of hormone mentioned*			
Dain	46.2	0	46.2
OCP (nilokan/sunaolo gulab)	33.2	0	33.2
Preme	10.3	0	10.3
Overel-G	2.6	0	2.6
Andocore	2.6	0	2.6
Pogynova	2.6	0	2.6
Velex	2.6	0	2.6
Don't know	7.7	0	7.7
N	39	0	39
Physical and mental health effects brought by the hormone			
Yes	23.1	0	23.1
No	76.9	0	76.9
Total	100.0	0	100.0
N	39	0	39
Type of effect experienced*			
Weight gain	11.1	0	11.1
Headache	11.1	0	11.1
Black spot in face	11.1	0	11.1
Fever	11.1	0	11.1
Uric Acid	11.1	0	11.1
Breast pain	22.2	0	22.2
Legs pain	11.1	0	11.1
Gastric	11.1	0	11.1
N	9	0	9

* Percentages total may exceed 100 due to multiple responses

3.16 Awareness of PrEP and PEP

Table 3.31 displays awareness of PrEP and PEP by the MSM-TG. Nearly a quarter (24.8%) had ever heard about PrEP (27.8% TG and 22.9% MSM), and only 1% ever heard about PEP (Table 3.31).

Table 3. 31 Awareness and use of PrEP and PEP

	SW (%)			Non-SW (%)			MSM-TG (%)		
	TG	MSM	Total	TG	MSM	Total	TG	MSM	Total
Ever heard about PrEP									
Yes	28.1	29.6	28.7	25.0	17.2	17.8	27.8	22.9	24.8
No	69.8	67.8	68.9	75.0	76.9	76.7	70.2	72.7	71.8
Don't know	2.2	2.6	2.4	0	6.0	5.5	2.0	4.4	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	139	115	254	12	134	146	151	249	400
Ever heard about PEP									
Yes	2.0	0	1.1	0	0	0	1.9	0	.9
No	98.0	100.0	98.9	100.0	100.0	100.0	98.1	100.0	99.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
N	49	43	92	4	20	24	53	63	116

CHAPTER 4: TREND ANALYSIS OF KEY INDICATORS

This chapter presents the findings of the IBBS Round VI on MSM-TG in Kathmandu Valley. The trend analysis was performed with the key variables such as prevalence of HIV, STI, sexual behaviors and condom use, over the six consecutive rounds of the IBBS Surveys on MSM conducted in 2004(Round 1), 2007 (Round 2), 2009 (Round 3), 2012 (Round 4), 2015 (Round 5) and 2017 (Round 6).The chapter also presents the analysis of other key indicators related to knowledge of HIV transmission, discrimination towards MSM-TG and exposure to the program.

4.1 HIV Prevalence

HIV Prevalence rate fluctuates during the study period 2004-2017. Table 4.1 presents data on the trend of HIV prevalence. The HIV prevalence rate in 2017 has increased to 6.2 % from 2.4% points in 2015 and 3.8% in 2012 while it was 3.3% in 2007, a small decline in comparison to 2004 (3.9%). The prevalence of HIV in SW shows that it was 4.8% in 2004, which declined to 2.9% in 2007 and increased again steadily in 2007(5.2%) and further in 2012(6.8%). In 2015 it decreased by 5.6% and again it has increased to 8.3% in 2017. Thus the trend of HIV prevalence among SW fluctuated significantly over time. With regards to HIV prevalence among Non-SW, it has declined from 2004 (3.6%) to 1.8% in 2015, and again slightly increased in 2017 (2.7%).

Table 4. 1 Trend of HIV Prevalence

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	83	4	79	4.8		275	10	265	3.6		358	14	344	3.9	
2007	135	4	131	2.9*		265	9	256	3.4*		400	13	387	3.3*	
2009	135	7	128	5.2	0.0515	265	8	257	3.0	0.956	400	15	385	3.8	0.1861
2012	145	16	129	6.8*		265	9	256	2.9*		400	25	375	3.8*	
2015	148	16	132	5.6*		226	5	221	1.8*		400	21	389	2.4*	
2017	254	21	233	8.3		146	4	142	2.7		400	25	375	6.2	

*Estimated population proportion (EPP) may not represent the sample proportion.

4.2 Active Syphilis

The trend of prevalence of Active Syphilis shows slightly decreased from 1.7% in 2004 to 1.5% in 2017. However, the trend does not seem consistently decreasing. It increased in 2007 (2.4%) from 2004 (1.7%) after that it decreased slightly to 1.5% in 2009 and further decreased to

0.8% and 0.5% in 2012 and 2015 respectively.

Active syphilis was 2.4% in 2004 among SW which was decreased to 1.6% in 2017. However, the prevalence of active syphilis increased to 3% in 2009 and 2012 (i.e. 3% each) while it decreased to 1.1% in 2015 and again increased to 1.6 in 2017. Similarly, in Non-SW as well, the trend does not seem uniform. It increased in 2007 to 2.3% from 1.5% in 2004, and it was down to 0 in 2012 and 2015 and increased to 1.4% in 2017.

Table 4. 2 Trend of Active Syphilis (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	83	2	81	2.4		275	4	271	1.5		358	6	352	1.7	
2007	135	2	133	1.5*		265	6	259	2.3*		400	8	392	2.4*	
2009	135	4	131	3.0	0.879	265	2	263	0.8	0.0639	400	6	394	1.5	0.4214
2012	135	3	132	3.0		0	0	265	0.0		400	3	397	0.8	
2015	174	2	167	1.1		226	0	224	0.0		400	2	391	0.5	
2017	254	4	250	1.6		146	2	144	1.4		400	6	394	1.5	

*Estimated population proportion (EPP) may not represent the sample proportion.

4.3 Ever had HIV Test

The trend of ever had HIV test among SW, Non-SW and MSM-TG tends to be fluctuating statistically significantly over the past six round of the IBBS surveys. The proportion of MSM-TG who ever had HIV test increased from 8.8% in 2004 to 26.2% in 2007. It jumped to 62.8% in 2009 and remained same until 2012. In 2015, it had decreased by 26 percent point (36.6 %) and increased to 79% in 2017.

Similarly, the proportion of SW who ever had HIV test was only 16% in 2007, it increased to 83.7% in 2009, which remained constant till 2012 and it decreased slightly in 2015 (79.9%) and went up to 87% in 2017. Among Non-SW, the proportion of respondents who ever had HIV test increased from 6.6 in 2004 to 52.1% in 2007 and 2009 each, which has slightly decreased to 44.2% in 2012 and decreased to 29% in 2015. The percent increased to 65% in 2017.

Table 4. 3 Trend of Ever had HIV Test (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	81	13	68	16.0		273	18	255	6.6		358	31	327	8.8	
2007	135	67	68	49.8		265	77	188	52.1		400	144	256	26.2	
2009	135	113	22	83.7	0.0001	265	138	127	52.1	0.0001	400	222	178	62.8	0.0001
2012	135	113	22	83.7		265	117	148	44.2		400	251	149	62.8	
2015	174	139	35	69.0		226	100	126	28.6		400	239	161	36.6	
2017	254	222	32	87.4		146	95	51	65.1		400	317	83	79.2	

4.4 Sexual behavior

4.4.1 Mean age at first sex

Mean age at first sex is slightly lower among SW than Non-SW in all the surveys. The mean age at first sex among SW was 14.2 years in 2004 and reached 15.4 in 2017. The mean age at first sex fluctuated for both SW and non-SW during the period of 2004 to 2017. Self-reported mean age at first sex was high for both SW and non-SW in 2012 and decreased slightly in 2015 and 2017.

Table 4. 4 Mean Age at First Sex (2004-2017)

Year	Mean age		
	SW	Non-SW	MSM-TG
2004	14.2	16.4	15.9
2007	14.8	16.6	16.0
2009	14.2	16.7	15.9
2012	19.2	19.6	19.3
2015	15.5	17.1	16.4
2017	15.4	17.3	16.1

4.4.2 Male in exchange for money

The trend of ever had sex with male in exchange for money increased statistically significantly among MSM-TG from 13.1% in 2004 to 63.5 % in 2017. None of the non-SW ever had sex in exchange for money in 2017.

Table 4. 5 Trend of Ever had Sex with Male in Exchange for Money (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	83	12	71	14.5		275	35	240	12.7		358	47	311	13.1	
2007	135	27	108	20.0		265	42	223	15.5		400	70	330	17.4	
2009	135	9	126	6.7	<i>0.0001</i>	265	67	198	25.3	<i>0.0001</i>	400	76	324	19.0	<i>0.0001</i>
2012	135	135	0	100		265	52	213	19.6		400	187	213	46.8	
2015	174	174	0	100		226	1	225	0.4		400	175	225	22.5	
2017	254	254	0	100		146	0	146	100		400	254	146	63.5	

4.5 Access to condom

Access to condom had increased significantly over time. The reported access to condom by the MSM-TG was lowest in 2004 for both SW (30%) and non-SW (28%) which has increased to almost all (99% among SW and 95% among Non-SW) in 2017.

Table 4. 6 Access to Condom by the MSM (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	81	24	57	30.0		259	73	186	28.0		340	97	243	39.9	
2007	135	124	11	91.9		265	222	43	83.8		400	308	92	77.0	
2009	135	129	6	95.6	0.0001	264	250	14	94.3	0.0001	399	379	20	94.8	0.0001
2012	133	125	8	92.6		262	242	20	91.3		395	367	28	91.8	
2015	174	152	22	99.1		226	136	90	95.4		400	288	112	94.0	
2017	254	252	2	99.2		146	138	8	94.5		400	390	10	97.5	

4.6 Lubricant use

Table 4.7 presents data on the trend of lubricant used by the MSM-TG. The trend of use of lubricant in the anal sex by the SW, Non-SW and MSM-TG has increased significantly from 2007 to 2017. More than two in five MSM-TG in 2004 (44%) used lubricant which decrease to 25% in 2007 and increased to 53% in 2009. It further increased 63% in 2012, 70% in 2015 and 85% in 2017. Similarly, only 25% of SW and 21% of Non-SW reported that they used lubricant while having anal sex in 2004 which increased to 94% among SW and 69% among Non-SW in 2017.

Table 4. 7 Trend of Lubricant Use

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	83	21	62	25.0		275	58	217	21.0		358	158	200	44.0	
2007	106	42	64	39.9		140	29	111	21.0		246	62	184	25.4	
2009	130	90	40	69.2	0.0001	202	87	115	43.1	0.0001	332	177	155	53.3	0.0001
2012	118	79	39	66.9		159	91	68	60.7		268	170	98	63.4	
2015	144	111	33	71.1		96	58	38	60.4		240	169	71	70.4	
2017	254	238	16	93.7		146	101	45	69.2		400	339	61	84.8	

Data on use of water-based lubricant were assessed from those who had used lubricant. It is found that more than three-fourth of the MSM-TG (76%) in 2004 had used water based lubricant in last anal sex which increased slightly in 2017 (80%). The lowest percent of MSM-TG who used water-based lubricant was found in 2007. It increased to 86% in 2009 and again 92% in 2012. However, it decreased to 65% in 2015 and

increased to 80% in 2017. A similar trend was found in SW and non-SW as well. These changes are statistically significant to show the differences.

Table 4. 8 Use of Water-based Lubricant in Last Anal Sex

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	83	71	12	86.0		275	124	151	45.0		275	124	151	75.5	
2007	111	28	83	25.2		168	27	141	16.1		279	55	224	19.7	
2009	132	118	14	89.8	0.0001	215	179	36	83.3	0.0001	347	297	50	85.6	0.0001
2012	122	112	10	91.8		193	172	21	91.7		305	289	16	91.7	
2015	144	94	50	63.8		96	62	34	73.0		240	156	84	64.7	
2017	254	213	41	83.9		146	106	40	79.5		400	319	81	79.8	

4.7 Comprehensive knowledge on HIV prevention

Comprehensive knowledge on HIV prevention (both ABC and BCDEF) was fluctuated overtime. It is discouraging to note that knowledge on ABC has decreased from 90% in 2004 to 58% in 2017. The same trend was observed in both SW and non-SW. However, knowledge on ABC has increased during the period of 2015 to 2017 (SW 49% in 2015 to 62% in 2017; and Non-SW 51% in 2015 to 62% in 2017).

Table 4. 9 Trend of Knowledge on ABC of HIV Prevention

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	72	64	8	89.0		220	200	20	91.0		292	264	28	90.4	
2007	135	104	31	76.7		265	211	54	79.6		400	319	81	79.8	
2009	135	114	21	84.4	0.0001	265	219	46	82.7	0.0001	400	333	67	83.3	0.0001
2012	135	84	51	62.2		265	156	109	59.0		400	240	160	60.0	
2015	174	103	71	48.6		226	121	105	51.1		400	224	176	50.9	
2017	254	141	113	62.3		146	91	55	62.3		400	232	188	58.0	

Same trend as ABC was observed regarding BCDEF as well. Among MSM, knowledge on BCDEF was 44% in 2007 which increased to 64% in 2009 and decreased to 59% in 2012. It further decreased to 51% in 2015. However, it increased slightly in 2017 (53%). Similar pattern can be

found among SW and Non-SW. These changes are statistically significant.

Table 4. 10 Trend of Increase in Knowledge on BCDEF of HIV Prevention (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2007	135	55	80	40.6	0.0001	265	118	147	44.4	0.2643	400	178	222	44.4	0.0001
2009	135	109	26	80.7		265	148	117	55.8		400	257	143	64.3	
2012	135	82	53	60.7		265	155	110	59.0		400	237	163	59.3	
2015	174	113	61	60.7		226	114	112	44.8		400	227	173	50.5	
2017	254	137	117	53.9		146	75	71	51.4		400	212	188	53.0	

4.8 Injecting behaviour

It is found that the practice of injecting drug use among SW seems on the declining trend right from the Round 1(3.4%) to Round 3(1.3%).It increased by a small proportion in 2012(2% in total) and again decreased to 0.3% in 2015. It increased slightly to 1% in 2017. Among SW the proportion of injecting drug use was high in 2007 (4.2%), which is still decreasing with small fluctuations and reached to 0.4% in 2017. No one reported such practice in 2015. Moreover, the practice of injecting drug use among Non-SW is also on the decline-from 4.4% in 2004 to 0.4% in 2015 and slightly increased to 2.1% in 2017. The injecting drug use behavior for MSM-TG, SW and Non-SW are statistically significant.

Table 4. 11 Trend of Injecting Drug Use in Past 12 Months (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	77	0	77	0	0.0033	275	12	263	4.4	0.0306	358	12	346	3.4	0.0188
2007	135	6	129	4.2		265	4	261	1.6		400	7	393	1.8	
2009	135	1	134	1.5		265	3	262	1.1		400	5	395	1.3	
2012	135	3	132	2.2		265	5	260	1.9		400	8	392	2.0	
2015	174	0	174	0.0		226	1	225	0.4		400	1	399	0.3	
2017	254	1	253	0.4	146	3	143	2.1	400	4	396	1.0			

4.9 Discrimination in Job/Daily life

Table 4.12 presents data from all six rounds of IBBS to examine whether there was a decrease in discrimination in jobs or daily lives of the MSM-TG. The data shows that as compared to the level of reported discrimination in jobs and daily lives in 2004 by SW there has been an increase in such discrimination over the years- from 17.1% in 2004 to 42.3% in 2015 and decreased to 19% in 2017. In the case of Non-SW, it increased from 2.2% in 2004 to 13.6% in 2012 and 3.4% of 2015. On the whole, among the MSM-TG, it was 5.6% in 2004 and increased and reached highest in 2015 (22.8%) and decreased to 12.5% in 2017. The differences in discrimination in various rounds of IBBS are statistically significant.

Table 4. 12 Trend of Discrimination in Job or Daily Life (2004-2017)

Year	SW					Non-SW					MSM-TG				
	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value	Total	Yes	No	Yes (%)	P-value
2004	82	14	68	17.1		275	6	269	2.2		357	20	337	5.6	
2007	135	34	101	25.0		265	21	244	8.0		400	40	360	10.1	
2009	136	60	76	44.4	0.0001	265	24	241	9.1	0.0001	400	84	316	21.0	0.0001
2012	135	43	92	31.9		265	36	229	13.6		400	79	321	19.8	
2015	127	60	67	42.3		175	68	107	3.4		302	128	174	22.8	
2017	254	49	205	19.3		146	1	145	0.7		400	50	350	12.5	

CHAPTER V: CONCLUSION AND RECOMMENDATIONS

This is the sixth round of IBBS survey conducted among 400 MSM-TG in the Kathmandu valley of Nepal. A structured questionnaire was used to collect background characteristics, knowledge on HIV and AIDs and STIs, sexual behavior, exposure and access to HIV services and stigma and discrimination.

The overall prevalence of HIV in MSM has 6.2 percent. The prevalence of HIV was high among SW group (8.3%) whereas it was 2.7 percent in MSM group. Comparison of the previous year 2015 the prevalence of HIV has increased by 3.8 in the case of MSM-TG group. The prevalence of active syphilis among MSM-TG had been decreased from 0.8% in 2012 to 0.5% in 2015 but it has been increased by a small proportion (1.5%) in 2017, while active syphilis had decreased from 3% in 2012 to 1.1% in 2015 and had increased to 1.6 percent and 1.4 percent among SW and MSM group respectively in 2017.

More than three in four MSM-TG (76%) while less than two in three TG (56%) had consumed alcohol. It is notable that 12 percent of TG and 15 percent of MSM consumed alcohol every day. Almost half of those who had ever consumed alcohol also consumed alcohol at the last sex. Similarly, 7 percent of MSM and 3 percent of TG tried oral drugs in the last 12 months.

The mean age at first sex was lower among SW than non-SW. The mean age at first sex among SW and non-SW was 15 years and 17 years respectively. Consistent condom use was not satisfactory among MSM. Less than three in four MSM-TG used condom always while having anal sex with non-paying male sex partner (73%) and paying male sex partner (67%) in the last month. Similarly, only three in five MSM-TG reported that they used condom while having vaginal, oral or anal sex with non-paying female sex partner (61%), with paying female sex partner (65%) in the last month. Furthermore, four in five MSM-TG (80%) reported that they used condom always while having sex with regular male/TG women in the last month.

Use of lubricant is high among SW than non-SW. An overwhelming majority of SW (94%) while only about two-third Non-SW (69%) had used lubricant while having anal sex. Four-fifth of the MSM-TG used water based lube while having sex.

Discrimination is still high among MSM-TG, especially among SW. Almost a fifth of the MSW (19%) reported facing discrimination in jobs and daily life. The level of discrimination among MSW has not changed in 2004 and 2017. However, the percent of MSWs facing discrimination in jobs and daily life has decreased during 2015 and 2017 (42% vs. 19%).

Comprehensive knowledge has increased over time but still low among MSM. The knowledge on BCDEF was highest in 2009 (64.3%), it started to decline from 2012 and has come down to 50.5% in 2015 and has slightly increased to 53% in 2017. In the case of MSW, the knowledge of BCDEF was peak (80.7%) in 2009 then remain constant (60.7%) in 2012 and 2015 and has declined to 53.9% in 2017. Similarly, the knowledge of BCDEF among the Non-MSW was fluctuated and found approximately same in 2007 and 2015 (i.e. around 45%), but it has increased to 51.4% in 2017.

Age of first sexual contact among MSM/TG was below 19 years. Injecting drug use among MSM-TG has slightly increased in recent years. Knowledge on PEP and PrEP among MSM/TG were lower. Hormone use is prevalent among TG, and some TG also faced side effects of hormonal use. Violence existed among MSM/TG, and most of them were from police and clients. Forced sex also existed among MSM/TG, and most of them were from clients and Hooligans' group.

Exposure to DIC, STI clinic, HIV and AIDS programs among MSM was satisfactory. Overall, almost three in four MSMs had met or discussed with PE or OE and visited any HTC (73%) in the last 12 months. An overwhelming majority of them who visited HTC went there for HIV test (95%) followed by pre-HIV test counseling (21%).

IMPLICATIONS FOR PROGRAM

- MSM-TG especially SW are involved in risky sexual behavior that leads to HIV transmission. Targeted interventions and strategies are necessary for MSWs to minimize the risk behavior that leads to HIV transmission.
 - Consistent condom use is not satisfactory. It is necessary to spread the message of consistent condom use with a different partner.
 - Comprehensive knowledge of HIV prevention is not satisfactory and fluctuated over time. A qualitative study should be conducted to find out the reason for declining it.
 - Access to HIV programs (DIC, HCT/STI clinics) is satisfactory but still need to be improved/scaled up.
 - Messages such as delayed sexual debut, violence and side effects of hormone should be disseminated among MSM/TG.
 - Special advocacy and awareness programs should be implemented in order to reduce the existing stigma and discrimination at the potential work place of the MSM-TG populations.
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ANNEX

Questionnaire

Government of Nepal
Ministry of Health and Population (MoHP)
National Center for AIDS and STD Control (NCASC)

Integrated Biological and Behavioral Surveillance Survey (IBBS) among Men who
have Sex with Men/Transgender people in Kathmandu Valley - 2017
(MSM Questionnaire)

Namaste! My name is..... I am here from to collect data for a research study being conducted under the leadership of **National Centre for AIDS and STD Control (NCASC), Ministry of Health and Population, Government of Nepal**. During this data collection, I will ask you some personal questions that will be about sexual behavior, use and promotion of condoms, STI/HIV/AIDS and drugs. We will also take your blood, anal swab and urine sample for testing HIV, syphilis, *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG). If it is determined that 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 about because your name will not be mentioned on this form and collected samples. All the mentioned information will be used only for the study purpose. This survey will take about 40 to 60 minutes.

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

Would you be willing to participate?

1. Yes 2. No

Signature of the interviewer: _____ Date: ____/____/2069

Operational definition of respondent:

Inclusion definition for MSM: *‘biological males who have engaged in sexual relationship (oral and/or anal sex) with another biological male at least once within the past 12 months prior to the date of survey’*

Male Sex Workers (MSWs)/ TG who involved in sex work: “regardless of their identity or label if one male has had sold anal and/or oral sex to another male in exchange for money or any other commodities in the 12 months preceding the study”.

Non –MSWs/ TG: “regardless of their identity or label if one male has had anal and/or oral sex with another male in the 12 months preceding the study and not sold sex to another male in the previous 12 months”.

MSM under the age of 16 will not be included.

1.0 PERSONAL INFORMATION

Q. N.	Questions	Coding Categories	Skip to
101	How old are you?	Age <input type="text"/> <input type="text"/> (Write the completed years)	
102	What is your caste?	Ethnicity/Caste _____ (Specify) Code No. <input type="text"/> <input type="text"/>	
103	Do you follow any religion?	Yes 1 No 2	→ 104
103.1	What is your religion? (Only one response)	Hindu 1 Buddhist..... 2 Muslim 3 Christian 4 Others (Specify) 96 Don't remember/know 98 No Response 99	
104	What is your educational status? (Circle '0' if illiterate, '19' for the literate without attending the school, and write exact number of the passed grade)	Illiterate..... 0 Literate..... 19 Grade <input type="text"/> <input type="text"/> (Write the grade completed)	
105	What kind of person do you get attracted to? (Multiple answer possible)	Dohori..... 1 Ta..... 2 Pinky ta..... 3 Man/mard 4 Homosexual 5 Gay 6 Meta/meti..... 7 Pinky meta 8 Woman 9 Hijara 10 Others (Specify) 96 Don't remember/know 98 No Response 99	
106	How would you identify yourself on the basis of your sexual orientation/ behavior ? (Only one answer)	Dohori..... 1 Ta..... 2 Top..... 3 Bottom..... 4 Intersex..... 5 Male TG..... 6 Man/mard 7 Homosexual 8 Gay 9 Meta/meti..... 10 Woman 11 Hijara 12 T.G..... 13 Others (Specify) 96 Don't remember/know 98 No Response 99	

Q. N.	Questions	Coding Categories	Skip to
106.1	How do you identify yourself on the basis of gender (Only one answer)	Tesro Lingi woman..... 1 Woman.....2 Man..... 3 Don't Know 98 No Response..... 99	
106.2	Which of the following best describes your current living situation? (Select only one option)	Homeless on the street.....1 Living in own home.....2 Living in a residential hotel.....3 Rented apartment/room.....4 Other (specify).....96	→ 107
106.3	How often your landlord or male partner forced you to vacate the rented room or apartment in the last 5 years?	Never.....1 Once/twice.....2 Three to five times.....3 More than five times.....4 Do not remember98	
107	Are you currently married?	Yes..... 1 No 2 No response 99	} 107.2
107.1	Who is your married sex partner? (Multiple answer possible)	Male/meti..... 1 Female 2 Others (Specify) 96	
107.2	Does your family force you for marriage with female?	Yes.....1 No.....2 No response 99	
108	Are you currently living with a regular sexual partner?	Yes..... 1 No 2 No response 99	} 110
109	Is your regular sexual partner who you live with male or female? (If female, confirm if she is wife or other female partner)	Male/meti 1 Wife 2 Other female..... 3 T.G.....4 No response 99	
110	What is your main profession? (Only one response)	Student..... 1 Driver..... 2 Police 3 Military 4 Other civil servant 5 Businessman 6 Private company staff 7 Unemployed 8 Laborer/wage labor..... 9 Sex worker..... 10 Artist.....11 Politician.....12 Others (Specify) 96 Don't know..... 98 No response 99	
111	What was your total income in last month? (Write total income from one or more than one professions)	NRs <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <i>If response is "00" go to Q.201</i> Don't remember/don't know 98 No response 99	} 114
	How did you earn that money?	Sex work..... 1	

Q. N.	Questions	Coding Categories	Skip to
112	(Record all. If the respondents says "work" or "my job" probe for whether formal salaried job or informal sector) (Multiple answer possible)	Money from family..... 2 Salaried job..... 3 Own business..... 4 Wage labor..... 5 Other work (Specify) _____ 96 Don't remember/know 98 No response 99	
113	How many people are you supporting with your income now?	Number of people <input type="text"/> <input type="text"/> Don't remember/don't know 98 No response Own business 99	
114	Does your family force you to live outside of home because of your sexual orientation/ behaviours?	Yes.....1 No.....2 No response 99	
115	Is there at least someone in your immediate family that you can talk openly with about your homosexual/bisexual behaviour?	Yes.....1 No.....2 No response 99	

2.0 INFORMATION ON SEXUAL BEHAVIOR

Q. N.	Questions	Coding Categories	Skip to
201	At what age did you first have sexual intercourse? (I mean any type of anal and or vaginal sex even if you were forced to have it)	Age in years..... <input type="text"/> <input type="text"/> (Completed years) Never had oral, vaginal or anal sex 1 Don't know/Can't recall 98 No response 99	→ Stop interview
202	Was your first sexual partner male or female?	Male/meti..... 1 Female 2 T.G, homosexual, bisexual 3 Don't know 98 No response 99	
202.1	Was your first sexual contact (anal or oral) forced or consensual?	Forced.....1 Consensual.....2 Don't know 98 No response 99	
203	Have you had vaginal, anal or oral sex with a female in the last 12 months? (Check with answer in Q No. 109)	Yes..... 1 No 2 Don't remember..... 98 No response 99	
204	Have you had anal/oral sex with a male/ T.G woman in the last 12 months?	Yes..... 1 No 2 Don't remember..... 98 No response 99	→ Stop interview
205	Have you ever had sex with a male/ T.G woman in exchange for money or any other commodities?	Yes..... 1 No 2 Don't remember..... 98 No response 99	→ 301
206	In the last 12 months have had sex with a male/T.G woman for money?	Yes..... 1 No 2 Don't remember..... 98	

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
207	How old were you when you had sex with a male/ T.G woman for money for the first time? (In Completed years)	Year's old <input type="text"/> <input type="text"/> Don't remember 98 No response 99	
208	When did you last have sex with a male/ T.G woman for money? (I mean any kind of sex, including oral sex, etc.)	Days <input type="text"/> <input type="text"/> Weeks <input type="text"/> <input type="text"/> Months <input type="text"/> <input type="text"/> Don't remember 98 No response 99	
209	Have you had anal (receptive, insertive or both) sexual intercourse in the last six months with a male partner/ T.G woman?	Yes 1 No 2 Don't remember 98 No response 99	
210	If yes in Q209 Did you or your partner use a condom the last time you had anal sex (receptive, insertive or both) in the last six months?	Yes 1 No 2 Don't remember 98 No response 99	

3.0 USE OF CONDOM WITH SEX PARTNERS

CONDOM USE WITH NON-PAYING MALE SEX PARTNER

Non-paying male sex partner: Male partners with whom you may have had sex without paying any cash or without exchanging gifts. When answering these questions please think about your "meti" or "ta" as well as other male partners.

Q. N.	Questions	Coding Categories	Skip to
301	In the past one month, how many male sex partners have you had sex with where no payment was involved?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	} 306
302	With how many of those partners did you have anal sex?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	→ 304
303	The last time you had anal sex with a non-paying male sex partner, did you use a condom?	Yes 1 No 2 Don't remember 98 No response 99	
304	How often did you use condom while you had anal sex with non-paying male sex partner in the last month?	Always 1 Most of the time 2 Sometimes 3 Never 4 Don't remember 98 No response 99	
305	Where did you meet your last non-paying male sex partner?	Park 1 Discothèque 2 Restaurant 3 Dance Restaurant 4 Massage Parlor 5	

Q. N.	Questions	Coding Categories	Skip to
		Street..... 5 Pub/Café 7 Temple..... 8 Bus Station..... 9 Public Toilets..... 10 Cinema Hall..... 11 Near Army barracks..... 12 Internet café (Facebook, grinder, romeo-planet, we-chat, viber).... 13 Sauna/Steam Bath..... 14 Swimming Pools/sports center...15 Home 16 <i>Bhatti Pasal</i> 17 Forest 18 Saloon 19 Shopping center 20 Community program.....21 Others (Specify) _____ 96 Don't remember 98	

CONDOM USE WITH NON-PAYING FEMALE SEX PARTNER

Non-paying female sex partner: Female partners with whom you may have had sex without paying in cash or without exchanging any gifts.

If no in Q. 203 go to Q.N. 309

Q. N.	Questions	Coding Categories	Skip to
306	In the past one month, how many female sex partners have you had vaginal, anal or oral sex with where no payment was involved? (Including your wife if married as well as other women)	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	} 309
307	The last time you had vaginal, anal or oral sex with a non-paying female sex partner, did you use a condom?	Yes.....1 No2 Don't remember.....98 No response99	
308	How often did you use condom while you had vaginal, oral or anal sex with non-paying female sex partner in the last month?	Always 1 Most of the time2 Sometimes3 Never.....4 Don't remember 98 No response 99	

CONDOM USE WITH REGULAR MALE CLIENTS

Regular male clients: Men who paid or gave other commodities to you for sex as client and you have had sex with him more than once

Q. N.	Questions	Coding Categories	Skip to
309	In the past one month, how many regular male/meti clients have you had sex with you?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	} 314

Q. N.	Questions	Coding Categories	Skip to
310	How many regular male/meti clients did you have anal sex with in the last month?	Number <input type="text"/> <input type="text"/> No on0 Don't remember98 No response99	→313
311	The last time you had anal sex with a regular male/TG woman, did you use a condom?	Yes.....1 No2 Don't remember.....98 No response99	
312	How often did you use condom while you have had anal sex with regular male/ TG woman in the last month?	Always1 Most of the time2 Sometimes3 Never.....4 Don't remember98 No response99	
313	How many regular male/meti clients did you have oral sex with in the last month?	Number <input type="text"/> <input type="text"/> No-one0 Don't remember98 No response99	
314	In the past month, have you brought any male/ TG woman to orgasm without penetration? (Any male client: Regular or one-time)	Yes.....1 No2 Don't remember.....98 No response99	
315	How much did your last male/ TG woman pay you? (Regular or one time client)	Rs. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Don't remember98 No response99	
316	Where did you meet your last male/ TG woman? (Regular or one time client)	Park.....1 Discotheque2 Restaurant3 Dance Restaurant.....4 Massage Parlor5 Street.....5 Pub/Café7 Temple.....8 Bus Station.....9 Public Toilets.....10 Cinema Hall.....11 Near Army barracks.....12 Internet /café13 Sauna/Steam Bath.....14 Swimming Pools.....15 Home16 Bhatti Pasal17 Forest18 Saloon19 Shopping center20 Community programs.....21 Others (Specify)96 Don't remember98	

Q. N.	Questions	Coding Categories	Skip to
		No response99	
317	What are the most common occupations among your clients? (Do not read options. Probe for up to three)	Student.....1 Police/Military.....2 Civil servant.....3 Businessman.....4 Laborer5 Unemployed6 Migrants labor (india).....7 Others (Specify)96 Don't know.....98 No response99	

CONDOM USE WITH FEMALE CLIENTS

Female clients: women who paid you for sexual services

Q. N.	Questions	Coding Categories	Skip to
318	In the past one-month, how many women have paid or gave other commodities to you for sexual services?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	} 321
319	The last time you had vaginal or anal sex with a female client, did you use a condom?	Yes.....1 No.....2 Don't remember.....98 No response99	
320	How often did you use condom while you have had vaginal or anal sex with female clients in the last month?	Always1 Most of the time2 Sometimes3 Never.....4 Don't remember98 No response99	

CONDOM USE WITH PAID MALE/ METI SEX PARTNER

Paying male sex partner: Men to whom you have paid in cash or gave some commodities for sex

Q. N.	Questions	Coding Categories	Skip to
321	In the past one month, how many different men/TG woman did you give money or any other commodities so that they would have sex with you?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember 98 No response 99	} 325
322	How many male/ TG epartners did you pay to have anal sex with in the last month?	Number <input type="text"/> <input type="text"/> Not paid0 Don't remember98 No response99	} 325
323	The last time you had anal sex with a paid male sex partner, did you use a condom?	Yes.....1 No.....2 Don't remember.....98 No response99	
324	How often did you use condom while you have had anal sex with paying male sex partners in the last month?	Always1 Most of the time2 Sometimes3	

Q. N.	Questions	Coding Categories	Skip to
		Never.....4 Don't remember 98 No response.....99	
324.1	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 have sex with the client.....4 Take medication/treatment after sex.....5 Have oral sex.....6 <i>Chepti dhulauni garchu</i>7 Other (Specify) 96 Don't know.....98	
324.2	Have you ever had sex with (regular/casual) clients without using condom ?	Yes.....1 No.....2	
324.3	How often do you have sex with regular and casual clients without condoms to make more money within 6 months?	Always.....1 Most of the time.....2 Sometimes.....3 Never.....4 Don't know.....98 No response.....99	

CONDOM USE WITH PAID FEMALE SEX PARTNER (FEMALE SEX WORKERS)

Paid female sex partner: Women to whom you have paid in cash or gave some gifts for sex

Q. N.	Questions	Coding Categories	Skip to
325	In the past one-month, how many female sex workers did you pay or give other commodities to for sexual contact?	Number <input type="text"/> <input type="text"/> No one 0 Don't remember..... 98 No response 99	} 328
326	The last time you had vaginal or anal sex with a paid female sex partner, did you use a condom?	Yes.....1 No2 Don't remember98 No response99	
327	How often did you use condom while you have had vaginal or anal sex with paying female sex partners in the last month?	Always1 Most of the time2 Sometimes3 Never.....4 Don't remember.....98 No response.....99	
328	With whom did you have the first sexual intercourse (vaginal or anal)? (Check with answer in Q 202)	Non-paying male partner/TG woman1 Non paying female partner2 Male client.....3 Female client4 Paid male sex worker.....5 Paid female sex worker (FSW).....6 Don't Know.....98 No response99	

Q. N.	Questions	Coding Categories	Skip to
329	Did you use a condom in the first sexual intercourse?	Yes 1 No 2 Don't remember/don't know 98 No response 99	
330	How many different sex partners you had in the last six months (count all types of partners: paid, not-paid, regular, one time among all male, female and <i>tesro lingis</i> also)	Number <input type="text"/> <input type="text"/> <input type="text"/> No-one 0 Don't remember 98 No response 99	

4.0 SEXUAL PRACTICES AND VIOLENCE

Q. N.	Questions	Coding Categories	Skip to
401	Among all your male sexual partners with whom you had oral sex last month, <u>were your partners (not you):</u>	All receptive (bottom role) 1 All insertive (top role) 2 Mostly receptive 3 Mostly insertive 4 Equally receptive and insertive 5 Didn't have oral sex in the last month 6 Don't remember 98 No response 99	
402	I am still talking about oral sex. Did you use a condom with your last male partner with whom you had oral sex ?	Yes 1 No 2 Don't remember/don't know 98 No response 99	
403	Among all your male/TG woman sexual partners with whom you had also anal sex last month, <u>were your partners (not you):</u>	All receptive 1 All insertive 2 Mostly receptive 3 Mostly insertive 4 Equally receptive and insertive 5 Didn't have anal sex in the last month 6 Don't remember 98 No response 99	
404	In the past 12 months, were you ever beaten because of your sexual behavior?	Yes 1 No 2 Don't remember/don't know 98 No response 99	} 406
405	Who was/were the people who beat you? (Multiple answers possible don't read possible answer)	Police 1 Military 2 Client 3 Regular client 4 Sexual Partner 5 Regular sex partner 6 Partner 7 Colleague 8 Hooligans' group 9 Others (Specify) 96 Don't remember 98 No response 99	
406	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	→ 408

407	Who were these people who forced you to have sex against your will? (Multiple answer possible)	Police..... 1 Military..... 2 Client..... 3 Regular client..... 4 Sexual Partner 5 Regular sex partner..... 6 Partner.....7 Colleague.....8 Hooligans' group.....9 Others (Specify).....96 Don't remember 98 No response 99	
408	In the past 12 months, have you been cheated /threatened because of your sexual behavior?	Yes 1 No..... 2 Don't remember 98 No response..... 99	
409	In the past 12 months, have you faced any kind of discrimination in your job or every day activities because of your sexual behavior?	Yes 1 No..... 2 Don't remember 98 No response 99	
409.1	Were you ever fired from the job or forced to leave the job due to your sexual orientation/ behavior?	Yes.....1 No.....2 Don't remember 98 No Response.....99	
410	Have you ever faced any problems because of your sexual identity?	Yes 1 No..... 2 Don't remember 98 No response 99	
411	Have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your sexual orientation in the past 12 months?	At school.....1 Getting hired or getting a job.....2 At work.....3 Getting housing (renting or buying).....4 Getting medical care.....5 Getting service in a store or restaurant.....6 On a street or in a public setting (park).....7 From the police/ other security personnel.....8 Never had such experience.....9 Others (specify).....96	
411.1	When you are treated unfairly because of your sexual orientation, what is your reaction?	Accept it/keep to self.....1 Do something/keep to self.....2 Do something/talk to others.....3	



Mental Health Condition and Social Assistance

412. Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

SCORING: zero for answers in the first column, 1 for answers in the second column, 2 for answers in the third column, 3 for answers in the fourth column.	Rarely on none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or moderate of the time (3-4 days)	Most or all the time (5-7 days)
1. I was bothered by things that usually don't bother me				
2. I did not feel like eating; my appetite was poor.				
3. I felt that I could not shake off the blues even with help from my family or friends.				
4. I felt I was just as good as other people				
5. I had trouble keeping my mind on what I was doing.				
6. I felt depressed				
7. I felt that everything I did was an effort.				
8. I felt hopeful about the future.				
9. I thought my life had been a failure.				
10. I felt fearful.				
11. My sleep was restless				
12. I was happy				
13. I talked less than usual				
14. I felt lonely.				
15. People were unfriendly				
16. I enjoyed life.				
17. I had crying spells.				
18. I felt sad.				
19. I felt that people dislike me.				
20. I could not get "going."				

Q. N.	Questions	Coding Categories	Skip to
413	Did you ever feel so low you thought a lot about committing suicide?	Yes 1 No 2 No response.. 99	→ 501
414	How often did you have any thoughts about ending your own life in last 12 months?	Many times.....1 A few times.....2 Once or twice.....3 No response.....99	



414.1	Have you ever made a plan to commit suicide?	Yes 1 No 2 No response.. 99	
415	Did you ever attempt suicide?	Yes 1 No 2 No response..... 99	

5.0 ACCESSIBILITY OF CONDOM AND LUBRICANT

Q. N.	Questions	Coding Categories	Skip to
501	Last time, from where did you get condom? (Multiple answers. DO NOT READ the possible answers)	Shop 1 Pharmacy 2 Health facility 3 Bar/Guest House/Hotel 4 Friends 5 Clients 6 BDS drop-in center 7 BDS field workers 8 Never received condom 9 Other (Specify) 96 Don't know 98 No response 99	



Q. N.	Questions	Coding Categories	Skip to
502	Can you obtain a condom every time you need it ?	Yes 1 No 2 Don't need one 3 Don't remember 98 No response 99	
503	Have you ever used lubricant when having anal sex? (Lubricants: Something to make your or your partner's penis slippery so it is easier to insert without pain)	Yes 1 No 2 Don't remember 98 No response 99	
504	What types of lubricant did you use while having anal sex?	Saliva 1 Oil 2 Water based lube 3 Antiseptic/antibiotic cream 4 Ghee 5 Cream/lotion 6 Other (Specify) 96 Don't know 98 No response 99	
505	If the respondent is 4 in Q.N. 510 go to Q.N. 513 For you, what are the purposes of using special lubricant with condoms during sex? (Multiple answers. DO NOT READ the possible answers)	Decrease pain/inflammation 1 Increase feeling/stamina 2 Decrease risk of condom breakage 3 Prevent HIV/AIDS infection 4 Other (Specify) 96 Don't know 98 No response 99	
506	Have you faced any problems while using lubricants?	Condom slippage 1 Irritation or burning sensation 2 Condom breakage 3 No problem 4 Other (Specify) 96 Don't know 98 No response 99	
507	What is your convenient/preferred place to buy condoms and lubricants? (Multiple answers. DO NOT READ the possible answers)	Shop 1 Pharmacy/Medical hall 2 Bar/Guest House/Hotel 3 BDS drop-in center 4 BDS field workers 5 Other (Specify) 96 Don't know 98 No response 99	
508	In the last month, was there such instance when your condom broke while you were using it?	Yes 1 No 2 Condom never used/didn't use last month 3 Don't know 98 No response 99	

6.0 USE OF ALCOHOL AND DRUGS

Q. N.	Questions	Coding Categories	Skip to
601	Have you ever had any drinks containing alcohol?	Yes 1 No..... 2 No response..... 99	→ 603
601.1	During the last 1 month how often have you had drinks containing alcohol?	Every day 1 3-4 days a week..... 2 At least once a week 3 Did not drink alcohol in the last week 4 Don't know / remember 98 No response..... 99	
602	Last time you had sex, have you any drinks containing alcohol? (Only one response)	Yes 1 No..... 2 Don't know / remember 98 No response..... 99	
603	Some people have tried different types of drugs. Have you also tried such drugs (oral drugs) in the last 12 months?	Yes 1 No..... 2 Don't know / remember 98 No response..... 99	
604	Some people try injecting drugs using a syringe. Have you injected such drugs in the last 12 months DO NOT COUNT DRUGS INJECTED FOR MEDICAL PURPOSES OR TREATMENT OF AN ILLNESS	Yes 1 No..... 2 Don't remember/don't know 98 No response..... 99	

7.0 SEXUALLY TRANSMITTED INFECTIONS (STI)

Q.N.	Questions	Coding Categories	Skip to
701	Have you heard about STIs which is transmitted from sexual contact?	Yes 1 No..... 2 No response..... 99	} 703
702	Could you tell me about any symptoms of STIs in men? DO NOT READ OUT (Multiple responses possible)	Penis discharge 1 Burning pain during urination..... 2 Genital ulcers/sores..... 3 Swellings in groin area..... 4 Anal discharge 5 Anal ulcer/sores 6 Other (Specify)..... 96 Don't know 98 No response..... 99	
703	Have you had a urethral discharge during the past 12 months?	Yes 1 No..... 2 Don't know 98 No response..... 99	
703.1	Are you currently experiencing urethral discharge?	Yes 1 No..... 2 Don't know 98 No response..... 99	
704	Have you had anal discharge during the past 12 months?	Yes 1 No..... 2 Don't know 98	

Q.N.	Questions	Coding Categories	Skip to
		No response..... 99	
704.1	Are you currently experiencing anal discharge?	Yes 1 No..... 2 Don't know 98 No response..... 99	
705	Have you had a genital ulcer / sore during the past 12 months?	Yes 1 No..... 2 Don't know 98 No response..... 99	
705.1	Are you currently experiencing genital ulcer / sore?	Yes 1 No..... 2 Don't know 98 No response..... 99	
706	Have you had an anal ulcer / sore during the past 12 months?	Yes 1 No..... 2 Don't know 98 No response..... 99	
706.1	Are you currently experiencing anal ulcer / sore?	Yes 1 No..... 2 Don't know 98 No response..... 99	
707	Have you had genital ulcer / discharge / sore (penis and or anal) during the past 12 months ? (Check consistency with previous questions)	Yes 1 No..... 2 Don't know 98 No response..... 99	
707.1	Are you currently experiencing genital ulcer / discharge / sore (penis and or anal)?	Yes 1 No..... 2 Don't know 98 No response..... 99	} 801
708	What was the first thing you did when you had those symptoms? DO NOT READ OUT	Sought treatment from hospital.... 1 Sought treatment from chemist.... 2 Sought treatment from private doctor/ clinician 3 Sought treatment from BDS clinic..4 Received treatment from friend...5 Took medicine available at home..6 Nothing 7 Other (Specify) _____ 96 Don't remember/know 98 No response..... 99	

8.0 HIV/AIDS KNOWLEDGE AND ATTITUDES

Q. N.	Questions	Coding Categories	Skip to
801	Can people reduce their risk of HIV by using a condom correctly every time they have sex?	Yes 1 No..... 2 Don't know 98 No response..... 99	
802	Can a person get the HIV virus from mosquito bites?	Yes 1 No..... 2 Don't know 98 No response..... 99	
803	Can people protect themselves from HIV by having one uninfected faithful sex partner?	Yes 1 No..... 2 Don't know 98 No response..... 99	
804	Can people protect themselves from HIV by abstaining from sexual intercourse? (This means abstaining from anal as well as oral sex)	Yes 1 No..... 2 Don't know 98 No response..... 99	
805	Can a person get the HIV virus by sharing meal with someone who is infected?	Yes 1 No..... 2 Don't know 98 No response..... 99	
806	Can a person get the HIV virus by using a needle that is used by someone else?	Yes 1 No..... 2 Don't know 98 No response..... 99	
807	Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS?	Yes 1 No..... 2 Don't know 98 No response..... 99	
808	Can a person get HIV by shaking hand with an HIV infected person?	Yes 1 No..... 2 Don't know 98 No response..... 99	
809	Can blood transfusion from an infected person to the other transmit HIV?	Yes 1 No..... 2 Don't know 98 No response..... 99	
810	Can a pregnant woman infected with HIV transmit the virus to her unborn child?	Yes 1 No..... 2 Don't know 98 No response..... 99	813
811	What can a pregnant woman do to protect her unborn child against the risk of HIV transmission?	Take medication 1 Others (Specify) 96 Don't know 98	
812	Can women with HIV transmit the virus to her newborn child through breast-feeding?	Yes 1 No..... 2 Don't know 98 No response..... 99	

Q. N.	Questions	Coding Categories	Skip to
813	To what extent do you think that you are at risk of HIV infection?	High risk..... 1 Some risk..... 2 Little or no risk..... 3 Don't know..... 98 No response..... 99	
814	Do you know any such place in your community where you could have a confidential HIV test? By confidential, I mean that no one will know the result if you don't want them to know it.	Yes 1 No..... 2 Don't know 98 No response..... 99	
815	Do you know where you can go for HIV test?	Yes 1 No..... 2	
816	Have <i>you</i> ever had an HIV test?	Yes 1 No..... 2 → Don't know 98 No response..... 99	901
817	Did you voluntarily take up the HIV test, or were you required to have the test?	Voluntary..... 1 Required 2 No response 99	
818	When did you have your most recent HIV test?	Within the past 12 months 1 Between 13-24 months..... 2 Between 25-48 months..... 3 More than 48 months 4 Don't know 98 No response 99	
819	How many times have you undergone for HIV test within the last 12 months? Times	
820	Did you find out the result of your HIV test?	Yes 1 No 2 No response 99	} 901
821	What was the result of your last test?	Positive..... 1 Negative..... 2 Uncertain..... 3 Result not received..... 4 Don't know..... 98 No response..... 99	} 901 → 824 } 901
822	Did you go to HTC for HIV care once you knew you were HIV positive?	Went..... 1 Did not go..... 2 Don't know..... 98 No response..... 99	→ 901
823	Why didn't you go to HTC for HIV 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	
824	Why did you not receive the test result?	Sure of not being infected 1 Afraid of result 2 Felt unnecessary 3 Forgot it 4	

Q. N.	Questions	Coding Categories	Skip to
		Others (Specify)96 No response.....99	

9.0 STIGMAS AND DISCRIMINATION

Q. N.	Questions	Coding Categories	Skip to
901	If you knew a shopkeeper or food seller had HIV, would you buy food from them?	Yes 1 No..... 2 Don't know 98 No response..... 99	
902	Do you think children living with HIV should be able to attend School with children who are HIV negative?	Yes 1 No 2 Don't know..... 98 No response 99	

10.0 KNOWLEDGE AND PARTICIPATION IN STI AND HIV/AIDS PROGRAMS

Q. N.	Questions	Coding Categories	Skip to
1001	Have you met or interacted with Peer Educators (PE) or Outreach Educators (OE) or Community Mobilisers (CM) or Community Educators (CE) in the last 12 months?	Yes1 No2 No response 99	→ 1005
1002	What kind of activities did you participate in with such PE /OE/CE/CM? (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 Others (Specify)..... 96	
1003	How many times have you been visited by PE, OE, CM and/or CE in the last 12 months?	Once 1 2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	
1004	Have you visited or been to any out reach center (DIC, IC or CC) in the last 12 months? Drop-In Center (DIC), Information Center (IC), Counseling Center (CC)	Yes1 No2	→ 1007
1005	When you went to the out reach center (DIC,IC or CC), which activities did you take part in? (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 Other (Specify)..... 96	
1006	How many times have you visited out reach centers (DIC, IC or CC) in the last 12 months?	Once 1 2-3 times 2 4-6 times 3 7-12 times 4 More than 12 times 5	

Q. N.	Questions	Coding Categories	Skip to
1007	Have you visited any STI clinic in the last 12 months?	Yes1 No2 →	1013
1008	When you visited such STI clinic in what activities were you involved? (Multiple answers. DO NOT READ the possible answers given below)	Blood tested for STI..... 1 Physical examination conducted for STI identification. 2 Discussed on how STI is/isn't transmitted 3 Discussed on regular/non-regular use of condom 4 Took a friend with me..... 5 Other (Specify)_____ 96	
1009	How many times have you visited 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	
1010	Have you visited any HIV Counseling and Testing (HTC) centers in the last 12 months?	Yes1 No2 →	1013
1011	When you visited such VCT center in what activities were you involved? (Multiple answers. DO NOT READ the possible answers)	Received pre-HIV/AIDS test counseling 1 Blood sample taken for HIV/AIDS test 2 Received post HIV/AIDS test counseling 3 Received HIV/AIDS test result 4 Received counseling on using condom correctly in each sexual intercourse..... 5 Took a friend with me..... 6 Received information on HIV/AIDS window period 7 Other (Specify)_____ 96	
1012	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	
1013	Have you heard about programs that provide essential services for people with HIV, ART services and that which gives information on ART (Community Care Support Treatment Program)?	Yes1 No2	

11.0 GENERAL INFORMATION and INFORMATION ON BDS AND MSM NETWORK

Q. N.	Questions	Coding Categories	Skip to
1101	Where were you born?	District _____	
1102	Where do you live now? (Do not ask the exact address)	Districts: _____	

1103	How many other MSM do you know, who also knows you well and lives in this same district? (Knowing someone is defined as being able to contact them, and having had contact with them in the past 6 months)	Number: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Don't know 98 No response 99	
1104	Among those people, please try to estimate their number by their age group:	Less than 16 years old... <input type="text"/> <input type="text"/> <input type="text"/> More than 16 years old . <input type="text"/> <input type="text"/> <input type="text"/> Don't know 98 No response 99	
1105	How are you related with the person who gave you the coupon for taking part in the study? (Do not ask this to the seed)	A close friend..... 1 A friend 2 Your sex partner 3 A relative 4 A stranger..... 5 Other (Specify)_____96 Don't know 98 No response 99	

1106	In the past 6 months, how often have you been to the following locations to meet male sexual partners: (Ask for all the items proposed and probe for other locations, as well)		Very Often	Often	Some-time	Never
	Park		1	2	3	4
	Discotheque		1	2	3	4
	Dance Restaurant		1	2	3	4
	Massage parlor		1	2	3	4
	Street		1	2	3	4
	Pub/Cafe		1	2	3	4
	Temple		1	2	3	4
	Bus Station		1	2	3	4
	Public Toilets		1	2	3	4
	Cinema Hall		1	2	3	4
	Near Army barracks		1	2	3	4
	Internet (chat room)		1	2	3	4
	Personal Add (web site)		1	2	3	4
	Personal Add (magazine or other)		1	2	3	4
	Sauna/Steam bath		1	2	3	4
	Swimming Pools		1	2	3	4
	Home		1	2	3	4
	Telephone		1	2	3	4
	Community program (party)		1	2	3	4
	Community sex party		1	2	3	4
	Other (Specify) _____		1	2	3	4

12. Information on Hormone

1201	Do you use hormone?	Yes.....1 No.....2 → 1205	
1202	Who advised you to take hormone?	Doctor.....1 Friend.....2 Client.....3 None/Self decided.....4 P.E/O.E.....5 Other (specify).....96	
1203	Can you tell me the name of hormone?	
1204	Are there any physical and mental health effects that the hormone brought to you?	Yes.....1 No.....2	
1204.1	If yes, what effects have you experienced?	
1205	Have you ever heard about PrEP?	Yes.....1 No.....2 Don't know.....98 No response.....99	} 1208
1206	Have you ever taken PrEP?	Yes.....1 No.....2 Don't know.....98 No response.....99	
1207	Are there any physical and mental health effects that you experienced after taking PrEP?	Yes.....1 No.....2	
1207.1	If yes, what effects have you experienced?	
1208	Have you ever heard about PEP?	Yes.....1 No.....2 Don't know.....98 No response.....99	} End
1209	Have you ever taken PEP?	Yes.....1 No.....2 Don't know.....98 No response.....99	
1210	Are there any physical and mental health effects that you experienced after taking PEP?	Yes.....1 No.....2	
1210.1	If yes, what effects have you experienced?	

