



# The Baseline Survey

on **HIV/AIDS** Knowledge, Attitudes,  
Practices and Related Risk Behaviors among  
Most-At-Risk Populations



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Heng Sopheab, Chhea Chhorvann  
Tuot Sovannary

## **Disclaimer**

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# EXECUTIVE SUMMARY

With funding support from the Global Fund Round 7 and the European Commission (EC), the focused HIV prevention project has been implemented by 14 of KHANA's partners in eleven provinces and municipalities among most-at-risk populations (MARP). The MARP baseline study essentially includes men who have sex with men (MSM), drug users (DU), including both injecting and non-injecting drug users; entertainment workers (EW) that broadly included: brothel-based sex workers, freelance sex workers, karaoke workers, beer promotion women, and beer garden women. The eleven provinces include: Banteay Meanchey, Battambang, Pailin, Siem Reap, Pursat, Kampong Chhnang, Kampong Cham, Kampong Speu, Prey Veng, Svay Rieng and Sihanoukville.

Establishing baseline data of key prevention indicators is critically important for the prevention program as part of the monitoring and evaluation of the project's implementation. Therefore, the baseline survey relating to HIV knowledge, attitudes, practices (KAP) and risk behaviors among EW, MSM and drug users was conducted among these high risk groups prior to the implementation of the focused HIV prevention project.

A quantitative method was used to identify and determine the magnitude of preventive project indicators. The survey was conducted in the 11 provinces from July to September 2009. Overall, about 750 study participants from the 3 MARP were recruited using different sampling techniques. A cluster sampling with a take-all approach was used for EW, while venue-based sampling was used for MSM and DU. A few key findings, along with proposed recommendations, are highlighted as follows:

## Entertainment workers

- More than 75% of EW were reported to have had sex with sweethearts and the report of consistent condom use was not high (61.7%). Therefore, the program should emphasize protective sex with sweethearts. Mass media campaigns delivering information to men with sweethearts should be considered.
- Consistent condom use with clients was high (89.2%). This protective behavior needs to be sustained through regular outreach and peer education, as well as regular STI checkups and proper STI referral and treatment.
- One-third of these women have experienced at least one abortion in their life-time: of which nearly half of the women respondents (47.5%) reported their last abortion in the past 6 months. Reproductive health issues, including abortion-related risks, must be addressed as part of the focused HIV prevention efforts.
- 90% of EW knew that there were ART services available and most of them believed that they could access ART services when needed.



## Men who have sex with men

- Close to 78% of MSM did so in the past month.
- The report of selling sex to men was high (31.7%) compared with selling sex to women (2%). However, consistent condom use was not high (69.3%). Consequently, more preventive efforts need to be undertaken to increase higher proportion of consistent condom use among MSM.
- The proportion of lubricant use during sexual intercourse ranged from 30% to 36%. Program interventions targeting lubricant use should be strengthened.
- Close to 60% reported to have undergone a HIV test, of which more than 75% got their last test results in  $\leq 6$  months.
- The places where MSM frequently socialized include: parties (78%), at homes (75%), at concerts (61%), on the streets (51%), and public parks (48%).
- Though MSM remain discriminated in Cambodia, they have become more socially accepted overtime, particularly transsexuals (long-haired MSM), who are more visible than other types of MSM (short-haired MSM).

## Drug users

- More than 60% of DU were young ( $\leq 24$  years old), and about 42% reported drug use  $\leq 12$  months. Yama and amphetamine powder were the most frequently used drugs. Only 6.2% of DU reported injecting drugs.
- About 13% of IDU shared needles and syringes during their last drug injecting session, while cleaning of needles and syringes was rare. However IDU did know where to access new needles and syringes and that sharing of needles and syringes could put them at higher risk of HIV infection. The program should focus intensively on HIV preventive behavior, including: reducing the practice of sharing needles and syringes, as well as safe needle-cleaning practices.
- About 28% had sex after taking drugs and one fourth of DUs reported to have taken drugs to increase their sexual desire.
- For men, almost 34% reportedly got paid for sex in the past month, in which the consistent condom use was 85%, while for women 71% reported selling sex in the last month, in which consistent condom use was high at 96%.
- NGO staff played a very important role in providing information relating to HIV and drug use (86%). This role should be further encouraged and maintained.

# 1

# Introduction

## 1. Background

The Khmer HIV/AIDS NGO Alliance (KHANA) is the largest national, non-governmental organization to provide HIV prevention, care and treatment services in Cambodia. KHANA works in 17 provinces through a network of over 60 community-based organizations and local NGOs. Its program focuses on HIV prevention, particularly among most-at-risk populations, including men who have sex with men (MSM); drug users (DU) both injecting and non-injecting; and entertainment workers (EW) that broadly include: brothel-based sex workers, freelance sex workers, karaoke workers, beer promotion women, and beer garden women. Also, married couples and youth are included in the prevention program. Furthermore, providing care and support to adults and children infected and affected by HIV/AIDS is an important component of KHANA's work. KHANA is also a linking organization of the International HIV/AIDS Alliance. Therefore, it benefits from regular communication with, and technical and resource mobilization support from, the Alliance. Recently, KHANA has received financial and technical support from USAID, Global Fund Round (GF) 5, GF 7, the World Food Program (WFP), and the European Commission (EC).

## 2. Rationale of the study

The focused HIV prevention program on the most-at-risk populations has been implemented by 14 implementing partners in 11 provinces and municipalities. These provinces include: Banteay Meanchey, Battambang, Pailin, Siem Reap, Pursat, Kampong Chhnang, Kampong Cham, Kampong Speu, Prey Veng, Svay Rieng and Sihanoukville. Based on funding support from the Global Fund Round 7 and EC, a baseline survey relating to HIV knowledge, attitudes, practices (KAP) and risk behaviors among entertainment workers; men who have sex with men; drug users, including both injecting (IDU) and non-injecting drug users (non-IDU); has been conducted to get comprehensive information for program planning and implementation.



# 2

## Study objectives

The overall objective of this survey is to document information related to HIV knowledge and risk behaviors of the most-at-risk populations at the baseline.

### **The following are the specific objectives:**

- 1.** To determine current, existing knowledge, attitudes and practices targeting most-at-risk populations (EW, MSM, and DU).
- 2.** To determine main, baseline indicators related to: HIV/AIDS knowledge awareness, condom use, availability and barriers, voluntary counseling and testing (VCT), awareness about HIV/AIDS treatment and care services, support of PLHIV, stigma and discrimination.
- 3.** To make recommendations to the GF provinces on better project planning for prevention efforts in relation to the most-at-risk populations.

# 3

## Methods

### 1. Sites and target groups

This was a cross-sectional baseline survey conducted in 11 provinces from July to September 2009, among most-at-risk populations, including: entertainment workers, men who have sex with men, and drug users. The provinces surveyed were Siem Reap, Banteay Meanchey, Battambang, Pailin, Pursat, Kampong Chhnang, Kampong Cham, Kampong Speu, Prey Veng, Svay Rieng, and Sihanoukville, where KHANA's NGOs partners are running projects under the funding of the Global Fund Round 7 and EC.

These most-at-risk populations were identified through consultation with the community under the project target area, whom they identified as the priority for the survey and intervention.

### 2. Sample sizes and sampling approach

Single proportion with specified, absolute precision was used to calculate the sample size for the survey. A 5-7% margin of error and 95% confidence interval were taken into account when estimating the required sample size. A number of project indicators such as condom use with sweethearts among the most-at-risk populations and sharing of needles and syringes among drug users, were used to calculate the sample size. These indicators were based on the results of the Behavioral Surveillance Survey 2007, a report of sexually transmitted infections (STI) in 2005, and a drug use study in Cambodia 2007 [1-4]. The sample size was calculated by using Epi Info software. **Table 1** summarizes the sample size estimated for each group and the sample size actually collected for each group. Specific sampling strategies for each group are described separately.

**Table 1: Planned and actual sample sizes by group**

Group	Estimated	Actually collected
EW	260	229
MSM	250	260
DU	240	258
<b>TOTAL</b>	<b>750</b>	<b>747</b>

#### 2.1 Entertainment workers

A cluster sampling with a take-all approach was used to recruit women in each entertainment establishment until the sample size was reached. However, because total number of EW in the sampling frame was smaller than the required samples, they were all taken. Lists of establishments and estimated numbers of women in each establishment were updated by KHANA's local partners prior to the data collection. Administration and support were coordinated by NGO partners in the relevant provinces.



## 2.2 Men who have sex with men

Venue-based sampling was used for this group. List of venues and estimated numbers of MSM per venue were updated by the KHANA partners. Then venues were randomly selected. All MSM in selected venues were approached for interview until the required sample size was met. Sites and MSM identified were arranged and coordinated by KHANA partners.

## 2.3 Drug users

Both injecting and non-injecting drug users were included in the survey. Again, venue-based sampling was used to recruit DUs for interview. The same process of sampling was followed for the MSM group. Local partners of KHANA were responsible for updating the sampling frame of this group. Also, their support and coordination were crucially important in approaching the drug users.

# 3. Questionnaire development

For this survey, different sets of questionnaires were developed separately and specifically for each group. The questionnaires were developed based on existing questionnaires from the National Behavioral Surveillance Survey (BSS), indicators relating to project objectives and activities described in the project documents [5, 6]. Furthermore, relevant questionnaires used in previous surveys were consulted.

The questionnaires were developed in Khmer. Then, they were pre-tested in the field to ensure that the wording and content were culturally appropriate, acceptable and clearly understood by study participants. About 2-3 study participants in each group were interviewed face-to-face to assess the content, format, length, language, and appropriateness of the survey questionnaires. Consequently, wordings and questions were revised and reformatted according to input from the pre-tests. The final version of the questionnaires was used for data collection.

Also, the questionnaires were pre-tested with the interviewers, to ensure clear understanding of the questionnaires and communication with participants. Clear instructions and explanations were added and revised accordingly.



## 4. Training of the data collection team



The main objective of the training was to make sure that all interviewers and supervisors understood the same procedures and followed the same standard to ensure the quality of the data collected. Therefore, interviewers and supervisors were trained before the fieldwork. The training included: interview techniques, the role and responsibilities of the survey team, confidentiality and privacy, and practice of the questionnaires. The study protocol was also explained during the training session to familiarize team members.

Since the supervisors and interviewers were integral to data quality in the survey, quality controls such as reviewing the questionnaire, and predicting and discussing issues that might arise during the fieldwork were included. Regular review sessions with interviewers were conducted during the survey period by the team leaders, in order to review progress and discuss any problems or issues in data collection.

## 5. Data collection

Data were mainly collected by trained interviewers and supervisors who had previous experience with data collection. Informed consent, confidentiality, as well as privacy of the study respondents were strictly ensured. Refusal rates were counted and recorded everyday by the interviewers and supervisors. Coordination and administration was arranged and collaborated by the KHANA network. **Mr. Tuot Sovannary**, Research and Documentation Coordinator, was the leading person who coordinated the survey. All respondents were interviewed face-to-face after their informed consent had been obtained. Generally, the estimated time for each interview was about 20-30 minutes.



## 6. Data entry and analysis

The data were coded and entered into a computerized database using Epi Data Version 3 (Odense, Denmark). Double data entry was performed to minimize entry errors. The data entry was performed by KHANA staff under a consultant's supervision. STATA 10 was used to analyze the data. Descriptive statistics were performed for all variables to determine mean, median, range and frequency. Cross-tabulation was used to compare different categories (i.e. different types of EW) of some variables among the MARP if necessary. However, it was not the main purpose of the analysis and objective of the study.



## 7. Ethical considerations

The survey protocol was approved by the National Ethics Committee for Health Research at the Ministry of Health. Anonymity of all study participants was guaranteed. There was no record of the names of the study participants kept. All collected questionnaires were kept at the Strategic Information Department (SID) under the responsibility of the Research and Documentation Coordinator.

Privacy and confidentiality was protected during the interview session also. Participation in the survey was voluntary - meaning that the subject had the right to refuse if they did not want to participate in the study or they were able to stop at any time during the interview.

# 4

## Results

The data collected from the three most-at-risk populations were evenly distributed across the provinces. Data on EW were collected only in Kampong Speu and Prey Veng as part of the integrated prevention and care project, while data on MSM were collected in 6 provinces. Data from DU were collected in another 6 provinces. A summary of the group's distribution by province is presented in **Table 2** below. All provinces included in the survey were the target provinces of KHANA and its partners, which were either under the Global Round 7 or EC project. First, findings from the EW are presented, followed by MSM and DU.

**Table 2: Group samples collected from each province**

Province	EW	MSM	DU
Banteay Meanchey			25
Battambang			69
Kampong Cham		25	22
Kampong Chhnang		82	
Kampong Speu	80	43	
Prey Veng	149	40	
Pursat		23	
Siem Reap			18
Svay Rieng			58
Sihanouk Ville		47	66
<b>TOTAL</b>	<b>229</b>	<b>260</b>	<b>258</b>

## 1. Entertainment workers

### 1.1. Socio-demographic characteristics

The EW sample consisted of 229 women: karaoke workers represented 71% and beer promotion girls 22.3% of the samples collected. No refusal was observed during data collection among this group. The demographic characteristics of the women are presented in **Table 3**. The mean age of women was 23.1 years, with the range between 16-38 years. EW aged less than 20 years accounted for 31%, and those over 30 years represented 8.7% of the sample collected. A high proportion of women reported being single (58.1%), followed by divorcees (34.9%). About 7% of the women reported being married: either living together with partners or apart. Average number of years at school was 4, with 23% reporting to have had no schooling at all. The mean monthly income was US\$74.3. Less than 3% (6/229) reported income between US\$200-325 per month, and 3 women reported no earnings at all in the past month. When asked about whom they were currently living with, most of the women (74.2%) said that they were living with other women in the workplace. Less than 4% reported living alone, while 42.4% of the women were found to be living far away from their families for more than a year.



**Table 3: Socio-demographic characteristics**

Variables	EW (n = 229)	
	Freq	%
Age, mean (median)	23.1 (22)	
Range	16-38	
Marital status:		
Married and live together	7	3.1
Single	133	58.1
Divorced	80	34.9
Married but living far apart	9	3.9
Duration of schooling, mean (median)	3.9 (4)	
Range	0- 12	
Monthly income, mean (median), USD	74.3 (67.5)	
Currently living with:		
Other people in the workplace	170	74.2
Friends	23	10.0
Relatives	12	5.2
Alone	8	3.5
Away from family in the past year, mean (median)	7.4 (8)	
Duration of working in the current place, mean (median)	6.7 (3)	
Duration of work in this job, mean (median)	6.6 (3)	
Duration living in this province, mean (median)	6.0 (1)	

## 1.2. Sexual behavior and condom use

More than 80% of the women were sexually active. Those reported to be non-sexually active, were those working as beer promotion women or karaoke workers. The age for having their first sexual experience was 18.4 years, which overlapped with their report of their age at first marriage (mean = 18.2 years). This was consistent with a high proportion of women reporting to have had their first sexual experience with husbands (49.2%). Only one-fifth reported their first sexual experience with clients (Table 4). Close to 60% had boyfriends or sweethearts in the past year, of which more than three-quarters reported having had sex. However, consistent condom use with their sweethearts was not as high (61.7%) as consistent condom use reported with clients (89.2%). The main reason for not using condoms with sweethearts was the long-term relationship with trust (61.8%). Only two out of 204 women mentioned the unavailability of condoms with their sweetheart. However, it should be noted that a question asking women the reason for not using condoms with their sweetheart was asked indirectly, due to the sensitivity of the issue.





Overall, 61% of EW reported having sex with clients in the past year. However, when stratified by groups, 10% (1/10) of beer garden women, 39.2% (20/51) of beer promotion women, 70% (115/164) of karaoke workers and 100% (4/4) of direct sex workers, reported so respectively. The average number of clients in the past month was 4.4, with a range between 1 and 28 clients. 12.6% of sexually active women reported to have experienced condom breakage or slippage in the past 3 months.

**Table 4: Sexual behavior and condom use**

Variables	EW (n = 229)	
	Freq	%
Age at first sex, mean (median)	18.4 (18)	
Range	14- 29	
Person a woman had sex with the first time:		
Husband	90	<b>49.2</b>
Sweetheart	49	26.8
Client	37	20.2
Have had a sweetheart in the past year	136	59.4
Have had sex in the past year (n= 133)	103	75.7
Always using condom with sweethearts over the past 3 months	58	<b>61.7</b>
Last condom use with client in past year (n = 142)	76	74.5
Main reasons for not using condoms with sweethearts:		
Long-term relation with trust	126	61.8
Too in love with sweethearts	44	21.6
Condom use did not feel good	12	5.9
Have had sex with clients in the past year	140	<b>61.1</b>
Always using condom with clients in the past month	99	<b>89.2</b>
Last condom use with client in past year (n = 142)	140	95.2
Experience of condom breakage or slippage:		
In the past 3 months (n = 135)	17	<b>12.6</b>
Only one time	11	8.2
More than one time	6	4.4
Easiness to find condoms when needed	181	79
Number of clients in the past year, mean (median)	23.3 (8.0)	
Number of clients in the past month, mean (median)	4.4 (3.0)	





### 1.3. Health seeking behavior and HIV-related information

Of 229 women interviewed, 38% reported STI symptoms in the past 12 months: abnormal, vaginal discharge being the most frequently reported (27%). Among those with STI symptoms, the first place of seeking care was public clinics (51.7%), followed by NGO clinics (34.5%). Women seeking care for their last STI symptom were mostly advised by outreaches and peer educators (66.1%). Less than 3% were advised by their establishment owners or managers. The average number of pregnancies for women was about 1: 46.3% experiencing at least one pregnancy in their lives. Also, close to one-third of the women (27.5%) had experienced at least one abortion in their lives at the time of the interview. Of those who'd had abortions, 41.3% had experienced more than one abortion. Moreover, nearly one half of those who'd had abortions (47.5%), reported their last abortion in the past 6 months, indicating recent non-protected sex most likely occurred with their intimate partners. This has been clearly highlighted and discussed in another study [7]. Karaoke workers reported the highest rate of abortions (54.9%).



With regards to access to HIV-related information, the most important source of information for EW was: HIV training and mass campaigns (74.7%); television (73.3%); billboards (61.6%); poster dissemination; group discussions and others (**Table 5**). When asked “Who has provided you with HIV information in the past 3 months?”, peer educators and NGO staff (86.5%) were the most identified group. However, it should be noted that questions regarding HIV information were based on multiple-choice answers.



**Table 5: Health seeking behavior and access to HIV-related information**

Variables	EW (n = 229)	
	Freq	%
STI symptoms in the past year:	87	<b>38.0</b>
Genital ulcers/blisters	9	3.0
Genital swelling	11	4.0
Vaginal discharge	82	<b>27.0</b>
First place seeking treatment when having symptoms:		
Buying medicine at pharmacies	5	6.0
Visit private clinic	5	6.0
Public clinic	45	<b>51.7</b>
NGO clinic	30	34.5
Person who advised women for last STI treatment:		
Herself	13	11.9
Friend	10	9.2
Outreach and peer educator	72	<b>66.1</b>
Number of pregnancies, mean (median)	1.1 (0.0)	
Number of living children among those who have children:		
1-2 children	55	84.6
3-4 children	10	15.4
Number of abortions:		
One abortion	37	58.7
More than one abortion	26	41.3
Duration of last abortion ≤ 6 months	29	<b>47.5</b>
Sources of receiving HIV information in the past 3 months:		
Television	168	<b>73.3</b>
Radio	104	45.4
Newspaper	65	28.4
Billboard	141	<b>61.6</b>
Poster	137	59.8
Booklet	114	49.8
HIV training and campaigns	171	<b>74.7</b>
HIV group discussions	130	56.8
Counselling	115	50.2
Staff providing HIV information in the past 3 months:		
STI clinic staff	58	25.3
Peer education, NGO staff	198	<b>86.5</b>
VCT staff	63	27.5
Private clinic staff	32	14.0



## 1.4. HIV testing and awareness about HIV/AIDS care services

As shown in **Table 6**, close to 70% of the women had undertaken a HIV test in the past year and most of them reported having a HIV test recently ( $\leq 6$  months). This finding might be due to the recent increase of VCT sites, largely expanded by both the government and civil society, as well the increase in women's awareness of their HIV status due to preventive programs. When stratified by types of EW, karaoke workers reported a higher rate of HIV tests than others (71.3%), followed by the beer girl group (58.8%). From those who got tested, many reported getting tested at public hospitals (56.3%), VCT and NGO sites (26.3%). However, it should be noted that women and others might still be confused in distinguishing between the public hospital-run VCTs and stand-alone VCT sites, because some stand-alone VCTs are located mostly in public health facilities or referral hospitals. An encouraging finding was that most of the women tested received their test results with counseling.

The level of awareness regarding HIV/AIDS stigma and discrimination was reported based on 4-5 standard questions about discrimination. About half of the women interviewed still wanted to keep secret the information about family members who had HIV/AIDS. 90.8% of the women reported they knew that there were ART services available for PLHIV (90.8%), and more than 90% believed that they could access available services when needed. Then, when asked in a multiple choice option "Do you know what services are available to PLHIV?", the answers varied among the group: ART clinics (58.5%), NGO clinics (32.7%) and HBC (16.6%) . However, close to 10% of the women did not know what services were available to PLHIV.

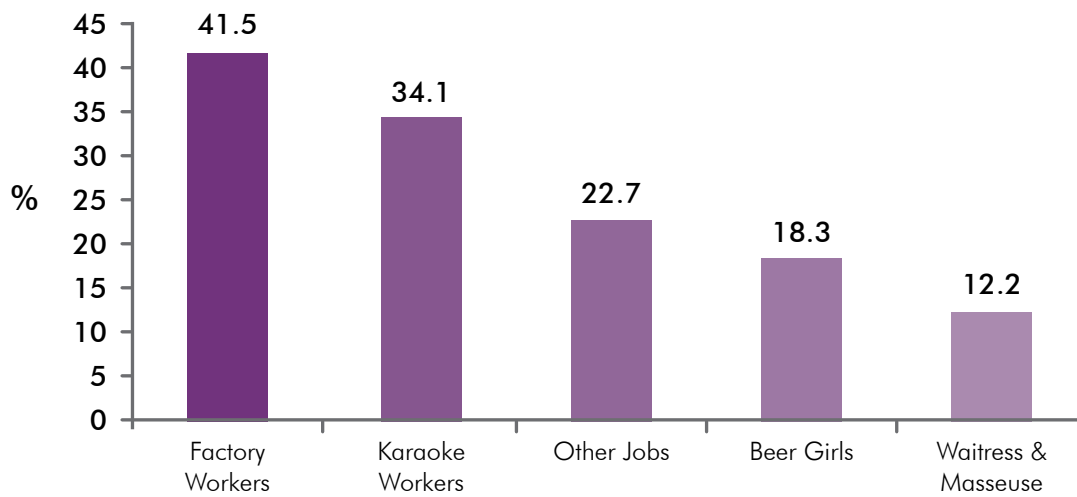
**Table 6: HIV test and awareness about the availability of AIDS care services**

Variables	EW (n = 229)	
	Freq	%
Ever had HIV test in the past year	156	<b>68.1</b>
Duration of last HIV test $\leq 6$ months	112	<b>70.9</b>
Places of last HIV test		
Private lab or clinic	18	11.3
Public hospital	90	<b>56.3</b>
Government and NGO VCT	42	26.3
Receiving last HIV test result	145	<b>90.6</b>
Receiving counseling for last HIV test	142	<b>88.8</b>
Ever have relatives or close friends infected or died of AIDS	54	23.6
Willing to take care of family member at home if they are AIDS patients	221	96.5
Not afraid to buy food from HIV infected sellers	189	82.5
Allow the infected female teachers continue to teach	218	95.2
Willing to keep the secrecy for infected family member	114	<b>49.8</b>
Currently knew that there were ART service for PLHIV	208	90.8
Believing to get ART service when needed	214	93.5
Ever experience in using drug	22	9.6



**Figure 1:** shows women’s working experience in different jobs over the past 12 months. Though they had experienced a diverse number of jobs, the most common jobs were as workers in garment factories; karaoke workers; beer promotion girls; waitresses; masseuses and other jobs. Finally, less than 10% of women experienced using drugs - particularly beer promotion girls, 11.8% (6/51) and karaoke workers 9.8% (16/164).

**Figure 1: EW work experience in the past 12 months**



## 2. Men who have sex with men

### 2.1. Socio-demographic characteristics

This group consisted of 260 samples of MSM. No refusal was observed during the data collection. Demographic characteristics of the MSM were presented in **Table 7**. The mean age of MSM was 23.8 years, with the range between 14-51 years old. MSM aged less than 25 years accounted for 60%, while those aged over 40 years represented about 4% of the samples collected. A high proportion of MSM were reported to be single (89.2%). The average number of years at school was 8.6 years with 3.1% reporting no schooling, while those with more than 12 years of schooling were at 7.7%. When asked who they were currently living with, most of MSM (62.9%) reported living with parents, while 12.4% lived with relatives. The major occupation for MSM was hairdresser (24.7%), seller (21.2%) and student (17.0%). Less than 4% reported living in different provinces in the past 12 months, indicating lower levels of mobility among this group.





**Table 7: Socio-demographic characteristics**

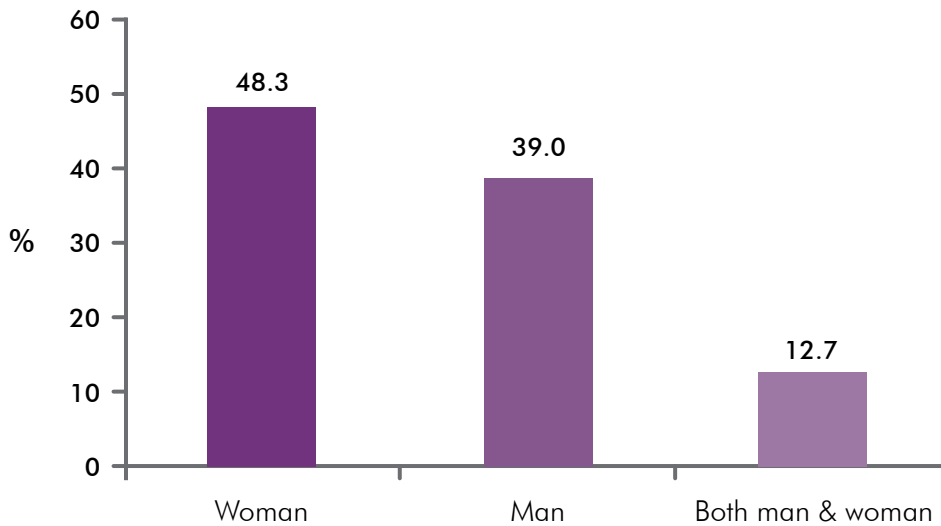
Variables	MSM (n = 260)	
	Freq	%
Age, mean (median)	23.8 (22)	
Range	14-51	
Marital status:		
Married and live together	19	7.3
Single	231	<b>89.2</b>
Divorced	8	3.1
Duration of schooling, mean (median)	8.6 (9.0)	
Weekly expenses on entertainment, mean (median), USD	15.0 (5.0)	
Currently living with:		
Spouse	17	6.6
Parents	163	<b>62.9</b>
Friends	18	7.0
Relatives	32	12.4
Alone	22	8.5
Major occupation:		
Hairdresser	64	24.7
Seller or trader	55	21.2
Students	<b>44</b>	<b>17.0</b>
Number of provinces lived in within the past year		
One province	210	81.1
Two provinces	31	12.0
Three provinces	10	3.9
Duration living in this province, mean (median)	4.6 (5.0)	
Range	1-5	

When being asked about their identity, close to half of the sampled respondents considered themselves to be women, whereas 39% considered themselves to be men, and about 13% considered themselves to be both man and woman (**Figure 2**). This report was consistent with another MSM survey in 2005 when asked about their personal thoughts relating to their identity [3].





**Figure 2: MSM’s personal thoughts about their own identity**



## 2.2. Sexual behaviors and condom use

7.3% (19/260) of MSM reported not having sex. Among those sexually active, the mean age for their first sexual experience was 17.7 years, with the range being between 10 and 27 years. They reported having had sex with both men and women.

29.7% reported having had sex with women in the past year. The average number of women they had sex with in the past year was 4.8. 54 out of 260 (20.8%) of MSM reported female sweethearts in the past month. However, of

those who had sex with their female sweethearts, only 26.9% reported using condoms consistently. 13.1% of MSM also reported having sex with female sex workers, of which 80% reported consistent use of condoms. Less than 2% reported selling sex to women.



77.6% of MSM had sex with men in the past month. The average number of men they had sex with was 4.8. Of those reported having had sex with men, 21.2% sold sex to men in the past week, with an average of 2 men per week (**Table 8**).



81.8% had sex with their male sweethearts, in which reports of consistent condom use was at 59.7%. The report of selling sex to men was high (31.7%) compared with selling sex to women. When stratified by personal thoughts about identity, 30.1% of MSM who identified themselves as men still reported selling sex to men, compared to 38.4% who identified themselves as women. The proportion of always using condoms was not high enough (69.3%), and there was a similar rate of condom use between the two types of MSM (69.2% vs. 71.7%) respectively.

Also, it was clear that MSM who identified themselves as women, were likely to report more receptive anal sex (77.6%) than those identifying themselves as men (22.8%). On the other hand, the MSM who identified themselves as both sexes reported receptive sex somewhere between the two types (51.5%). Regardless of receptive or inserted anal sex, consistent condom use did not exceed 65%, though there was a difference between different types of MSM.

Finally, the proportion of lubricant use during sexual intercourse varied from 30% to 36%, depending on inserted sex or receptive anal sex with partners. In contrast, other studies found that MSM used lubricant more frequently during inserted anal sex rather than receptive anal sex, though the proportion was not significantly different from our survey [3].



**Table 8: Sexual behaviors and condom use**

Variables	MSM (n = 259)	
	Freq	%
Age at first sexual experience, mean (median)	17.7 (17)	
Range	10-27	
Number of women you have had sex with in the past year, mean (median)	4.8 (2.0)	
Number of men you have had sex with in the past year, mean (median)	4.8 (2.0)	
Number of men you sell sex to for money in the past week, mean (median)	1.9 (1.0)	
Have had sweethearts (women) in the past month	54	20.8
Have had sex with sweethearts (woman) in the past month (n = 54)	26	48.2
Always use condoms with current sweethearts in the past month (n= 26)	7	<b>26.9</b>
<b>Sex with women</b>		
Paying woman for sex (sex worker) in the past month	34	13.1
Always using condoms with paid sex in the past month	28	<b>80.0</b>
Selling sex to women in the past month	5	1.9
Casual sex with women in the past month	20	7.7
Always using condoms during casual sex with women in past month (n = 21)	14	66.6
Report of having sex with male sweetheart in the past month (n = 154)	126	81.8
Always using condoms with male sweethearts in the past month (n = 114)	68	59.7
Paying men for sex in the past month	10	<b>3.9</b>
Always using condoms when paying men for sex in the past month (n = 12)	9	75.0
Selling sex to men in the past month	82	<b>31.7</b>
Always using condoms when selling sex to men in the past month (n = 75)	52	69.3
<b>Sex with men</b>		
Sex by inserting penis in your partner's anus in the past month	60	23.2
Always using condoms when inserting penis in your partner's anus (n = 60)	33	55.0
Always using lubricant when inserting penis in your partner's anus (n = 60)	18	30.0
Receptive sex with your partner in the past month	137	<b>52.9</b>
Always using condoms during receptive sex with your partner (n = 137)	87	<b>63.5</b>
Always using lubricant during receptive sex with your partner (n = 137)	50	36.5





### 2.3. HIV-related risk awareness, knowledge and discrimination

The self-perceived risk of acquiring of HIV/STI among MSM was unevenly distributed. Close to 60% perceived themselves at high risk of acquiring HIV/STI compared to other men and women. Only one-fourth of MSM perceived themselves to be at a lower risk than others **(Table 9)**.

58.3% of them reported having had a HIV test. The reported time elapsed since their last test varied. Of 150 MSM tested, more than 75% had received their last HIV test result in the past 6 months. Generally HIV knowledge was high, both in terms of mode of transmission and preventive methods. Still, limited understanding about the transmission from mother to unborn child and through blood transfusions was observed.

Most MSM had a positive understanding towards HIV/AIDS stigma and discrimination, reporting that they were willing to keep it secret if a family member was infected with HIV, and they believed that a neighbor would be willing to share meal at their house if a family member was infected. 82.2% of MSM thought that the level of discrimination against PLHIV had declined dramatically compared to last year. According to the findings, a MSM could be still discriminated in Cambodian society. However, there has been more acceptable perception overtime about this issue, particularly for transgender, who are more visible than other types of MSM. 62.5% of MSM thought that there had been a decrease of discrimination against them.



**Table 9: Awareness about HIV-related risks and perceptions about discrimination**

Variables	MSM (n = 259)	
	Freq	%
Thoughts about HIV/STI risk compared with other men and women:		
Much higher	102	40.0
Higher	46	18.0
Similar risk	43	16.9
Lower risk	64	25.1
HIV test	150	<b>58.3</b>
Time elapsed since last HIV test result: (n = 150)		
past 6 months	113	<b>75.3</b>
7 - 12 months	20	13.3
> 12 months	17	11.4
Knowledge that AIDS is still incurable	244	<b>94.2</b>
HIV/AIDS can not be identified by outside appearance of the people	248	95.8
Knowledge about mode of HIV transmission:		
Sexual intercourse	254	98.1
Sharing unclean needles and syringes	213	82.2
Mother to unborn child	97	37.5
Blood transfusions	141	54.4
Knowledge about prevention methods:		
Using condoms	257	99.2
Abstinence	21	8.1
One regular partner	95	36.7
Not sharing unclean needles and syringes	151	58.3
Friends and neighbors are not afraid to visit if family member is infected	230	88.8
Neighbor is not afraid to have meal if family member is infected	201	77.6
Willing to keep a family member's HIV status a secret	151	58.3
Thoughts about discrimination toward PLHIV compared with last year:		
Increased	21	8.1
Decreased	212	<b>82.2</b>
The same	25	9.7
Thoughts about discrimination toward MSM compared with last year:		
Increased	48	18.8
Decreased	160	<b>62.5</b>
The same	48	18.7



## 2.4. Network and meeting places for MSM



The network and places where MSM had met their partners are detailed in **Table 10**. On average, MSM knew about other 22 MSM in their network. About 50% of them had met at least other 10 MSM over the past 6 months in places where they often visited. The most frequented places were at parties (78%); their homes (74.5%); at concerts (61.4%); on designated streets (51.3%); as well as public parks (48.2%).

**Table 10: Network of men who have sex with men**

Variables	MSM (n = 259)	
	Freq	%
Number of MSM you know in this place, mean (median)	22.0 (10.0)	
Number of MSM you know in this place ≤ 10 MSM	131	50.6
Estimated numbers of MSM you know according to the age range:		
< 15 years old	6.2 (5.0)	
15 - 19 years old	9.9 (5.0)	
20 - 29 years old	9.5 (5.0)	
30 - 39 years old	6.5 (3.0)	
≥40 years old	6.5 (3.0)	
Places MSM meet or go to seek for partners:		
Public parks	125	<b>48.2</b>
Riverside	116	44.7
On the street	133	<b>51.3</b>
Nightclub	66	25.5
Café shop	64	24.7
Market	120	46.3
Telephone point	75	29.0
Home	193	<b>74.5</b>
Concerts	159	<b>61.4</b>
Party	202	<b>78.0</b>



### 3. Drug users

#### 3.1. Socio-demographic characteristics



The drug user sample consisted of 258 DU. No refusal was observed during the data collection among this group. Demographic characteristics of DU are presented in Table 11. The mean age of the DU was 24.1 years, with the range between 13-59 years. DU aged less than 25 years accounted for 60.9% of the sample collected. A high proportion of DU were single (60.5%) and about 22% were married. Male DU represented 72.1% of the total sample. The mean duration of schooling was 6.5 years, with 12.8% reporting no schooling, and those with more than 12 years of schooling were less than 5%. Nearly

half of DU (48.5%) reported living with parents and another 42.6% (110/258) lived elsewhere. When stratified by province, it was found that of the 110 DU who reported living elsewhere, more than 95% of them were EW in Sihanoukville living at their places of work. The mean duration of living in this province for DU was about 12 years, indicating that this group was stable.

**Table 11: Socio-demographic characteristics**

Variables	Drug user (n = 258)	
	Freq	%
Age, mean (median)	24.1 (22.0)	
Range	13 - 59	
Sex of the participants:		
Male	186	72.1
Female	72	27.9
Marital status:		
Married and live together	49	19
Single	156	60.5
Divorced	46	17.8
Duration of schooling, mean (median)	6.5 (7.0)	
Range	0-16	
Currently staying or living:		
With parents	125	48.5
Own home	23	8.9
Other places	110	42.6
Duration living in this province, mean (median), months	147 (156)	



### 3.2. Experience with drug use and injecting drugs



The mean duration of using drugs was 35.7 months. 41.6% (86/207) of the DU reported drug use  $\leq$  12 months. It should be noted that 66 DU from Sihanoukville were entertainment workers. More than 77% of EW reported not using drugs at all, due to it being a sensitive issue related to their working environment. However, a KHANA partner who had been working with the group identified these women. Sharing needles and syringes were still common among the group. 12.5% of the IDU shared needles and syringes during their last injection, while

cleaning needles and syringes were rare. However, most of them were aware that they could be at high risk of getting HIV infection through shared needles and syringes. DU and particularly IDU knew where to find new needles and syringes (Table 12). About 11% of the drug users used to stay in either government-run or NGO rehabilitation centers.

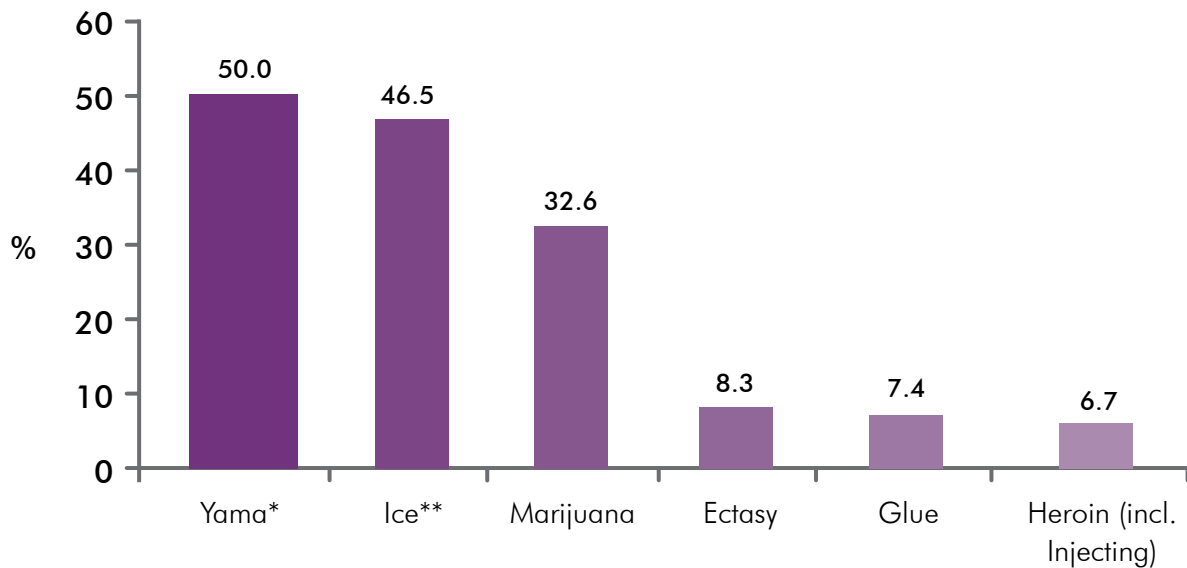
**Table 12: Experience with the drug use and injecting drugs**

Variables	Drug user (n = 258)	
	Freq	%
Duration of using drugs, mean (median), months	35.7 (12.0)	
Report of injecting drugs	16	<b>6.2</b>
Duration of injecting drug, mean (median), months	6.9 (2.0)	
Sharing needles or syringes last time	2	12.5
Clean needles and syringes when sharing:		
Sometimes	2	12.5
Never clean needles and syringes	14	87.5
Places when you can find new needles and syringes:		
Pharmacy	15	<b>93.7</b>
Friend	5	31.2
Used to stay in a rehabilitation center	28	<b>10.9</b>

There were many types of drug use reported by the group in the past month, ranging from heroin to marijuana. The report is shown in **Figure 3**. Half of the users reported using yama (50%), followed by ice & amphetamine powder (46.5%), and then marijuana (32.6%). Only 6.2% of drug users reported injecting drugs, either heroin or amphetamine, in which the mean duration of injecting drugs was 7 months.



**Figure 3: Type of drugs used in the past month**



### 3.3. Sexual behavior and condom use

The mean age for having sex for the first time was 18.5 years, with a range between 13-31 years. More than 80% of the drug users had sex in the past year, and about 28% had sex after taking drugs (Table 13). Moreover, nearly one fourth of DU mentioned that taking drugs to some extent had an effect on their sexual desire. Always condom use with regular partners (sweethearts, spouses) was low (28.3%), and the report of last condom use with this type of partner was close to 42%.

For men, almost 34% reported paid sex in the past month: consistent condom use being at 85.3%. Furthermore, men reported different types of paid sex partners, including: brothel based sex workers (37.6%), indirect sex workers (33.3%), street sex workers (15.0%), and so on.

For women, 71.4% reported paid sex with clients in the last month (50/70): consistent condom use was very high (96.4%). The mean number of clients in the past month was 57 (median = 20). Most of drug users knew where to get condoms: pharmacies being the most popular place (82.9%), followed by guesthouses or hotels (37.2%).





**Table 13: Sexual behavior and condom use**

Variables	Drug user (n = 258)	
	Freq	%
Age at having sex for the first time, mean (median), year	18.5 (18.0)	
Range	13-31	
Had sex in the past 1 year	212	82.2
Had sex with men <b>(men only)</b>	17	9.1
Had sex with men last year	6	3.2
Had sex after taking drugs in the past year	72	27.9
Taking drugs had an effect on sexual desire	61	23.6
<b>Regular partner (n = 149)</b>		
Last condom use with regular partner (sweetheart, spouse) (n = 149)	62	41.6
Always use condoms with regular partner in past year (n = 121)	35	28.3
<b>Men only (n = 186)</b>		
Had paid sex in the past month <b>(men only)</b> (n=186)	63	33.9
Number of paid sex partners in last month, mean (median) <b>(men only)</b>	3.1 (2.0)	
Always used condom when paid for sex in the past year <b>(men only)</b> (n=102)	87	<b>85.3</b>
Last condom use with paid sex partner (n = 115)	113	98.3
<b>Type of paid sex partner (men only):</b>		
Brothel sex workers	70	37.6
Street sex workers	28	15.0
Beer girl, beer garden, karaoke, masseuse	62	33.3
Other types	74	39.8
<b>Entertainment worker (EW) (n=70)</b>		
Sex with clients last month <b>(entertainment worker: EW)</b> (n=70)	50	71.4
Number of clients in past month, mean (median), <b>(EW only)</b>	57.0 (20.0)	
Last condom use with paid sex partner <b>(EW only)</b> (n=70)	56	80.0
Always use condoms with clients in the past year <b>(EW only)</b> (n=56)	54	<b>96.4</b>
<b>Casual partner (n = 120)</b>		
Last condom use with casual partner (n = 120)	109	90.8
Always used condoms with casual partners in the past year (n = 107)	87	81.3
<b>Where to get condoms:</b>		
Pharmacies	214	82.9
Health centers, hospitals	55	21.3
Guest houses, hotels	96	37.2
NGO staff	81	31.4



### 3.4. Health seeking behavior and access to HIV information



13.1% of the drug users reported STI symptoms in the past year. When stratifying by sex, it showed that women had significantly higher STI symptoms than men (30.6% vs. 6.5%,  $p$  value  $< 0.001$ ). Among those reported, 45.7% sought medical care at public clinics, while 31.4% bought medicine at pharmacies or drug stores for their last STI symptom.

In terms of HIV knowledge, more than 95% of DU knew that consistent and proper use of condoms could prevent them from HIV infection, while close to 100% knew that sharing needles and syringes could put them at higher risk of getting HIV infection. NGO staff played a very important

role in providing information related to HIV and drug use (86%). The mass media, which included TV and radio, were the second important source of information. Only 3.1% reported that they got the relevant information from staff at rehabilitation centers.

More than 85% of the DU knew about the VCT service and close to 61% reported having HIV tests and receiving their results. When stratifying by sex, HIV tests were significantly higher among women than men (75% vs. 55.4%,  $p$  value = 0.004). Among those tested, 77% had a HIV test over the past 6 months, indicating a high proportion of recent HIV tests. Men had a slightly higher proportion than women (77.7% vs. 75.9%). Furthermore, most of them were aware about the availability of ART services and they believed that they would be able to access the service when needed (**Table 14**).

**Table 14: Health seeking behavior and access to HIV information**

Variables	Drug user (n = 258)	
	Freq	%
STI symptoms in the past year	34	13.1
Places sought treatment when had last STI symptoms: (n = 35)		
Pharmacies	11	31.4
Private clinic	5	14.3
Public clinic	16	45.7
NGO clinic	4	11.4
Able to always properly use a condom when having sex	255	98.8
Aware that you can transmit HIV through shared needles and syringes	257	<b>99.6</b>
Sources have received information and education about drug use/ HIV from:		
NGO staff	222	<b>86.0</b>
TV and radio	179	69.4
Family	38	14.7
Rehab staff	8	3.1
Know about the VCT service	220	<b>85.3</b>
Have had a HIV test before	157	60.8
Have received a HIV test result	157	60.8
Have HIV test $\leq$ 6 months, (n = 157)	121	<b>77.1</b>
Aware about the availability of OI-ART service	227	88.0
Believe can access the service when needed	232	89.9



# 5

## Conclusion and recommendations

### 1. Entertainment workers

- More than 75% of EW were reported to have had sex with their sweethearts and the report of consistent condom use was not high enough (61.7%). The main reason for not using condoms with sweethearts was the belief that this was a long-term relationship with trust (61.8%). Only about 1% mentioned the unavailability of condoms. Therefore, the program should emphasize protected sex with sweethearts and mass media campaigns delivering this information to men with sweethearts should be considered.
- 61% of the women reportedly had paid sex with clients in the past year and consistent condom use was high (89.2%). This high consistency needs to be sustained through regular outreach and peer education, as well as regular STI checkups and proper STI referral and treatment.
- 38% reported STI related symptoms in the past 12 months. Most women were advised by either peer educators or NGO staff to seek medical care (66.1%).
- About 30% of EW had experienced at least one abortion in their lifetime. Of those women who had abortions, nearly one half (47.5%) reported their last abortion in the past 6 months, indicating very recent unprotected sex, particularly with sweethearts. Therefore, in addition to outreaches and peer education aimed at encouraging EWs to use condoms more consistently with their sweethearts, reproductive health issues, including abortion-related risks, must be addressed as part of the focused prevention.
- Peer educators and NGO staff were the main sources of HIV information and training to EWs.
- 70% of the women had undergone a HIV test in the past year and most of them reported being tested in the past 6 months.
- High awareness about the availability of OI/ART service was observed among EW (90.8%). Knowledge about HIV/AIDS care services was fairly high. More than 90% of the women believed that they could access available OI/ART services when needed.

### 2. Men who have sex with men

- 60% of MSM were aged less than 25 years, and a high proportion were single (89.2%).
- More than 80% of MSM were sexually active. Close to 78% had sex with men in the past month.
- The report of selling sex to men was high (31.7%), compared with selling sex to women. However, consistent condom use was not high (69.3%). Consequently, more preventive efforts need to be focused on the MSM to increase a higher proportion of consistent condom use among this group.
- The proportion of lubricant use during sexual intercourse varied from 30% to 36%, depending on inserted sex or receptive anal sex with partners. Program interventions targeting lubricant use should be strengthened. 58.3% reported having undergone a HIV test, in which more than 75%



- got their last test results within the past 6 months.
- Most MSM had a positive understanding toward HIV/AIDS stigma and discrimination; with more than 80% thinking that the level of discrimination against PLHIV had declined dramatically compared to last year.
  - The places where MSM frequently socialized included: parties (78%), their homes (74.5%), concerts (61.4%), on the street (51.3%), and public parks (48.2%). This finding could be used to design better targeted intervention among MSM.
  - Finally, though MSM could be still discriminated in Cambodian society, they have become more acceptable overtime, particularly the trans-genders (long haired MSM), who are more visible than other types of MSM.

### 3. Drug users

- 61% of DU were young ( $\leq 24$  years), and about 42% reported drug use  $\leq 12$  months. One half of the users reported using yama, amphetamine powder (46.5%), and marijuana (32.6%). Only 6.7% of drug users reported injecting drugs.
- 12.5% of IDU shared needles and syringes during their last injection, and while cleaning needles and syringes were rare, they knew where to find new ones. Programs should focus on intensively on reducing the practice of sharing needles and syringes, while increasing the cleaning practices. New needles and syringes should be made available to DU, particularly the IDU.
- About 28% had sex after taking drugs, and nearly one fourth of DU mentioned that taking drugs to some extent had an effect on their sexual desire.
- For men, almost 34% reported paid sex in the past month, in which consistent condom use was 85.3%; while for women, 71.4% reported selling sex in the last month, in which the consistent condom use was very high (96.4%).
- Close to 100% knew that sharing needles and syringes could put them at a higher risk of getting HIV infection. Education should be focused on raising DU awareness about HIV and STI transmission and prevention.
- NGO staff played a very important role in providing information relating to HIV and drug use (86%). This role should be encouraged and maintained.

# 6

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Khana is a linking organisation of the global partnership  
**International HIV/AIDS Alliance**  
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**Khmer HIV/AIDS NGO Alliance**

# 33, Street 71, Sangkat Tonle Bassac,  
Khan Chamkar Mon, Phnom Penh, Cambodia  
Tel : +855 23 211 505 / Fax : +855 23 214 049  
Website : www.khana.org.kh

**The International HIV/AIDS Alliance**

(International Secretariat)  
Preece House, 91-101 Davigdor Road, Hove, BN3 1RE, UK  
Tel : +44 (0) 1273 718900 / Fax : +44 (0) 1273 718901  
E-mail : mail@aidsalliance.org / www.aidsalliance.org