

# **Integrated Biological and Behavioral Surveillance (IBBS) Survey among Male Labor Migrants in Western and Mid to Far Western Region of Nepal**

**Round VI- 2017**



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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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## ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
CHBC	Community Home Based Care
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
KAP	Key Affected Populations
MLM	Male Labor Migrant
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
PPS	Probability Proportional to Size
PWID	People Who Inject Drugs
SGS	Second Generation Surveillance
SI	Strategic Information
<u>SITWG</u>	Strategic Information Technical Working Group
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection

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## EXECUTIVE SUMMARY

This is the sixth round of Integrated Biological and Behavioral Surveillance Survey conducted among 720 Male Labor Migrants (MLMs) (360 migrants from Western Region and 360 migrants from Mid to Far Western Region) of 11 districts (five districts of Western Region and six districts of Mid to Far Western Region).

The survey was undertaken primarily to track the trend of HIV prevalence among MLMs and to understand risky sexual behaviors among MLMs of Western and Mid to Far Western Regions of Nepal. Information on the socio-demographic characteristics, work and migration, sexual behavior and condom use with different partners in Nepal and during the stay in India; knowledge perception and attitude on HIV/AIDS and STI; use of drug and injection; exposure to STI, HIV and AIDS awareness programs; and stigma/discrimination against HIV infected person were collected using a structured questionnaire.

Prevalence of HIV was determined by testing blood samples. Rapid testing was conducted by using a serial testing scheme based on the NCASC national guideline algorithm and approved commercial test kits. First test kit was Determine HIV ½, second test kit was Uni-Gold HIV, and third test kit was Stat Pack. 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 for all three tests were reported positive. Any sample that was positive on the 1<sup>st</sup> and 2<sup>nd</sup> test and negative on the 3<sup>rd</sup> 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.

The cross-sectional study design was employed in the survey. The study population was defined as “a male returnee migrant aged 18-49 years, having stayed continuously or with an interruption for at least 3 months in India as a migrant worker and having returned to Nepal within three years prior to the date of the survey”. A two-stage cluster sampling technique was utilized to select number of MLMs from each of the clusters. In this first stage, probability proportionate to size (PPS) method was used to select 30 clusters from the Western Region and other 30 clusters from the Mid to Far Western Region of Nepal. A Village Development Committee (VDC) consisting at least 20 returnee labor migrants was defined as a cluster. Based on the preliminary information collected prior to the field survey, a list of VDCs with an estimated number of MLMs was made through household enumeration. In the second stage, 12 MLMs were selected from each of the selected clusters which were identified in the first stage through systematic random sampling method. As per survey guideline, 360 MLMs were selected from each of the Western and Mid to Far Western Region of Nepal.

### **KEY FINDINGS**

#### **Comparison of the results of different IBBS surveys (2006-2017)**

HIV prevalence among MLMs showed declining trend in survey clusters of both regions and found to be static throughout 2015-2017 (1.1% vs.2.7% in 2006, 1.4% vs.0.8% in 2008, 1.1% vs.1.4% in 2012, 0.3% vs.0.6% in 2015 and 0.3 vs.0.6% in 2017 in Western Region and Mid-Far Western Region respectively).

Nearly half of the MLMs had comprehensive knowledge of ABC in the 1<sup>st</sup> round of the survey (2006) in both regions which showed a fluctuating trend in between 2012-2015 and has raised again in this round (23% in 2012, 36% in 2015 and 43% in 2017 in Western Region and 31% in 2012, 27% in 2015 and 45% in 2017 in Mid to Far Western Region). Similarly, the comprehensive knowledge of BCDEF has been slightly increased over 2006 to 2017 in the Western Region (16% vs.21%) whereas same in Mid to Far Western Region (22% vs 22%).

It is notable that the trend of condom use at last sex with FSWs in Nepal has been increased in both regions with a higher improvement in Western Region (12% in 2006, 35% in 2012 to 100% in 2017) than the Mid-Far Western Region (36% in 2012 to 71% in 2017). However, the MLMs using condoms in the last sex with their wives showed decreasing trend in between 2012-2015 and has been improved in this round among both the regions (18% in 2012, 13% in 2015, 33% in 2017 in Western Region and 23% in 2012, 12% in 2015 and 23% in 2017 in Mid to Far Western Region). Similarly, the condom using practice with FSWs in the last sex in India showed fluctuating trend over the recent years with remarkable improvement in this round in both regions (64% in 2015 to 100% in 2017 in the Western region, lowest ever 25 percent in 2015 to 87% in 2017 in Mid to Far Western Region).

The proportion of MLMs who had met or discussed with OEs /PEs in the Western Region was 2 percent in 2008 which increased to 8 percent in 2012 and had again declined to 1 percent in this round (2017). Similarly, this proportion was the highest in the beginning (15%) following a slight decrease in 2010-2012 (10% vs 9%) which further dropped to just 3 percent in 2015 but has improved in this round again (9%) in Mid to Far Western Region.

### **HIV Prevalence**

HIV infection was found less than one percent among the MLMs (N=3; 0.4%). Out of the 360 surveyed MLMs in each region, only one MLM from Western Region and two MLMs from Mid to Far Western Region were diagnosed with HIV.

### **Sociodemographic Characteristics**

Age-wise distribution of the MLMs indicates that the highest number of them belonged to youth (39%) aged below 25 years with a mean age  $29.8 \pm 9.4$ . Overall, nearly two-fifth of the MLMs (37%) each had school leaving certificate (SLC) or above education and grade 6-9 respectively. About 5 percent of the MLMs were illiterate (6% in Western Region and 3 percent in the Mid to Far Western Region). Nearly half of the MLMs from Mid-far Western Region (46%) belonged to Brahmin/Chettri/Thakuri while above two-fifth (41%) of the MLMs from the Western Region belonged to Dalit ethnicity.

### **Migration history**

The major destinations for migration reported by the MLMs were Delhi (23%) and Mumbai (21%). Overall, the mean age and standard deviation of the MLMs at first migration was  $17.9 \pm 4.0$  years. More than half of the MLMs (53%) used to live with their friends during the last stay in India. Overall almost three-fourth of the MLMs (74%) expressed that the reason for employment in India is to earn money. Majority of the surveyed MLMs (72%) opined that they were planning to revisit India.

### **Marriage and Sexual behavior**

The mean age and standard deviation at first marriage as reported by the MLMs were 20.3 ±3.2 years. Nearly half of the MLMs (47%) had got married at the age of 20-24 years followed by 15-19 years (41%). Adolescence marriage was slightly high among the MLMs of Western Region (43%) than that of the Mid to Far Western Region (40%). Slightly over two-third of the MLMs (67%) were ever married. Nearly two-third of the MLMs (65%) were living with their wives, and this relationship status was higher among the MLMs of Mid to Far Western Region (68%) than that of the Western regions (62%). More than four out of every five MLMs (86%) had ever had sex with a female. More than three-fifth of the MLMs (63%) had their first sexual contact 20 years of age. The mean age of the MLMs while having first sex was 18.9±2.5 years.

### **Sexual Contact and Condom Use**

Among the MLMs who had ever had sex with a woman, one out of four MLMs (25%) had ever had sex with a sex worker. Almost a fifth of the MLMs (19%) had used condom during the last sex with wife, and this practice was found higher in the Western Region (23%) than Mid to Far Western Region (16%). Among them, only 13 percent of the MLMs practised consistent condom use with their wives, and this proportion was much lower among the MLMs of Mid to Far Western Region (2%) than that of the MLMs of the Western Region (23%).

More than a tenth of the MLMs (12%) had ever had sex with FSWs in Nepal, and this proportion was slightly higher in Mid to Far Western Region (14%) compared to Western Region (9%). Among them above two-fifth (41%) had sex with 2-3 FSWs. In an average, MLMs had sex with 2.4FSWs in their lifetime in Nepal. Majority of the MLMs (78%) who had sex with FSWs used condom during last sex. Consistent condom use practice was observed in only two-third of the surveyed MLMs (66%). Encouragingly, all MLMs of Western Region however only above a half of them from the Mid to Far Western Region (54%) had used condom all of the time in the last sexual intercourse with FSW in Nepal.

A fifth of the MLMs (20%) had ever had sex with FSWs in India. More than a third of the MLMs (35%) reported that they visited 2-3 FSWs during their lifetime in India. In an average, the MLMs had sex with 4.4 FSWs with a range of 1-32. More than two-fifth of the MLMs (44%) had sex with only one FSW in the past year in India. Out of them, almost two-fifth (38%) had sexual relations with 2-3 FSWs, and this practice was remarkably higher among the MLMs of Mid-Far Western Region (47%) than that of the Western Region (27%). In an average, the MLMs were found to have sex with 2.2FSWs in the past year.

An overwhelming majority of the MLMs (92%) who had sex with FSWs in the past year had used condom during their last sex. About 83 percent of the MLMs had used condom consistently in all the episodes of sex with FSWs in the past year. Furthermore, only one MLM from the Western Region and four MLMs from the Mid-Far Western Region had practised in anal sex with their male partners in the past year in India.

### **Knowledge of STI, HIV and AIDS and Treatment in the Past Year**

An overwhelming majority of the MLMs had heard about HIV and AIDS (93%). Overall, more than two-fifth of the MLMs (44%), had the knowledge of all three ABCs {A (abstinence from

sex), B (being faithful to one partner), and C (consistent condom use} of HIV prevention. However, only 21 percent of the MLMs had knowledge of all the five components BCDEF {B (being faithful to one partner), C (consistent condom use), D (Healthy looking person can be infected), E (Get HIV from mosquito bite) and F (Get HIV by sharing meal) of HIV prevention.

Commonly understood symptoms of STIs among MLMs were; HIV and AIDS (68%), Syphilis (33%) and ulceration around the genitalia (15%). Similarly, the most commonly experienced symptoms MLMs in the past year were burning sensation at the time of urination (5%), ulcers or sores around genital area (3%), pain during urination (2%), white discharge (1%) and others (1%). It is notable that out of those MLMs who reported some STIs in the past year, only 4 percent of them had received the treatment against those symptoms. Among them, almost three-fifth (59%) had got the treatment from the hospital followed by private clinic (33%).

### **Exposure to STI, HIV and AIDS Program**

It is notable that only 5 percent of the surveyed MLMs had ever met or discussed or interacted with PEs or OEs and none of the MLMs from the Mid-Far Western Region while a negligible percent of the MLMs in the Western Region (2%) had visited the DIC in the last year. Only 3 percent of the MLMs each had visited any of the STI Clinic and HTC centres respectively in the last 12 months. Only 7 percent of the MLMs reported that CHBC health workers had visited their home in the last 12 months. It is notable that still nearly a half of the MLMs (48%) were unaware about prevention of mother to child transmission services (PMTCT) for pregnant women.

**Conclusion and recommendation:** This survey provides an insight into the estimated prevalence of HIV infection among MLMs as well as assesses their sexual risk behaviors. This survey found that overall 11 percent and 20 percent of MLMs had sex with FSWs in Nepal and India respectively. A third (33%) and 17 percent MLMs did not use condom consistently during sexual intercourse with FSWs in Nepal and India respectively. *These behaviors are considered as high-risk behaviors for HIV infection. MLMs should be made aware of their high-risk behaviors through community-focused HIV prevention programs.*

Overall, knowledge of ABC and BCDEF of HIV prevention and control was found low. *Programs focusing on raising awareness among MLMs need to be geared up to move towards the vision of Zero HIV in Nepal.*

Very few MLMs had accessed and utilized the services provided by PEs/OEs. *Outreach activities, HTC and STI services should be organized to increase the utilization of MLMs in dense migration districts.*

Migration was prevalent in early age. *Safe sex behaviors, condom use, should be promoted among youths before they migrate.*

Pre-marital sex was prevalent among MLMs. The median age at first sexual contact was 18 years, and the majority of MLMs had sexual contact before 20 years. *Messages on delayed sexual debut should be incorporated into target programs and promoted among MLMs.*

HIV testing among MLMs was low (18%). The practice of seeking STI treatment was not common. *Treatment seeking behaviors should be promoted among those MLMs engaged in risky sexual behaviors.*

Likewise, the practice of consistent condom use with girlfriends in Nepal and India was found decreasing. Consistent condom use with wives was found low. This may increase vulnerability for HIV and STI transmission. *The program should focus on the consistent condom use with wives, girlfriends and female partners.*

## CHAPTER I: Introduction

### 1.1 Background

Nepal is one of the major source countries of migrant labourers, helping to fulfil the demand of the rapidly industrializing countries in Asia and abroad (ADB, 2009). Foreign employment provides an alternative livelihood for much young Nepalese population (CARAM Asia, 2007). Top destination countries for migration are India, Malaysia, Qatar, Saudi Arabia, United Arab Emirates, Kuwait, South Korea and Bahrain (ADB, 2009).

Studies found that migrants commonly had multiple sexual encounters, changed partners, and used condoms infrequently both in India and at home. Several factors influence to increase high-risk sexual behaviors, for example, peer norms and pressures, cheaper sex, lack of family control, drinking alcohol cause vulnerability to HIV/STIs in India. However, in Nepal, migrants' new status, frequent local festivals, and low perceived vulnerability to HIV/STIs were the leading causes of HIV. Migrants displayed substantial deficits in their knowledge of HIV/STIs (Poudel, et al., 2004). As a social control in migrant communities is limited, sexual relationships that are prohibited at home are often possible abroad. Besides continuing to belong to their home communities, migrants gradually adapt to their new communities abroad. In doing so, they adopt so-called 'migrant identity' which can lead to a denial of certain sexual behaviors. Multiple kinds of sexual behaviors seem to be possible in abroad, as long as other people do not notice them (Gurung, 2004). Migrant populations have a greater risk for poor health in general and HIV infection in particular. This is due to the impact of sociocultural patterns of the migrant's situation on health, their economic transitions, reduced availability and accessibility of health services; and the difficulty of the host country's health care systems to cope with the traditions and practices of the immigrant" (NIDS, 2006). Previous IBBS surveys also reported that migrants who migrated to India for work are more likely to involved in risky sexual behaviour (NCASC, 2012)

National Centre for AIDS and STD Control (NCASC) has estimated that there were 32,861 People Living with HIV (PLHIV) in Nepal in 2016 with the prevalence of HIV infection among adult population being 0.17 percent (National HIV Infections Estimate 2016 using AEM/Spectrum Model, 2016). The existing National HIV and AIDS Strategy (2011-2016) identifies that People who Inject Drugs (PWID), Female Sex Workers (FSWs) and their clients, Male Labor Migrants (MLM) and their spouses and Men who have Sex with Men (MSM) are the Key Affected Populations (KAP) (NCASC, 2012).

The National HIV and AIDS Strategy 2011-2016 has adopted the strengthening of Second Generation Surveillance (SGS) system as one of the key principles of strengthening surveillance of HIV and Sexually Transmitted Infections (STIs) in Nepal. Conducting Integrated Biological and Behavioral Surveillance (IBBS) Surveys among KAPs in selected high-risk clusters at the regular intervals based on the National Plan on HIV and STI Surveillance is one of the key components of SGS and also the strategic direction of the national strategy (NCASC, 2015). Table 1.1 provides frequency of all the previous IBBS Surveys among MLMs conducted in Nepal;

Table 1.1 IBBS surveys conducted in Nepal (2000 – 2017)

Populations	Survey areas	Years
Male Labor Migrants (MLM)	Western to Mid & Far Western Districts	2006, 2008, 2010*, 2012, 2015, 2017

\* IBBS, 2010 was carried out only in Mid-Far western region

## 1.2 Objectives of the Survey

The primary objectives of this survey were to track the trends in the prevalence of HIV and to assess the sexual risk behaviors related to HIV and STI among the MLMs of Western and Mid to Far Western Region of Nepal.

The secondary objectives of the survey are:

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

## 1.3 Rationale of the Survey

Nepal's HIV and AIDS epidemic is concentrated amongst KAPs (Wolffers et al, 2002). These groups include PWID, FSWs and their clients; and MSM. Migrant males, uniformed service and transport workers have also been identified as key populations at risk. However, the data demonstrate that in the case of the migrants this holds true only when they serve the clients of sex workers both in the country and abroad. In Nepal, hundreds of migrant workers leave the country for overseas employment every day. They are vulnerable to HIV infection; which becomes more important when they return to Nepal, and then they transmit the infection to their wives. An understanding of the association between perception of risk of HIV infection and their risky sexual behaviors may facilitate the design of AIDS-preventive measures necessary to halt the transmission of HIV infection to the different groups and subgroups of the population (Country profile, 2009). The present study attempted to identify the sexual behavior of Nepali migrant workers in India and their perceived risk of HIV infection.

IBBS survey, one of the key components of second generation HIV surveillance, have been used in many concentrated epidemic contexts. More recently, IBBS surveys have also been recommended in generalized epidemic settings (Akwara et al. 1998). As the HIV incidence has declined up to 50% in 26 countries of the World over the last decade (Tanser et al. 2014), there is a need for more focused and valid second generation surveillance approaches including community led IBBS surveys to understand the dynamics and drivers of micro-epidemics (UNAIDS, 2013). In 2012, the HIV prevalence among MLM was 1.3 percent. (IBBS, 2012).

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, 2012). Since then, IBBS surveys have been conducted at the interval of two-three years among KAPs of

epidemic zones. The epidemic zones are based on different distributions of key populations at risk, their mobility links and HIV risk behaviors.

## **CHAPTER II: METHODOLOGY**

### **2.1 Survey design**

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

### **2.2 Survey Population**

This survey was conducted among MLMs who were returnee migrants; identified as one of the high-risk sub-groups. The definition of the MLMs used in the survey was “a male returnee migrant aged 18-49 years, having stayed continuously or with an interruption for at least three months in India as a migrant worker and having returned to Nepal within three years prior to the date of the survey”.

### **2.3 Survey districts**

Altogether 11 districts were covered in this study. Five districts from the Western development region (Syangja, Kaski, Gulmi, Palpa, Kapilvastu) and six districts from the Mid to Far Western development regions (Banke, Surkhet, Doti, Achham, Kailali and Kanchanpur) were selected for this IBBS survey.

### **2.4 Survey Period**

This survey was carried during December 2016 to May 2017. The data collection took 20 days to complete the desired sample size.

### **2.5 Sample Design/Sample Size**

This IBBS survey followed the similar sampling procedures, which were so utilized in previous rounds of IBBS surveys among MLMs in Western and Mid to Far Western Region of Nepal. To compile the sampling frames, a preliminary mapping exercise was conducted in the first phase of the survey. In the preliminary visit of the survey sites, the survey team identified the locations and estimated the number of survey populations. A list of locations with the enumerated number of MLMs was prepared for the both the Western and Mid to Far Western Regions.

A two stage cluster sampling procedure was utilized to select number of MLMs from each of the clusters. In this first stage, probability proportionate to size (PPS) method was used to select 30 clusters from the Western Region and other 30 clusters from the Mid to Far Western Region of Nepal. A Village Development Committee (VDC) consisting at least 20 returnee labor migrants was defined as a cluster. Based on the preliminary information collected prior to the field survey, a list of VDCs with an estimated number of returnee migrants was made through household enumeration. In the second stage, every 12 MLMs



were selected from each of the selected clusters which were identified in the first stage through systematic random sampling method. As per survey guideline, 360 labor migrants were selected from each of the Western and Mid to Far Western Region of Nepal. Thus, a total of 720 MLMs were selected for the interview and testing of blood samples.

## **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 MLMs 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 MLMs, and a lab technician collected blood samples for HIV testing. Strict confidentiality was maintained throughout the survey period.

## **2.7 Survey team with their responsibilities**

The survey team was lead by a Team Leader and supported by a Research Officer. The overall field command was given to the Field Coordinator who constantly monitored the field operation and guided the researchers during the data collection process. All the researchers were accountable to their Field Coordinator, and they were asked to discuss and immediately solve any issue during the field operation. The Field Coordinator had a role to communicate each day's field progress and plan of movement to different locations to the Research Officer who in turn communicated the Team Leader. There were altogether 1 Field Coordinator, 4 Lab Technicians, 4 STI Technicians, 6 Interviewers and 4 Counselors distributed in each 4 teams.

## **2.8 Training of Field Team and Pretesting**

### **2.8.1 Training of Field Team**

A two-day training program was organized for the experienced researchers working at School of PMER for field mapping exercise. In the training, objectives and the purpose of the survey was explained along with the techniques of mapping, tools used in mapping, possible key informants and ethical issues related to the survey. A mock mapping exercise was an integral part of the training. These activities were organized to enhance the capacity of researchers on mapping.

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 six-day intensive training program was organized from 21<sup>st</sup>-26<sup>th</sup> February, 2017 to the field researchers at Martin Chautari, Thapathali by the trainers from NCASC, Save the Children, NPHL, FHI 360 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 MLMs, recording keeping, counselling, 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.

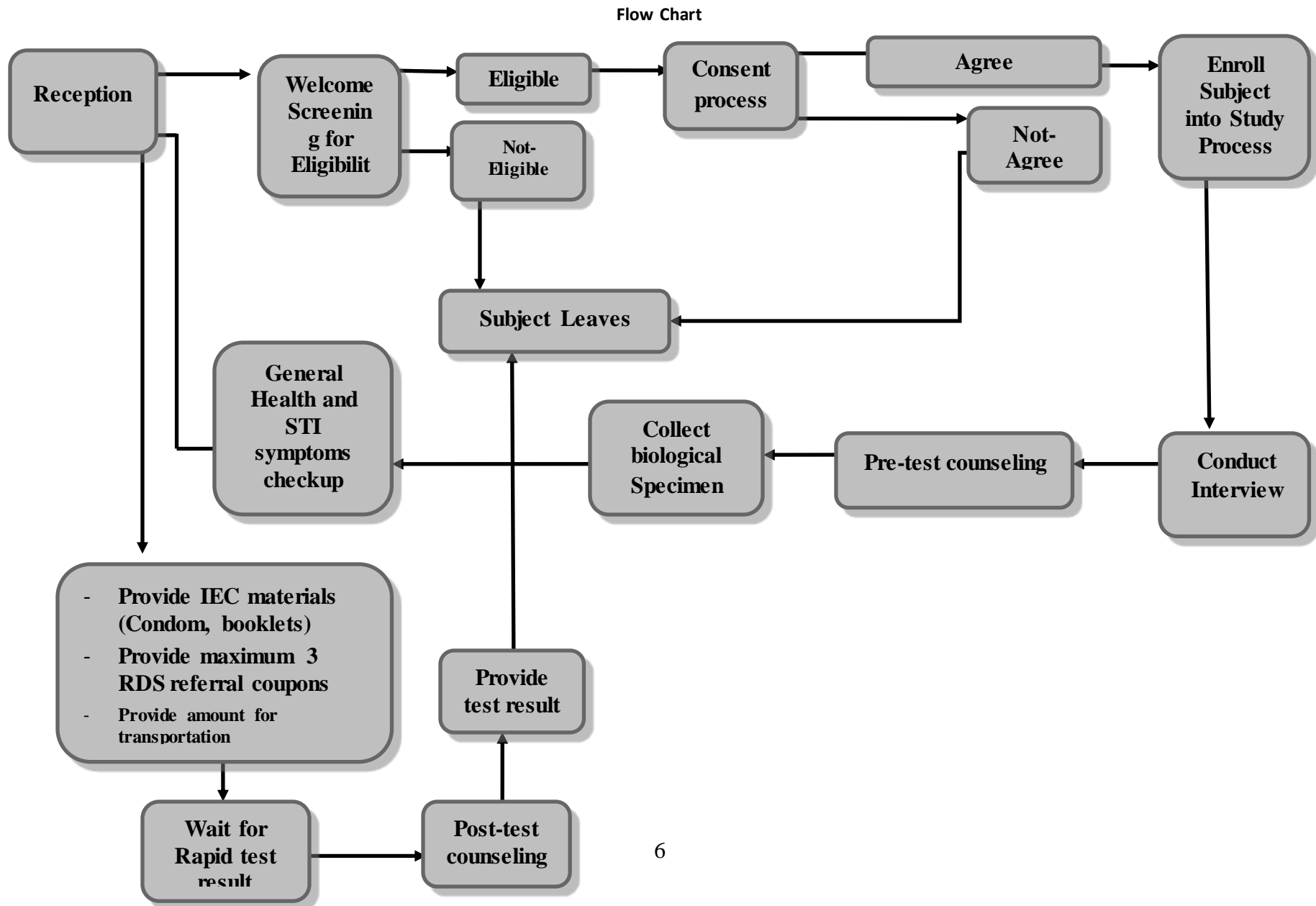
### **2.8.2 Pretesting**

The researchers from School of PMER conducted pretesting of the survey tools among the study population. Altogether, 12 questionnaires were tested in different locations in Kritipur district. Only minor grammatical changes were made after the pretesting.

### **2.9 Fieldwork**

Clinic set up was done in school located nearby each selected cluster. Altogether there were 60 clusters in 11 districts. Based on the local circumstances and available resources researchers managed to established clinic having all requirements of the survey. Altogether there were 7-8 rooms in the clinic. The clinic comprised of one welcome room, 2-3 interview rooms, one counseling room, one STI clinician room, one laboratory room and one waiting room. The flow chart displaying the survey procedure was pasted on the walls of each room. The MLMs fulfilling the eligibility criteria were recruited after necessary screening and greeted in the welcome room where they were briefed on the overall survey process. Similarly, prior to the interview, informed consent was taken with the MLMs in the presence of local mobilizers, and they were assigned a unique ID (ID card was given) for the enrollment in the survey procedure. They were then, interviewed using the structured questionnaire in the tablet based computers 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 MLMs were sent to the STI Clinician room where necessary syndromic treatment of STIs was provided as per National Guidelines on Case Management of STI (2015). 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.

Figure 2. 1 Integrated Biological and Behavioral Survey (IBBS) PWID 2017



## **Post-Test Counseling and Test Result Distribution**

Pre-Test counseling was given to the MLMs prior to drawing their biological sample (blood). They were counseled that other than a very little bearable pain to them during drawing their sample, they do not have any other risks associated with their test. They were informed about 10ml 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 MLMs 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.

### **2.10 Sample Recruitment process**

Field researchers were well informed about the survey area and methods for identification of MLMs. District maps with selected VDCs/clusters including work schedule were provided to each team of the researchers to facilitate them to locate the survey sites and to identify the eligible MLMs of the study. A community level meeting was organized at each of the field sites of study districts with an aim to inform the community about the general objective and methods of the survey. Local leaders, health personnel, government representatives, and other key informants were involved in the meeting.

Once the survey teams reached in the selected clusters, each of the teams conducted household listing and established an interview site with a temporary clinic and laboratory facilities in strategic locations of the selected clusters. The identified survey participants were further confirmed through the screening questions. If the researcher confirmed the participants as an MLM, then only they were listed as prospective MLMs of the survey. Final selection of the MLMs was made through the systematic random sampling methods.

Randomly selected MLMs were brought in established sites for interviews, biological sample collection as well as for clinical examination and treatment of STIs in order to ensure that privacy during data collection was maintained. The interview sites were selected based on the recommendation of the community people. The temporary mobile clinic and interview sites were operated at each location for one day.

Once the final selection of the MLMs was made randomly, the MLMs were requested to take part in the survey. MLMs who satisfactorily answered all the screening questions were briefed about the purpose, objectives, and methodology of the survey. Once the selected MLMs agreed to participate in the survey, the researchers invited them to the clinic and interview site for an interview and collection of blood samples required for the testing of HIV.

### **2.11 Refusal**

Three MLMs refused to take part in the survey. All these refusals were replaced randomly to full fill the required sample. One MLM got irritated when the interviewer asked him about his alcohol consumption behavior and he annoyingly refused to answer the questions further. The two participants were only ready to answer the questions but disagreed to give their blood samples and left after the consent process.

## **2.12 Clinical and Laboratory Procedure**

### **2.12.1 Clinical Set-up**

The survey team used locally available best shelters Schools to operate the clinic and conduct interview among MLMs. Hygiene and sanitation were strictly maintained at each of the clinics. There were separate rooms for waiting, counseling, laboratory process, physical examinations, and conducting interviews (managed using the available resources).

### **2.12.2 Clinical Procedures**

A trained Health Assistant examined the MLMs 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 was done providing some essential medicines according to the National Guidelines for 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 nearby DIC where STI treatment options were available.

### **2.12.3 Laboratory Procedures**

After pre-test counseling, the lab technician briefly explained to the MLMs about the HIV testing process and offered for consent for drawing blood. Blood samples were drawn in 3milli-liter tubes by disposal syringes. The samples were tested for HIV on the spot within an hour.

This survey was designed to provide test results with pre- and post-counselling in the shortest possible time. As the survey team has to move from one to another cluster, reagents that can be stored at room temperature were chosen.

### **2.12.4 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 serum which was 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 MLMs received post-test counseling, with specific messages tailored to their test result. Persons with any reactive result, or indeterminate result, were given 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 for all three tests were reported positive.
- Any sample that was positive on the 1<sup>st</sup> and 2<sup>nd</sup> test and negative on the 3<sup>rd</sup> 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.

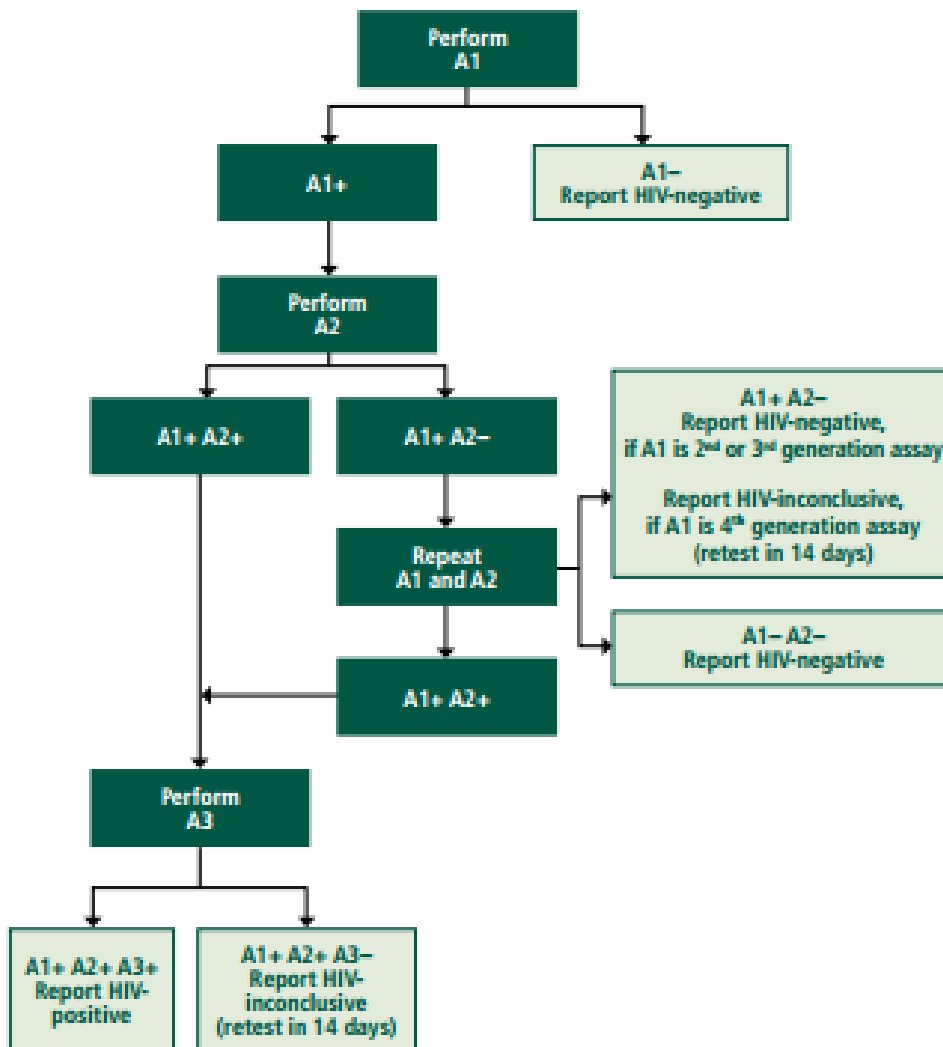


Figure 2.1: HIV Testing Strategy II Algorithm

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	99.3%	100.0%

### 2.12.5 Dried Blood Spots Creation

Creation of dried blood spots (DBS) specimens on Whatman filter paper for HIV surveillance testing in the NPHL was done with the explicit consent of the participants using a dried blood spot card prepared at the same time as the rapid tests. DBS specimens were labelled with cryogenic bar coded labels containing the participant's laboratory code. Prepared DBS were sent to the NPHL for EQAS. Specimens were stored in waterproof boxes on site, and then the total samples collected were sent to the NPHL soon after the completion of data collection.

### 2.13 Precautions, Disposal Mechanism and Post-Exposure Management

The universal precautions were followed in the laboratory and STI clinic. Gloves and mask were used by a laboratory technician and STI clinician. Waste produced in the lab was collected in different colour-coded and labelled 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 health facilities. Researchers were prepared for possible Post exposure management. They were provided with contact numbers of the concerned authorities in case if an emergency.

### 2.14 Fieldwork Supervision and Monitoring

The overall monitoring and supervision of the survey were done by the team of NCASC. NCASC and member of SITWG had monitoring visits during the entire survey and provided feedbacks and suggestions to maintain the quality of work. Their feedbacks and suggestions were adopted by the study team.

Internally, School of PMER followed the result based participatory monitoring and supervision process for this survey. Since the beginning of the survey, team leader, co-team leader and coordinator made regular monitoring and supervision visits of the work in progress in the field. The site coordinators were responsible for a day-to-day basis to ensure that the survey was implemented in the field according to the protocol. Team meetings were held every week to plan ahead and solve any field-level problems. The site coordinators in the field reported to the survey coordinator frequently to update the field operations.



## **2.15 Quality Control of Laboratory Tests and External Quality Assurance Scheme**

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 testing. The EQA samples were sent to the NPHL with new code numbers in the DBS card.

## **2.16 Data Management and Data Analysis**

The behavioural 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-20 version for the final data analysis. Descriptive statistics such as percentage, mean, median, standard deviation and inferential statistics like chi-square test 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.

## **2.17 Ethical Considerations**

Ethical approval was obtained from the Nepal Health Research Council (NHRC). The MLMs include 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. They were also informed that such withdrawal would not affect the services they would normally receive from the survey.

A consent form describing the objectives of the study, the nature of the participant's involvement, the benefits, and confidentiality issues was read aloud to them (Annex). A specific ID card was provided to each of the MLMs so that their names and addresses were not recorded anywhere. HIV test results along with post-test counselling were provided to the individual participants in a confidential manner. A travel allowance of NRs 200 and fruit juice/snack was provided to each of the MLMs as transportation costs. The research team maintained the confidentiality of the data collected throughout the survey.

## **2.18 Limitations of the survey**

There were some limitations in the interpretation of the results of this study. First, as pointed out previously, we restricted our subjects to only those who resided in the sampled clusters, so our results regarding the prevalence of HIV and others could not be generalized to all male labor migrant population in Nepal. Secondly, because of the cross-sectional design of the study and all of the items analyzed came from information at the time of the survey, the analysis can only provide evidence of statistical association between those items

and cannot show cause-effect relationships. Furthermore, there might be possibilities that same MLMs could participate in multiple rounds of this surveillance survey because this survey is being conducted in the same regions among the same group over a period of time.

## CHAPTER III: RESULTS

### 3.1 Prevalence of HIV

In this survey, HIV prevalence among MLMs was determined using the standard revised diagnostic protocol of the NCASC. The prevalence of HIV infection was found less than one percent among the MLMs (n=3; 0.4%). Out of the 360 surveyed MLMs in each region, only one MLM from Western Region and two MLMs from Mid-Far Western Region were diagnosed as having HIV infection.

**Table 3.1 HIV Prevalence by study regions**

HIV Prevalence	Western		Mid-Far western		Total	
	N	%	N	%	N	%
Positive	1	0.3	2	0.6	3	0.4
Negative	359	99.7	358	99.4	717	99.6
Total	360	100.0	360	100.0	720	100.0

### 3.2 Socio-Demographic Characteristics

#### 3.2.1 Birth Place and Current Living Place

Table 3.2 shows the distribution of MLMs according to their birth districts. Equal numbers of MLMs (84) were selected from each of the Syangja, Kaski and Gulmi. A total of 60 and 48 MLMs were selected from Gulmi and Kapilvastu of the Western Regions respectively. Out of 84 MLMs selected from each of the Syangja, Kaski and Gulmi districts, 98 percent of the MLMs from Syangja, 84 percent from Kaski and 91 percent from Gulmi were born in their respective districts. Similarly, 90 percent of the MLMs of Kapilvastu were born in the same interviewed district while all of the MLMs who were interviewed in Palpa were born in Palpa.

Similarly, a total of 360 MLMs were selected from different selected districts of the Mid to Far Western Region. A number of selected MLMs ranged from 36 in Banke to the maximum 108 from Kailali. Almost all (97%) of the MLMs who were interviewed in Doti were born in Doti. Likewise 85 percent of the surveyed MLMs from Achham, 65 percent from Surkhet, 63% from Kailali, 53% from Kanchanpur and exactly a half from Banke district (50%) belonged to the same respective districts.

**Table 3.2 Number of MLMs by Birth Districts**

	Number of migrants interviewed	Migrants Born in the Interviewed district	
	Total Number	N	%
<b>Western</b>			
Gulmi	84	77	91.7
Kapilvastu	48	43	89.6
Kaski	84	71	84.5
Palpa	60	60	100.0
Syanja	84	82	97.6
<b>Mid-Far western</b>			
Achham	60	51	85.0
Banke	36	18	50.0
Doti	36	35	97.2
Kailali	108	68	63.0
Kanchanpur	72	38	52.8
Surkhet	48	31	64.6
<b>Total</b>	<b>720</b>	<b>574</b>	<b>79.7</b>

### 3.2.2 Background Characteristics

Table 3.3 illustrates the socio-demographic characteristics of the MLMs. Age-wise distribution of the MLMs indicates that the highest number of them belonged to youth (39%) aged below 25 years with a mean age  $29.8 \pm 9.4$ .

Overall, nearly two-fifth of the MLMs (37%) had school leaving certificate (SLC) education or above and grade 6-9 respectively. A higher percent of the MLMs from Mid to Far Western Region (41%) had completed SLC and above education than that of the MLMs belonging to Western Region (32%). A fifth of the MLMs (20%) had primary education (schooling of grade 1-5). MLMs having primary education were higher in Western Region (23%) compared to Mid to Far Western Region (18%). A total of 5 percent of the MLMs were illiterate (6% in Western Region and 3% in the Mid-Far western region). Slightly over two-third of the MLMs (67%) were ever married whereas 32 percent of the MLMs were never married. On the other hand, 0.4 percent each of them were divorced or permanently separated and widowers respectively.

Less than half of the MLMs (47%) were married for the first time at the age of 20-24 years followed by 15-19 years (41%). Adolescence marriage was slightly high among the MLMs of Western Region (43%) than that of the MLMs of Mid-Far Western Region (40%). In the meantime, 9 percent of the MLMs reported of getting married at the age of 25-29 years. Nearly 2 percent of the MLMs had got their first marriage at 30 years and above whereas 1.4 percent reported of getting married before reaching 15 years of life. The mean age at first marriage as reported by the MLMs was  $20.3 \pm 3.2$  years.

Current living relationship of the MLMs indicates that almost two-third of them (65%) were living with their wives and it was higher among the MLMs of Mid-Far Western Region (68%)

when compared with those MLMs of Western regions (62%). Similarly, above three out of five MLMs (62%) reported of living with their parents followed by 41 percent of them living with their children. Living with parent was more common in Western Region (67%) while living with the children was more common in Mid-Far Western Region (44%). Likewise, some MLMs were living with other family members (3%) followed by living alone (0.3%).

**Table 3.3 Socio-demographic Characteristics of MLMs**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Age group</b>						
18-19	38	10.6	46	12.8	84	11.7
20-24	90	25.0	108	30.0	198	27.5
25-29	65	18.1	49	13.6	114	15.8
30-34	49	13.6	47	13.1	96	13.3
35-39	56	15.6	38	10.6	94	13.1
40 or above	62	17.2	72	20.0	134	18.6
<i>Mean ±SD</i>	30 ±9.1		29.5 ±9.8		29.8 ±9.4	
<i>Median</i>	29		26		28	
<b>Education</b>						
Illiterate	23	6.4	12	3.3	35	4.9
Literate, no schooling	3	0.8	1	0.3	4	0.6
Grade 1-5	82	22.8	64	17.8	146	20.3
Grade 6-9	135	37.5	135	37.5	270	37.5
SLC and above	117	32.5	148	41.1	265	36.8
<b>Caste/Ethnicity</b>						
Brahmin/Chettri/Thakuri	107	29.7	165	45.8	272	37.8
Dalit	149	41.4	90	25.0	239	33.2
TeraiMadhesi	10	2.8	46	12.8	56	7.8
Muslim	4	1.1	2	0.6	6	0.8
Janajati	90	25.0	57	15.8	147	20.4
<b>Marital Status</b>						
Married	244	67.8	241	66.9	485	67.4
Divorced/Permanently Separated	2	0.6	1	0.3	3	0.4
Widower	2	0.6	1	0.3	3	0.4
Never married	112	31.1	117	32.5	229	31.8
<b>Age at first marriage</b>						
Less than 15 years	0	0	7	2.9	7	1.4
15-19	105	42.3	97	39.9	202	41.1
20-24	115	46.4	114	46.9	229	46.6
25-29	23	9.3	21	8.6	44	9
30 and above	6	2.4	4	1.6	9	1.8
<i>Mean ±SD</i>	20.4 ±3.0		20.1 ±3.4		20.3 ±3.2	
<i>Median</i>	20		20		20	
<b>Currently living with*</b>						
With wife	223	61.9	243	67.5	466	64.7
Alone	1	0.3	2	0.6	3	0.4

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
With parents	241	66.9	206	57.2	447	62.1
With children	134	37.2	158	43.9	292	40.6
With family	8	2.2	12	3.3	20	2.8
Total	360	100.0	360	100.0	720	100.0

\* Percents total may exceed 100 due to multiple responses

### 3.2.3 Migration History of the MLMs

Table 3.4 reveals the migration destinations of the male labor migrants in India. Altogether 20 migration destinations of India were reported by the MLMs. The major destinations for migration reported by the MLMs were Delhi (23%; 34% among Western MLMs and 12% among Mid-Far Western MLMs) and Mumbai (21%; 17% among Western MLMs and 25% among Mid-Far Western MLMs). A substantially higher proportion of the MLMs from the Western Region (34%) than Mid-Far Western Region (12%) reported Delhi as the destination for migration while a higher percent of the MLMs from Mid-Far Western Region (25%) than the Western Region (17%) reported Mumbai as their migration destination. Other major destinations for migration were Gujarat (12%), Punjab (9%), Himanchal Pradesh (7%), Maharashtra (4%), Karnatak and Rajasthan (3%), Uttar Pradesh, Chennai and west Bengal (2%).

**Table 3.4 Migration Destinations of Male Labor Migrants**

Destination	Western		Mid-Far western		Total	
	N	%	N	%	N	%
Delhi	121	33.6	42	11.7	163	22.6
Mumbai	61	16.9	91	25.3	152	21.1
Gujarat	34	9.4	55	15.3	89	12.4
Himachal Pradesh	3	0.8	49	13.6	52	7.2
Punjab	55	15.3	12	3.3	67	9.3
Maharashtra	7	1.9	20	5.6	27	3.8
Karnatak	5	1.4	17	4.8	22	3.0
Hariyana	12	3.3	12	3.3	24	3.3
Haidarab	12	3.3	7	1.9	19	2.6
Rajasthan	9	2.5	10	2.8	19	2.6
Utarpardesh	7	1.9	10	2.8	17	2.4
Andra Pradesh	5	1.4	2	0.6	7	1.0
Assam	4	1.1	0	0	4	0.6
Chennai	4	1.1	10	2.8	14	1.9
Goa	5	1.4	5	1.4	10	1.4
Kerala	5	1.4	5	1.4	10	1.4
Lakhanau	2	0.6	6	1.7	8	1.1
West Bengal	7	1.9	5	1.4	12	1.7
Uttarakhand	2	0.6	2	0.6	4	0.6
Total	360	100.0	360	100.0	720	100.0

### 3.2.4 Characteristics of the male labor migrants

Table 3.5 portrays different characteristics of the male labor migrants such as age at first migration, living partnership in India and plan to re-migrate to India. Nearly four-fifth of the MLMs (78%) reported that they migrated to India for the first time when they were  $\leq 19$  years old. The migration practice in this early age was slightly higher in the Western Region (82%) than Mid-Far Western Region (74%). Similarly, almost one-sixth of the MLMs (15%) had their first migration at the age of 20-24 years followed by 4 percent of them migrating to India at the age of 25-29 years. Overall, the mean age of the MLMs at first migration was  $17.9 \pm 4.0$  years. The average age of MLMs of Mid-Far Western Region was higher by 1 year ( $18.5 \pm 4.6$ ) than that of the MLMs from the Western Region ( $17.4 \pm 3.2$  years). It was found that the age of the MLMs when they first migrated to India ranged from 12-42 years.

The survey revealed that more than half of the MLMs (53%) used to live with their friends during last stay in India. Slightly higher percent of the MLMs belonging to Mid-Far Western Region (58%) than the Western Region (48%) reported this. More than one out of the four MLMs (27%) used to live with their relatives, one-sixth of them (16%) lived alone and 3 percent of them lived with their wife. However, only two MLMs from Mid-Far Western Region reported of living with their family.

Majority of the surveyed MLMs (72%) opined that they were planning to revisit India and the proportion of the MLMs reporting this was almost similar in both regions. However, 7 percent of the MLMs remained not determined about revisiting to India.

**Table 3.5 Male Labor Migrants by Migration Characteristics**

Age at first migration	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<20	296	82.2	267	74.2	563	78.2
20-24	52	14.4	59	16.4	111	15.4
25-29	8	2.2	20	5.6	28	3.9
30-34	2	0.6	8	2.2	10	1.4
35 or above	2	0.6	6	1.7	8	1.1
Mean $\pm$ SD	17.4 $\pm$ 3.2		18.5 $\pm$ 4.6		17.9 $\pm$ 4.0	
Median	17		18		17	
Age ranges	12-35		12-42		12-42	
<b>During last stay in India to whom with the respondent lived</b>						
Alone	67	18.6	51	14.2	118	16.4
With wife	17	4.7	8	2.2	25	3.5
With friends	173	48.1	208	57.8	381	52.9
Relatives	103	28.6	91	25.3	194	26.9
With family	0	0	2	0.6	2	0.3
<b>Planning to revisit India</b>						
Yes	260	72.2	255	70.8	515	71.5
No	74	20.6	79	21.9	153	21.2
Don't know	26	7.2	26	7.2	52	7.2

<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
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Overall three-fourth of the MLMs (74%) expressed (76% in Western and 72% in Mid-Far Western) that the reason for employment in India is to earn money. The percent of MLMs reporting this is slightly higher in Western Region (76%) than Mid-Far Western Region (72%). On the other hand, more than two-third of the MLMs (68%) reported of being employed in India due to unemployment (68%) followed by poverty (55%) and in order to rear family (46%).



**Table 3.5 Reason of employment in the last India**

Reasons*	Western		Mid-Far western		Total	
	N	%	N	%	N	%
Earn money	275	76.4	259	71.9	534	74.2
Unemployment	272	75.6	216	60.0	488	67.8
Poverty	227	63.1	167	46.4	394	54.7
In order to rear family	188	52.2	142	39.4	330	45.8
For training	2	0.6	1	0.3	3	0.4
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>

\* Percent total may exceed 100 due to multiple responses

### 3.3 Injecting Behaviors /Use of drug and Alcohol

Almost all of the surveyed MLMs (97%) did not attempt to take any types of drugs during the past one month. A higher percent of the MLMs in the Western Region (6%; n=20) than the Mid-Far Western Region (1%) had ever tried to consume any type of illicit drugs in the past one month. It was found that almost 4 percent of the total MLMs had ever injected drugs. None of the MLMs from Mid-Far Western Region while less than a tenth of them from the Western Region (7%; n=27) had ever injected drugs. Similarly, more than one-sixth of the total MLMs (18%) had ever injected drugs in the last 12 months, and all of them belonged to the Western region. Among the MLMs who had ever injected drugs in the past 12 months, it is notable that none of them from both the regions were currently injecting drugs.

**Table 3.6 Use of drug and injection**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Tried to take any types of drugs during past one month</b>						
Yes	20	5.6	3	0.8	23	3.2
No	340	94.4	357	99.2	697	96.8
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Ever injected drugs</b>						
Yes	27	7.5	0	0	27	3.8
No	326	90.6	355	98.6	681	94.6
Don't know	7	1.9	5	1.4	12	1.7
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Ever injected drugs in last 12 months</b>						
Yes	5	18.5	0	0	5	18.5
No	22	81.5	0	0	22	81.5
<b>Total</b>	<b>27</b>	<b>100.0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>100.0</b>
<b>Currently injecting drugs</b>						
No	5	100.0	0	0	5	100.0
<b>Total</b>	<b>5</b>	<b>100.0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>100.0</b>

Overall more than a tenth of the MLMs (13%) used to drink alcohol every day during their last stay in India. The percent of MLMs consuming alcohol every day is relatively higher in the Western Region (20%) compared to that of Mid-Far Western Region (6%). On the other hand, almost a sixth of the MLMs (16%) had taken alcohol for 2-3 times in a week followed by 15 percent of them taking alcohol at least once a week. However, a total of 18 percent of the MLMs had taken alcohol occasionally with less than one time in a week. This percent was found higher in the Mid-Far Western Region (26%) than the Western Region (10%).

**Table 3.7 Use of Alcohol**

Consumption of alcohol during last stay in India	Western		Mid-Far western		Total	
	N	%	N	%	N	%
Every day	71	19.7	23	6.4	94	13.1
2-3 times a week	68	18.9	47	13.1	115	16.0
At least once a week	52	14.4	59	16.4	111	15.4
Less than once a week	37	10.3	95	26.4	132	18.3
Don't know	132	36.7	136	37.8	268	37.2
Total	360	100.0	360	100.0	720	100.0

### 3.4 Sexual behaviors of and condom use with different partners

This section describes the sexual behaviors of MLMs, including sexual contact with spouse, girlfriend and FSWs in Nepal and India. Male Labor Migrants were asked series of questions related to their sexual behaviors. This section presents the general findings of the study regarding sexual behaviors of the MLMs.

#### 3.4.1 Sexual Behavior of MLMs

It was found that more than four-fifth of the MLMs (86%) had ever had sex with a woman and this experience was reported by almost similar proportion of the MLMs from both Western (84%) and Mid-Far Western Region (87%).

More than three-fifth of the MLMs (63%) had their first sexual contact at the age between 15-19 years whereas less than a third of the MLMs (30%) had experienced their first sex in between the age of 20-24 years. In the mean time, 6 percent of the MLMs from the Western Region reported that they do not remember their age at first sex. The mean age of the MLMs while having first sex was  $18.9 \pm 2.5$  years.

Among the MLMs who had ever had sex with a woman, one out of four MLMs (25%) had ever had sex with a sex worker. The percent of MLMs having sex with a sex worker was higher in Mid to Far Western Region (32%) than that of the Western Region (19%).

**Table 3.8 Sexual Behavior of Male Labor Migrants (Sexual intercourse with a woman)**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Ever have had sexual intercourse with a woman</b>						
Yes	301	83.6	315	87.5	616	85.6
No	59	16.4	45	12.5	104	14.4
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Age at first sex</b>						
15-19	186	61.8	204	64.8	390	63.3
20-24	88	29.2	95	30.2	183	29.7
25-29	9	3.0	16	5.1	25	4.1
Don't know	18	6.0	0	0	18	2.9
<b>Total</b>	<b>283</b>	<b>100.0</b>	<b>315</b>	<b>100.0</b>	<b>598</b>	<b>100.0</b>
Mean $\pm$ SD*	18.9 $\pm$ 2.5		18.9 $\pm$ 2.6		18.9 $\pm$ 2.5	
Median*	18		18		18	
<b>Ever had sex with a sex worker</b>						
Yes	56	18.6	100	31.7	156	25.3
No	245	81.4	215	68.3	460	74.7
<b>Total</b>	<b>301</b>	<b>100.0</b>	<b>315</b>	<b>100.0</b>	<b>616</b>	<b>100.0</b>

\*Don't know the response is excluded.

### 3.4.2 Condom use with wife

Almost a fifth of the married MLMs (19%) had used condom during the last sex with wife, and this practice was found higher in the Western Region (23%) than Mid to Far Western Region (16%). Out of those who had used condom during the last sex with wife, the majority of the MLMs (82%) used condom on their motivation. However, 18 percent of the MLMs used condom following the suggestion of their wives. It is notable that more than a half of the MLMs never used condom with their wives in the past year (55%). Only 13 percent of the MLMs practised consistent condom use with their wives. Consistent condom use practice was much lower among the MLMs of Mid to Far Western Region (2%) than that of the MLMs of the Western Region (23%).

**Table 3.9 Condom use with wife**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Use of condom during last sex with wife</b>						
Yes	82	22.8	57	15.8	139	19.3
No	166	46.1	186	51.7	352	48.9
Unmarried	112	31.1	117	32.5	229	31.8
Total	360	100.0	360	100.0	720	100.0
<b>Person to suggest the use of condom during last sex</b>						
Myself	68	82.9	46	80.7	114	82.0
My wife	14	17.1	11	19.3	25	18.0
Total	82	100.0	57	100.0	139	100.0
<b>Consistent use of condom with wife in the past year</b>						
All of the time	58	23.4	6	2.5	64	13.0
Most of the time	24	9.7	26	10.7	50	10.2
Some of the time	24	9.7	49	20.2	73	14.9
Rarely	14	5.6	22	9.1	36	7.3
Never	128	51.6	140	57.6	268	54.6
Total	248	100.0	243	100.0	491	100.0

### 3.4.3 Condom use with FSW in Nepal

The survey assessed the information related to sexual behavior and condom use practices of MLMs during sex with FSWs in Nepal. More than a tenth of the MLMs (12%) had ever had sex with a female sex worker in Nepal, and this proportion was slightly higher in Mid to Far Western Region (14%) compared to Western Region (9%).

Among those MLMs who had sex with FSWs in Nepal, above two-fifth of them (41%) had sex with 2-3 FSWs. More than a fifth of the MLMs (22%) reported of having sex with 4-5 female sex workers and this involvement was quite higher among the MLMs of Mid-Far Western Region (27%) than those MLMs of Western Region (15%). A fifth of the MLMs (20%) had sex with only one FSW, and this response was remarkably higher among the MLMs from the Western Region (35%) when compared to the MLMs from the Mid-Far Western Region (11%). On the other hand, one-sixth of the MLMs reported of having sex with more than 5 FSWs. The proportion of MLMs reporting this was much higher in Mid-Far Western Region (22%) than the Western Region (8%). In an average, MLMs had sex with 2.4±1.0 FSWs in their lifetime. The total number of FSWs visited by the MLMs ranged from 1-4.

Among the MLMs who had ever had sex with FSWs in Nepal, more than two-fifth of them (45%) had done so in the past year. A higher percentage of the MLMs belonging to Mid to Far Western Region (53%) had sex with a female sex worker in the past year than that of MLMs of Western Region (31%).

Among the MLMs who had ever had sex in the past year, more than a half of them (52%) had sex with only one FSW, and the percent of the MLMs reporting this is considerably

higher in the Western Region (62%) than the Mid-Far Western Region (11%). Nearly a third of the MLMs (32%) had sex with 2-3 FSWs in the past year, and this involvement is much higher among the MLMs of Mid-Far Western Region (40%) than the Western Region (25%). Only two MLMs from Mid-Far Western Region reported of having sex with more than 5 FSWs in the past year. In an average, MLMs had sex with  $2.2 \pm 1.7$  FSWs in the past year and the total number of FSWs with whom they had sex with ranged from 0-8.

Majority of the MLMs (78%) who had sex with FSWs used condom during last sex. All of the MLMs of Western Region and nearly three-fourth (71%) of the MLMs of Mid to Far Western Region who had sex with FSWs in Nepal had used condoms in the last sex. Consistent condom use practice was observed in only two-third of the surveyed MLMs (66%). Encouragingly, cent percent of the MLMs of Western Region however only above a half of them from the Mid to Far Western Region (54%) had used condom all of the time in the last sexual intercourse with FSWs in Nepal.

**Table 3.10 Sexual Behavior and Condom use with female sex workers in Nepal**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Ever had sex with a female sex worker in Nepal</b>						
Yes	26	8.6	45	14.3	71	11.5
No	275	91.4	270	85.7	545	88.5
Total	301	100.0	315	100.0	616	100.0
<b>Total number of FSWs visited in Lifetime in Nepal</b>						
1	9	34.6	5	11.1	14	19.7
2-3	11	42.3	18	40.0	29	40.8
4-5	4	15.4	12	26.7	16	22.5
>5	2	7.7	10	22.2	12	16.9
Mean $\pm$ SD	2 $\pm$ 0.9		2.6 $\pm$ 1.0		2.4 $\pm$ 1.0	
Median	2		2		2	
Ranges	1-4		1-4		1-4	
Total	26	100	45	100	71	100
<b>Ever had sex with a female sex worker in the past year</b>						
Yes	8	30.8	24	53.3	32	45.1
No	18	69.2	21	46.7	39	54.9
Total	26	100.0	45	100.0	71	100.0
<b>Total number of FSWs visited in the past year in Nepal</b>						
1	5	62.5	11	11.1	16	51.6
2-3	2	25	8	40.0	10	32.3
4-5	1	12.5	2	26.7	3	9.7
>5	0	0	2	22.2	2	6.5
Mean $\pm$ SD	2 $\pm$ 1.5		2.2 $\pm$ 1.8		2.2 $\pm$ 1.7	
Median	1		1.5		1	
Ranges	1-5		0-8		0-8	
Total	8	100	24	100	32	100
<b>Use of condom during the last sex with FSWs in Nepal</b>						

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
Yes	8	100.0	17	70.8	25	78.1
No	0	0	7	29.2	7	21.9
Total	8	100.0	24	100.0	32	100.0
<b>Consistent use of condom in the past year with FSW</b>						
All of the time	8	100.0	13	54.2	21	65.6
Most of the time	0	0	2	8.3	2	6.2
Some of the time	0	0	6	25.0	6	18.8
Never	0	0	3	12.5	3	9.4
Total	8	100.0	24	100.0	32	100.0

### 3.4.4 Condom use with FSWs in India

This table illustrates the sexual behavior and condom use practice of MLMs while visiting female sex workers during their stay in India. A fifth of the MLMs (20%) reported of having sex with FSWs in India and this involvement was higher among the MLMs of Mid-Far Western Region (26%) than the Western Region (14%).

More than a third of the MLMs (35%) reported that they visited 2-3 FSWs during their lifetime in India. The MLMs reporting this was almost twice higher in the Mid-Far Western Region (42%) than the Western Region (22%). More than a fourth of the MLMs (27%) had sex with only one FSW, and the percent of the MLMs is reporting this was slightly higher in Western Region (32%) than Mid-Far Western Region (25%). However, almost a quarter of the MLMs (24%) reported of having sex with more than 5 FSWs. In an average, the MLMs had sex with 4.4  $\pm$ 5.3 FSWs in their lifetime. The total number of FSWs with whom the MLMs had sex in India ranged from 1-32.

The survey revealed that more than two-fifth of the MLMs (44%) had sex with only one FSW in the past year in India. A higher percentage of the MLMs from the Western Region (64%) than Mid-Far Western Region (30%) reported this. Almost two-fifth of the MLMs (38%) had a sexual relations with 2-3 FSWs, and this practice was remarkably higher among the MLMs of Mid-Far Western Region (47%) than that of the Western Region (27%). On the other hand, one respondent each from both regions reported of having sex with more than 5 FSWs in the past year. In an average, the MLMs were found to have sex with 2.2  $\pm$ 1.7 FSWs in the past year. Similarly, the average number of FSWs with whom the MLMs had sex with ranged from 1-10.

Among the MLMs who had ever had sex with FSWs in India, more than two-fifth (43%) had such relation in the past year. This proportion of the MLMs was higher in Western Region (54%) compared to that of Mid to Far Western Region (37%).

An overwhelming majority of the MLMs (92%) who had sex with FSWs in the past year had used condom during their last sex. A total of 83 percent of the MLMs had used condom consistently in all the episodes of sex with FSWs in the past year and this practice was considerably higher among the MLMs of Western Region (96%) than the MLMs of Mid to Far Western Region (73%).

**Table 3.11 Sexual Behavior and Condom use with female sex workers in India**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Ever had sex with female sex workers in India</b>						
Yes	41	13.6	81	25.7	122	19.8
No	260	86.4	234	74.3	494	80.2
<b>Total</b>	<b>301</b>	<b>100.0</b>	<b>315</b>	<b>100.0</b>	<b>616</b>	<b>100.0</b>
<b>Total number of FSWs visited in Lifetime in India</b>						
1	13	31.7	20	24.7	33	27.0
2-3	9	22	34	42.0	43	35.2
4-5	9	22	8	9.9	17	13.9
>5	10	24.4	19	23.5	29	23.8
<b>Total</b>	<b>41</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>122</b>	<b>100</b>
Mean	4.1		4.6		4.4	
Median	3		2		2.5	
Ranges	1-15		1-32		1-32	
<b>Had sex with a female sex worker in the past year in India</b>						
Yes	22	53.7	30	37.0	52	42.6
No	19	46.3	51	63.0	70	57.4
<b>Total</b>	<b>41</b>	<b>100.0</b>	<b>81</b>	<b>100.0</b>	<b>122</b>	<b>100.0</b>
<b>Total number of FSWs visited in the past year in India</b>						
1	14	63.6	9	30.0	23	44.2
2-3	6	27.3	14	46.7	20	38.5
4-5	1	4.5	6	20.0	7	13.5
>5	1	4.5	1	3.3	2	3.8
Mean $\pm$ SD	1.9 $\pm$ 1.6		2.5 $\pm$ 1.8		2.2 $\pm$ 1.7	
Median	1		2		2	
Ranges	1-7		1-10		1-10	
<b>Total</b>	<b>22</b>	<b>100</b>	<b>30</b>	<b>100</b>	<b>52</b>	<b>100</b>
<b>Use of condom during the last sex with FSW in India</b>						
Yes	22	100.0	26	86.7	48	92.3
No	0	0	4	13.3	4	7.7
<b>Total</b>	<b>22</b>	<b>100.0</b>	<b>30</b>	<b>100.0</b>	<b>52</b>	<b>100.0</b>
<b>Consistent use of condom with FSW in the past year in India</b>						
All of the time	21	95.5	22	73.3	43	82.7
Most of the time	0	0	4	13.3	4	7.7
Some of the time	0	0	3	10.0	3	5.8
Never	1	4.5	1	3.3	2	3.8
<b>Total</b>	<b>22</b>	<b>100.0</b>	<b>30</b>	<b>100.0</b>	<b>52</b>	<b>100.0</b>

### 3.4.5 Condom use with girlfriend in Nepal

Table 3.12 represents the sexual behavior of MLMs and their condom use practices during

sex with girlfriend in Nepal. A fifth of the MLMs (20%) had sexual contact with their girlfriend in the past one year. A similar percent of the MLMs had sex with their girlfriend in the past year in both regions (Western Region =20%, Mid to Far Western Region = 21%). On the other hand, nearly a half of the MLMs reported that they did not have any girlfriend in Nepal (46%).

Among the MLMs who had ever had sex with their girlfriend in Nepal, three out of five of them (60%) had used condom during their last sex. Condom use during last sex with girlfriend was higher among the MLMs of Mid to Far Western Region (63%) than the MLMs of the Western Region (58%). Less than a half of the MLMs (45%) had used condom consistently during all the sexual contacts with their girlfriends in the past one year, and this practice was more prevalent among the MLMs of Western Region (49%) than the MLMs of the Mid to Far Western Region (42%). On the contrary, 17 percent of the MLMs never used condom during sex with their girlfriend in the past year.

**Table 3.12 Sexual Behavior and Condom use with girlfriend in Nepal**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Had sex with girlfriend in the past year</b>						
Yes	59	19.6	67	21.3	126	20.5
No	122	40.5	82	26.0	204	33.1
No Girl friend	120	39.9	166	52.7	286	46.4
<b>Total</b>	<b>301</b>	<b>100.0</b>	<b>315</b>	<b>100.0</b>	<b>616</b>	<b>100.0</b>
<b>Use of condom during last sex with girl friend</b>						
Yes	34	57.6	42	62.7	76	60.3
No	25	42.4	25	37.3	50	39.7
<b>Total</b>	<b>59</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>126</b>	<b>100.0</b>
<b>Consistent use of condom with girlfriend in the past year</b>						
All of the time	29	49.2	28	41.8	57	45.2
Most of the time	3	5.1	5	7.5	8	6.3
Some of the time	12	20.3	14	20.9	26	20.6
Rarely	2	3.4	11	16.4	13	10.3
Never	13	22.0	9	13.4	22	17.5
<b>Total</b>	<b>59</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>126</b>	<b>100.0</b>

### 3.4.6 Condom use with girlfriend in India

This table represents the information related to sexual contact and condom use practice of the MLMs with their girlfriend in India. Only 4 percent of the MLMs had sex with their girlfriends in the past one year in India. The proportion of MLMs reporting higher in Mid to Far Western Region (5%) than that of Western Region (2%).

Among the MLMs who had sex with their girlfriend in India in the past year, almost two-third of them (65%) had used condom during their last intercourse. Condom use with girlfriend at the last sex was considerably higher among the MLMs of Mid to Far Western



Region (75%) compared to that of Western Region (43%).

It was found that nearly a half of the MLMs (48%) used condom all of the time during sex with their girlfriends in the past year. Consistent condom use practice was more noticeable among the MLMs belonging to Mid to Far Western Region than that of the Western Region (29%). On the counterparts, above a fifth of the MLMs (22%) reported of never using condom while having sex with their girlfriend in the past year in India.

**Table 3.13 Sexual Behavior and condom use with girlfriend in India**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Had sexual intercourse with girl friend in the past year in India</b>						
Yes	7	2.3	16	5.1	23	3.7
No	143	47.5	110	34.9	253	41.1
No Girl friend	151	50.2	189	60.0	340	55.2
<b>Total</b>	<b>301</b>	<b>100.0</b>	<b>315</b>	<b>100.0</b>	<b>616</b>	<b>100.0</b>
<b>Use of condom during last sex with girl friend in India</b>						
Yes	3	42.9	12	75.0	15	65.2
No	4	57.1	4	25.0	8	34.8
<b>Total</b>	<b>7</b>	<b>100.0</b>	<b>16</b>	<b>100.0</b>	<b>23</b>	<b>100.0</b>
<b>Consistent use of condom with girlfriend in the past year in India</b>						
All of the time	2	28.6	9	56.2	11	47.8
Most of the time	1	14.3	2	12.5	3	13.0
Some of the time	0	0	2	12.5	2	8.7
Rarely	1	14.3	1	6.2	2	8.7
Never	3	42.9	2	12.5	5	21.7
<b>Total</b>	<b>7</b>	<b>100.0</b>	<b>16</b>	<b>100.0</b>	<b>23</b>	<b>100.0</b>

### 3.4.7 Condom use with male sex partner in Nepal

This table represents the sexual behavior and condom use practice of the MLMs with their male partners in Nepal. A negligible percent of the MLMs (0.3%) had anal sex with a male partner in the past one year. Only one respondent in each region (Western and Mid to Far Western Region) respectively had practised anal sex with a male partner.

Out of the two MLMs who had anal sex with a male partner in the past year only the one from the Western Region had used condom during his last sex. The same MLM reported of using condom consistently while having sex with his male partners in the past year.

**Table 3.14 Sexual Behavior and Condom use with Male Partner in Nepal**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Had anal sex with a male partner in the past year in Nepal</b>						
Yes	1	0.3	1	0.3	2	0.3
No	359	99.7	359	99.7	718	99.7
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Use of condom during last anal sex with male partner in Nepal</b>						
Yes	1	100.0	0	0	1	50.0
No	0		1	100.0	1	50.0
<b>Total</b>	<b>1</b>	<b>100.0</b>	<b>1</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>
<b>Consistent use of condom with male partner/s in the past year in Nepal</b>						
All of the time	1	100.0	0	0	1	50.0
Never	0	0	1	100.0	1	50.0
<b>Total</b>	<b>1</b>	<b>100.0</b>	<b>1</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>

### 3.4.8 Condom use with male sex partner in India

The table illustrates the information related to sexual contact and condom use practice of the MLMs with their male partners during their stay in India. Less than one percent of the MLMs had anal sex with male partner in the past year. Only one MLM from the Western Region and four MLMs from the Mid-Far Western Region had practised anal sex with their male partners.

Out of the five MLMs who had sex with their male partners in the past year, only one from each Western and Mid to Far Western Region had used condom during the last sex. However, consistent condom use was practised by only one MLM from the Western region.

**Table 3.15 Sexual Behavior and condom use with Male Partner in India**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Had anal sex with male partner in the past year in India</b>						
Yes	1	0.3	4	1.1	5	0.7
No	359	99.7	356	98.9	715	99.3
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Use of condom during last anal sex with male partner in India</b>						
Yes	1	100.0	1	25.0	2	40.0
No	0	0	3	75.0	3	60.0
<b>Total</b>	<b>1</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>5</b>	<b>100.0</b>
<b>Consistent use of condom with male partner/s in the past year in India</b>						
All of the time	1	100.0	0	0	1	20.0
Most of the time	0	0	1	25.0	1	20.0

Never	0	0	3	75.0	3	60.0
Total	1	100.0	4	100.0	5	100.0

### 3.4.9 Condom use with last sex

Two-third of the MLMs (66%) reported of having their last sexual intercourse with their wife followed by lover/female friend (13%). On the other hand, 14 percent of the MLMs reported of never having sexual intercourse. Among the MLMs who have experienced sex, only a third of them (33%) had used condom during their last sex. The proportion of the MLMs using condom during their last sex was higher in Western Region (36%) than that of the Mid to Far Western Region (30%). A Large majority of the MLMs reported of having their last sexual intercourse in Nepal (95%).

**Table 3.16 Last sex partner and Condom use at last sex**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Last sex partner</b>						
FSW	10	2.8	14	3.9	24	3.3
Wife	239	66.4	240	66.7	479	66.5
Other female friend	11	3.1	6	1.7	17	2.4
Lover/female friend	34	9.4	57	15.8	91	12.6
No sexual intercourse in the last 12 months	8	2.2	0	0	8	1.1
Never had sexual intercourse	58	16.1	43	11.9	101	14.0
Total	360	100.0	360	100.0	720	100.0
<b>Use of condom during last sex</b>						
Yes	107	36.4	95	30.0	202	33.1
No	187	63.6	222	70.0	409	66.9
Total	294	100.0	317	100.0	611	100.0
<b>Place of last sexual intercourse</b>						
Nepal	284	96.6	298	94.0	582	95.3
India	10	3.4	19	6.0	29	4.7
Total	294	100.0	317	100.0	611	100.0

### 3.5 Comprehensive Knowledge of HIV and Modes of HIV Transmission

The survey explored the knowledge of the MLMs on HIV/AIDs. It is encouraging to note that an overwhelming majority of the MLMs (93%) had heard about HIV/AIDs. However, still, 7 percent of the MLMs reported of never hearing about HIV/AIDs. Three-fourth of the MLMs (75%) did not know any person infected with HIV or died of AIDs. Relatively higher percent of the MLMs from the Western Region (84%) than the Mid-Far Western Region (66%) reported this. Over a third of the MLMs reported of having a close relative (35%) and close friend (36%) who are infected with HIV or has died of AIDs. The percent of MLMs having a close relative infected or died of HIV is almost thrice higher in Mid-Far Western Region (44%) than the Western Region (15%). However, a higher percent of the MLMs from Western Region (52%) had a close friend infected or died of HIV than Mid-Far Western Region (28%).

**Table 3.17 Knowledge on HIV Infected people**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Ever heard about HIV and AIDS</b>						
Yes	342	95.0	328	91.1	670	93.1
No	18	5.0	32	8.9	50	6.9
Total	360	100.0	360	100.0	720	100.0
<b>Know anyone infected with HIV or died of AIDS</b>						
Yes	58	16.1	123	34.2	181	25.1
No	302	83.9	237	65.8	539	74.9
Total	360	100.0	360	100.0	720	100.0
<b>Have a close relative or close friend who is infected with HIV or has died of AIDS</b>						
Yes, a close relative	9	15.5	54	43.9	63	34.8
Yes, a close friend	30	51.7	35	28.5	65	35.9
No	19	32.8	34	27.6	53	29.3
Total	58	100.0	123	100.0	181	100.0

Table 3.18 represents the knowledge of HIV transmission and prevention among the MLMs. Above three-fifth of the MLMs (61%) opined that HIV transmission could be prevented through abstinence and this understanding was apparent among an almost equal proportion of the MLMs in both the regions. Similarly, the majority of the MLMs (73%) had to understand in regards to the faithful partnership to a single partner as a measure of HIV prevention. A Large majority of them knew that consistent use of condom (82%) could protect from HIV transmission. This knowledge was slightly higher in Mid to Far Western Region (86%) than the Western Region (79%). In the meantime, almost two- third of the MLMs (65%) opined that a person looking healthy could be infected with HIV and this insight was slightly higher among the MLMs of Western Region (68%) than those of Mid to Far Western Region (63%). More than two-fifth (45%) of the MLMs opined that a person could get HIV infection from a mosquito bite. A quarter of them (25%) stated that HIV could be transmitted by sharing a meal.

Overall, more than two-fifth of the MLMs (44%), had the knowledge of all three ABCs of HIV prevention. A similar proportion of the MLMs belonging to both regions had this knowledge (Western Region=43%, Mid to Far Western Region=45%). However, only 21 percent of the MLMs had knowledge of all the five components (BCDEF) of HIV prevention. A similar understanding was observed regarding the knowledge of (BCDEF) of HIV prevention in both the regions (Western Region=21%, Mid to Far Western Region=22%).

**Table 3.18 Knowledge of HIV/AIDS Transmission**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Abstinence from sex (A)</b>						
Yes	218	60.6	219	60.8	437	60.7
No	115	31.9	113	31.4	228	31.7
Don't know	27	7.5	28	7.8	55	7.6
Total	360	100.0	360	100.0	720	100.0
<b>Being faithful to one partner (B)</b>						
Yes	262	72.8	260	72.2	522	72.5
No	68	18.9	59	16.4	127	17.6
Don't know	30	8.3	41	11.4	71	9.9
Total	360	100.0	360	100.0	720	100.0
<b>Consistent condom use (C)</b>						
Yes	283	78.6	310	86.1	593	82.4
No	48	13.3	31	8.6	79	11.0
Don't know	29	8.1	19	5.3	48	6.7
Total	360	100.0	360	100.0	720	100.0
<b>Healthy looking person can be infected (D)</b>						
Yes	244	67.8	227	63.1	471	65.4
No	109	30.3	101	28.1	210	29.2
Don't know	7	1.9	32	8.9	39	5.4
Total	360	100.0	360	100.0	720	100.0
<b>Get HIV from mosquito bite (E)</b>						
Yes	166	46.1	161	44.7	327	45.4
No	167	46.4	156	43.3	323	44.9
Don't know	27	7.5	43	11.9	70	9.7
Total	360	100.0	360	100.0	720	100.0
<b>Get HIV by sharing meal (F)</b>						
Yes	93	25.8	90	25.0	183	25.4
No	248	68.9	243	67.5	491	68.2
Don't know	19	5.3	27	7.5	46	6.4
Total	360	100.0	360	100.0	720	100.0
<b>Knowledge of all three ABC</b>						
Yes	156	43.3	162	45.0	318	44.2
No	204	56.7	198	55.0	402	55.8
Total	360	100.0	360	100.0	720	100.0
<b>Knowledge of all five BCDEF</b>						
Yes	76	21.1	79	21.9	155	21.5
No	284	78.9	281	78.1	565	78.5
Total	360	100.0	360	100.0	720	100.0

**3.6 Awareness and Availability of HIV Testing Facility and HIV Testing**

More than four-fifth of the MLMs (83%) knew about the availability of confidential HIV testing facility in the community, and this awareness was widespread among higher proportion of the MLMs of Western Region (88%) than the MLMs of Mid-Far Western Region (78%). Overall, two-third of the MLMs (67%) were aware of the place where HIV testing could be done. The relatively higher proportion of the MLMs from Mid-Far Western Region (81%) had this knowledge than the MLMs from the Western Region (52%). More than one-sixth of the MLMs (19%) had ever had an HIV test and this practice was more prevalent among the MLMs from the Mid-Far Western Region (24%) than the Western Region (13%).

Out of those MLMs who had ever had HIV testing, it is notable that four out of the five MLMs (80%) had voluntarily undergone the test. A higher percentage of the MLMs from the Western Region (87%) than Mid-Far Western Region (76%) had done HIV testing voluntarily. Nearly two-fifth of the MLMs (38%) had done their most recent HIV test within the last 12 months followed by a quarter of them (25%) having their test in between 25-48 months and a fifth of them (21%) between 13-24 months.

It is notable that overall over a half of the MLMs (51%) had not undergone HIV testing within the last 12 months. On the counterparts, a third of the MLMs (34%) reported of undergoing HIV testing once followed by almost a sixth of them (16%) having done their HIV testing 2-4 times within the last 12 months. Among the MLMs who had undergone their HIV testing within the last 12 months, the majority (90%) had obtained the test result. The MLMs reporting this is slightly higher in the Mid-Far Western Region (91%) than the Western Region (87%). However, almost 7 percent of the MLMs had not obtained their test results.

**Table 3.19 Knowledge about HIV Testing Facilities among MLMs and History of HIV Test**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Confidential HIV test facility available in the community</b>						
Yes	318	88.3	280	77.8	598	83.1
No	31	8.6	36	10.0	67	9.3
Don't know	11	3.1	44	12.2	55	7.6
Total	360	100.0	360	100.0	720	100.0
<b>Know about the place where HIV testing can be done</b>						
Yes	189	52.5	290	80.6	479	66.5
No	171	47.5	70	19.4	241	33.5
Total	360	100.0	360	100.0	720	100.0
<b>Ever had an HIV test</b>						
Yes	48	13.3	86	23.9	134	18.6
No	307	85.3	272	75.6	579	80.4
No response	5	1.4	2	0.6	7	1.0
Total	360	100.0	360	100.0	720	100.0
<b>Voluntarily underwent the test or because it was required</b>						
Voluntarily	42	87.5	65	75.6	107	79.9

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
Required	6	12.5	21	24.4	27	20.1
Total	48	100.0	86	100.0	134	100.0
<b>Most recent HIV test</b>						
Within last 12 months	13	27.1	38	44.2	51	38.1
Between 13-24 months	15	31.2	13	15.1	28	20.9
Between 25-48 months	15	31.2	18	20.9	33	24.6
49 months and more	5	10.4	16	18.6	21	15.7
Don't know	0	0	1	1.2	1	0.7
Total	48	100.0	86	100.0	134	100.0
<b>Frequency of undergoing HIV test within the last 12 months</b>						
None	23	47.9	45	52.3	68	50.7
Once	20	41.7	25	29.1	45	33.6
2-4 times	5	10.4	16	18.7	21	15.7
Total	48	100.0	86	100.0	134	100.0
<b>Obtained the test result</b>						
Yes	42	87.5	78	90.7	120	89.6
No	3	6.2	6	7.0	9	6.7
No response	3	6.2	2	2.3	5	3.7
Total	48	100.0	86	100.0	134	100.0

### 3.7 Knowledge of STIs, Experienced Symptoms, and Treatment in the Past Year

This table represents the understanding of MLMs in regards to STIs. More than two-third of the MLMs (68%) understood STIs as HIV/AIDs. Almost a third of the MLMs (33%) understood Syphilis as one of the STIs. The percent of MLMs stating Syphilis as STI was twice higher in the Western Region (45%) than the Mid-Far Western Region (21%). Similarly, the MLMs reported ulceration around the genitalia (15%), burning sensation during urination (5%), white discharge/discharge of pus/Dhatu flow (5%) and painful urination (4%) are the common STI symptoms. MLMs of the Western Region had a better understanding of most of the symptoms and conditions of STIs than those MLMs who belonged to the Mid-Far Western Region. Slightly higher proportion of MLMs from Mid-Far Western Region reported white discharge (6%) and HIV/AIDs (69%) as the symptoms of STI than the Western Region; white discharge (4%) and HIV/AIDs (67%). It is discouraging to note that almost a quarter of the MLMs (24%) lack understanding of STI related symptoms and the proportion of the MLMs who lack understanding about the STIs was almost similar in both the Mid-Far Western Region (25%) and the Western Region (24%).

In the meantime, STI related symptoms were experienced by the MLMs in the past year. The most common reported symptoms were burning sensation at the time of urination (5%), ulcers or sores around genital area (3%), pain during urination (2%), white discharge (1%) and others (1%).

**Table 3.20 Understanding of STIs and Reported STI Symptoms (Past Year)**

Understanding of STI *	Western		Mid-Far western		Total	
	N	%	N	%	N	%
White Discharge/Discharge of Pus	14	3.9	20	5.6	34	4.7
Pain during urination	25	6.9	3	0.8	28	3.9
Burning Sensation while Urinating	35	9.7	3	0.8	38	5.3
Ulcer or sore around genital area	76	21.1	29	8.1	105	14.6
Syphilis	162	45.0	77	21.4	239	33.2
HIV/AIDs	243	67.5	249	69.2	492	68.3
Don't know	85	23.6	90	25.0	175	24.3
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Reported STI Symptoms (Past Year)</b>						
White Discharge/Discharge of pus	3	0.8	5	1.4	8	1.1
Pain during urination	9	2.5	9	2.5	18	2.5
Burning sensation while urinating	18	5.0	16	4.4	34	4.7
Ulcer or sore around genital area	12	3.3	8	2.2	20	2.8
Others	1	0.3	4	1.1	5	0.7
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>

\* Percents total may exceed 100 due to multiple responses

It is notable that among MLMs who reported STIs in the past year, only 4 percent of them had received the treatment against those symptoms. Among those MLMs who received treatment for STIs, almost three-fifth (59%) had got the treatment from the hospital followed by private clinic (33%). On the other hand, over one-sixth of the MLMs (18%) each got STI treated from the health post and pharmacy respectively. More than a quarter of the MLMs (29%) from the Western Region who were treated against STIs had received treatment from the pharmacy whereas only 8 percent of them from Mid to Far Western Region had done so.

**Table 3.21 Reported Treatment of STI among Male Labor Migrants (Past Year)**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Received treatment for any of the above symptoms</b>						
Yes	14	3.9	13	3.6	27	3.8
No	346	96.1	347	96.4	693	96.2
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Places of treatment of STI symptoms in the past year</b>						
Private Clinic	5	35.7	4	30.8	9	33.3
Health Post/Health center	3	21.4	2	15.4	5	18.5
Hospital	8	57.1	8	61.5	16	59.3
Pharmacy	4	28.6	1	7.7	5	18.5
<b>Total</b>	<b>14</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>	<b>27</b>	<b>100.0</b>

\* Percents total may exceed 100 due to multiple responses



### **3.8 Exposure to HIV Programs (PE, DIC, HTC)**

The survey assessed the exposure and knowledge on HIV/AIDS/STI Programs among the Male Labor Migrants (Table 3.22). It is notable that only 5 percent of the MLMs had ever met or discussed or interacted with Peer Educators (PE) or Outreach educators (OE) in the last 12 months. The percent of MLMs who interacted with the PE and OE was higher in Mid to Far Western Region (9%) than the Western Region (only 1%). None of the MLMs from the Mid to Far Western Region had visited the DIC in the last 12 months. However, a negligible percent of the MLMs in the Western Region (2%) had visited the DIC.

Overall, only 3 percent of the MLMs had visited any of the STI Clinic in the last 12 months. Similarly, it was found that same percent of the MLMs (3%) had visited HIV testing and counselling (HTC) centers in the last 12 months. Among the MLMs who have visited the HTC center, almost three-fourth of them (74%) had visited the HTC center only once. Almost a tenth of the surveyed MLMs (9%) had participated in HIV/AIDs awareness program of the community. Likewise, only 7 percent of them reported that CHBC health workers had visited their home in the last 12 months.

It is notable that nearly a half of the MLMs (48%) were unaware about prevention of mother to child transmission services (PMTCT) for pregnant women. Awareness about the PMTCT for pregnant women was twice higher in the Western Region (15%) than in the Mid to Far Western Region (7%). Among the MLMs who have heard about the PMTCT services, majority knew about the availability of PMTCT services (90%).

**Table 3.22 Exposure and Knowledge on HIV/AIDS/STI Programs among Male Labor Migrants**

	Western		Mid-Far Western		Total	
	N	%	N	%	N	%
<b>Met or discussed or interacted with Peer Educators (PE) or Outreach Educators (OE) in the Last 12 months</b>						
Yes	5	1.4	33	9.2	38	5.3
No	355	98.6	327	90.8	682	94.7
Total	360	100.0	360	100.0	720	100.0
<b>Visited DIC in the last 12 months</b>						
Yes	0	0	7	1.9	7	1.0
No	360	100.0	353	98.1	713	99.0
Total	360	100.0	360	100.0	720	100.0
<b>Visited any STI Clinic in the last 12 months</b>						
Yes	12	3.3	8	2.2	20	2.8
No	348	96.7	352	97.8	700	97.2
Total	360	100.0	360	100.0	720	100.0
<b>Visited HTC centers in the last 12 months</b>						
Yes	9	2.5	10	2.8	19	2.6
No	351	97.5	350	97.2	701	97.4
Total	360	100.0	360	100.0	720	100.0
<b>Frequency of visiting HTC center in the last 12 months</b>						
Once	7	77.8	7	70.0	14	73.7
2-3 times	2	22.2	3	30.0	5	26.3
Total	9	100.0	10	100.0	19	100.0
<b>Ever participated in HIV AIDs awareness program of the community</b>						
Yes	27	7.5	40	11.1	67	9.3
No	333	92.5	320	88.9	653	90.7
Total	360	100.0	360	100.0	720	100.0
<b>CHBC health workers having home-visit in the last 12 months</b>						
Yes	10	2.8	42	11.7	52	7.2
No	350	97.2	318	88.3	668	92.8
Total	360	100.0	360	100.0	720	100.0
<b>Heard about PMTCT for pregnant women</b>						
Yes	55	15.3	27	7.5	82	11.4
No	216	60.0	74	20.6	290	40.3
Don't know	89	24.7	259	71.9	348	48.3
Total	360	100.0	360	100.0	720	100.0
<b>Knowledge about availability of PMTCT services</b>						
Yes	47	85.5	27	100.0	74	90.2
No	8	14.5	0	0	8	9.8
Total	55	100.0	27	100.0	82	100.0

### 3.9 Stigma and Discrimination

The survey explored the information about stigma and discrimination among the HIV infected people. In this regards, more than three-fourth (76%) of the MLMs expressed their willingness to buy food from HIV infected shopkeeper. Majority of the MLMs (81%) opined that children living with HIV should be able to attend school with children who are HIV negative. The percent of the MLMs agreeing to the above statement is pretty higher in Mid-Far Western Region (84%) than the Western Region (77%).

**Table 3.23 Stigma and discrimination**

	Western		Mid-Far western		Total	
	N	%	N	%	N	%
<b>Willing to buy food from HIV infected shopkeeper</b>						
Yes	272	75.6	278	77.2	550	76.4
No	76	21.1	68	18.9	144	20.0
Don't know	12	3.3	11	3.1	23	3.2
No response	0	0	3	0.8	3	0.4
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>
<b>Children living with HIV should be able to attend school with children who are HIV negative</b>						
Yes	279	77.5	304	84.4	583	81.0
No	68	18.9	37	10.3	105	14.6
Don't know	10	2.8	18	5.0	28	3.9
No response	3	0.8	1	0.3	4	0.6
<b>Total</b>	<b>360</b>	<b>100.0</b>	<b>360</b>	<b>100.0</b>	<b>720</b>	<b>100.0</b>

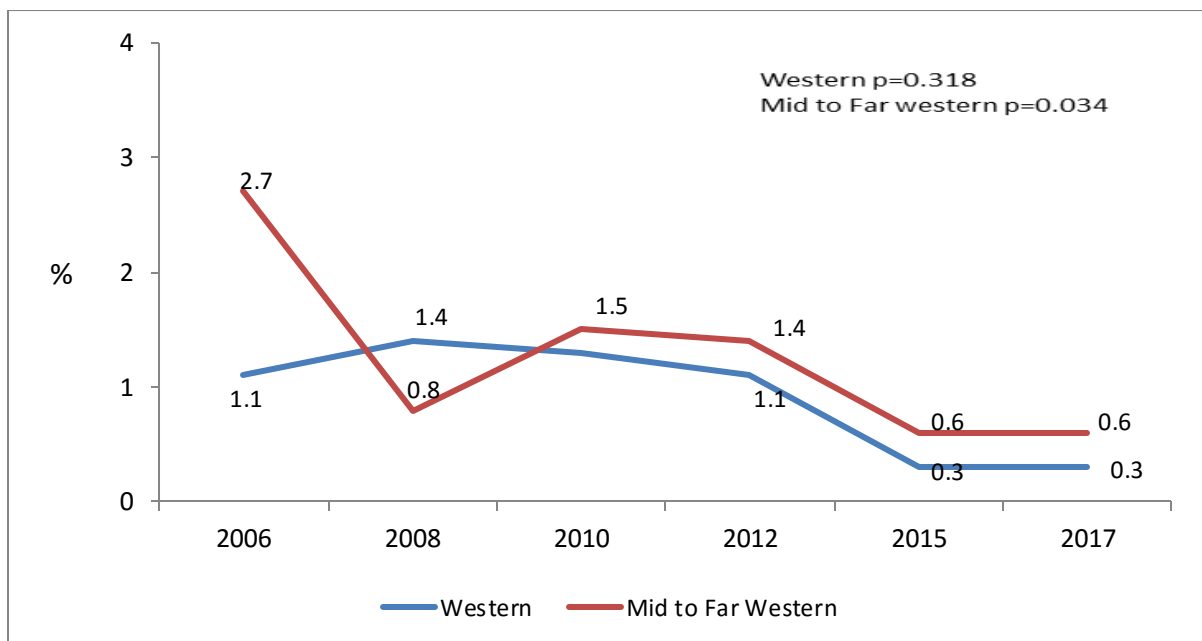
## CHAPTER IV: TRENDS ANALYSIS OF KEY INDICATORS

This chapter analyzes the trends in the prevalence of HIV infection reported in different rounds of IBBS surveys carried out among MLMs. The selected indicators comprises of prevalence of HIV, key socio-demographic characteristics, migration history, consistent condom using practices with different partners, comprehensive knowledge of HIV and exposure to HIV and AIDS prevention or awareness programs among MLM have been chosen for the comparative analysis of all rounds of IBBS surveys. Since all the rounds of IBBS surveys among MLMs were conducted using same sampling design and sampling procedures; comparison have been made among the key results of various rounds. It is customary to note that IBBS survey among MLMs-2010 was carried out only in the Mid Far Western Region using 500 samples of population.

#### 4.1 Prevalence of HIV among MLMs

Figure 4.1 shows the trends in the prevalence of HIV infection among MLMs. There was an increase in the prevalence of HIV among MLMs from 1.1 percent in 2006 to the 1.4 percent in 2008 in Western Region. After that, its prevalence showed declining trend (1.1% in 2012 to 0.3% in 2017) in the same Region. Similarly, HIV prevalence among MLMs of the Mid to Far Western Region was 2.7 percent in 2006; which was reduced drastically to 0.8 percent in 2008. Again, its prevalence was increased to 1.5 percent in 2010. After that, its prevalence was decreased to 1.4 percent in 2012, and it was further declined to 0.6 percent in 2017. It is found that the HIV prevalence in 2015 and 2017 has no change.

**Figure 4.1 Trends in the Prevalence of HIV among Male Labor Migrants**



Source: IBBS surveys (2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western=360), 2010 Survey N=550 (Only Mid to Far Western))

## **4.2 Key Socio-Demographic Characteristics of MLMs**

### **4.2.1 Socio-demographic characteristics**

It was found that majority of MLMs were of 25 years or above in all the previous rounds of surveys in the both Western and Mid-Far Western Regions and the similar trend was observed in this round of IBBS, 2017 as well. Previous rounds of surveys showed the decreasing trend (46.3% in 2006, 38.7% in 2008 and 26.4% in 2012) in the illustration of MLMs less than 25 years of age in Western Region. Unlike this, the illustration of MLMs less than 25 years of age was slightly increased (26.4% in 2012 to 30.6% in 2017) in Western Region in this round of survey. Proportion of MLMs aged 25 years or above has been decreased (72.2% in 2015 to 57.2 percent in 2017) in Mid to Far Western Region. Mean age of the MLMs remained between 27 to 32 years of age over the six rounds of surveys. Percent of ever-married MLMs participating in this survey showed increasing trend till 2012 while it has been decreasing in recent years (72.8% in 2015 to 67.8% in 2017) in the Western Region. In terms of Mid to Far Western Region, the trend of ever married MLMs has been fluctuating over the years following a decrease between 2015 (85.6%) and 2017 (66.9%).

Level of education has been increased during the period of 2006 to 2017. Proportion of illiterate participants has been decreased over the years (7.5 percent in the Western Region in 2006 to 6.4 percent in 2017 and 14.4% in 2006 in the Mid-Far Western Region to 3.3% in 2017). Similarly, in the beginning of the survey (2006), only 7.8 percent of the migrants from the Western Region and 8.1 percent from Mid-Far Western Region had completed SLC and above which has been increased to 32.5 percent in Western Region and 41.1 percent in the Mid-Far Western Region in 2017.

In all the previous rounds of surveys, there was the highest representation from Brahmin/Chettri/Thakuri. However, earlier trend has been changed in the year (2015) where representation of Dalit MLMs has been increased from 26.7 percent in 2012 to 44.4 percent in Mid to Far Western Region in 2015 and which has again decreased to 25 percent in this round (2017). Nearly half of migrants (45.8%) from Mid-Far Western Region in this round (2017) belonged to Brahmin/Chettri and this proportion was only 29.7 percent in the Western region.

More than two-fifth of the MLMs (43%) from both the regions participating in this round of survey had their first marriage at the age of less than 20 years. Majority of MLMs were living with their wife in all rounds of surveys. Proportion of MLMs who had their first sex at the age less than 20 years showed decreasing trend till 2012 in the Western Region (63.4% in 2006, 54.7 % in 2008, 42% in 2012); however, this proportion inclined to an increase in recent years. (47.3% in 2015 and 61.8% in 2017) Meanwhile, the proportion of MLMs of the Mid to Far Western Region who had first sexual contact at the age of less than 20 years showed decreasing trend till 2015 (74.9% in 2006, 67.8% in 2008, 66.8% in 2012, 60.8 in 2015) which has slightly increased in this round (64.8% in 2017).

**Table 4.1 Trend Analysis of Socio-Demographic Characteristics of MLMs**

Socio-Demographic Characteristics	2006		2008		2010		2012		2015		2017	
	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western
<b>Age of MLMs( in years)</b>												
< 25	46.3	45.5	38.7	33.8	NA	27.5	26.4	45.3	30.5	27.8	35.6	42.8
≥25	53.7	54.4	61.4	66.1	NA	72.6	73.6	54.7	69.5	72.2	64.4	57.2
Mean	27.8	27.7	29.6	29.2	NA	30.2	31.6	27.4	31.7	32.2	30	29.5
Median age	25	26	27	28	NA	33	31	25	31	31	29	26
<b>Marital Status</b>												
Ever Married	71.9	84.2	78.1	88.1	NA	86.7	80.6	71.7	72.8	85.6	67.8	66.9
Divorced/separated/ Widowed	2.2	3.1	1.4	1.6	NA	3	1.1	1.4	1.7	2.5	1.1	0.6
Never married	25.8	12.8	20.6	10.3	NA	10.3	18.3	26.9	25.6	11.9	31.1	32.5
<b>Education</b>												
Illiterate	7.5	14.2	10.6	18.6	NA	19.3	7.8	6.7	4.4	20	6.4	3.3
Literate/no schooling	4.7	2.7	5.3	4.2	NA	11.64	30.3	6.4	4.2	4.4	0.8	0.3
Grade 1-5	36.7	33.9	38.9	36.4	NA	32.18	20	25.8	23.1	24.7	22.8	17.8
Grade 6-9	43.3	41.1	31.1	35.6	NA	25.45	24.7	38.1	43.9	36.1	37.5	37.5
SLC and above	7.8	8.1	14.2	5.3	NA	11.64	17.2	23.1	24.4	14.7	32.5	41.1
<b>Caste/Ethnicity</b>												
Brahmin/Chettri/Thakuri	36.9	46.7	36.6	49.5	NA	42.2	38.1	41.1	44.7	35	29.7	45.8
Dalit	20.3	28.9	22.8	28.3	NA	33.1	30.3	26.7	19.7	44.4	41.4	25.0
TeraiMadhesi	11.4	3.3	7	2	NA	0.7	5.3	7.8	1.1	0.6	2.8	12.8
Muslim	5.8	0.8	3.9	1.1	NA	1.9	3.1	1.1	0.3	0.6	1.1	0.6
Janajati	25.7	20.3	29.7	19.3	NA	22.1	23.4	23.3	34.2	19.5	25.0	15.8
<b>Age at first marriage (in years)</b>												
< 20 years	42	58.3	46.5	56.3	NA	27.3	36.4	53.2	28.9	48.6	42.6	42.9

Socio-Demographic Characteristics	2006		2008		2010		2012		2015		2017	
	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western
<b>Currently living With*</b>												
With Wife	71.4	84.2	76.4	87.8	NA	NA	65.6	57.8	71.9	85.6	61.9	67.5
With Parents	26.1	15	20.8	11.1	NA	NA	65.6	44.2	68.1	58.1	66.9	57.2
With Others (children, male friends, alone, relatives and no response)	2.5	0.9	3.4	1.1	NA	NA	65.6	47.8	61.7	75.6	39.7	47.6
<b>Age at first sex (&lt; 20 years)</b>	63.4	74.9	54.7	67.8	NA	64	42	66.8	47.3	60.8	61.8	64.8

Source: 2006, 2008, 2012 and 2015 IBBSurveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)

NA: not available

#### 4.2.2 Migration History of MLMs

It was observed that in all rounds of IBBS surveys, majority of the MLMs of both the Western and Mid to Far Western Regions were below 25 years old at the time of first migration. There was noticeable decrease in the percent of MLMs who had their first migration at the age of less than 25 years in between 2012-2015 (Western Region 75.8% in 2012 to 60% in 2015 and Mid to Far Western Region 86.1% in 2012 to 65.5% in 2015). However, in this round (2017) the same proportion has considerably increased in both regions (88.8% in Western Region and 89.8 percent in Mid-Far Western region).

**Table 4.2 Trend Analysis of Migration History of MLMs**

Age at first migration (in Years)	2006		2008		2010		2012		2015		2017	
	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western
<25	88.6	86.2	88.6	80.5	NA	80.9	75.8	86.1	60	65.5	88.8	89.8
≥ 25 years	11.5	14	11.3	19.5	NA	19.1	24.2	13.9	40	34.5	11.2	10.2
Mean/median	18.6/18	19.8/19	18.7/18	19.8/19	NA	19.9/20	21.20/19	19.69/19	24/22	23.1/21	17.4/17	18.5/18

Source: 2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)

### 4.3 Condom Carrying Practice and HIV Testing

Condom carrying practices of MLMs of both the regions showed fluctuating trend over the years. In Western Region this practice was found improving in between 2008-2015 (6.7% in 2008 to 24.4% in 2015) which in this round (2017) has again decreased to 17.8 percent. There was continuing decreasing trend in the condom carrying practices of MLMs of Mid to Far Western Region since 2012 (32.2% in 2010 to 31.1 in 2012 and 17.5% in 2015). However it is notable that in this round (2017) this proportion showed an increase (23.1%).

Percent of MLMs who had ever had HIV test has been declined in both the Western (66.4% in 2012 to 9.5% in 2015) and Mid to Far Western Regions (63.1% in 2012 to 21% in 2015) in between 2012-2015. Nevertheless, the proportion of MLMs ever having an HIV test has raised in this round of survey in both regions. (13.3% in Western Region and 23.9% in Mid to Far Western Regions)

**Table 4.3 Trend analysis of Condom Carrying Practice and HIV Test among MLMs**

Description	2006	2008	2010	2012	2015	2017
<b>MLMs carry condom usually</b>						
Western	16.4	6.7	NA	17.5	24.4	17.8
Mid-Far Western	15.6	16.4	32.2	31.1	17.5	23.1
<b>Ever had an HIV Test</b>						
Western	12.2	8.1	NA	66.4	9.5	13.3
Mid- Far Western	8.6	11.7	8.9	63.1	21	23.9

*Source: 2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)*

### 4.4 Condom Use with Different Sex Partners

Condom using practice with the FSWs among the MLMs has been constantly increasing over the recent years. It is notable that the trend of condom use at last sex with FSWs in Nepal has been increased in both regions with a higher improvement in Western Region (12.5% in 2006, 35.3% in 2012 to 100% in 2017) than the Mid-Far Western Region (36% in 2012 to 70.8% in 2017). However, the MLMs using condoms in the last sex with their wives showed decreasing trend in between 2012-2015 and has been improved in this round (2017) among both the regions (18.3% in 2012, 13.5% in 2015, 33.1% in 2017 in Western Region and 23% in 2012, 12% in 2015 and 23.5% in 2017 in Mid to Far Western Region). On the other hand, the condom using practices in last sex with girlfriend in Nepal has been considerably decreased in this round



compared to the previous round in the Western Region (64.7% in 2015 and 32.6% in 2017) and slightly decreased in Mid to Far Western Region (56% in 2015 and now 45% in 2017). Similarly, the condom using practice with FSWs in the last sex in India showed remarkable change in both regions (63.6% in 2015 to 100% in 2017 in the Western region, lowest ever 25 percent in 2015 to 86.7% in 2017 in Mid to Far Western Region). The condom using practices of migrants with their girlfriends in the last sex during the stay in India in both regions showed increasing trend between 2006-2008 and notably dropped in between 2008-2012 then again inclined considerably in 2015 (Western region=68.7.8% and Mid-Far western region=75%) while has slightly decreased in this round, 2017 (Western region=42.9% and Mid-Far western region=75%)

**Table 4.4 Trend analysis of Condom Use with Different Sex Partners in the Past Year**

Description	2006	2008	2010	2012	2015	2017
<b>Condom use with FSW in the last sex in Nepal</b>						
Western	12.5	75	NA	35.3	64	100
Mid-Far Western	50	50	6.9	36	48.4	70.8
<b>Condom use with wife in the last sex in Nepal</b>						
Western	12.9	11.3	NA	18.3	13.5	33.1
Mid-Far Western	12	14.6	18.3	23	12	23.5
<b>Condom use with girlfriend in the last sex in Nepal</b>						
Western	47.1	41.7	NA	6.9	64.7	32.6
Mid-Far Western	41.4	64	8.9	19.6	56	45.0
<b>Condom use with FSW in the last sex in India</b>						
Western	63.6	80	NA	87.5	63.6	100
Mid-Far Western	71	66.7	68.4	77.8	25.0	86.7
<b>Condom use with Girlfriend in the last sex in India</b>						
Western	62.5	87.5	NA	3.9	68.4	42.9
Mid-Far Western	57.1	58.3	9	9	77.8	75.0

*2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)*

#### **4.5 Comprehensive Knowledge of HIV and AIDS**

The overall knowledge level of MLMs on almost all indicators showed fluctuating trend over the years. Nearly half of the MLMs had comprehensive knowledge of ABC in the beginning of the survey, 2006 in both regions which showed a fluctuating trend in between 2012-2015 and has raised again in this round (22.8% in 2012, 36.1% in 2015 and 43.3% in 2017 in Western Region and 30.9% in 2012, 26.9% in 2015

and 45% in 2017 in Mid to Far Western Region). Similarly, the comprehensive knowledge of BCDEF has been slightly increased over 2006 to 2017 in the Western Region (16%vs 21.1%) whereas almost same in Mid to Far Western Region (22.2% vs 21.9%).

**Table 4.5 Comprehensive Knowledge on HIV/AIDS**

Description	2006		2008		2010		2012		2015		2017	
	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western	Western	Mid to Far Western
<b>A. Can protect themselves through abstinence from sexual contact</b>												
	66.1	61.1	62.5	64.2	NA	NA	42.5	50.2	53	52.4	60.6	60.8
<b>B. Can protect themselves through being faithful to a single partner</b>												
	71.4	71.1	71.9	71.7	NA	NA	52.1	70.4	76	63.1	72.8	72.2
<b>C. Can protect themselves through condom use every time during sex</b>												
	78.9	77.8	82.8	77.5	NA	NA	62.1	77.5	85.5	75.6	78.6	86.1
<b>D. A healthy looking person can be infected with HIV</b>												
	76.9	79.4	86.9	78.3	NA	46	44.3	47.9	71.6	59.8	67.8	63.1
<b>E. A person cannot get HIV virus from mosquito bite</b>												
	26.1	31.4	29.7	33.6	NA	NA	46.1	50.2	42.3	39.9	46.1	44.7
<b>F. A person cannot get HIV by sharing meal with an HIV infected person</b>												
	50	61.1	56.4	60.8	NA	NA	59.4	74.3	19.9	25.1	25.8	25
<b>Knowledge of ABC</b>												
	48.9	44.7	46.4	47.8	NA	NA	22.8	30.9	36.1	26.9	43.3	45.0
<b>Knowledge of BCDEF</b>												
	16.1	22.2	17.2	15.8	NA	NA	12.8	12.5	20.6	13.9	21.1	21.9

2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)

#### 4.6 Exposure to HIV and AIDS Related Program

HIV and AIDs related exposure programs among MLMs started since 2008. Proportion of MLMs who had met or discussed with OEs /PEs in the Western Region was 1.9 percent in 2008 which increased to 7.8 percent in 2012 and has again declined to 1.4 percent in this round (2017). Similarly, this proportion was the highest in the beginning (15%) following a slight decrease in 2010-2012 (9.6%Vs 9.2%) which further dropped

to just 2.8 percent in 2015 but has improved in this round again (9.2%) in Mid to Far Western Region.

Similarly, the percent of migrants from Western Region visiting DIC was 0.3% in 2008 and this showed an inclination in 2012 (3.9%), however none of the MLMs in this round reported of visiting the DIC. On the other hand, this proportion was 0.6 percent in 2008 and has been increased to 1.9 percent in 2017 in Mid to Far Western Region. The practice of migrants visiting STI clinic in Western Region showed an increasing trend (1.7% in 2008 to 3.3% in 2017) whereas it showed a declining trend in Mid to Far Western Region (4.2% in 2008 to 2.2% in 2017).

The percent of MLMs from the Western Region who had visited HTC center was 0.3 percent in 2008 which has slightly increased to 2.5 percent in this round (2017). In the meanwhile, this proportion was 2.8 percent in 2008 which showed a decreasing trend in between 2012-2015 (2.2%vs1.1%) and has again slightly raised in 2015 (2.8%). Proportion of the MLMs who had ever met with CHBC workers in the house has been considerably increased between 2008-2017 in Mid to Far Western (3.6% in 2008 to 11.7% in 2017) while slightly increased in the Western Region (1.7% in 2012 to 2.8% in 2017).

**Table 4.6 Exposure and Knowledge on HIV and AIDS/STI Programs among MLM**

Description	2006	2008	2010	2012	2015	2017
<b>Met or discussed with OEs/PEs</b>						
Western	NA	1.9	NA	7.8	2.8	1.4
Mid to Far western	NA	15	9.6	9.2	2.8	9.2
<b>Visited DIC</b>						
Western	NA	0.3	NA	3.9	0.6	0
Mid to Far western	NA	0.6	NA	0.8	0.3	1.9
<b>Visited STI Clinic</b>						
Western	NA	1.7	NA	1.1	0	3.3
Mid to Far western	NA	4.2	NA	2.2	0.8	2.2
<b>Visited HTC centre</b>						
Western	NA	0.3	NA	1.1	0.3	2.5
Mid to Far western	NA	2.8	NA	2.2	1.1	2.8
<b>Ever met with CHBC workers in the house</b>						
Western	NA	0	NA	1.7	0.6	2.8
Mid to Far western	NA	3.6	NA	5.6	1.4	11.7

2006, 2008, 2012 and 2015 Surveys N=720 (Western =360, Mid to Far western t=360), 2010 Survey N=550 (Only Mid to Far Western)

## CHAPTER V CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

This survey provides an insight into the prevalence of HIV among MLMs and is also an assessment of sexual risk behaviors prevalent among the survey population. A cross-sectional quantitative survey method was utilized in this study. Both the behavior related structure questionnaire and biological laboratory examination were performed to gather data required for this survey. This survey reveals the level of awareness of HIV and AIDS and the risk behaviors among MLMs.

**Prevalence of HIV:** It was found that out of 720, 3 MLMs (0.4%) had HIV infection. Prevalence of HIV infection among the MLMs of the Mid to Far Western Region (0.6%) was higher than that was identified among the MLMs of the Western Region (0.3%). Prevalence of HIV among MLMs of Western Region was 1.1 percent in 2006, and it was 0.3 percent in 2017. In the meantime, HIV prevalence among MLMs of Mid to Far Western Region was 2.7 percent in 2006 and decreased to 0.6 in 2015. The prevalence of HIV has not changed during 2015 and 2017.

**A large proportion of MLMs were young:** Almost two in five of the MLMs (39%) were less than 25 years. The median age of the MLMs of Western and Mid to Far Western Region was 29.0 years and 24 years respectively. An overwhelming majority of the MLMs (95%) were literate with almost three fifths (74%) had more than primary level education. More than two- fifths (43%) of the MLMs had got first marriage during the adolescent age. Similarly, more than three-fifths of the MLMs (78%) had first migration before completing 20 years of life. The mean age and standard deviation at first Marriage and Migration were  $20.3\pm 3.2$  years and  $17.9\pm 4.0$  years respectively.

**Delhi (23.0%) and Mumbai (21.0%) were the major destinations of migration among MLMs.** More than a third (34%) of the MLMs of Western Region reported Delhi as a major destination while a quarter of the MLMs of Mid-Far western regions (25%) stated Mumbai as one of the major destination for migration. Other commonly mentioned destinations were Gujarat (12%), Panjab (9%) etc.

**Early entry into sexual life was common among MLMs.** Almost two-third of the MLMs (63%) had first sexual contact before 20 years of age, and their mean age at first sex was  $18.9\pm 2.5$  years.

**Sexual contact with Female Sex worker was prevalent among MLMs:** One-fourth of the MLMs who had ever had sex had also had sex with FSWs. More than a tenth (12%) of the MLMs had sex with FSWs in Nepal, and a fifth (20%) had sex with FSWs in India. Furthermore, 26 percent of MLMs of the Mid to Far Western Region and 14 percent of MLMs of Western Region had sexual contact with FSWs in India.

**A high proportion of MLMs in Western Region than mid-far Western Region had used Condom consistently during sex with FSWs:** It is encouraging to note that all of the MLMs

from Western Region had used condom consistently during sex with FSWs in Nepal while this proportion of MLMs was only over half (54%) in Mid-Far Western. Similarly, a higher percent of MLMs who resided in Western Region (95%) than who resided in Mid-Far Western Region (73%) had used condom consistently while having sex with FSWs in India.

***Awareness of HIV and AIDS was prevalent among the majority of MLMs; however, Comprehensive Knowledge about HIV and AIDS was low.*** More than four-fifth (93%) of the MLMs had ever heard about HIV and AIDS. Overall, less than half (43%) of the MLMs from Western Region and 45 percent from mid-far Western Region had knowledge of ABC and only about a fifth of them (21% in western and 22% in the mid-far western region) had knowledge of BCDEF.

***Exposure to STI, HIV and AIDS programs among MLMs was low.*** Overall, very few MLMs had met or discussed with PE or OE in the last 12 months. Similarly, negligible proportion of MLMs visited DIC (1%), STI clinic and HTC (3%) in the last 12 months. Less than a tenth (9%) of them had ever participated in HIV/AIDS awareness program. Similarly, less than a tenth (7%) of the MLMs reported that CHBC health workers visited their home in the last 12 months.

## 5.2 Recommendations

Based on the findings of this study, the following are the recommendation.

**Knowledge of ABC and BCDEF of HIV prevention and control was low among MLMs.** *Programs focusing on raising awareness among MLMs needs to be geared up to move towards achieving the vision of Zero new cases of HIV in Nepal.*

**Risky sexual behaviors were prevalent among MLMs.** Frequent exposures to risks make MLMs and their spouses at risk of HIV transmission. *Therefore, MLMs should be made aware of their high-risk behaviors through community-focused HIV prevention programs.*

**Very few MLMs had accessed and utilized the services provided by PEs/OEs.** *Therefore, outreach activities, mobile HTC and STI treatment services should be organized to increase the utilization of services among the MLMs in dense migration districts.*

**Migration was prevalent in early age.** *Safe sex behaviours, condom use, should be promoted among youths before they migrate.*

**Pre-marital sex was prevalent among MLMs.** The median age at first sexual contact was 18 years, and the majority of MLMs had sexual contact before 20 years. *Messages on delayed sexual debut should be incorporated in target programs and promoted among MLMs.*

**HIV testing among MLMs was low, i.e., 18 percent.** The practice of seeking STI treatment was not common. *Treatment seeking behaviors should be promoted among those MLMs who engaged in risky sexual behaviors.*

**Consistent condom use with wives and FSWs in Nepal and India is increasing whereas**

**consistent condom use with girlfriends in Nepal and India are decreasing.** Consistent condom use with wives was found low. This may increase vulnerability for HIV and STI transmission. *The program should focus on consistent condom use with wives, girlfriends and female partners.*

**Alcohol consumption is common among MLMs.** Some MLMs also inject drugs. *Behavioral change and safe injecting practices should be promoted.*

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