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# **Behavioral Sentinel Survey (BSS) V: SEXUAL BEHAVIOR AMONG URBAN SENTINEL GROUPS, CAMBODIA 2001**

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**August 2003**

**National Center for HIV/AIDS, Dermatology and STDs (NCHADS)**

Pamina M. Gorbach	FHI & UCLA
Heng Sopheab	NCHADS
Saphonn Vonthanak	NCHADS
Mean Chhi Vun	NCHADS
Seng Sut Wantha	NCHADS
Hor Bun Leng	NCHADS

Edited by Guy Morineau, FHI



# Foreword

As part of the national surveillance system, Cambodia has measured the level of HIV related sexual risk behaviors in sentinel groups on a regular basis since 1997. This information has provided scientific background to justify prevention interventions in the groups in which high risk behaviors were recorded. Behavioral surveys have become a critical tool for HIV program planners from the government as well as from NGOs that serve to identify the intervention needs and to evaluate, the outputs of behavior change programs at national level. Because the behavioral surveys have been conducted consistently in the same sub-groups since 1997, it allows following the trends in risk behaviors for each sentinel group that help explaining the changes in HIV sero-prevalence as measured in HSS.

The sentinel groups included in this fifth round of the BSS remain unchanged: the female sentinel groups are the brothel based sex workers and the indirect sex workers represented by beer promotion girls and karaoke workers, whereas the male sentinel groups are policemen, militaries and the mototaxi drivers. The survey covers the same five provinces as in the previous years.

Trends in consistent condom use are still on the rise, which confirms the success of condom use programs targeting sex workers and clients. BSS 5 shows that efforts to expand VCCT services have been beneficial as shown by the increasing number of people who have ever been tested and have received pre and post-test counseling. The results highlight some changes in the sex industry with more indirect sex workers reporting selling sex than in the past. This population may require special attention because they are using condoms less consistently than brothel based sex workers. Another finding reveals an increasing number of men reporting ever having a relationship with sweetheart whereas condom use remains low in this type of sexual encounter.

We would like to take this opportunity to express our gratitude to the respondents who had given personal information for the benefit of the country.

Phnom Penh, January 19, 2004

NCHADS Director



Mean Chhi Vun, MD, MPH

## BSS team

- Mean Chhi Vun NCHADS
- Seng Sut Wantha NCHADS
- Hor Bun Leng NCHADS
- Ly Penh Sun NCHADS
- Heng Sopheab NCHADS
- Mun Phalkun NCHADS
- Khol Vohith NCHADS
- Chhea Chhorvann NCHADS
- Kao Chantha NCHADS
- Seng Sopheata NCHADS
- Lim Yi NCHADS
- Theng Thithara NCHADS
- Pamina Gorbach FHI & UCLA

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# List of Acronyms

ANC	antenatal care
BSS	behavioral surveillance survey
DFSW	direct female sex worker
FHI	Family Health International
FSW	female sex worker
HSS	HIV sero-surveillance survey
IDFSW:	indirect female sex worker
NCHADS:	National Center for HIV/AIDS, dermatology and STDs
NGO	non governmental organization
PAO	provincial AIDS office
STD	sexually transmitted disease
STI	sexually transmitted infection
UCLA	university of California Los Angeles
VCT	voluntary counseling testing
WHO	World Health Organization

# Acknowledgments

- Ministry of Health for their administrative and financial support
- FHI/IMPACT and USAID for financial and technical assistance
- Provincial AIDS Committees/ Provincial AIDS Secretariats/ Provincial Health Departments/ Provincial AIDS Program for their administrative collaboration and participation
- Surveillance unit of NCHADS, Interviewers, and BSS participants for all their efforts in the field

# I. Introduction

A well established HIV/AIDS epidemic has been clearly documented in the past few years in Cambodia. HIV prevalence appears to be declining among risk groups including brothel-based female sex workers among whom HIV decreased from 42.6% in 1998 to 33.2% in 1999 and to 31.1% in 2000, and among police in which HIV decreased from 6.2% in 1998 to 4.7% in 1999 and to 3.1% in 2000. The HIV prevalence of 2.3% reported among pregnant women in 2000, however, suggests that the epidemic has expanded from core groups into the general population for an estimated prevalence of 2.8% in the general population. This classifies Cambodia's epidemic as "generalized"<sup>1</sup>. Even though the HSS 2000 showed that the HIV prevalence may be on the decline in high risk groups, Cambodia still has one of the most severe HIV epidemic in Asia. In 2000 it was estimated that 169,000 people in Cambodia were infected with HIV. To control this epidemic, the National Center for HIV/AIDS, Dermatology and STDs (NCHADS) has developed programs to educate people about HIV and other sexually transmitted infections (STIs) and to prevent the spread of the diseases through promotion of condom use and treatment of STIs. Such intervention efforts require reliable systems for tracking risk behaviors associated with STI/HIV transmission to determine if and to what extent such behaviors change. Many non-governmental organizations (NGOs) have also implemented STI/HIV prevention and treatment programs in Cambodia and need valid data to guide their efforts.

Throughout the world, epidemics are followed through regular tracking of cases of diseases known as *surveillance*. For public health purposes, most countries systematically collect data on exposure to risk factors such as smoking, physical activity, eating patterns, alcohol consumption, and violence. The rise of the global HIV epidemic has led to increasing attention on the need for standardized systems for surveillance of the behaviors associated with acquiring and transmitting HIV. Sentinel surveillance of HIV prevalence was first proposed in 1988 by the World Health Organization (WHO) to monitor the extent of the HIV epidemic<sup>1</sup> and was recently updated by UNAIDS and WHO in what is known as Second Generation Surveillance. In 1996-7 with USAID funding Family Health International (FHI) launched a series of sexual behavior surveys in developing countries called the Behavioral Surveillance Surveys (BSS). These repeated cross-sectional surveys of behaviors in sentinel groups are now considered as an essential component of second generation HIV surveillance systems<sup>2</sup>. These surveys are designed to be administered on a regular basis (either annually or bi-annually) to provide data on changes of risk behaviors over time. Cambodia is fortunate to have one of the most comprehensive BSS in the world, established in 1997 and repeated annually since; the 2001 BSS is the fifth round.

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<sup>1</sup> World Health Organization. Sentinel Surveillance for HIV Infection. Geneva. Switzerland: World Health Organization; 1988 (WHO/GPA/DIR/88.8)

<sup>2</sup> WHO/UNAIDS. Guidelines for Second Generation HIV Surveillance. Geneva, Switzerland. World Health Organization and the Joint United Nations Programme on HIV/AIDS; 2000.

In 1995, the Cambodian Ministry of Health initiated an active HIV sero-surveillance program (HSS) with the support of the WHO. These annual sero-surveys have expanded to cover almost all provinces in Cambodia. As mentioned above, the 1999 and 2000 HSS indicated that HIV prevalence declined among high risk groups. The prevalence among indirect female sex workers (beer promotion girls), however, has not shown a decline remaining around 16%. Through tracking changes in risk behaviors, the BSS can help explain the changes in HIV prevalence observed in the HSS.

Because HIV has a long latency period before progressing to AIDS, a country with a growing HIV epidemic would have a rate of new infections that surpasses the rate of people dying of AIDS (the mortality rate), which would result in an increasing number of people with HIV, and an increasing HIV prevalence rate. It is not until the number of people dying from AIDS surpasses the number newly infected that HIV prevalence would decline. Therefore, the HIV prevalence in population may change very slowly even though a population's behaviors may be going through rapid change. Thus, it is difficult to rely on HIV surveillance data to detect whether prevention interventions are effectively changing behaviors in the short-term. Repeated behavioral surveys such as the BSS, on the other hand, can capture behaviors changes that reduce the number of people getting infected with HIV (such as a reduction in the number of sexual partners and increase in condom use among high risk partners). These changes may be the result of interventions designed to reduce the frequency of high risk behaviors, may be a function of naturally occurring responses to the epidemic, or may reflect more general social changes in the population. Although BSS cannot demonstrate what has caused the behavior change, it can provide evidence that behaviors are changing and show both the magnitude of the changes and how these are distributed within and across target groups. Therefore, BSS focuses on the highest risk segments of the population who are most often the targets of intensive behavior change programs and whose behavior can have the most effect on the course of the epidemic. Changes in the behaviors of these groups may occur before that in the general population, either heralding a decrease in risk or warning of emergence of new risky patterns.

Since 1997 Cambodia has conducted annual surveys of sentinel groups<sup>3</sup>. The data from these surveys has been used to guide the design and evaluation of intervention programmes by giving program planners and program managers a clear picture of current risk behaviors in various segments of the population.

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<sup>3</sup> With the exception of BSS IV conducting in 2000 that was a household survey of urban and rural males.

## II. Objectives of Cambodia's BSS

- 1- To track trends in risk behaviors of high risk and vulnerable groups which influence the HIV epidemic in Cambodia.
- 2- To provide information on trends in risk behaviors of sentinel groups in some of the same locations and groups as the HIV surveillance survey (HSS).
- 3- To provide information to help guide planning for HIV/AIDS control programs
- 4- To provide evidence of the relative effectiveness of the combination of HIV prevention efforts taking place in selected sites.
- 5- To develop a behavioral risk profile of risk groups driving the Cambodian HIV epidemic to be used in the targeting and design of HIV/AIDS prevention programs.
- 6- To obtain data in a standardised format which will enable a comparison with other behavioral surveillance studies carried out in other countries

### III. Background information on previous rounds of data collection

The epidemiology of sexually transmitted infections (STIs) and HIV in Cambodia was first described in 1996 by an STI Prevalence & Behavior Survey that identified risk groups and risk behaviors. It was followed by the first round of BSS conducted in 1997 by the National AIDS Program (NAP) that serves as the baseline data to establish sexual behavior trends in Cambodia. Six sentinel groups (three male groups and three female groups) were selected for the survey. These included brothel based FSWs; female beer promoters; working women 18-30 years old (e.g. hotel workers, factory workers, government workers and waitresses in restaurants); males in the military and police forces; male mototaxi drivers, and male vocational students. Urban centers of the five biggest provinces in Cambodia were included in this survey: Battambang, Siem Reap, Sihanouk Ville, Kampong Cham and Phnom Penh. A questionnaire was designed to measure sexual behaviors including information on socio-demographic status as well as sexual behaviors. The variable collected included among others: the age at first sex, the number of sexual intercourse per month, the type and number of sexual partners, the consistency of condom use, condom use at last sex, and health seeking behavior for vaginal or urethral discharge. All groups were interviewed face to face by trained interviewers, except male vocational students who were given a self-administered questionnaire.

The following two years, the BSS was repeated in the same cities and sentinel groups as the first round. The only change was in 1999 to drop the low risk groups (the working women, male vocational students, and male government officials). For all groups the questionnaires had the same content and only minor changes were made by revising, adding or dropping questions. There were 4,353, 4,265, and 3,400 respondents respectively in BSS I, II, and III. In 2000 for BSS IV rather than repeating surveillance in the sentinel groups, a household survey of 3,166 males was conducted to determine general risk behavior and verify if the occupational groups that served as male sentinel groups were higher risk than other Cambodian males. This latest BSS represents BSS V (2001), and marks a return to the original design by following trends in risk behavior among the sentinel groups. This report describes the social and sexual behavior of members of the sentinel groups in 2001 and how these behaviors have changed since 1997.

## IV. Methodology

- The target populations of BSS V were: brothel-based or direct female sex workers (DFSWs); indirect female sex workers (IDFSWs) including beer promotion girls and karaoke workers; men in the military and police forces; and male mototaxi drivers. These study populations were surveyed in the urban centers of the five provinces where BSS has annually occurred.
- The total sample sizes and sample sizes per province are detailed below in Table 1:

**Table 1: Sample sizes by provincial city**

BSS Group	Sihanouk Vill	Kampong Cham	Battambang	Siem Reap	Phnom Penh
Military	128	128	142	140	144
Police	95	98	97	101	107
Moto-drivers	132	125	126	131	134
DFSWs	105	125	110	114	115
Beer girls	56	73	80	85	106
Karaoke worker	81	84	NA	NA	NA
<b>Total</b>	<b>597</b>	<b>633</b>	<b>555</b>	<b>571</b>	<b>606</b>

Sample sizes for each sentinel group were calculated to detect a change of 10% from the 1999 level of consistent condom use in commercial sex assuming two sided statistical tests with 95% confidence (alpha 0.05), power 80% and a design effect (x2). Because there was no previous data on karaoke workers, the sample size for this group was calculated to be large enough to detect a 10% difference in consistent condom use in past 3 months during commercial sex from 58%, which is an estimate obtained by averaging the 1999 reported levels of consistent condom use with clients of DFSWs in past month and IDFSWs in past 3 months (78% and 38% respectively).

### 1. SENTINEL SITES

BSS V was conducted in December 2001 and January 2002. Data were collected from the same cities of the five provinces as earlier rounds of BSS. These are the largest provincial cities of Cambodia, which include: Phnom Penh, Battambang, Siem Reap, Sihanouk Ville and Kampong Cham. As they are the most populated, these cities are seen as pockets of high-risk behaviors and have been the targets of behavior change programs. All these cities had implemented 100% condom use programs by 2001.

## 2. SENTINEL GROUPS

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UNAIDS and WHO suggest that even where HIV epidemics are well established in the general population, sub-populations with higher HIV prevalence and risk behaviors contribute disproportionately to the continued spread of the virus. Even though Cambodia has a generalized HIV epidemic (2.3% of women attending in ANC were HIV positive in 2000), risk is not evenly distributed across all men and women in the population. Behavior change in certain groups may have a disproportionate effect on breaking the continued spread of the virus across the broader population. Therefore, BSS sentinel groups have been selected to represent segments of the population which have been identified as epidemiologically important to the dynamic of Cambodia's HIV epidemic. The occupational groups that make up the sentinel groups represent the currently identified "core" groups that have a disproportionate level of HIV and risk behavior compared to the general population and "bridging" groups who create sexual links between the core groups and the general population by having sex with members of both.

Brothel based sex workers in Cambodia – referred to as direct sex workers (DFSWs) – remain an important sentinel group in the BSS. DFSWs are considered a core group of women because they have many sexual partners.

The beer promoters are considered as a bridging group because the women from this group are operating as "indirect female sex workers" (IDFSWs) as they have been found in previous BSS rounds to occasionally sell sex. Because of recent shifts in patterns of commercial sex in the country, an attempt was made to include karaoke workers in the BSS V as another group of IDFSWs. However, karaoke workers could only be interviewed in two of the five BSS cities prior to a change in government policy in December 2001 that closed down karaoke establishments making it impossible to sample or interview them in these sites.

Data from previous rounds of Cambodia's BSS has shown that the sentinel groups of men including military, police and mototaxi drivers have higher risk sexual behaviors than other urban Cambodian males. Therefore, these groups were maintained as the male sentinel groups in BSS V.

## 3. SAMPLING PROCEDURES

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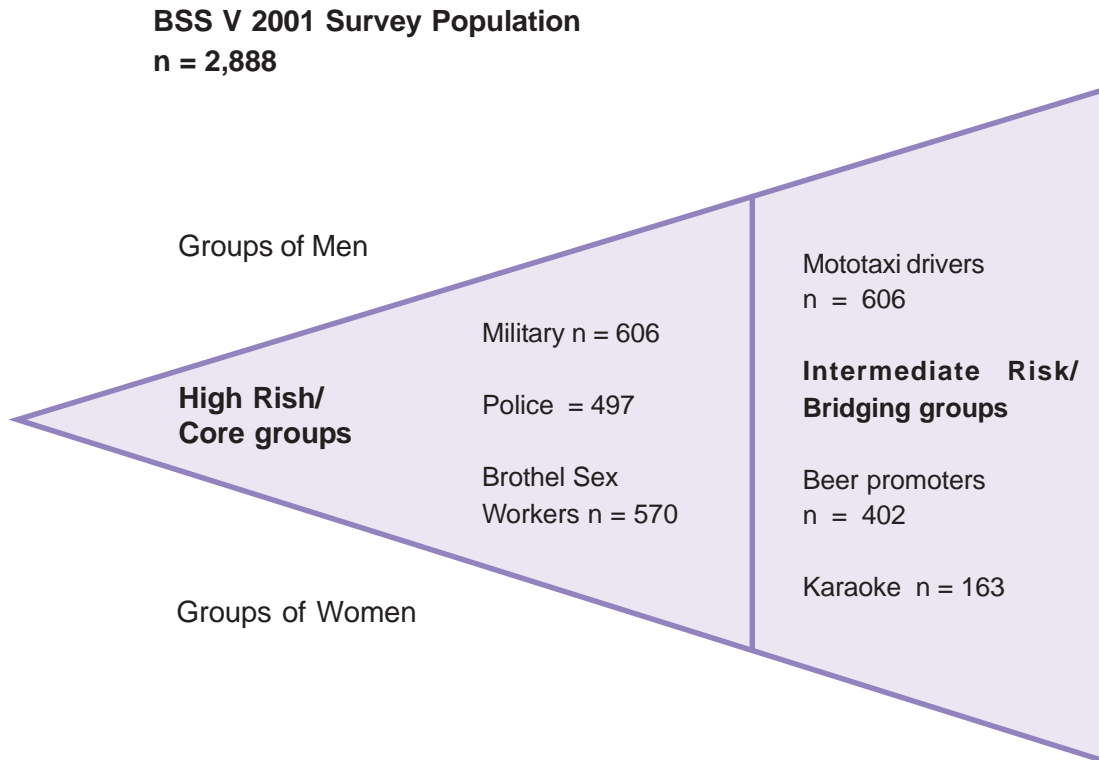
A two stage cluster sample with a take all approach per cluster was used for DFSWs, IDFSWs, military, and police. In mototaxi drivers clusters were represented by time-location period of sampling. A self weighted sample was obtained by taking all individuals from randomly selected clusters. Similar methodology was applied in previous BSS rounds. All clusters and number of individuals in each cluster were listed by the Provincial AIDS Office (PAO) to create the sampling frames. When the size of a provincial sample was lower than the sample required, the take all approach resulted in a census of all individuals from this group.

Clusters were defined as brothels for DFSWs, beer companies for beer promoters, karaoke bars for karaoke workers, battalions for military, and police units for police. Time slots at heavy trafficked street corners such as those surrounding markets and bus stations were clusters for mototaxi drivers.



Below illustrates which occupation groups represent core and bridging groups.

**Figure 1: Who are the Sentinel Groups**



#### 4. STUDY TEAM

BSS V was conducted by the NCHADS surveillance unit. Interviews were conducted face to face by gender-matched interviewers who were staff from either the Provincial AIDS Office or the Provincial Health Department. Two trained local supervisors from each province and one or two from the NCHADS supervised the data collection. This mixed supervision team was constantly present during data collection insuring that interviews were conducted privately and in an appropriately sensitive manner. All questionnaires were checked in the field by supervisors to ensure data quality before data entry. All participants underwent a process of oral informed consent and provided an opportunity to refuse participation. Refusal rates were recorded every day by the interviewers. Table 2 below reveals a low refusal rate; more mototaxi drivers refusing than other groups. Overall there were 55 refusals.

**Table 2: Refusal rates by Provincial City**

BSS Group	Sihanouk Ville	Kampong Cham	Battambang	Siem Reap	Phnom Penh
Military	0	0	0	0	0
Police	0	0	0	0	0
Mototaxi drivers	14	1	11	7	16
DFSWs	1	0	0	0	2
Beer girls	0	3	0	0	0
Karaoke workers	0	0	NA	NA	NA
<b>Total</b>	<b>15</b>	<b>4</b>	<b>11</b>	<b>7</b>	<b>18</b>

## 5. DATA ENTRY AND ANALYSIS

Data was coded and entered by NCHADS staff in to a computerized database using the Epi-Info software program. The data entry and tabulation was conducted at NCHADS by staff experienced in computing within the center. The data was analyzed using the statistical software program STATA.

The raw data was weighted to reflect differences in the sizes of the sentinel groups between the provinces. For the military, police, and mototaxi drivers weights were created using the urban male population size by provinces from Cambodia's 1998 census. For direct and indirect sex workers, weights were created using the 1999 NCHADS census of sex workers. These figures were obtained from NCHADS outreach programs that provided a count of all sex workers by type of sex worker per province. Separate weights were calculated for DFSWs, beer promoters and karaoke workers to reflect the different distribution of these women across provinces. All national figures presented or discussed in this report have been weighted as described above, whereas provincial frequencies remained unweighted.

# V. Results

## 1. FEMALE SENTINEL GROUPS

BSS V female sentinel groups are core groups for HIV because of their high level of sexual risk. This was confirmed by the 2002 sero-surveillance survey which found 28.8% and 14.8% of HIV positive individuals among brothel based sex-workers and beer promoters respectively. In BSS V, indirect sex workers are mostly represented by beer promoters as karaoke workers were sampled only in 2 provinces (Sihanouk Ville and Kampong Cham) due to a crack down on the karaoke during the BSS V data collection.



Indirect female sex workers (IFSWs)

Beer promoters  
n = 402

Karaoke women  
n = 163

Direct female sex workers (DFSWs)

Brothel based sex workers  
n = 570



## 1.1. Social and demographic characteristics of female sentinel groups

Brothel based sex workers from the five provinces participating in BSS V were in large majority young and unmarried women, mostly uneducated, who had recently migrated to these provinces and were earning relatively high incomes for young Cambodian women. The mean age of beer promoters was 23.8 years versus 22.1 years for karaoke workers. More beer promoters reported being currently married than karaoke workers (21.7 % vs. 5.4% respectively).

**Table 3: Socio-demographic characteristics among DFSWs and IDFSWs**

	DFSWs		IDFSWs
	Brothel based n = 570	Beer promoters n = 402	Karaoke* n = 163
Mean age	22.3	23.8	22.1
% Currently married	1.6	21.7	5.4
% No school	49.0	16.0	30.0
% Recent migrant	66.9	21.9	42.8
Mean Riels/ month	316,707	282,054	321,450
US Dollars (3919=\$1)	(\$81)	(\$72)	(\$82)
Income (Rs) median	200,000	200,000	240,000

\* Data collected only in Kompong Cham and Sihanoukville

Fewer beer promoters than karaoke workers had not attended school (16.2% vs. 30%), and 22.1% of beer promoters vs. 42.8% of karaoke workers had lived in the current province for 1 year or less. On average karaoke women earned almost the same as brothel based sex workers (81 and 82 US \$ per month, respectively), whereas beer promoters earned less (US\$ 72 per month). However, these reported incomes may only represent beer promoters' salaried income and not include income that they supplement through sex work. In regards of the socio-demographic data, karaoke workers were more similar to brothel based sex workers than beer promoters, which were on average a little older, more likely to be married, have some education, and had a lower monthly income than karaoke workers or brothel based FSWs.

## 1.2. Sexual history of female sentinel groups

DFSWs and IDFSWs reported the same mean age at first sex, around 17 years of age. Among brothel based FSWs the mean age at first commercial sex was 20.6, suggesting that most initiate sexual activity before starting sex work. Husbands were the most frequently reported first sexual partner in all FSWs groups, and about a quarter of the women from both groups reported a sweetheart or boyfriend as their first sexual partner (20% of DFSWs and 24.5% of IDFSWs). IDFSWs seldom initiated their sexuality with clients, whereas 30% of brothel based sex workers did.

**Table 4: Sexual history of DFSWs and IDFSWs**

	DFSWs	IDFSWs	
	Brothel based n = 570	Beer promoters n = 402	Karaoke* n = 163
Mean age at 1st sex (median)	17.7 (18)	18.7 (18)	16.8 (17)
Mean age at 1st commercial sex (median)	20.6 (20)		
First sexual partner	%	%	%
Husband	45.9	68.0	61.5
Sweetheart	20.9	26.6	24.1
Client	30.1	3.0	13.5
Other	3.1	3.4	0.9

\* Data collected only in Kampong Cham and Sihanouk Ville

The numbers of sexual partners in the past year and in life time were collected solely from IDSWs. Beer promoters reported a mean of 3.8 (median 2) lifetime partners and one in the past month. Karaoke workers reported more partners: 9.4 mean lifetime (4 median) and a mean of 1.4 in the past month.

### 1.3. Sweethearts or non commercial partners of direct and indirect sex workers

For Cambodian female sex workers, the term sweetheart is used to represent an intimate romantic partner. About half of all the FSWs reported a sweetheart or boyfriend in the past year (47.5% of brothel based FSWs, 44% of beer promoters and 66% of karaoke workers). While many Cambodians have sweethearts that are not sexual partners, all DFSWs reported having sex with their sweethearts. Similar high frequency of sex with sweetheart was reported by IDFSWs as 99% of beer promoters who have ever had a sweetheart and 95% of karaoke workers who ever had a sweetheart reported having sex within this relationship.

FSWs were asked about their sweetheart's job in order to identify the socio economic status of these sexual partners. All groups reported having sweethearts from military or police, 19% in beer promoters, 13% in karaoke workers, and 17% in brothel based sex workers. Beer promoters, however, reported more sweethearts working as government officials or businessmen (31%) than karaoke workers (25.4%) or brothel sex workers (7.8%). Most of brothel based FSWs' sweethearts were sellers (22%), which was not so common in beer promoters (10%) or karaoke workers (7%). This suggests that beer promoters have sweethearts and boyfriends with higher socio economic status – both higher social status and more economic power - than brothel based sex workers.

To obtain an idea of the role played by financial exchanges in relationships with sweetheart, IDFSWs were asked how often their sweethearts gave them money (brothel based sex workers were not asked about receiving money from sweethearts). Very few of the IDFSWs with sweethearts reported not receiving money from their sweetheart (4.2% of beer promoters and 7.4% of karaoke workers). Among IDFSWs, fewer beer promoters than karaoke workers received money for each sexual encounter (19% vs. 38%), but more beer promoters received money on a weekly or monthly basis (20% weekly and 23% monthly in beer promoters versus 6% weekly and 17% monthly in karaoke workers). A similar proportion of the 2 sub-groups of IDFSWs reported not receiving money regularly (34% of beer promoters and 30% of karaoke workers). While it is not clear how much having sex with sweethearts is actually motivated by money, few IDFSWs report expectations that such relationships will result in marriage. Among IDFSWs with sweethearts, 68% of beer promoters and 75% of karaoke workers reported that it is not likely that they will marry their sweetheart. Motivation for sexual activity with sweethearts may therefore be for other reasons including financial need, social advantages, peer pressure, intimacy or pleasure.

#### 1.4. Conditions of sex work

DFSWs reported working as commercial sex workers for a little over a year (mean 19 months and median 12 months). The mean duration of work in the current brothel was 7.7 months (median 5 months) suggesting frequent movement from one brothel to another. DFSWs reported charging an average of 5000 Riels (US\$ 1.3) per sexual intercourse. There was on average 8 sex workers per brothel (median 6). Most sex workers reported being paid on a monthly basis (57%), 15% reported getting paid per client and 17% getting paid by day. DFSWs reported a mean of 3.1 clients in the past day (median of 2). Finally, 25% of DFSWs reported having had sex while menstruating, which is a behavior with high risk of HIV transmission. Table 5 below describes the turnover of DFSWs, their sex frequency, and the payment condition in brothels from the sentinel sites.

**Table 5: Duration of sex work, staff turnover in brothels, cost of sex, frequency of payment, sex frequency, and occurrence of sex during menstruation in DFSWs**

Mean # months working in brothel (median)	19.1 (12)
Time in this brothel (median # months)	7.7 (5)
Brothel size –mean (median)	8.3 (6)
Mean cost of sex (median)	5,000 (~US\$1.3)
Proportion paid on a monthly basis	57.0%
Mean number of clients in last day (median)	3.1 (2)
Proportion reporting sex while menstruating	25.1

Overall more than twice as many karaoke workers reported selling sex in the past year as beer promoters (63.5% vs. 30.6%). Most of the beer promoters reported living with a family member; 71% lived with a parent, relatives or husband. There is an association between whether beer promoters live with their families and whether they sell sex. In the cities and provinces where more beer promoters live with their families and less are

recent migrants, less report selling sex and more report being currently married. Across all provinces, IDFSWs who were not living with their families were significantly more likely to report selling sex in the past year than women who lived with their families; (53.5% vs. 19.9% respectively).

**Table 6: Distribution of socio-demographic characteristics and commercial sex in beer promoters by city**

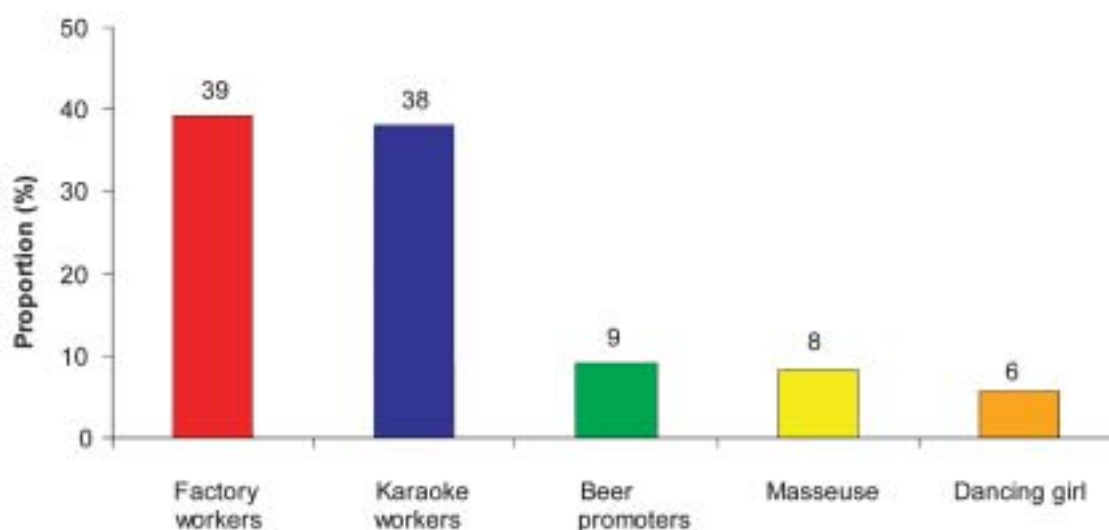
	N	% Currently living with family*	% Currently married	% Sweetheart in the past year	% Recent migrant	% Sold sex in the past year
Phnom Penh	106	80.4	24.3	40.2	18.7	25.2
Sihanoukville	56	53.4	16.1	37.5	55.4	28.6
Siem Reap	85	38.8	11.8	64.7	37.6	56.5
Battambang	80	60.0	30.0	60.0	22.5	31.3
Kg Cham	73	18.9	1.4	73.0	27.0	60.8
Overall**	400	71.3	22.7	46.0	21.9	30.4

\* Family refers to living with parents, relatives or husband

### 1.5. Employment history of direct female sex workers

About half of DFSWs reported that commercial sex was their first employment (46%), whereas others reported previous work in karaoke bars (20%), in factories (15%), as dancing girls (7%), as masseuses (6%), or as beer promoters (6%). This suggests that urban women move from low paying jobs into brothel based sex work. As shown in figure 2, the ones who reported a paid activity prior to sex work were mostly previously working as factory workers or as karaoke workers (39% and 38% respectively).

**Figure 2: Profession prior to brothel based sex work among DFSWs reporting previous employment**

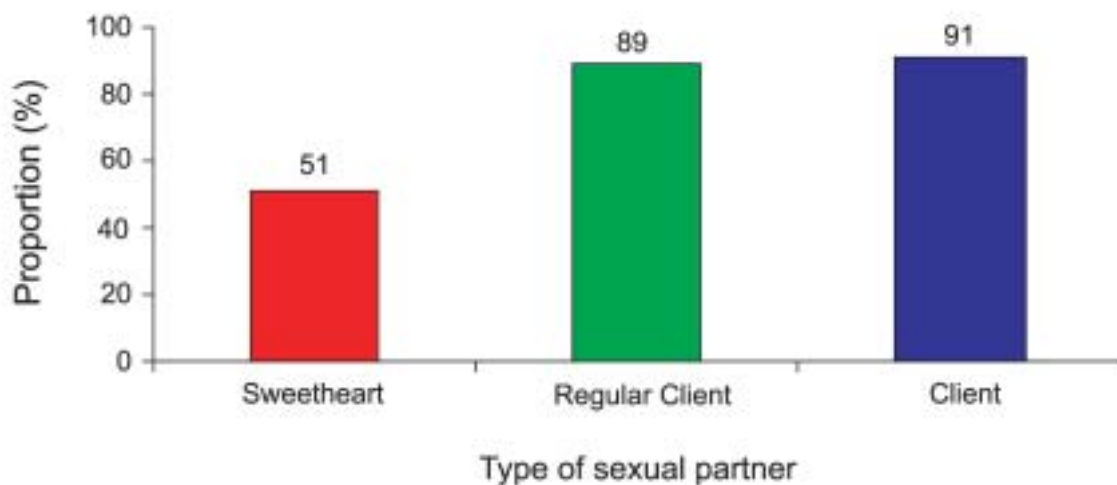




## 1.6. Condom use in female sentinel groups

Brothel based sex workers reported an extremely high frequency of condom use; 91% of brothel based sex workers reported consistent condom use with clients in the past week, whereas 96% reported condom use at last commercial sex. The frequency of condom use with regular clients was also high with 89% reporting consistent condom use in the past week and 97% at last sex with regular client (figure 3). Almost all DFSWs reported that condoms were available at their work place (98%). In sexual intercourse with sweethearts, however, half of the DFSWs remained unprotected with 51.5% reporting consistent condom use in the past week (figure 3) and only 59% at last sex.

**Figure 3: Consistent condom use in past week among DFSWs by type of sexual partner**

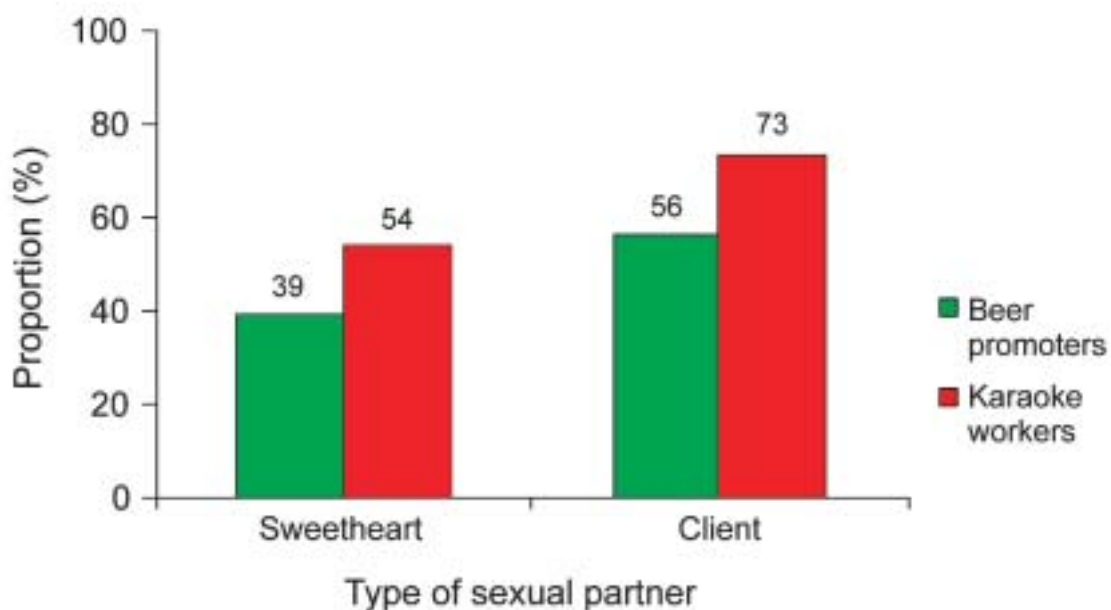


Among indirect sex workers, karaoke workers reported more consistent condom use in commercial sex than beer promoters. While 73% of karaoke workers reported always using condoms with clients in the past 3 months and 90% at last commercial sex, only 56% of the beer promoters reported always using condoms with clients in the past 3 months and 83% reported using a condom at last commercial sex.

IDFSWs reported less protected sex with sweethearts than with clients (figure 4). 39% of beer promoters and 54% of karaoke workers reported consistent condom use with sweethearts in the past 3 months, whereas 58% versus 75% reported condom use at last sex with sweethearts.



**Figure 4: Consistent condom use in the past 3 months by type of sexual partner in IDFSWs**



**Figure 5: Proportion of DFSWs reporting consistent condom use in the past week in commercial sex and IDFSWs reporting consistent condom use in the past 3 months by province**

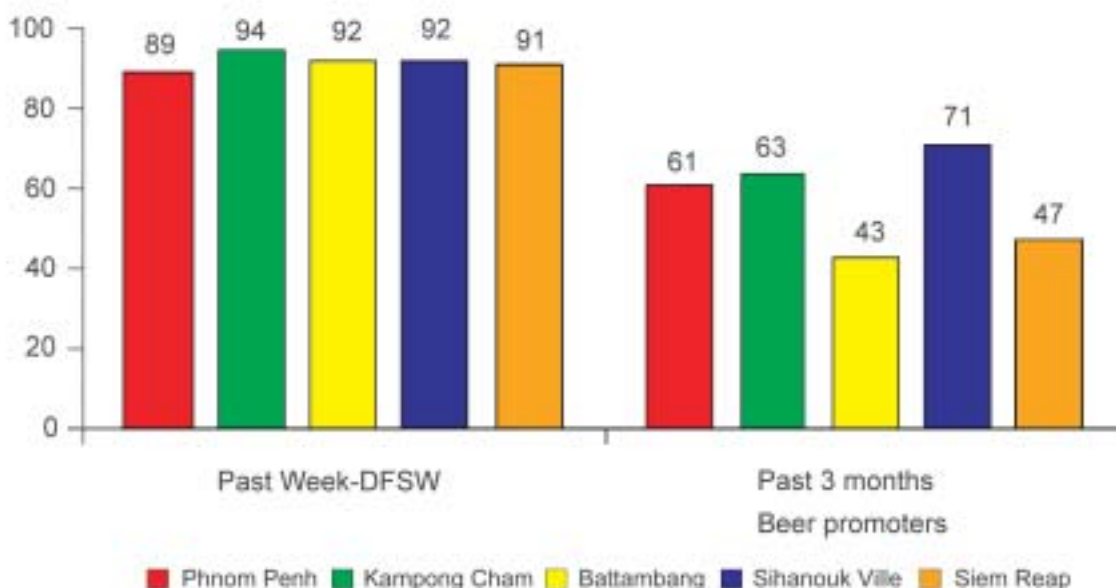


Figure 5 shows that the proportion of DFSWs reporting consistent condom use with clients in past week is comparable between BSS provinces. Conversely the proportion of beer promoters reporting consistent condom use in commercial sex in the past 3 months is not evenly distributed. Fewer beer promoters from Battambang and Siem Reap reported consistent condom use with clients in the past three months than in other cities (43% and 47% respectively).

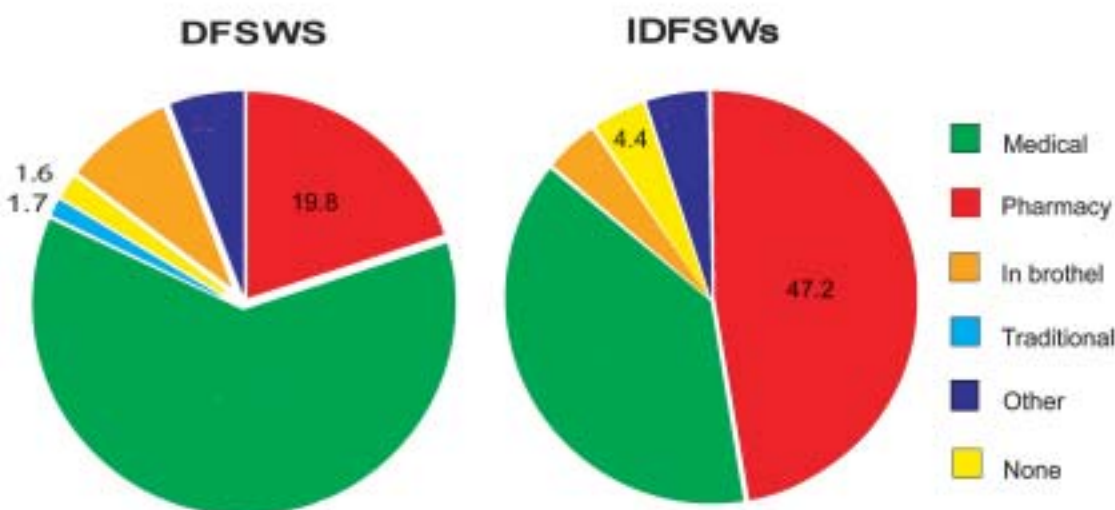
### 1.7. Perceived morbidity from sexual transmitted infections and care seeking behaviors in female sentinel groups

Vaginal discharge is one of the symptoms of STIs in women but it also occurs in the absence of any genital infection. Moreover, the perception of a vaginal discharge as being abnormal is subjective and varies among women. Hence, this variable does not provide any measure of the prevalence of STIs in the sentinel groups but is an estimate of the perceived morbidity from STIs. In this report the number of sex workers reporting a perceived morbidity from STIs serves as a denominator to calculate the proportion of sex workers seeking for treatment.

Overall 51% of the DFSWs reported abnormal vaginal discharge in the past year; 42% of those reporting discharge first sought treatment at a government hospital, followed by 20%, 11%, 14% who first sought care at a pharmacy, private clinic or in the brothel, respectively (see figure 6). Only 5% reported not seeking any treatment.

In IDFSWs, out of the 42% of the beer promoters and karaoke workers who reported abnormal vaginal discharge in the past year, almost half (47%) first sought care at a pharmacy, followed by 20%, 19%, 4.3% who sought care at a private clinic, hospital or traditional healer, respectively and 4.4% who did not seek treatment (see figure 6). Karaoke workers had slightly different health seeking behavior for symptoms of STIs: 28.5% attended first to pharmacies, whereas 17.5% went to private clinics, 28.2% to a public clinic or hospital, 1% to a traditional healer, and a surprising 20% reported not getting any treatment.

**Figure 6: First source of care at last episode of abnormal vaginal discharge**

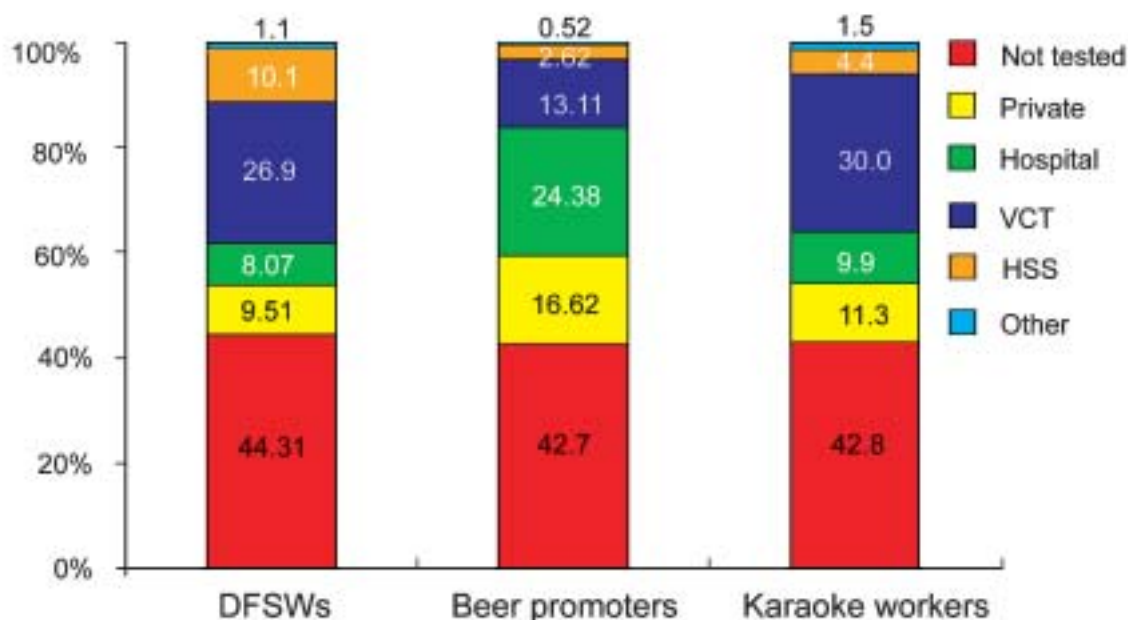


## 1.8. HIV Testing in female sentinel groups

The majority of direct sex workers reported having ever been tested for HIV (52%). Almost half of the DFSWs who had been tested reported having taken their last HIV test in a voluntary testing centre (43%) and 75% reported receiving counselling at their last HIV test (see figure 7). Almost equal proportions of each type of IDFSWs reported ever being tested for HIV; 56% of the beer promoters and 57% of karaoke workers. Testing sites for beer promoters and karaoke workers included private labs (29% and 20% respectively), hospitals (46% and 17%), voluntary centers (21% and 52%) and through the sentinel surveillance program (3% and 7%). Among the IDFSWs who have ever taken a HIV test, 76% of beer promoters and 79% of karaoke workers reported receiving counselling at their last HIV test.

The provision of counselling services varied with testing sites. In voluntary testing centers 98% of DFSWs, 98.2% of beer promoters and 97.5% of karaoke workers reported being counselled. In private labs 45.8% of DFSWs, 49.5% of beer promoters and 28.1% of karaoke workers reported being counselled. In hospitals 89.9% of DFSWs, 85% of beer promoters and 83.5% of karaoke workers reported receiving counselling. Therefore, virtually all of those at VCT and less than half of those tested at private labs reported receiving counselling. However, the understanding of the concept of counselling, a word that is not part of the Khmer language, might differ widely among respondents.

**Figure 7: Never tested for HIV or type of facility in which last HIV testing was performed in female sentinel groups**



## 2. MALE SENTINEL GROUPS

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The comparison of the males from BSS sentinel groups with the men from the general population in the household survey conducted in 2000 (BSS IV) has highlighted that the urban men followed in BSS present a higher frequency of risky behavior for acquiring and transmitting HIV than most of the urban Cambodian men. In BSS V, the three male sentinel groups were the military, policemen, and mototaxi drivers.



Police

n = 498



Mototaxi driver n = 651



Military n=678

## 2.1 Social and demographic characteristics of male sentinel groups

Most of the men in the BSS V sentinel groups were currently married, had at least primary education, and were long term members of their local communities (i.e. few are recent migrants) (see Table 7 below). Policemen were slightly older than other male occupational groups. The mean age of police was 36 years vs. 34 years for military and 33 years old for mototaxi drivers. Few men reported no schooling. While 81% police had attended secondary and high school, almost half of the military and most of the mototaxi drivers had only attended primary school. Compared to men from other male sentinel groups, fewer military were currently married, and more policemen were long term members of their local communities.

Incomes varied greatly by profession, with the mean monthly income being the highest in mototaxi drivers and the lowest in military. Military were less educated, less likely to be married and reported lower incomes than men in other sentinel groups. Although military were the most mobile with almost one third reporting traveling for at least a month in the past year, their duration of travel was shorter than that reported by the men in the other groups. Fewer mototaxi drivers reported traveling; however, when they traveled they spent on averaged more time away from their families than the other groups (mean of 3.7 months vs. mean of 1.9 months for military and 2.5 months for police).

About half the men in all groups reported drinking once a week or less in the past month. The police, however, reported more drinking episodes in the past month than the two other male sentinel groups,, with a third reporting drinking twice a week or more and 7% reporting daily drinking. While almost 20% of military and mototaxi drivers reported drinking at least twice a week, a similar proportion of military and mototaxi drivers reported never drinking (33%). Alcohol abstinence was less common in police (14%).

**Table 7: Socio-demographics and alcohol abuse patterns in male sentinel groups**

	Military (n=678)	Police (n=498)	Motos (n=651)
Mean age	34.1	36.3	33.2
% Currently married	67.4	84.9	82.5
% Migrated to this city in past year	2.9	<1	6.1
Education			
% no school	7.1	>1	>1
%1-7 years schooling (primary)	48.8	18.6	55.1
% 8-11 years schooling (secondary)	54.9	40.1	27.2
% >11 years (high school)	9.2	41.2	17.0
Mean # years of education (median)	6.3 (7)	9.1 (9)	7.4 (7)
Mean income Riels/month (median)	95,993 (78,000)	135,605 (90,000)	196,093 (200,000)
% Traveled > 1 month in past year	27.0	13.0	9.7
Mean # of months away at last trip (median)	1.9 (1)	2.5 (1)	3.7 (1)
Frequency of alcohol intake in past month			
Daily	6.7	7.1	5.4
Twice or more a week	19.1	32.6	17.2
Once a week or less	52.8	46.6	44.3
Never	21.5	13.7	33.2



## 2.2. Sexual initiation and sexual behavior in male sentinel groups

The median age at first sex for these urban males was 21 and 22 for policemen (see Table 8). Most of the never married men reported being sexually active: 94% of never-married police, 79% of never married military and 70% of never-married mototaxi drivers. The average age at first marriage was 24 for military and mototaxi drivers, and 25 for police. The males from the BSS V sentinel groups had spent on average 3 years between first sex and marriage. The number of lifetime sexual partners varied greatly by sentinel group. Police reported the most lifetime partners (mean of 33, median 10) with few reporting only one partner (8.5%). The military reported fewer lifetime partners than police (mean of 18, median 7), with 23% reporting one lifetime partner. Mototaxi drivers reported the fewest lifetime partners (mean 13, median 4) and almost half had only one lifetime partner (45%). In each male sentinel groups, about one third of the interviewees reported their first sexual partner to be either their wife, a sweetheart, or a FSW. Mototaxi drivers, however, were more numerous to report initiating their sexuality with their wife (42%) (see Table 8 below).

**Table 8. Sexual behaviors in male sentinel groups**

	Military (n=678)	Police (n=498)	Motos (n=651)
Mean age at first sex (median)	21.6 (21)	22.8 (22)	21.8 (21)
First sexual partner: Wife	32.7	37.8	42.1
Sweetheart	29.0	34.1	27.2
FSW	29.5	23.7	22.9
Other	3.7	2.9	3.1
% Ever had sweetheart	48.9	59.8	41.9
% Ever had sex with sweetheart out of men with sweetheart	69.5% n = 403	70.7% n = 324	66.9% n = 341
% Ever had sex with sweetheart out of total men	41%	46%	35%
% Provide money to sweetheart			
Every time have sex	4.7	2.8	4.0
Weekly or monthly	5.0	1.0	1.0
Occasionally	20.0	28.1	27.5
Never	70.3	68.1	67.5

## 2.3. Sweethearts or non commercial and non marital partners

Sweethearts are non marital partners, which are not necessarily “regular” partners but are often sexual partners (almost half of the men across all the groups reported ever having had sex with a sweetheart). More than half of the men from the male sentinel groups reported ever having had a sweetheart. Among the three male sentinel groups the reports of having a current sweetheart ranged from 2 to 8% in currently married men, and from 10 to 16% in unmarried men, producing an overall percentage of men with current sweetheart ranging from 5-9%. About half of the men with sweethearts reported intending to marry their sweethearts: 44%, 41%, and 52% among military, police

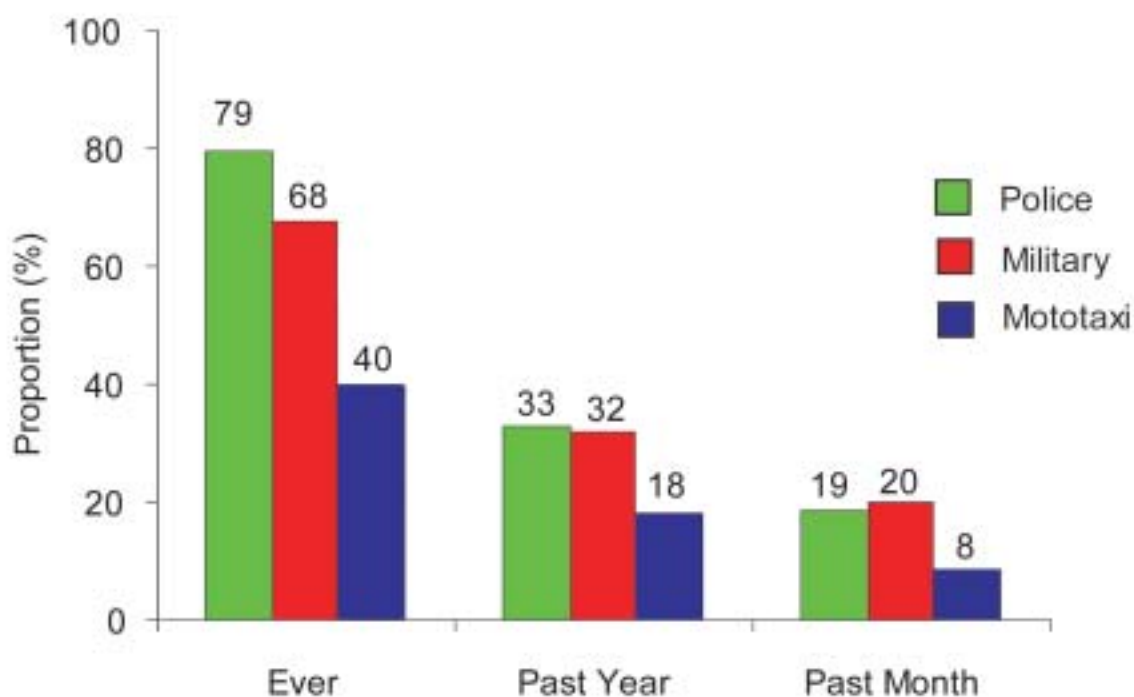
and mototaxi drivers respectively. Most men (about 70%) reported not providing financial support to their sweethearts. Among the men who supported their sweethearts financially most did not provide them with money on a regular basis.

Men from the sentinel groups were asked if in the past year they had sex with a woman that was not their wife, their regular sweetheart, their mistress or a sex worker. More police reported such casual partners (20%) than either military (5.5%) or mototaxi drivers (9.7%).

#### 2.4. Attendance to sex workers in males from sentinel groups

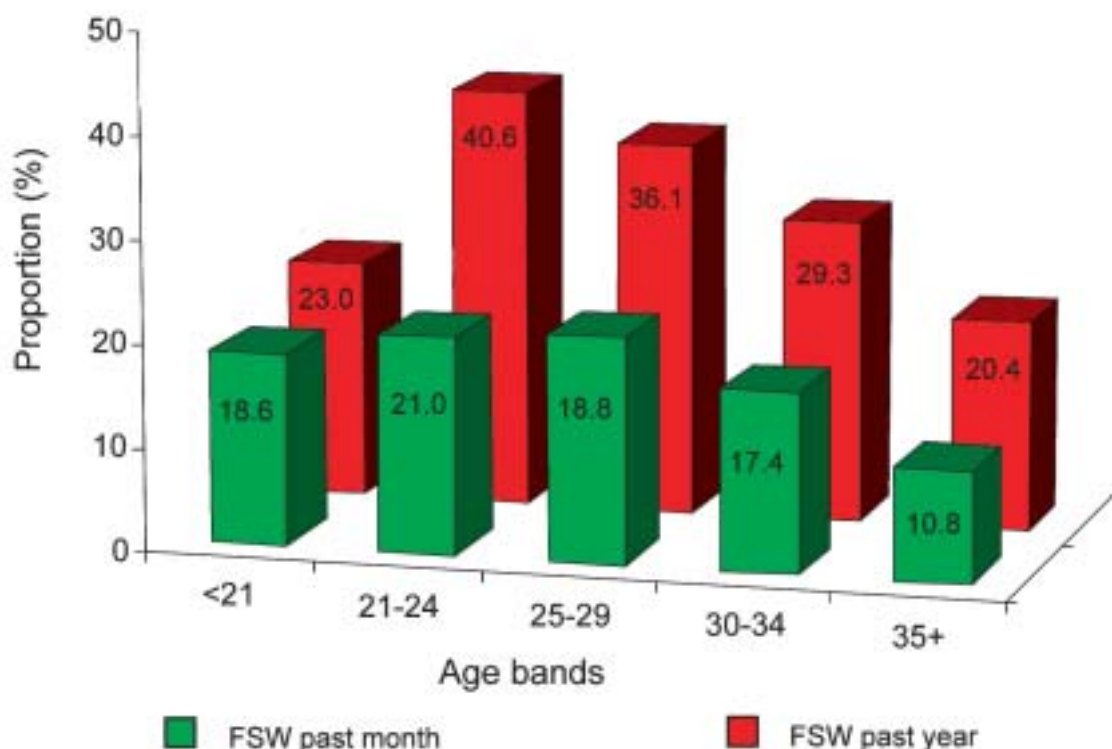
In BSS 2001, 80% of the military, 68% of the police, and 40% of mototaxi drivers reported ever having had sex with a sex worker. About one third of military and police reported having had sex with a sex worker in the past year and about 20% in the past month. Compared to other male sentinel groups, fewer mototaxi drivers reported sex with a sex worker in either the past year (18%) or the past month (8%) (see figure 8 below).

**Figure 8: Proportion of men from sentinel groups reporting having had sex with FSWs in lifetime, past year, and past month**



In the male sentinel groups, a large proportion of the men aged 20 to 35 reported having had sex with sex workers in the past year, whereas fewer men aged more than 35 did. The age group 20-24 reported more commercial sex in the past year or in the past month than any other age group (see figure 9). This is also the age band in which most Cambodian men initiate sexual activity and get married.

**Figure 9: Sex with female sex workers in the past month and in the past year in all males from sentinel groups**



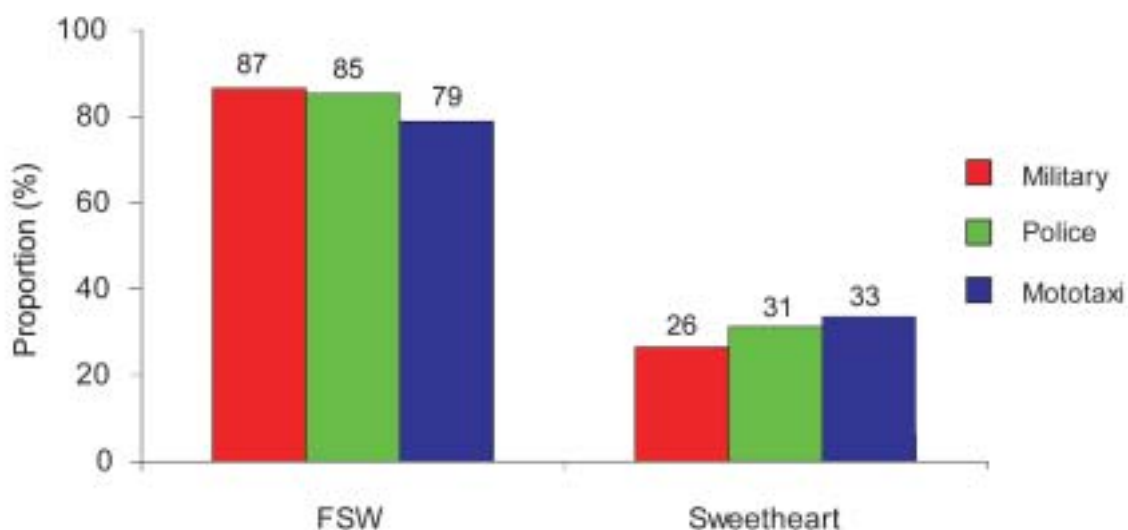
The majority of the men from the BSS V sentinel groups reported that their last commercial sex took place at a brothel: 91.2% of military, 74.5% of police, and 87.2% of mototaxi drivers. In the male sentinel groups other than police, a small proportion of commercial sex involves IDFSWs as 12.8% of the mototaxi drivers and 8.8% of the military reported last commercial sex with a non brothel based sex worker. Compared to other sentinel groups, more policemen(25.5%) reported having had their last commercial sex with an IDFSW. However, because men in the BSS may represent middle to lower income Cambodian men, it is not clear if wealthy Cambodian men may have more sex with other types of women.

## 2.5. Condom use in male sentinel groups

In the male sentinel groups, condom use with commercial partners was measured by both the reported condom use at last sex, and the reported consistent condom use in the past 3 months. Reported condom use at last commercial sex was high: 91.1%, 94.1%, and 87.3% in military, police, and mototaxi drivers respectively. As shown in Figure 10 below, men reported more consistent use of condoms in the past 3 months with DFSWs than with sweethearts.

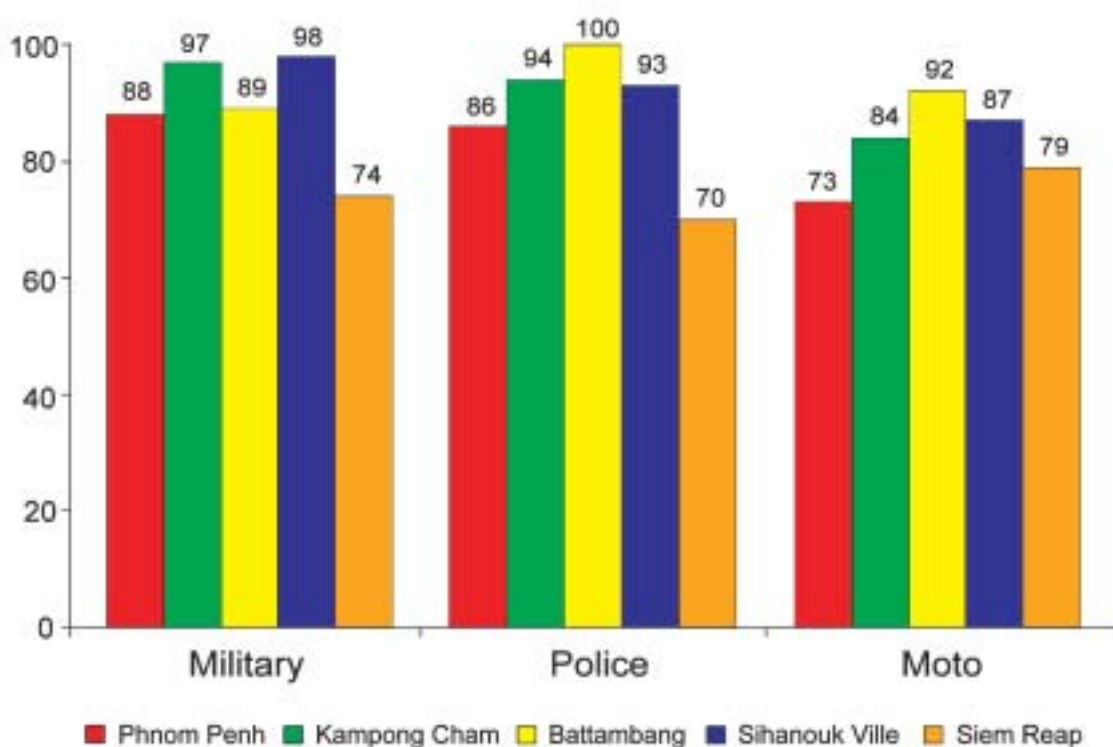


**Figure 10: Proportion of men from sentinel groups reporting consistent condom use in the past 3 months with FSWs and sweethearts**



A large proportion of men from the sentinel groups reported never using condoms with sweethearts (52.8% of military, 33.1% of police, and 38.9% of mototaxi drivers). Figure 11 below shows condom use at last sex by male sentinel groups and by province. The highest reported consistent condom use in sex with DFSWs in the past 3 month was measured in Sihanoukville for the military, and in Battambang for the police and mototaxi drivers.

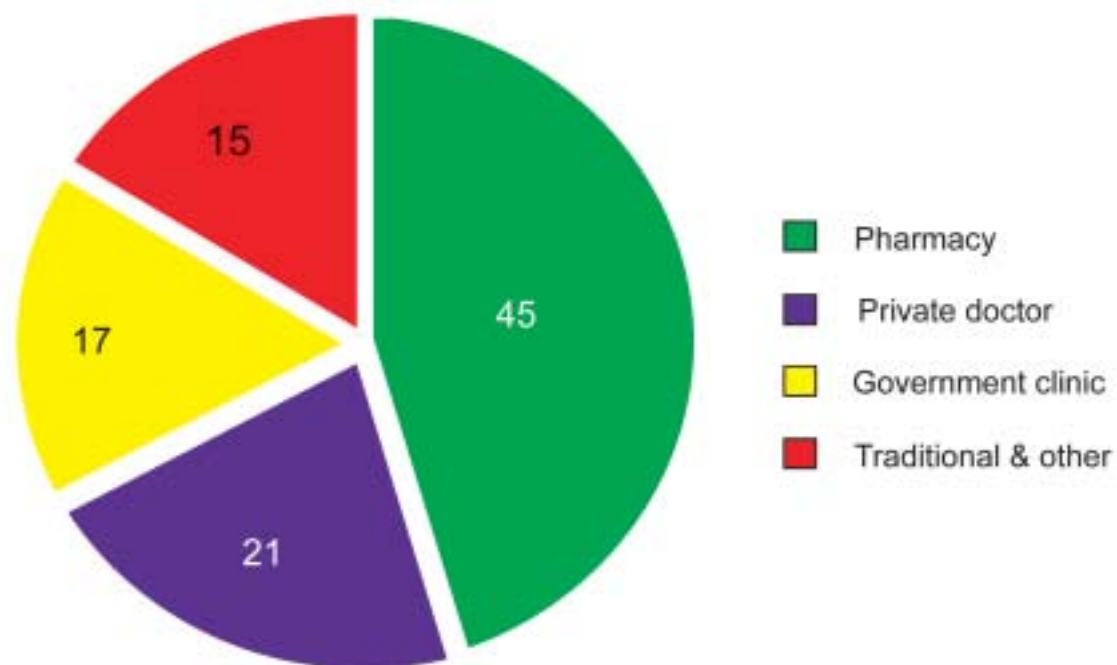
**Figure 11: Consistent condom use in the past 3 months with brothel based sex workers by province and by male sentinel group**



## 2.6. Perceived morbidity from Sexually transmitted infections (STIs) and care seeking behaviors in male sentinel groups

Overall 5.7% of all men reported having had an episode of urethral discharge in the past year. Of those reporting urethral discharge in the past year, 45% reported first seeking treatment at a pharmacy, 38% received medical treatment (21% sought care from a private clinic and 17% from a government clinic), and 15% went to a traditional healer (see figure 12). Only one individual reported not getting treatment. Among the men reporting an episode of urethral discharge, few notified this episode to their wife (17%), and almost none to their sweetheart (only 1%). Men disclosed their symptoms to pharmacists or drug sellers (25.4%), medical personnel (22%), friends (20.1%), or someone else (9.4%), and very few (4.0%) reported not talking to anyone.

**Figure 12: Care providers at last episode of urethral discharge in all male sentinel groups**

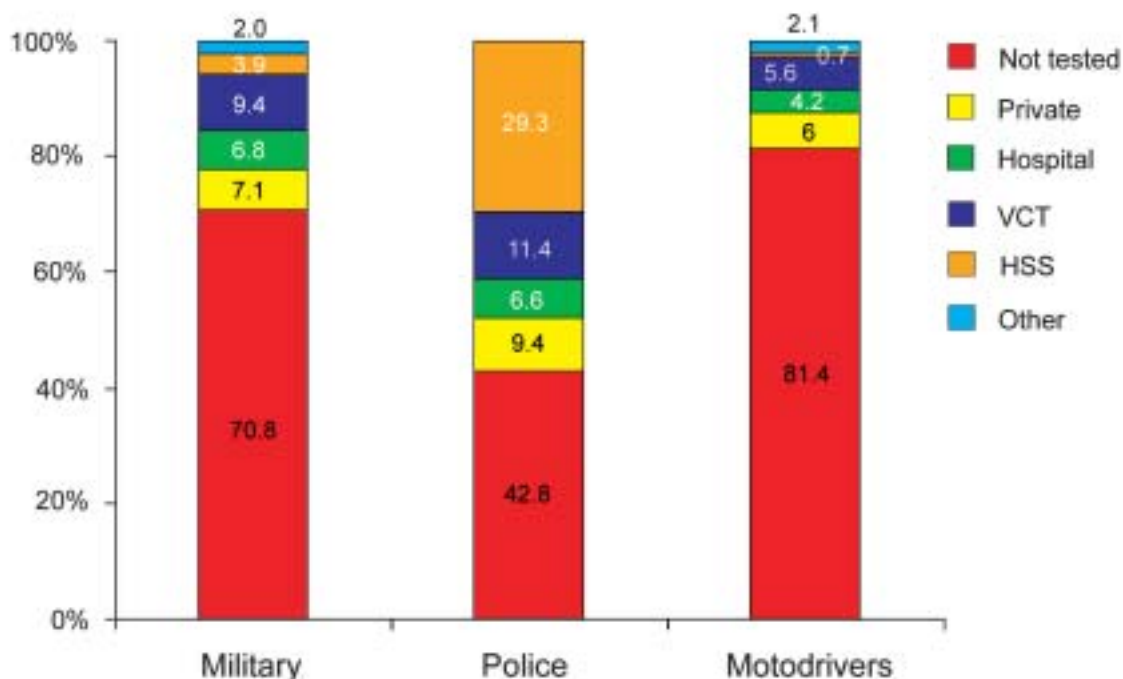


\* Only 1 man reported no treatment, only 6% reported symptom in the past year

## 2.7. HIV testing in male sentinel groups

Almost one third of all men from the sentinel groups reported ever having been tested for HIV (24.4% of military, 51.6% of police, and 15.6% of mototaxi drivers). Location of last test included private laboratories (9% of military, 10% of police and 3% of mototaxi drivers), hospitals (8% of military, 8% of police and 5% of mototaxi drivers), voluntary testing centres (10% of military, 13.5% of police and 8.6% of mototaxi drivers), or through the sentinel surveillance program (2% of military, 20% of police and 1% of mototaxi drivers) (see figure 13). Among those reporting getting tested, 57% reported having received counselling at their last HIV test. Excluding those tested through HSS who are not informed of their test results, 60% of military, 79% of police, and 65% of mototaxi drivers reported being counselled the last time they were tested for HIV.

**Figure 13: Never tested for HIV or type of facility in which last HIV testing was performed in male sentinel groups**

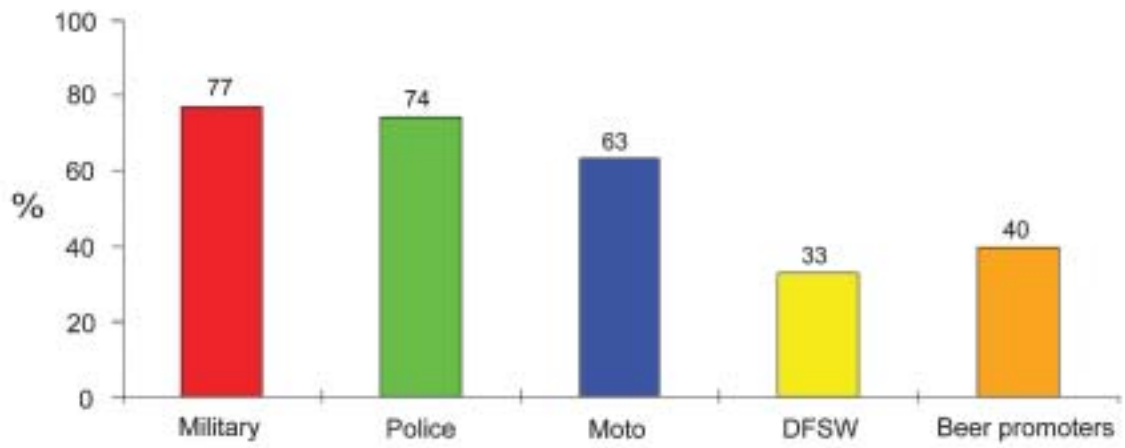


## 2.8. Knowing someone affected by HIV or AIDS: male and female sentinel groups

The majority of the men from the sentinel groups reported knowing someone who has been sick or died from HIV/AIDS (three quarters of the military and police and 63% of motodriver), which is almost twice as many as reported by the female sentinel groups (figure 14). This difference may reflect the large age differences between the male and female groups as the mean ages of police, military, and motodriver are over 30 whereas the brothel based sex workers and beer promoters are only in their early twenties (22 and 24 respectively). Older people are more likely to have peers who have been infected by HIV in the past and who would now be sick or dying of AIDS.

The survey did not find any significant effect of knowing someone sick or who has died of AIDS towards either the frequency of attendance to FSWs or consistent condom use with brothel based sex workers. A similar proportion of motodriver and military who knew someone dead or sick with AIDS reported sex with sex workers in the past year as those who did not know anyone with AIDS. Although the proportion of policemen who reported having visited sex workers in the past year was lower in the ones who knew someone with HIV/AIDS compared to others (29% versus 43%), this difference was not statistically significant. Consistent condom use with DFSWs in the past 3 months was comparable between the sentinel groups who knew someone sick or who died from AIDS, and others.

**Figure 14: Proportion reporting knowing someone sick or who died of HIV/AIDS by sentinel group**



# VI. Trends BSS I-V: 1997- 2001

## 1. Introduction

Measuring trends in risk behaviors over 5 years among the sentinel groups provides a picture of changes in sexual behaviors in Cambodia. Two important issues regarding the data used for the construction of the trends must be recognized. On the one hand, the data published in the present report were weighted to reflect the population size of each city covered by BSS V. On the other hand, different methods were employed to measure consistent condom use across the behavioral surveys. In the first three years of the BSS, consistent condom use was measured both by a direct question on overall consistency of condom use and by counting episodes of condom use over a limited period of time with the help of a calendar. The precision of the measure of consistent condom use increased in BSS III, when the wording of the questionnaires precised the time period in which condoms were used (last week in DFSWs and past 3 months for men and IDFSWs). In previous BSS reports, the data from the calendar were also used to construct a measure of consistent condom use. However, the calendar was dropped from the BSS survey after 1999 because it took too long to administer and it was complicated to create the variable for consistent condom use. Therefore, trends in consistent condom use from this report are based on the overall measure of condoms gathered from the questionnaire, which existed in all years of the survey. These two issues explain why the prevalence points of consistent condom use presented in the present trend analysis are different from those reported in previous BSS reports.

## 2. Sample sizes from BSS I to V

Relatively large sample sizes have been collected each year in BSS in order to have enough power to detect some changes in behavior both at the national level, and at the provincial level for each of the sentinel groups.

**Table 9. Sample sizes from BSS I, II, III, and V**

	BSS I	BSS II	BSS III	BSS V
DFSWs (brothel based)	245*	804	792	569
Beer Promoters	581	406	379	402
Karaoke	—	—	—	163
Working Women**	1370	1011	—	—
Policemen	210	405	674	498
Military	195	344	808	678
Motodriviers	570	756	746	651
Vocational Students/Working men**	1183	553	—	—
<b>Total</b>	<b>4,356</b>	<b>4,275</b>	<b>3,400</b>	<b>2,961</b>

\* DFSWs in only two of the five cities were included in 1997: Phnom Penh and Siem Reap

\*\* The sampling frame for working men and women included low paid government employees, factory workers, and hotel workers.

### 3. Behavior change among female sentinel groups

Across the past five years, reported consistent condom use with clients has increased in both direct and indirect sex workers and in each sentinel city. Between 1997 and 2001, consistent condom use reported by brothel based sex workers has increased by 138% (an increase of over 50 percentage points), which represents 30% change between 1997 and 1998, 61% between 1998 and 1999, and 13% between 1999 and 2001.

Consistent condom use in commercial sex as reported by IDFSWs has stepped from 11.0% in 1997, to 25.3% in 1998, 39.1% in 1999 and 58.8% in 2001, realizing 435% of increase from its 1997 level.

The proportion of DFSWs reporting using condom at last commercial sex increased from 87.6% in 1997, to 90.4% in 1998, 96.4% in 1999 and 96.6% in 2001. Across all years of BSS the proportion of DFSWs reporting condom use at last sex has always been higher than any other measures of condom use, which are collected from longer retrospective periods. Therefore the variable condom use at last sex does not capture well the amount of protected sex, and is an indicator that is a little sensitive to change.

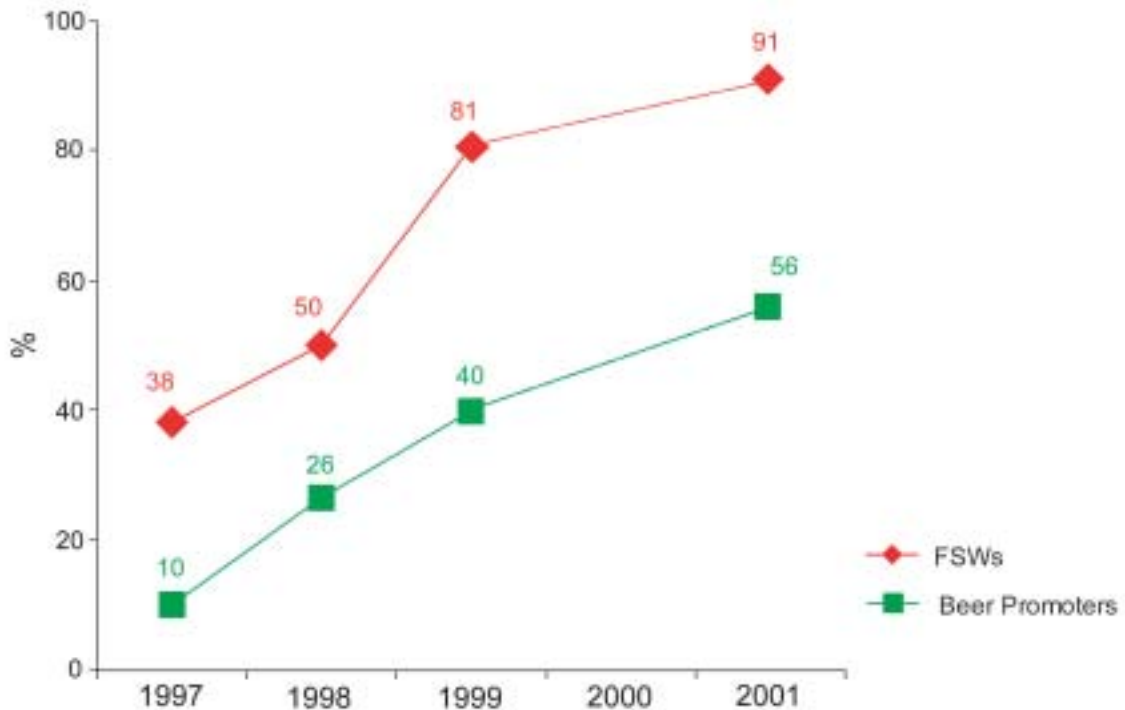
BSS I (1997) only surveyed DFSWs in two of the five cities (Phnom Penh and Siem Reap). To make the data comparable between years, an analysis was conducted to examine the consistent use of condoms in the past week in DFSWs from the two cities. This analysis was weighted to reflect the different population size of sex workers in these two cities. This produced the consistent condom use prevalence rates reported in Table 10 below. Comparison between the proportion of DFSWs reporting consistent condom use in the past week from two cities with 5 cities shows a slight difference and a statistically significant trend at the same level for both analyses, demonstrating that it is valid to use the combined data and percentages across cities for the analysis of this variable.

**Table 10: Proportion of direct sex workers reporting consistent condom use with clients in the past week: 1997-2002 in Phnom Penh and Siem Reap\***

	1997 BSS I %	1998 BSS II %	1999 BSS II %	2001 BSS V %	Pearson chi-square
All Cities n = 2406	38.2	50.0	80.6	90.9	F=105.5190 p < 0.0001
Phnom Penh & Siem Reap n = 1121	38.2	54.1	84.1	89.1	F= 51.63 p < 0.0001

\* BSS I, II time frame not specified, BSS III and V condom use in past week.

**Figure 15: Trend 1997 -2001: Consistent condom use in commercial sex in the past week in DFSWs, and in the past 3 months in beer promoters**



Age and level of education are irregularly distributed across the five year period 1997 - 2001 (see Table 11 below). Conditions of sex work also changed as DFSWs reported staying longer in their profession and in the brothel where they are currently working. At the same time the number of clients per DFSW per day slightly decreased and more DFSWs reported getting tested for HIV. Among DFSWs the mean age at first sex, the proportion with regular clients, and the proportion reporting sweethearts did not significantly change over time.

Among IDFSWs, the proportion reporting selling sex in the past year increased significantly from 12% to 30%, which is more than doubling over the five years. During the same period those reporting being tested for HIV tripled from 17% to 56% (Table 11). In IDFSWs the mean age at first sex, the proportion of currently married and the proportion reporting having a sweetheart did not significantly change over time. Finally, since 1998 respondents were asked if they knew someone sick with HIV/AIDS and these numbers increased considerably over the 3 years, from 7% to 34% among DFSWs and from 8% to 39% among IDFSWs.

Reported working duration in each brothel has increased steadily going from about 6 months (median of 3) in 1997 to about 8 months (median 5) in 2001. The price per sexual intercourse did not change between 1997 and 2001, with a median price remaining at 5000 Riels. Changes in conditions of sex work from year to year are slight and may be fluctuations due to sampling issues, seasonal differences, or other changes that do not represent overall temporal change.

**Table 11: Demographic characteristics, HIV testing, knowledge of HIV affected individuals, having regular client, having sweetheart, brothel size, sex work duration in DFSW and IDFSW from BSS I-V**

	DFSW					IDFSW				
	1997	1998	1999	2001	p-value*	1997	1998	1999	2001	p-value*
Mean age (Median)	21.7 (21)	21.7 (20)	21.6 (20)	22.4 (21)	0.02	22.1 (22)	22.8 (23)	22.7 (23)	23.8 (23)	<0.001
% No education (Mean # year of education)	40.9 (2.4)	38.5 (2.6)	50.2 (2.0)	46.4 (2.3)	0.03	8.3 (5.9)	12.2 (5.3)	9.7 (5.3)	16.2 (4.8)	0.001
Mean age at first sex	17.5	17.6	17.6	17.7	0.23	18.6	18.3	18.5	18.7	0.65
% Currently married						25.4	30.4	29.7	21.7	0.59
% Currently having regular clients	60.5	47.5	48.5	58.6	0.34					
% Who had sweetheart in past year	41.3	41.5	34.6	47.5	0.36	42.1	36.8	45.1	45.7	0.34
% Ever tested for HIV**	26.6	35.1	30.6	52.4	<0.001	17.8	43.7	38.8	56	<0.001
% Knowing HIV infected person		7.4	22.2	33.9	<0.001		8.2	23.5	39.3	<0.001
Mean # clients in past day (Median)	4 (3)	2.9 (2)	2.6 (2)	3.1 (2)	0.009					
Mean # of DFSWs per brothel (Median)	5.4 (5)	6.6 (5)	6.4 (6)	8.4 (6)	<0.001					
Mean # of months spent in brothel (Median)	6.3 (3)	4.5 (2)	6.1 (3)	7.8 (5)	0.004					
Mean # years of sex work (Median)	1.8 (<1)	1 (<1)	1.2 (1)	1.7 (1)	0.09					
% selling sex in past year						11.9	16.3	25.4	30.6	<0.001

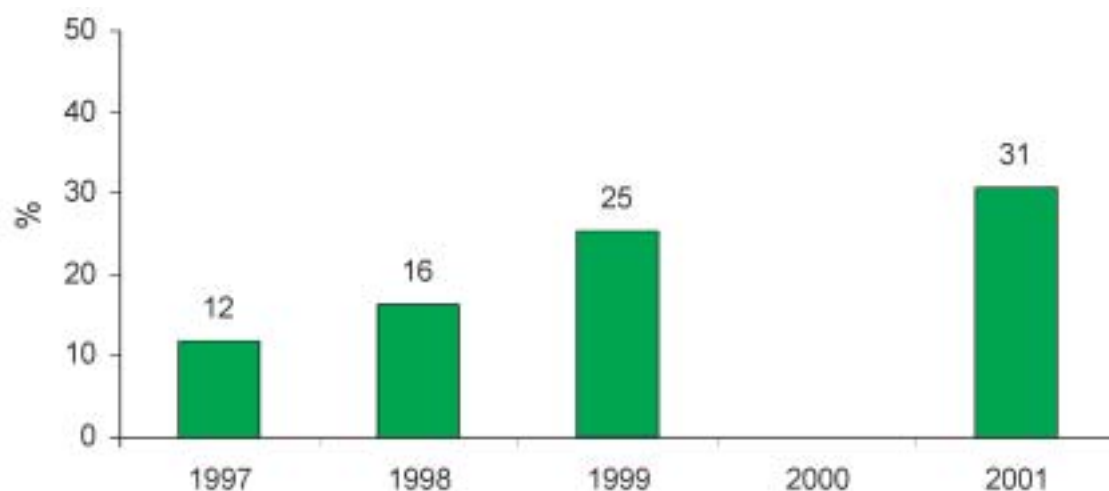
\* p-values based on univariate ordered logistic regression

\*\* Those tested through sentinel surveillance are coded as not tested as they did not have access to their serological status



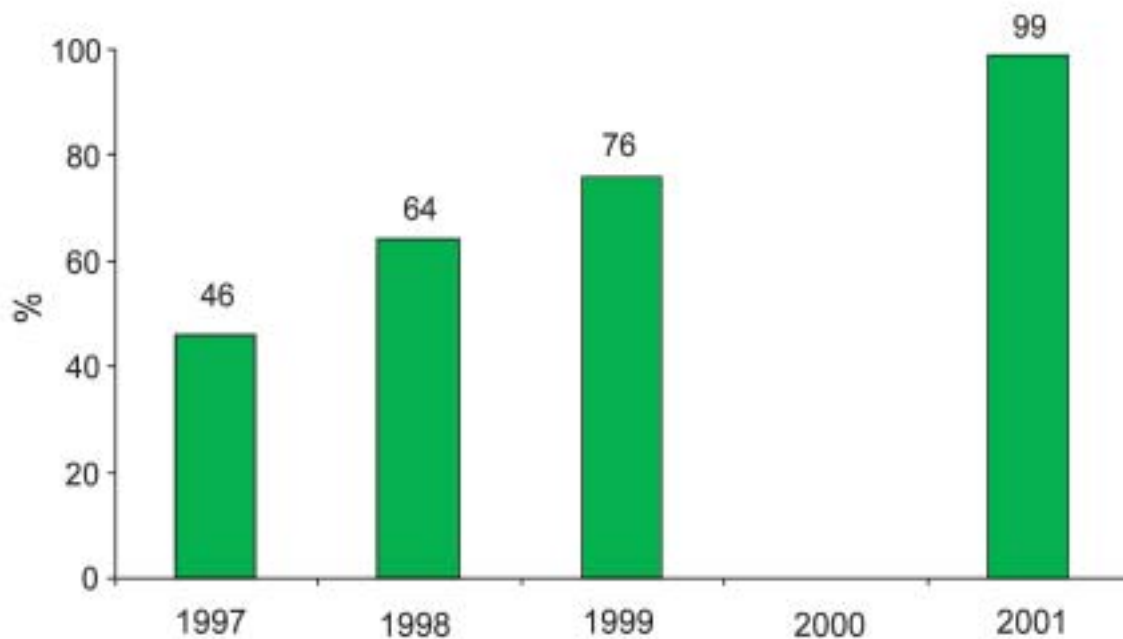
The proportion of beer promoters who reported engaging in sex work increased each year. Figure 16 below shows that the proportion of beer promoters who reported selling sex in the past year has more than doubled between 1997 and 2001, which represents 157% increase from the 1997 baseline.

**Figure 16: Beer promoters reporting selling sex in the past year: trend 1997 - 2001**



While the proportion of beer promoters reporting sweethearts in the past year changed little over the 4 year period (from 42% to 45%), the percentage who reported sex with a sweetheart in the past year increased significantly. Figure 17 below illustrates the rise of sexual activity with sweethearts in beer promoters which has increased by 115% from its initial value in 1997.

**Figure 17: Proportion of beer promoters with sweethearts in the past year reporting sex with sweetheart in the past year: trends 1997-2001\***

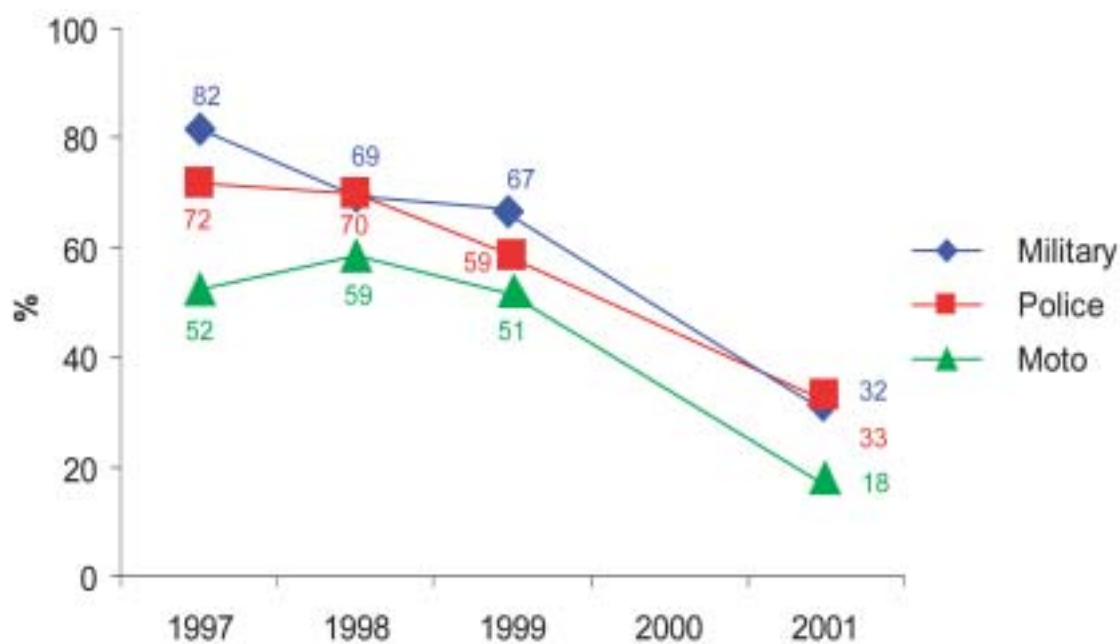


\* In 1997 beer promoters were asked if they had ever had sex with a sweetheart

#### 4. Behavior change among male sentinel groups

Some important changes in behaviors of Cambodian men from the sentinel groups have been observed over the 5 year period. Each year, less men reported buying sex whereas more men reported consistent use of condom with sex workers and sweethearts. The decrease in the proportion of men reporting sex with sex workers in the past year represents the biggest change in behaviors in BSS V (see figure 18 below). While the proportion of men reporting sex with a sex worker in the past year changed little from 1997-1999, in 2001 there was a decrease in all the male groups to almost half the level of 1999. This represents a drop of approximately 30 percentage points for military, police, and mototaxi drivers. It is unlikely that this difference is an artefact of sampling or interviewing because the decrease was reported in all the male groups and the decrease was of the same magnitude in all the sentinel groups. Clearly, fewer Cambodian men in these sentinel groups recently purchased sex than in previous years.

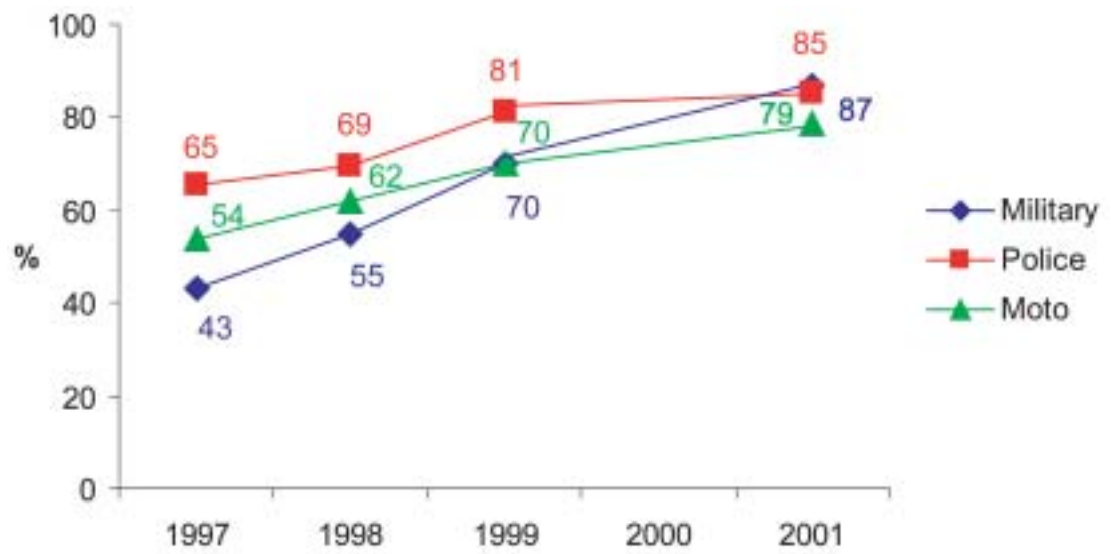
**Figure 18: Proportion of men reporting having had sex with FSWs in the past year by male sentinel groups: trends 1997 - 2001**



The rise in consistent condom use among men having sex with direct sex workers was observed in all male groups (figure 19).

Condom use at last sex with sex workers also increased significantly among military (from 81.6%, to 86.1%, to 94.1%, to 90.1%) and motodriver (82.4%, to 87.7%, 95.9, to 87.4%) but not among police who always reported more condom use than other male groups (from 95.6%, 94.3%, 95.6%, to 91.4%).

Figure 19: Consistent condom use in commercial sex in the past 3 month by male groups: trends 1997 - 2001



# VII. Conclusions, Recommendations & Implications: BSS I-V: 1997- 2001

## 1. GENERAL CONCLUSIONS

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- Condom use in commercial sex has risen among ALL risk groups; especially among DFSWs where it has reached around 90%.
- The greatest achievement in behavior change was noted in the male sentinel groups who reported significantly less commercial sex in the past month and in the past year than they did in the previous years of BSS. Simultaneously these men also reported a higher frequency of consistent condom use with sex workers.
- More men in all the sentinel groups reported sexual activity with sweethearts (non commercial and non marital partners).
- Almost all individuals in the sentinel groups who reported STI symptoms sought treatment for their symptoms. Most reported seeking medical treatment but many (especially men) still sought care at a pharmacy.
- In all groups, more individuals had ever been tested for HIV at VCT.
- Most of the individuals ever tested for HIV had received counseling, but less in the male sentinel groups than in the female sentinel groups.
- Many individuals in sentinel groups knew someone sick or who has died from AIDS. Nevertheless, more men knew someone affected by AIDS than the sex workers did.

## 2. CONCLUSIONS : FEMALE SENTINEL GROUPS

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- Socio demographic characteristics and working conditions of sex workers (direct & indirect) have changed little from 1997-2001.
- Sex workers did seem to be working longer and moving around less frequently as the reported duration of stay in each brothel and reported duration in sex work has increased for DFSWs.
- While more beer promoters reported selling sex than in the previous years of BSS, they reported less consistent condom use in commercial sex than DFSWs.
- Karaoke women reported behaviors similar to DFSWs and some DFSWs reported previously working as karaoke workers.

### 3. CONCLUSIONS: MALE SENTINEL GROUPS

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- Men from the Cambodian sentinel groups had many lifetime partners, and most had ever had commercial sex.
- Men in the sentinel groups reported that most of their encounter with commercial sexual partner occurred at a brothel (~80%).
- Although few men reported sex with non brothel based sex worker (IDFSW), more police reported sex with IDFSWs than men from other sentinel groups.
- More men in the sentinel groups reported sex with sweethearts than in the previous years of BSS and condom use with sweethearts is on the rise. However, condom use with sweetheart remained low.
- In males from BSS V sentinel groups, risk behaviors as measured by the proportion reporting commercial sex in the past year peaked among young adult males aged 21 to 24.

### 4. RECOMMENDATIONS

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- Future rounds of BSS should expand to other parts of Cambodia and should better understand how sex is initiated, sexual activity with non commercial partners (especially sweethearts), and drug abuse patterns.
- There is a need for better access to young males (in their 20's) – both with surveillance and interventions.
- Greater emphasis is needed to change STI treatment seeking behavior away from pharmacies and toward medical care, especially among men and IDFSWs.

### 5. IMPLICATIONS

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- The focus of intervention targeting sex workers should expand to include indirect sex workers as well as regular partners and sweethearts.
- Greater access to VCT is needed especially because hospitals and private clinics do not systematically provide counseling with testing. Program effort also needs to be directed towards increasing counseling for men who are tested.
- Condom promotion and risk behavior reduction has been highly successful to date in Cambodia. Efforts in behavior change intervention must be maintained to sustain this positive change.

## APPENDIX I: LIST OF BSS SUPERVISORS AND INTERVIEWERS, 2001

	NAME	SEX	ROLE	PLACE OF WORK
National level	<b>Heng Sopheab</b>	M	Team leader	NCHADS
	Mun Phalkun	M	Supervisor	NCHADS
	Chhea Chorvann	M	Supervisor	NCHADS
	Lim Yi	M	Supervisor	NCHADS
	Khol Vohith	M	Supervisor	NCHADS
	Theng Thithara	M	Supervisor	NCHADS
	Seng Sopheata	F	Supervisor	NCHADS
	Kao Chantha	F	Supervisor	NCHADS
Sihanouk ville	Cheng Sovanna	F	Interviewer	PHD
	Ty Vibolla	F	Interviewer	PHD
	Heng Dara	F	Interviewer	PHD
	Siphan Sovannara	M	Interviewer	PHD
	Chhim Kim Oun	M	Interviewer	PHD
	Touch chy	M	Interviewer	PHD
	Than Khung	M	Interviewer	PHD
	Kim Sitha	M	Coordinator	PHD
	Koeut Khanarith	M	Coordinator	PHD
	Chhem Samloth	F	Supervisor	PHD
	Cheam Mong	M	Supervisor	PHD
Kampong Cham	Tan Nuch	M	Interviewer	PHD
	So Mony	M	Interviewer	PHD
	Tong Kheang	M	Interviewer	PHD
	Bany Vuth	M	Interviewer	PHD
	Penh Sokunthy	F	Interviewer	PHD
	Seng Sophary	F	Interviewer	PHD
	Oi Chenda	F	Interviewer	PHD
	Chhun Sopheap	F	Supervisor	PHD
	Yung Serey	M	Supervisor	PHD
	Chhun Lipich	M	Coordinator	PHD
	Sim Khon	M	Coordinator	PHD
Siem Reap	Bou Sarinn	M	Interviewer	PHD
	Hang Sambopheaktra	M	Interviewer	PHD
	Mak Vanna	M	Interviewer	PHD
	Sok Meth	M	Interviewer	PHD

	NAME	SEX	ROLE	PLACE OF WORK
	Toch Savun	F	Interviewer	PHD
	Chan Than	F	Interviewer	PHD
	Sam Munty	F	Interviewer	PHD
	Oeun Sa Em	M	Supervisor	PHD
	Ear Sam Art	F	Supervisor	PHD
	Chea Sambath	M	Coordinator	PHD
	Tra Tim	F	Coordinator	PHD
Battambang	Proeung Sarao	M	Interviewer	PHD
	Sut Sameth	M	Interviewer	PHD
	Muth Phirom	M	Interviewer	PHD
	Choeun Sovanna	M	Interviewer	PHD
	Chhe Chakrya	F	Interviewer	PHD
	Oung Sophanary	F	Interviewer	PHD
	Ean Kim Eap	F	Interviewer	PHD
	Sou Narath	M	Supervisor	PHD
	Kim Sokhy	F	Supervisor	PHD
	Tun Sophal	M	Coordinator	PHD
	Lay Vichea	M	Coordinator	PHD
Phnom Penh	Chhun Chandarine	F	Interviewer	PHD
	Beng Horn	F	Interviewer	PHD
	Chan Sithan	F	Interviewer	PHD
	Krech Silean	M	Interviewer	PHD
	Vok Chandina	M	Interviewer	PHD
	Ngeth Sovan	M	Interviewer	PHD
	San Bunthan	M	Interviewer	PHD
	Chan Ann	M	Supervisor	PHD
	Sok Phalla	F	Supervisor	PHD
	Sor My	M	Coordinator	PHD
	Dam Phal	M	Coordinator	PHD

# APPENDIX II: QUESTIONNAIRES, 2001

## Cambodia Behavioral Surveillance Survey V 2001: MALE GROUPS

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[Introduction: (The following is to be read by the interviewer to the respondent): "The Ministry of Public Health is conducting a survey of people in many different provinces to learn more about their risk for certain infectious diseases. We would like to request your cooperation for no more than 30 minutes to ask you a few questions. Some of these questions are personal. You are free to refuse to participate or to terminate the interview at any time. All answers are totally confidential. I do not know your name and there is no way that anyone can learn how you answered these questions. Please be totally truthful in your responses. Your participation is very important and will help Cambodia to improve its health services for people like you."]

ID # .....

Cluster #.....

District Name .....

1. Group

1. Mototaxi-driver
2. Military
3. Police
4. Beer girls
5. Karaoke workers
6. CSWs

2. City/Province:

- |     |   |
|-----|---|
| PNP | 1 |
| KCH | 2 |
| BTB | 3 |
| SKV | 4 |
| SR  | 5 |

3. Date: .....

4. Interviewer: .....

5. How old are you..... (western years) 15-49 years



6. Are you married now?
- Yes - currently.....1
  - No - never.....2
  - No - Divorced.....3
  - No - Separated (live far away from their spouse).....4
7. Did your parents or guardians choose your wife for you or not?
- Yes - parents choose.....1
  - No - I choose.....2
  - Not yet married.....0
8. How old were you when you first married?..... (0 - not married)
9. How many children do you have now?..... (0 - not married or no children)
10. How many years did you complete at school? .....
11. How much money did you earn last month?
- a. .... Riels
12. Who do you live with now?
- Parents.....1
  - Relatives.....2
  - Wife.....3
  - Friends.....4
  - Alone.....5
  - Othe.....6
13. How long have you been working in this job?
- ..... months
  - ..... years
14. In the past 12 months have you been away from your home for more than one month altogether (in total all trips)?
- Yes.....1
  - No.....0
15. How long did you stay away from your home the last time (if away from home now, how long have you been gone so far)?
- ..... # of months (1 if one month or less, 0 if no travel)

16. During the last month (4 weeks) how often have you had drinks containing alcohol?  
Would you say..... **(read responses and circle one)**
- Not at all.....0  
 Every day.....1  
 At least twice week.....2  
 Less than once a week.....3  
 Don't know.....4
17. How old were you when you first had sexual intercourse with a woman?  
 .....years (0 if never sex)
18. Who was your first sex partner?
- Wife.....1  
 Sweetheart.....2  
 Sex Worker in Brothel.....3  
 Beer, karaoke, massage or dancing girl.....4  
 Friend.....5  
 Other.....6
19. Until now, how many different women have you had sexual intercourse with (including wife)?  
 ..... (0 - if never sex)
20. In the last 12 months, how many different women have you had sexual intercourse with (including wife)?  
 ..... (0 - if never sex)
21. In the last month, how many different women have you had sexual intercourse with (including wife)?  
 .....
22. In the last month, how many times did you have sexual intercourse with your wife?  
 ..... (0- no sexual intercourse, 99- no wife)
23. Have you ever had a girlfriend or sweetheart (or mistress)?
- Yes.....1  
 No.....0
24. Did you ever have sexual intercourse with a girlfriend or sweetheart (or mistress)?
- Yes.....1  
 No.....2  
 Never girlfriend.....0

25. Have you had a girlfriend or sweetheart (or mistress) in the past year?
- Yes.....1  
No.....0
26. Do you have a girlfriend or sweetheart (or mistress) now?
- Yes.....1  
No.....0
27. In the past three months, how often did you use a condom with your most recent girlfriend or sweetheart (or mistress)?
- Always.....1  
Frequently.....2  
Sometimes.....3  
Never.....4  
Have sweetheart but never sex with her.....5  
No girlfriend/sweetheart.....0
28. Did you use a condom the last time you had sex with last or current girlfriend/sweetheart?
- Yes.....1  
No.....2  
Have sweetheart but never sex with her.....3  
No girlfriend.....0
29. Do you intend to marry your girlfriend or sweetheart?
- Yes.....1  
No.....2  
Never girlfriend.....0
30. How often do you give your current or last sweetheart/girlfriend money?
- READ RESPONSES**
- Every time you have sex.....1  
Every week.....2  
Every month.....3  
On occasion, but not regularly.....4  
Never give money.....5  
Never girlfriend.....0

In the past year, did you ever have sex with: (ask one by one – CIRCLE YES OR NO)

	<u>Yes</u>	<u>No</u>
31. Dancing girl	1	0
32. Sex worker in brothel	1	0
33. Woman in massage place	1	0

	<u>Yes</u>	<u>No</u>
34. Sex worker in hotel or guesthouse	1	0
35. Sex worker from the street or park/garden	1	0
36. Beer girl	1	0
37. Sweetheart	1	0
38. Karoke girl	1	0
39. Women at a festival	1	0
40. How many of your friends ever have sex with sex workers (ie have commercial sex)?		
All.....		1
Most.....		2
Few.....		3
None.....		4
Don't know.....		5
41. Have you ever paid to have sex (or had sex with a sex worker)?		
Yes.....		1
No.....		0
42. In the past year did you ever pay to have sex (or have sex with a prostitute)?		
Yes.....		1
No.....		0
43. In the past month how many commercial sex workers did you pay to have sex with?		
..... (0 - if never sex)		
44. In the past month how many times did you pay to have sex with a commercial sex worker?		
..... (0 - if never sex)		
45. How much did you pay the last time you had sex with a sex worker?		
..... a ..... Riels		
(0 never sex with FSW, 00 did not pay)		

46. Which place did you meet (seek/recruit) the last sex worker the last time you paid for sex?
- Never paid for sex.....0
  - Brothel.....1
  - Massage Place.....2
  - Hotel or guesthouse.....3
  - Street or park/garden.....4
  - Karaoke bar.....5
  - Other.....6
47. Did you use a condom the last time you had sex with a prostitute?
- Yes.....1
  - No.....2
  - Never sex with FSW.....0
48. In the past three months, how often did you use a condom when you have sex with commercial sex workers?
- Always.....1
  - Frequently.....2
  - Sometimes.....3
  - Never.....4
  - Never sex with FSW.....0
49. In the past year (12 months), how often did you use a condom when you have sex with commercial sex workers?
- Always.....1
  - Frequently.....2
  - Sometimes.....3
  - Never.....4
  - Never sex with FSW.....0
50. Last time you went to a sex worker, how many men did you go with ( how many in your group)?
- .....
- (0 never went to FSW, 1 = went alone, 2 = went with one other man.....)
51. Last time you went to a sex worker, how much alcohol did you drink?
- A lot (more than 6 small beers or 3 glasses of wine).....1
  - Some (3-6 small beers or 1-3 glasses of wine).....2
  - A little ( 1-3 small beers or 1 glass of wine).....3
  - No alcohol.....4
  - Don't remember.....5
  - Never sex with FSW.....0

52. In the past year (12 months) did you have sex with anyone that was not your wife, regular sweetheart, (or mistress) or sex worker – a casual or non-regular sex partner?

- Yes.....1
- No.....2
- Never sex.....0

53. At what age did you first try to use a condom?

..... (0 if never sex, 99 never used condom)

54. In the past year did you ever have discharge from your penis (or urinate pus)?

- Yes.....1
- No.....0

55. Where did you first go for treatment the last time you had discharge from your penis?

- Pharmacy.....1
- Private clinic.....2
- Public Hospital.....3
- Traditional doctor.....4
- Didn't get care.....5
- Other.....6
- Never had discharge.....0

56. The last time you had discharge from your penis, who did you tell about the discharge?

- Never had discharge from penis.....0
- Wife.....1
- Sweetheart.....2
- Sex worker.....3
- Wife and sweetheart.....4
- Wife and sex worker.....5
- Sweetheart and sex worker.....6
- Friend.....7
- Drug seller or pharmacist.....8
- medical or clinic personnel.....9
- Don't tell any one.....10
- Other.....11

57. Have you ever had an HIV test?

- Yes.....1
- No.....0

58. The last time you had a HIV test, where did you go for testing?
- Never have HIV test.....0
  - Private clinic.....1
  - Public Hospital.....2
  - Anonymous Testing Center.....3
  - Government test (HIV sentinel surveillance).....4
  - Other.....5
59. The last time you had a HIV test, did you receive counseling?
- Yes.....1
  - No.....2
  - Never had HIV test.....0
60. The last time you had a HIV test, why did you get the test?
- Never have HIV test.....0
  - Getting married.....1
  - Family member has HIV or AIDS.....2
  - Feel unwell.....3
  - Have symptom.....4
  - Had sex with someone they think had HIV.....5
  - Worried about HIV.....6
  - Other.....5
61. Do you know anyone sick with AIDs or who has died from AIDS?
- Yes.....1
  - No.....0
62. How long have you lived in this city or village?
- ..... years  
(1 = 1 year OR less than 1 year)
63. Which province did you last live in before here?
- ..... province

[Interviewer: “Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation” — (give respondent a health pack or something)]

## Cambodia Behavioral Surveillance Survey V 2001: BROTHEL BASED SEX WORKERS

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[Introduction: (The following is to be read by the interviewer to the respondent): “The Ministry of Public Health is conducting a survey of people in many different provinces to learn more about their risk for certain infectious diseases. We would like to request your cooperation for no more than 10 minutes to ask you a few questions. Some of these questions are personal. You are free to refuse to participate or to terminate the interview at any time. All answers are totally confidential. I do not know your name and there is no way that anyone can learn how you answered these questions. Please be totally truthful in your responses. Your participation is very important and will help Cambodia to improve its health services for people like you.”]

(conditions: only include sexually experienced; no skips)

Interview # .....

Cluster # .....

1. Group

1. Mototaxi-driver
2. Military
3. Police
4. Beer promotion women
5. Karaoke workers
6. CSWs

2. City:

- |     |   |
|-----|---|
| PNP | 1 |
| KCH | 2 |
| BTB | 3 |
| SKV | 4 |
| SR  | 5 |

3. Date: .....

4. Interviewer: .....

5. How old are you..... (western years)

6. Are you married now?

- |                         |   |
|-------------------------|---|
| Yes - currently.....    | 1 |
| No - never married..... | 2 |
| No - divorced.....      | 3 |
| No - separated.....     | 4 |

7. How old were you when you were first married?

.....



8. How many years did you complete at school?

.....

9. How much money did you earn last month?

..... Riels

10. There are various ways or methods a woman can use to delay or avoid pregnancy. Are you currently doing something to avoid getting pregnant?

Yes	IUD.....	1
	Pill.....	2
	Condom.....	3
	Spermicide.....	4
	Injection.....	5
	Rhythm.....	6
	Withdrawal.....	7
	Abortion.....	8
	other.....	9
Nothing	.....	0

11. How many times have you been pregnant?

.....

12. How many children do you have now?

.....

13. How many days do you stop having sexual intercourse when menstruating?

..... days (0= don't stop)

14. In the past year have you had discharge that is not normal (very smelly or abnormal color?)

Yes.....	1
No.....	2

15. Where do you first get treatment the last time you had abnormal discharge?

Never had vaginal discharge.....	0
Never get treatment.....	1
In Brothel.....	2
Private clinic.....	3
Public Hospital.....	4
Pharmacy./drug seller.....	5
Traditional healer.....	6
Other.....	7

16. How old were you when you first had sexual intercourse?

..... years

17. Who was your first sex partner?

Husband.....	1
Sweetheart.....	2
Client.....	4
Other.....	4
Never sex.....	0

18. How old were you when you first had sexual intercourse for money?

..... years

19. How long have you been working as a sex worker?

..... months

20. How many times did you have sexual intercourse yesterday or last working day?

..... times/day

21. How many clients did you have yesterday or last working day ?

..... men/day

22. How many condoms did you use yesterday or last working day?

..... condoms

23. Did you use a condom the last time you had sex with a client?

Yes.....	1
No.....	2

24. This past week, how often did/do you use condoms with your clients?

All of the time.....	1
Frequently.....	2
Sometimes.....	3
Never.....	4

25. Where do you meet men who pay to have sex with you?

At the brothel.....	1
Hotel.....	2
At a dance hall/night club.....	3
Other.....	4

26. How many other women who have sex for money live at the brothel where you live?

.....

27. How long have you worked/lived in this place (this brothel)?  
.....# months (1 = 1 month or less)
28. How often do you get paid for your work?  
Every client/man.....1  
Once a day.....2  
Once a week.....3  
Once a month.....4  
Yearly.....5  
Never get paid.....6  
Other.....7
29. How much does it cost to have sex with you one time?  
..... Riels
30. Are there condoms available at the place where you work?  
Yes.....1  
No.....2
31. How old were you when you first use a condom?  
..... year
32. Do you have any regular customers now (men you have sex with more than 5 times)?  
Yes.....1  
No.....2
33. How many regular customers now (men you have sex with more than 5 times) do you have now?  
.....
34. Did you use a condom the last time you had sex with a regular customer?  
Yes .....1  
No.....2  
No regular customers.....0
35. How often do you use condoms with regular customers in the past month?  
Always.....1  
Often.....2  
Rarely.....3  
Never.....4  
No regular customers.....0

36. Have you had a boyfriend/sweetheart in the past year?

Yes.....1  
 No.....2

37. Did you use a condom the last time you had sex with a boyfriend/sweetheart?

Yes.....1  
 No.....2  
 Don't have a boyfriend.....0

38. This past week, how often do you use condoms with your boyfriend/sweetheart ?

Always.....1  
 Frequently.....2  
 Sometimes.....3  
 Never.....4  
 Don't have boyfriend now.....0

39. What is your husband or sweetheart's job?

Seller.....1  
 Military.....2  
 Police.....3  
 Factory worker.....4  
 Student.....5  
 Teacher.....6  
 Official or business man.....7  
 Porter.....8  
 Farmer.....9  
 Mototaxi driver.....10  
 Other.....11  
 Don't know.....12

Did you ever work before in the following jobs: (ask one by one – CIRCLE YES OR NO)

	<u>Yes</u>	<u>No</u>
40. Dancing girl	1	0
41. Masseuses	1	0
42. Beer girl	1	0
43. Karoke girl	1	0
44. Factory worker	1	0

45. Did you ever have a HIV test?

Yes.....1  
 No.....2

46. Where did you have your last HIV test?

Never had HIV test.....	0
Private lab or clinic.....	1
Public hospital.....	2
Anonymous testing center.....	3
Government test (HIV sentinel surveillance).....	4
Other.....	5

47. Did you get counseling the last time you had a HIV test?

Yes.....	1
No.....	2
Never had HIV test.....	0

48. Do you know anyone sick with or who has died from AIDS?

Yes.....	1
No.....	2

49. How long have you lived in this city?  
 ..... years (1 = 1 year OR less than 1 year)

50. Which province did you live in before here?  
 ..... province

[Interviewer: “Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation” — (give respondent a health pack or something)]

## Cambodia Behavioral Surveillance Survey V 2001: BEER & KARAOKE GIRLS

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Introduction/Informed Consent: (The following is to be read by the interviewer to the respondent): "The Ministry of Public Health is conducting a survey of people in many different provinces to learn more about their risk for certain infectious diseases. We would like to request your cooperation for no more than 20 minutes to ask you a few questions. Some of these questions are personal. You are free to refuse to participate or to terminate the interview at any time. All answers are totally confidential. I do not know your name and there is no way that anyone can learn how you answered these questions. Please be totally truthful in your responses. Your participation is very important and will help Cambodia to improve its health services for people like you. May we interview you now?" conditions: no skips)

Interview #.....

Cluster #.....

1. Group

1. Mototaxi-driver
2. Military
3. Police
4. Beer promotion women
5. Karaoke workers
6. CSWs

2. City:

- |     |   |
|-----|---|
| PNP | 1 |
| KCH | 2 |
| BTB | 3 |
| SKV | 4 |
| SR  | 5 |

3. Date: .....

4. Interviewer: .....

5. How old are you ..... (western years)

6. Are you married now?

- |                      |   |
|----------------------|---|
| Yes - Currently..... | 1 |
| No - Never.....      | 2 |
| No - Divorced.....   | 3 |
| No - Separated.....  | 4 |

7. How old were you when you were you first married?

.....

8. How many years did you complete at school?  
 .....
9. How much money did you earn last month?  
 ..... Riels
10. Who do you live with now?
- |                |   |
|----------------|---|
| Parents.....   | 1 |
| Relatives..... | 2 |
| Husband.....   | 3 |
| Friends.....   | 4 |
| Alone.....     | 5 |
| Other.....     | 6 |
11. How long have you lived away from your family?  
 ..... # months
12. How long have you lived here in this place?  
 ..... # months
13. How long have you worked in this job?  
 ..... # months
14. About how many beer girls you know do you think have boyfriends?
- |                 |   |
|-----------------|---|
| All.....        | 1 |
| Most.....       | 2 |
| Few.....        | 3 |
| None.....       | 4 |
| Don't know..... | 5 |
15. About how many beer girls do you think have sexual intercourse with their boyfriends?
- |                 |   |
|-----------------|---|
| All.....        | 1 |
| Most.....       | 2 |
| Few.....        | 3 |
| None.....       | 4 |
| Don't know..... | 5 |
16. Have you ever had a sweetheart/boyfriend?
- |          |   |
|----------|---|
| Yes..... | 1 |
| No.....  | 2 |

17. Did you EVER have sex with a boyfriend/sweetheart?
- Yes.....1  
 No.....2  
 Don't have a boyfriend.....0
18. Did you have a sweetheart/boyfriend in the past year?
- Yes.....1  
 No.....2
19. Did you have sex with a boyfriend/sweetheart in the past year?
- Yes.....1  
 No.....2  
 Don't have a boyfriend.....0
20. Do you have a boyfriend or sweetheart now?
- Yes.....1  
 No.....0
21. In past three months, how often do you use a condom with your current (or last if no current) boyfriend or sweetheart?
- Always .....1  
 Frequently.....2  
 Sometimes.....3  
 Never.....4  
 Never boyfriend.....0
22. Did you use a condom the last time you had sex with current (or last if no current) girlfriend/sweetheart?
- Yes.....1  
 No.....2  
 Never boyfriend.....0
23. How often does your boyfriend give you money?
- No boyfriend.....0  
 Never get money.....1  
 Every time we have sex.....2  
 Ever week.....3  
 Every month.....4  
 Not regularly .....5



24. How likely is it that you will marry your boyfriend/sweetheart?

Very likely .....	1
Somewhat likely.....	2
Not likely.....	3
Never boyfriend.....	0

25. What is your husband or sweetheart's job?

Seller.....	1
Military.....	2
Police.....	3
Factory worker.....	4
Student.....	5
Teacher.....	6
Official or business man.....	7
Porter.....	8
Farmer.....	9
Mototaxi driver.....	10
Other.....	11
Don't know.....	12

26. How old were you the first time you had sexual intercourse?

..... years (0 = never had sex)

27. Who was your first sex partner?

Husband.....	1
Sweetheart.....	2
Client.....	3
Other.....	4
Never sex.....	0

28. Some beer girls get money or gifts for having sex with men. How many beer girls do you know have sex with men for money or gifts?

All.....	1
Most.....	2
Few.....	3
None.....	4
Don't know.....	5

29. In the past year, did you get money or gifts from any man for having sex?

Yes.....	1
No.....	2

30. Did you use a condom the last time you had sex for money?
- Yes.....1  
 No.....2  
 Never have sex for money.....0
31. In the past 3 months, how often did you use condoms when you have sex for money or gifts?
- Always.....1  
 Often.....2  
 Rarely.....3  
 Never.....4  
 Never have sex for money.....0
32. How many men have you had sex with in your lifetime (until now)?
- ..... (0 = never sex)
33. In the last month, how many men did you have sexual intercourse with?
- ..... (never sex = 0)
34. In the last month, how many times did you have sexual intercourse?
- ..... times (never sex = 0)
35. How old were you when you used a condom for the first time?
- ..... month/year  
 (0 = never had sex, 99 = never used condom)
36. In the past year have you had discharge that is not normal (very smelly or abnormal color?)
- Yes.....1  
 No.....2
37. Where do you first get treatment the last time you had abnormal discharge?
- Never had vaginal discharge.....0  
 Pharmacy.....1  
 Private clinic.....2  
 Public Hospital.....3  
 Traditional healer/doctor.....4  
 Never get care.....5  
 Other.....6
38. How many times have you been pregnant?
- .....
39. How many living children do you have now?
- .....

40. Did you ever have a HIV test?

Yes.....1  
No.....2

41. Where did you have your last HIV test?

Never had HIV test.....0  
Private lab or clinic.....1  
Public hospital.....2  
Anonymous testing center.....3  
Government test (HIV sentinel surveillance).....4  
Other.....5

42. Did you get counseling the last time you had a HIV test?

Yes.....1  
No.....2  
Never had HIV test.....0

43. Do you know anyone sick with or who has died from AIDs?

Yes.....1  
No.....2

44. How long have you lived in this city?

..... years (1 = 1 year OR less than 1 year)

45. Which province did you live in before here?

..... province

Did you ever work before in the following jobs: (ask one by one – CIRCLE YES OR NO)

	<u>Yes</u>	<u>No</u>
46. Dancing girl	1	0
47. Masseuses	1	0
48. Beer girl	1	0
49. Karaoke girl	1	0
50. Factory worker	1	0

[Interviewer: “Thank you very much for answering these questions. Let me repeat that your answers are totally confidential and there is no way anyone will learn what you told me. Here is a token of our appreciation” — (give respondent a health pack or something)]

