

BSS 2003: Sexual behavior among sentinel groups,  
Cambodia

## **BSS Trends 1997-2003**

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National Center for HIV/AIDS,  
Dermatology and STDs

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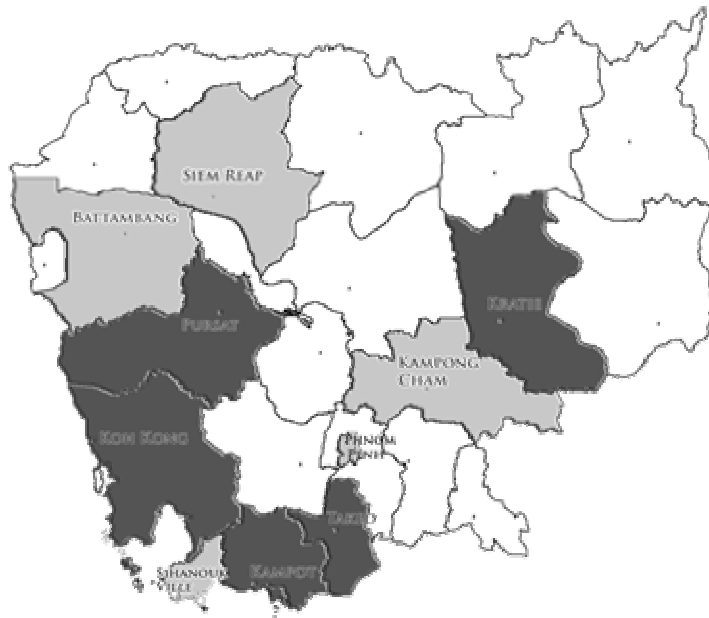
## **BSS - Purpose**

- Provide specific-year information on socio-demographic and risk behavior related to HIV/STDs
- Monitor sexual behavior of risk groups from year to year to determine trends in behavior change
- Provide baseline data for the three-year USAID funded provinces

## **Cambodia's BSS - Background**

- In-depth epidemiology - STI Prevalence & Behavior Survey 1996 first to determine risk groups and risk behaviors
- First round of BSS in 1997
- Same high risk groups every year until 2003
- Medium and low risk groups alternated as epidemic has changed

## Sites for BSS 2003



## Survey Design (1)

- The 2003 BSS covered 10 provinces:
  - Original five provinces: Phnom Penh, Sihanouk Ville, Kampong Cham, Siem Reap and Battambang) – only urban
  - Five additional USAID provinces: Pursat, Koh Kong, Kratie, Takeo and Kampot
- The same sentinel groups in the original 5 BSS provinces and in 5 additional provinces
- Military and police were combined into one group – with equal numbers from each and sampled independently according to the protocol from previous rounds.

## Survey Design (2)

- Two-stage cluster sampling with equal probability
- Time location sampling for moto-taxi driver
- Face to face interviews and gender matched with privacy and confidentiality ensured
- Trainings for supervisors and interviewers
- Repeated measures (key indicators such as condom use, number of partners)

## Sample sizes by year and by group

BSS	Sites	Target groups	Sample size
1997	KPC, SHV, BTB, SRP, PNP	DFSW, Beer girls, Working women, Military, Police, Moto-taxi drivers, Vocational students	4,356
1998	KPC, SHV, BTB, SRP, PNP	DFSW, Beer girls, Working women, Military, Police, Moto-taxi drivers, Vocational students	4,275
1999	KPC, SHV, BTB, SRP, PNP	DFSW, Beer girls, Military, Police, Moto-taxi drivers	3,400
2000	KPC, SHV, BTB, SRP, PNP	Household Male Survey	3,166
2001	KPC, SHV, BTB, SRP, PNP	DFSWs, Karaoke & Beer girls, Military, Police, Mot-taxi drivers	2,961
2003	KPC, SHV, BTB, SRP, PNP, PST, KHK, KRT, TKO, KPT	DFSW, Karaoke & Beer girls, Mil/pol, Moto-taxi driver	4,858

## Sample sizes: BSS 2003

Province	DSW	IDSW		Mil/Police	Moto-taxi	Total
		Beer	Karaoke			
PNP	170	161	--*	137	97	565
KPC	158	92	63	128	97	538
BTB	154	63	95	136	92	540
SHV	172	63	91	133	94	553
SRP	168	134	30	130	92	554
PST	107	30	37	145	96	415
KHK	108	6	159	141	98	512
KRT	76	30	25	136	95	362
TKO	125	26	76	132	93	452
KPT	70	43	28	133	93	367
Total	1308	648	604	1351	947	<b>4858</b>

## Data analysis

- Data were coded and entered into computerized database using EpiData 3
- Analysis was performed in STATA 8

## Female sentinel groups

DFSW: Brothel based sex workers

IDFSW: Beer girls and Karaoke workers

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## Socio-demographic characteristics

	<b>FSWS 1308</b>	<b>Beer girls 648</b>	<b>Karaoke workers 604</b>
Mean age- yr (median)	23 (22)	24.8(25)	21.9(22)
Mean age at first marriage (median)	17.6(17)	18.7(18)	18(18)
% Never married	51	24.4	53.9
% Divorced	47.1	45.5	41.8
% No school	41.3	12.2	22
Mean monthly income, \$(median)	86.2 (84.1)	104.5(71.8)	70.6 (51.3)
% Live with parents	-	17.4	6.8
% Live with husband/sweetheart	-	31	2.8
Mean # mth in current job (median)	22.4(12)	16.4(6)	7(3)
Mean # month away from family (median)	-	41.3(24)	19.3(12)

## Sexual behaviors

	FSW 1308	Beer 648	Karaoke 604
Mean age at first sex (median)	17.5(17)	18.6(18)	18(18)
Mean age first sell sex (median)	20.6(20)	-	-
First sex partner, %			
Husband	45.8	78.5	55.7
Sweetheart	15.7	16.8	29
Client	34.3	3.7	12.8
Others	4.1	1.0	3.5
Mean # partners life time (median)	-	5.4(2)	13.7(4)
Mean # partners last mth (median)	-	1.3(1)	2.6(2)

## Sweethearts (SH) relationship

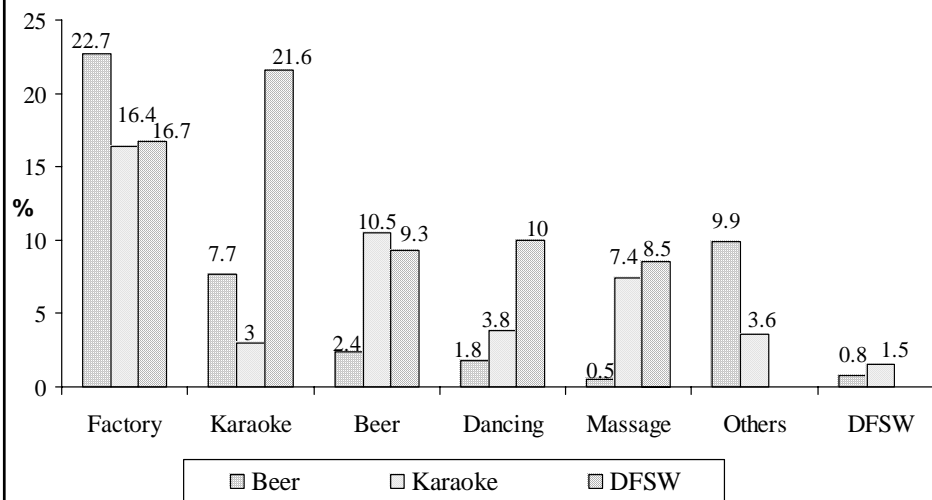
	FSW 1308	Beer 648	Karaoke 604
% Having SH last year	43.5	51.2	56.6
% Have sex with SH last year	NA*	87.3	79.8
% Frequency money from SH			
Never get paid	NA*	3.4	12.6
Each sex	NA*	7.1	7.7
Each week	NA*	14.1	7.2
Each month	NA*	27.3	15.9
Irregular basis	NA*	48	56.5
% Husband/SH's job			
Vendor	17.2	17.4	11.9
Gov/businessmen	5.3	11	11.2
Police	8.7	24.1	25.5
Others	14	15.5	15.8

\* NA: non available

## DFSW: Conditions of sex work

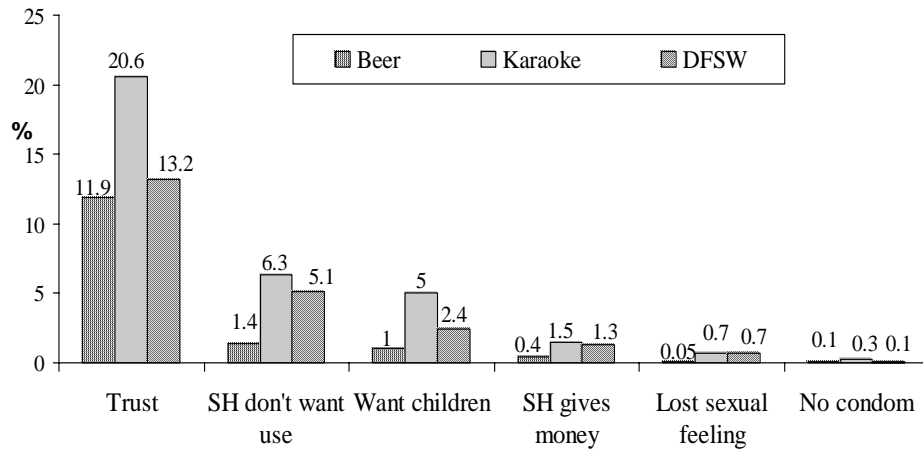
	DFSW 1308
Mean # month as sex worker (median)	22.4(12)
Mean cost per sex act (median), Riel	7990(5000)
Frequency get paid %	
Each sex	20.9
Each day	9.8
Monthly	57.8
Mean size of brothel (median)	8(6)
Mean # clients yesterday (median)	3(2)
Mean # months in current brothel (median)	10.7(5)

## Previous jobs

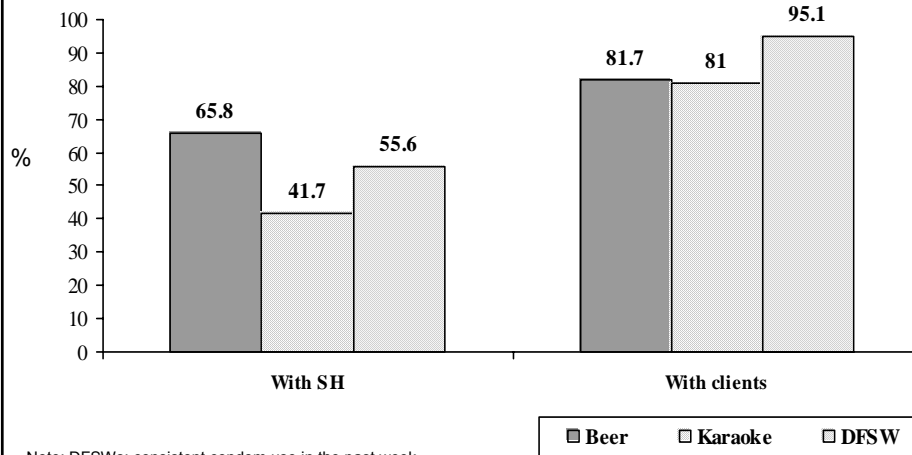




## Reasons for not using condoms with sweethearts



## Consistent condom use by type of partner

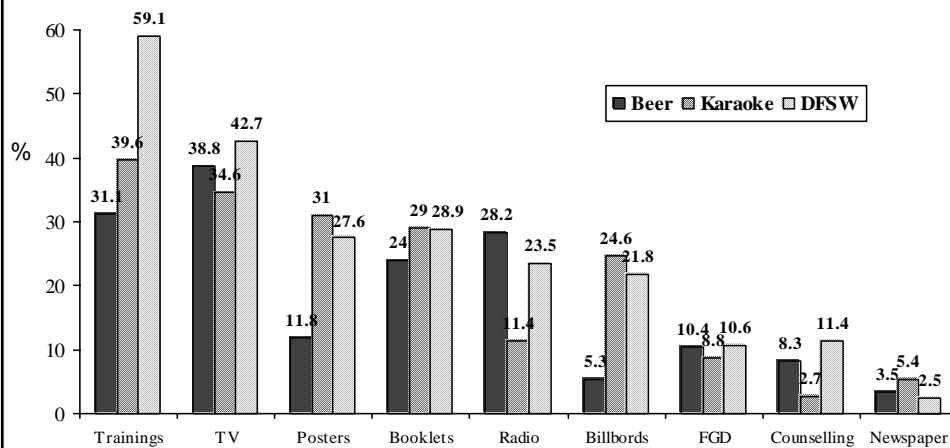


Note: DFSWs: consistent condom use in the past week,  
IDFSW: consistent condom use in the past 3 months

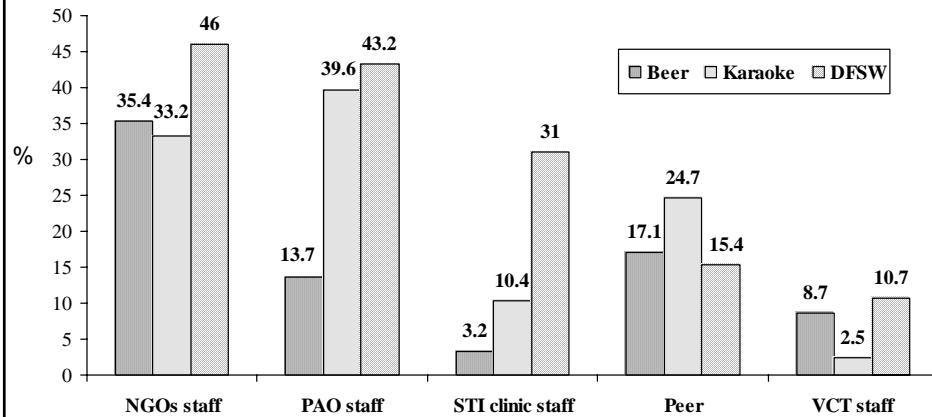
## Reported vaginal discharge & care seeking at last time discharge

	Beer 648	Karaoke 604	DFWS 1308
Abnormal vaginal discharge last year	47.4	31.4	43.6
	<i>N=276</i>	<i>N=210</i>	<i>N=513</i>
Pharmacy	<b>43.2</b>	<b>46.5</b>	26.5
NGOs STD clinic	27	20.7	17.5
Public hospital/ clinic	12.9	15.5	<b>47.9</b>
Private clinic	11.2	13.5	7.6
Traditional healer	5.7	2.7	0.7
No treatment	10.2	21	4

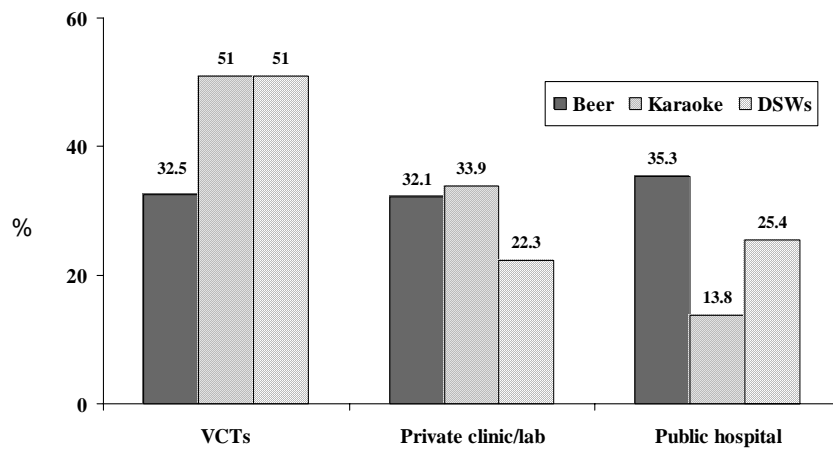
## Sources for HIV/AIDS information



## Sources where female groups receive HIV/AIDS information



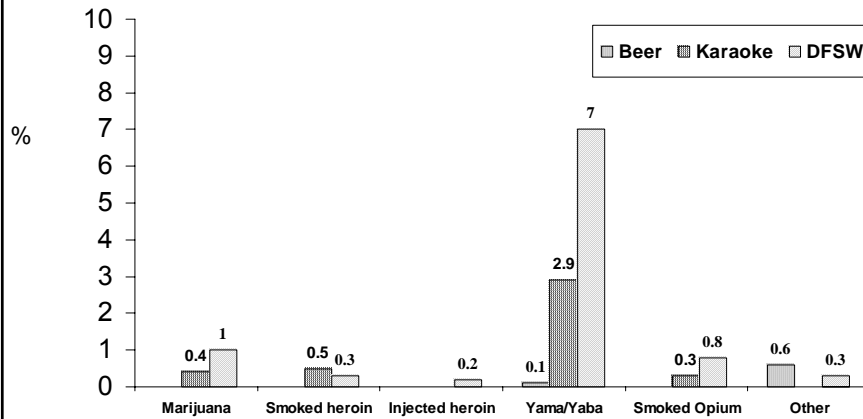
## Facilities used for last HIV test



•Excluding women tested in the HSS

•Beer n= 402, Karaoke n=251, DFSW n= 659

## Drug use in female groups



## Male sentinel groups:

Military

Police

Moto-taxi driver

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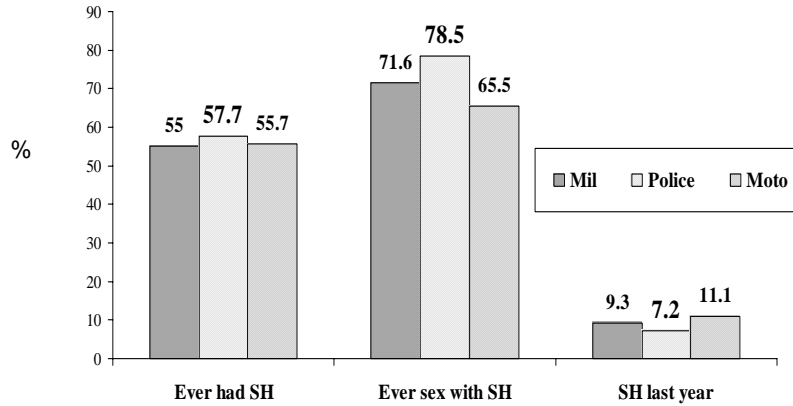
## Demographic characteristics

	Mil 675	Pol 676	Moto 947
Mean age (median), year	35.7(36)	37.8(37)	32.7(32)
% Age group ≤ 25	7.8	0.6	17.5
Mean age first marriage (median)	24.4(25)	25.7(25)	24(23)
% Of married currently living with spouse	69.6	89.6	79.5
Mean # years of schooling (median)	6.9(8)	9.2(9)	7.3(7)
Mean monthly income in \$ (median)	29.6 (25)	34.8 (30)	50 (50)
% Travel > 1 month in past year	39.7	19.6	21.5

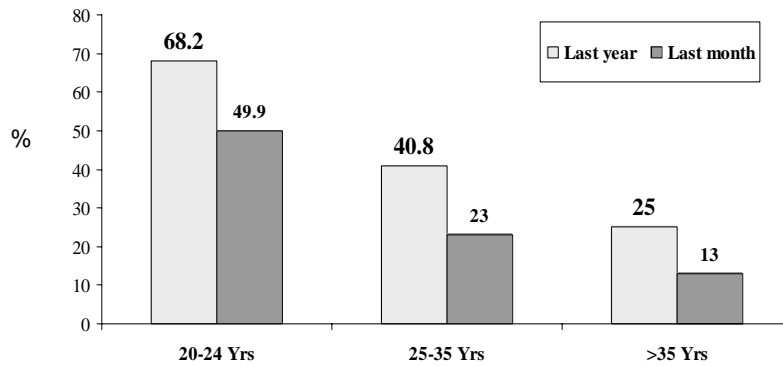
## Sexual behaviors

	Mil 668	Pol 673	Moto 890
Mean age at first sex (median)	21.1(21)	23(23)	21.7(21)
First sexual partner, %			
Wife	33.4	42.7	43.6
Sweetheart	28.8	31.5	27.8
DFSW	34.8	22.7	26.9
IDFSW	0.2	1.8	0.3
Mean # life time partner (median)	23.1(10)	17.3(10)	12.7(5)
Mean # partner last year (median)	3(1)	2.7(1)	2.9(1)

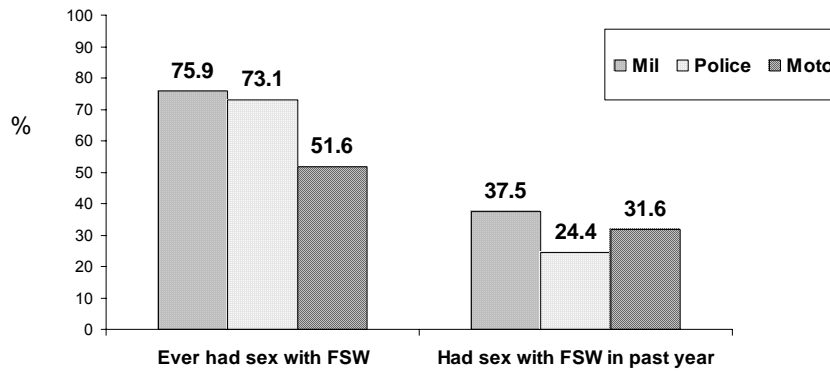
## Percentages reporting Sweethearts (SH) & sex with SH: By Male Groups



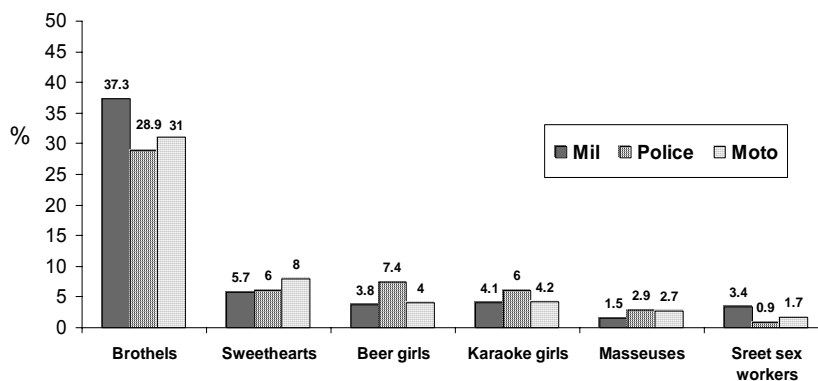
## Percent of Military and Police Reporting Sex with DFSW: By Age



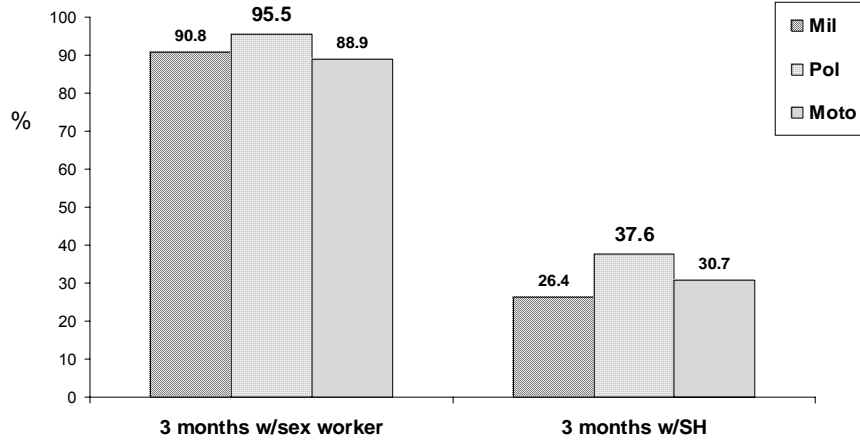
## Percent Reporting Sex with DFSWS



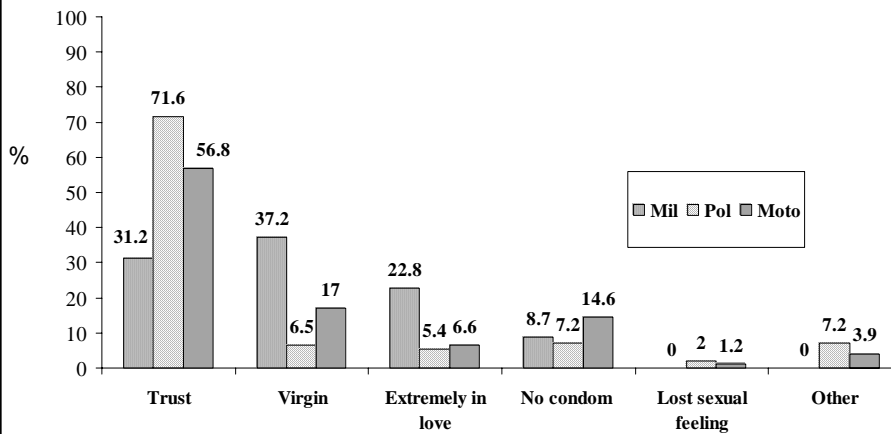
## Types of Sexual Partners in the Past Year



## Consistent condom use by type of partner



## Reasons for not using condom with sweethearts

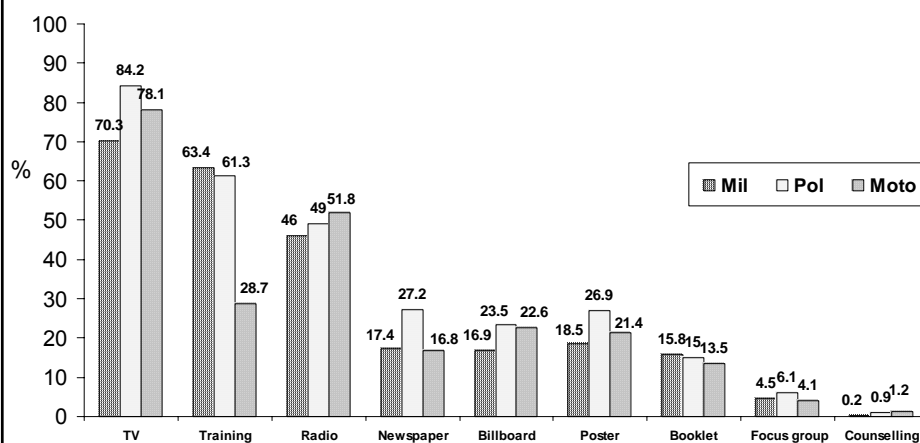




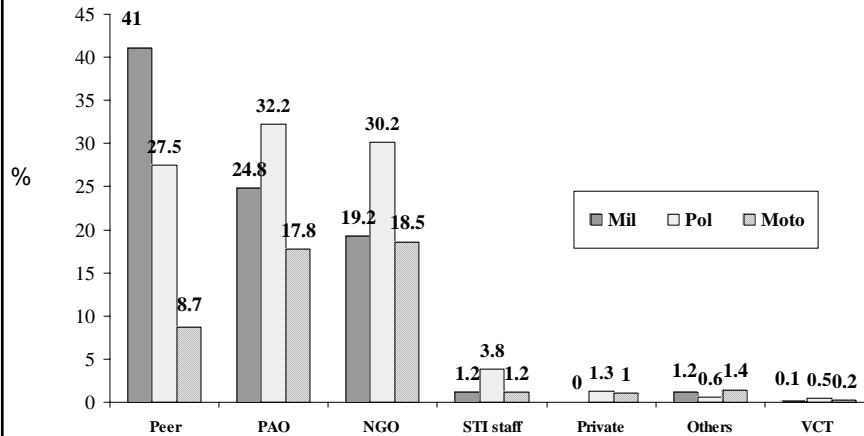
## Reported urethral discharge & care sought at last episode of discharge

	Mil 675	Pol 676	Moto 947
Urethral discharge last year	4.3	2.3	2.7
	<i>N</i> =39	<i>N</i> =24	<i>N</i> =31
Pharmacy	38.1	59.6	41.8
Public hospital/ clinic	14.2	20.3	28.3
Private clinic	15.6	7.2	23
Traditional healer	16.5	10.9	5.5
NGOs STD clinics	4.6	0	1.4
No treatment	4	2.1	0
Others	7	0	0

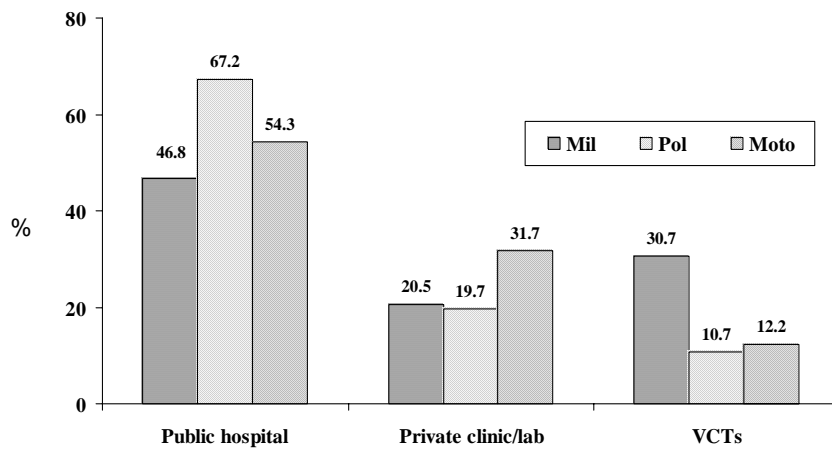
## Sources of HIV/AIDS Information



## From whom male groups received HIV/AIDS education/information



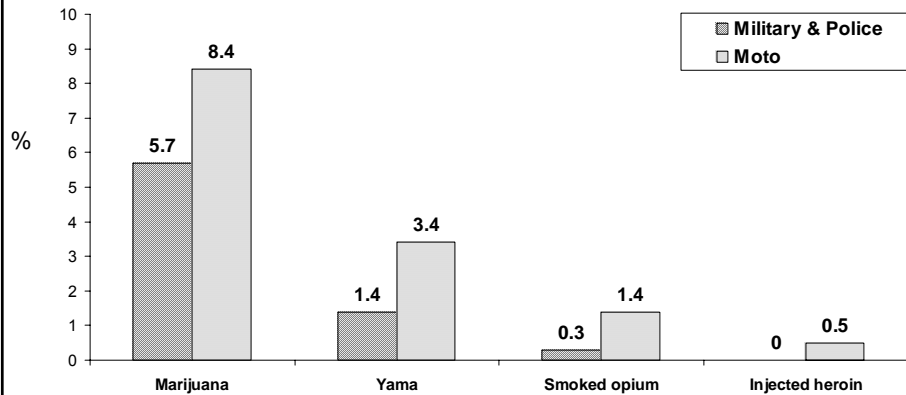
## Facility used for last HIV test\*



\*Excluding those tested in the HSS

•Military n=177, Police n=187, Motodriver n=191

## Drug Use: Male Groups



## BSS Trends 1997-2003

Are there any changes in risk behaviors over time?

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## Trend Analysis

- Datasets were combined across different rounds of BSS over a five-year period
- Only 5 original provinces from 1997-2003 (Phnom Penh, Sihanouk Ville, Kampong Cham, Battambang and Siem Reap) were compared
- Only main indicators were compared: frequency of commercial sex, number of sexual partners, condom use

## Sample Sizes: All BSS

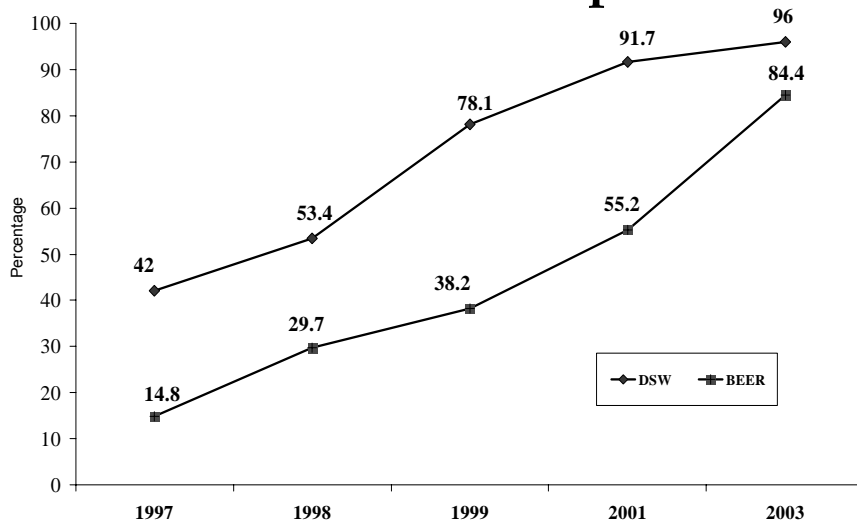
	BSS I	BSS II	BSS III	BSS V	BSS VI
DSWs (brothel based)	245*	804	792	569	822
Beer Promoters	581	406	379	402	513
Karaoke	-	-	-	163**	279
Policemen	210	405	674	498	330
Military	195	344	808	678	334
Moto-taxi drivers	570	756	746	651	472
<b>Total</b>	<b>4,356</b>	<b>4,275</b>	<b>3,400</b>	<b>2,961</b>	<b>2750</b>

\* Phnom Penh and Siem Reap, \*\* Kampong Cham and Sihanouk Ville

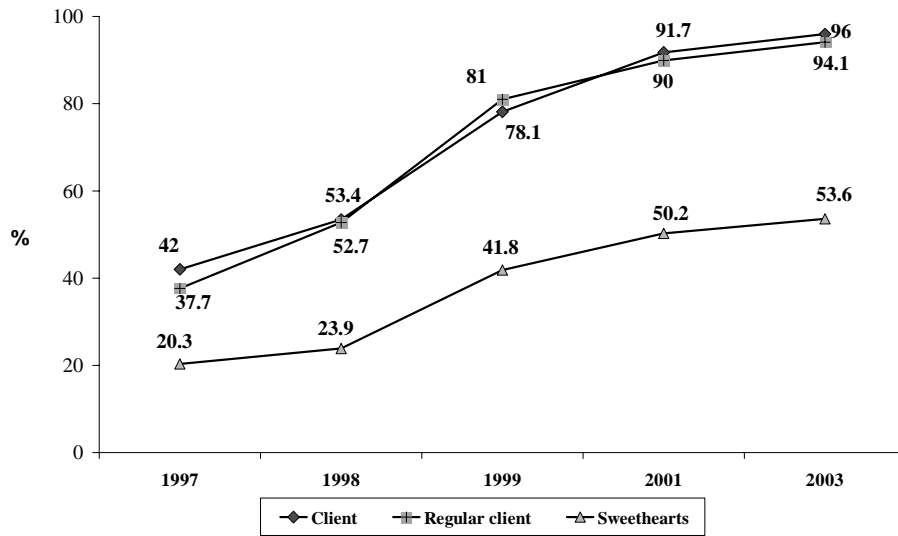
## Female groups

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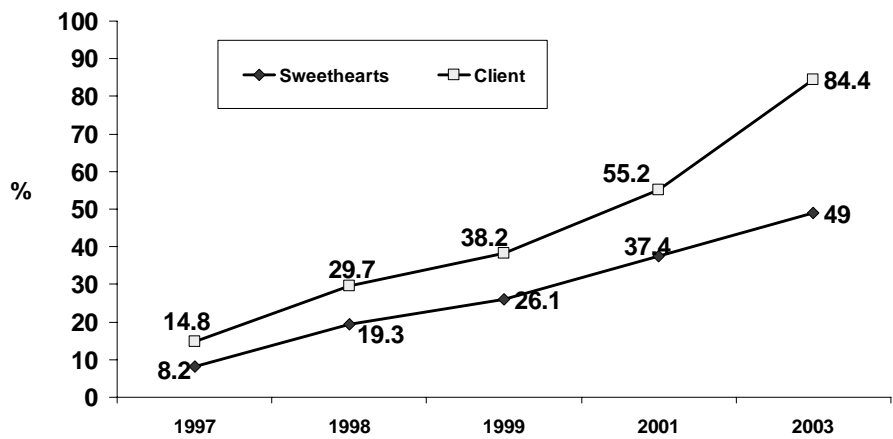
### Consistent Condom Use with Clients: Female Groups



## DSW: Consistent Condom Use by Type of Partner

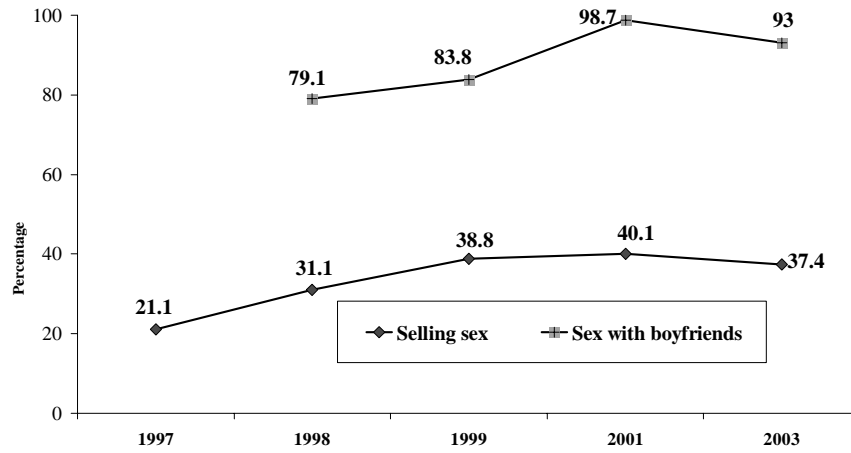


## Beer Girls: Consistent Condom Use by Type of Partner\*



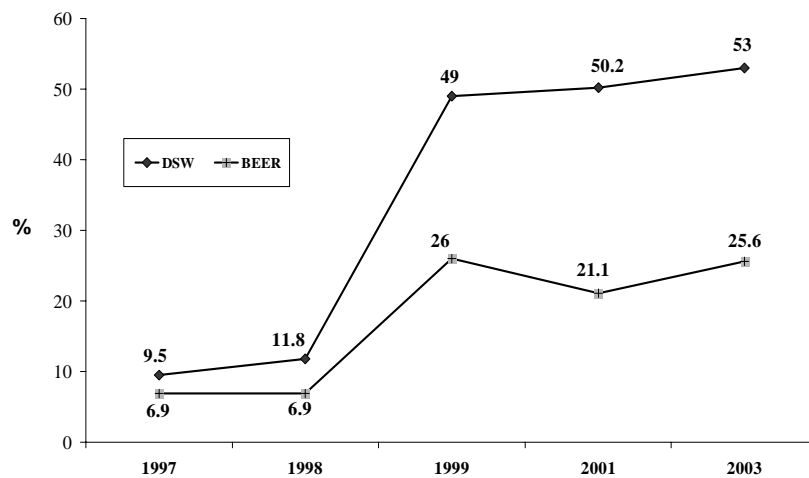
\*condom use with client among those with clients; condom use with sweethearts among those with sweethearts

## Percent Beer Girls Reporting Selling Sex & Sex with Sweethearts Past Year\*

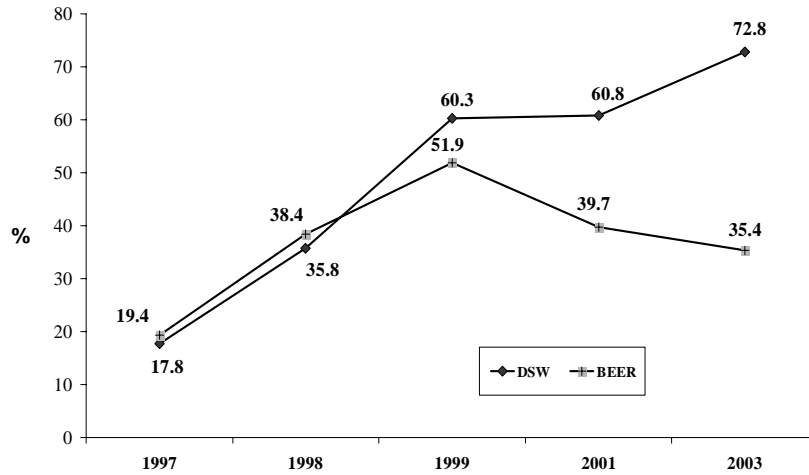


\*Percent reporting sex with sweethearts is among those with sweethearts

## Female Groups: STI Care Seeking at the Public/STD Clinics

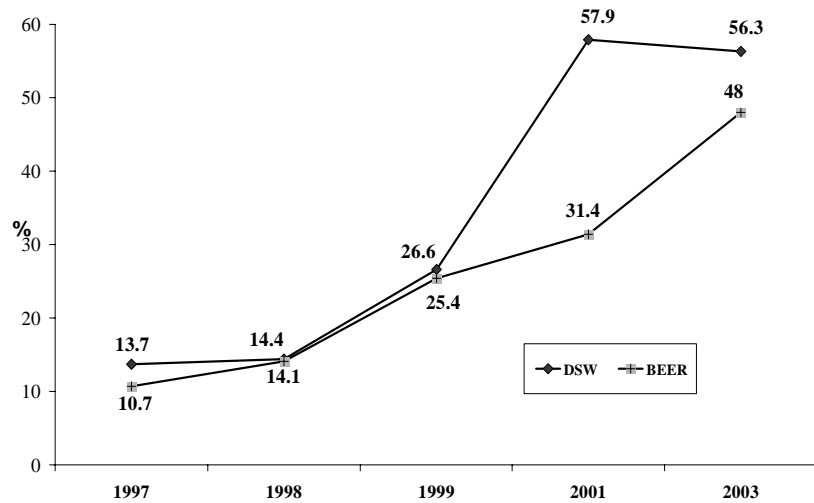


## Female Groups: STI Care Seeking at Medical Settings\*



\* Medical settings include public, NGOs and private

## Female Groups: HIV Testing at VCTS

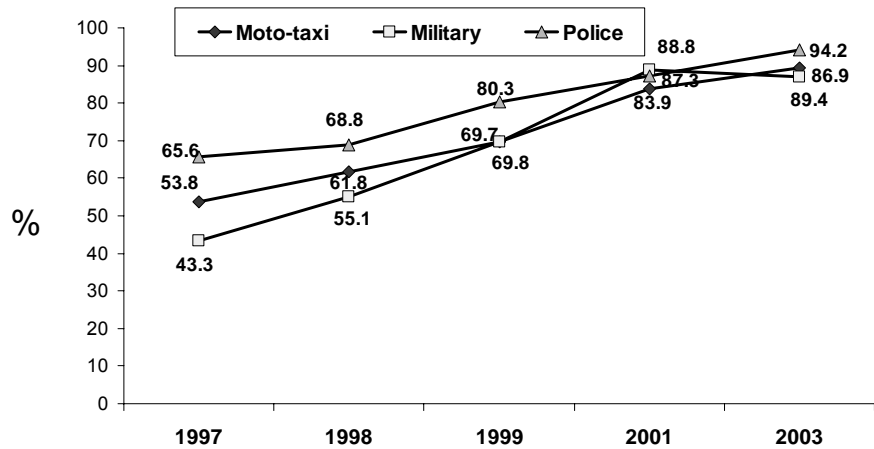




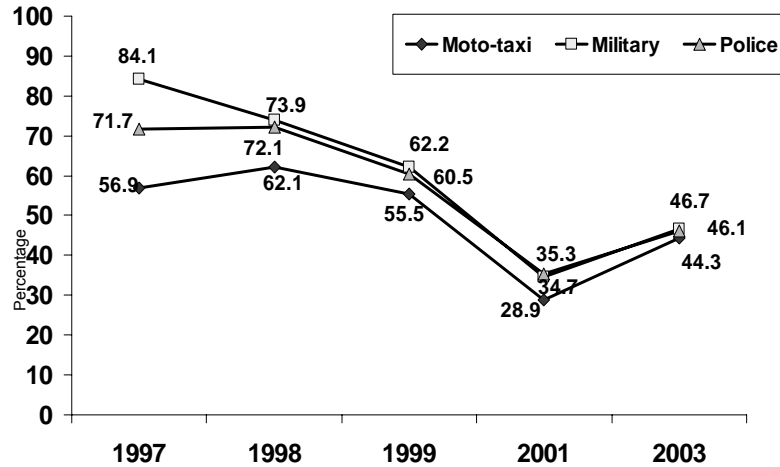
## Male groups

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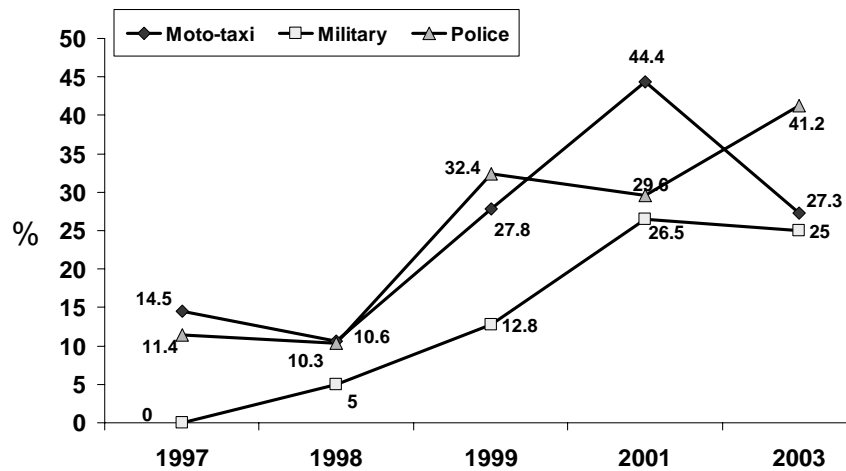
### Consistent condom use with sex worker in past 3 months



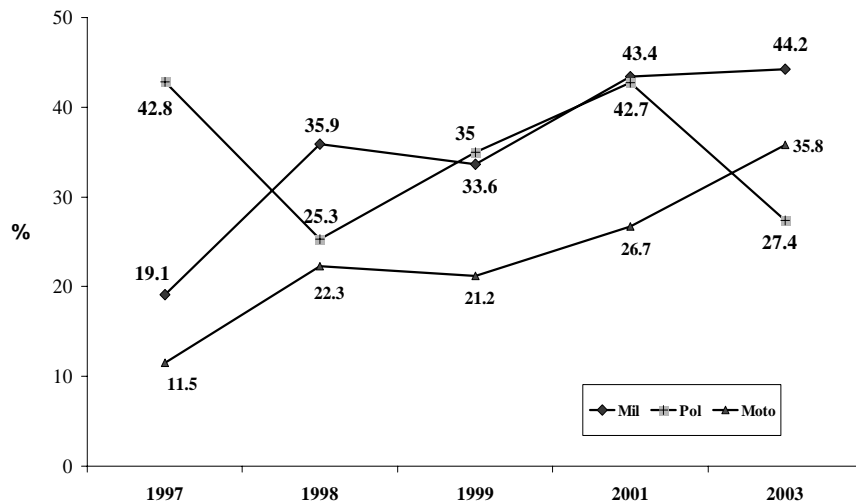
## Commercial Sex in the Past Year



## Consistent Condom Use with Sweethearts: by Male Groups



## Male Groups: HIV testing at VCTS



## Conclusions: Female Groups (1)

- DFSW and IDFSW remain very mobile
- IDFSW with sweethearts reported high frequency of sex with SH and some of them considered their sweethearts as sources of income
- There is overlap between DFSWs and IDFSWs:
  - About 22% of DFSW reported working previously as Karaoke workers and about 10% worked as Beer girls
  - About 10% of Beer and Karaoke women reported working previously in other entertainment places

## **Conclusions: Female Groups (2)**

- Female groups reported using condoms more consistently with clients than with sweethearts
- Trust was the main reason for non use of condom with sweethearts
- Prevalence of self-reported vaginal discharge in female groups is high

## **Conclusions: Female Groups (3)**

STI Care seeking is different by female groups:

- IDFSWs go first to the pharmacy
- DFSWs go first to the public STI clinic
- > 90% of DFSWS and 73% of IDFSW reported receiving recent HIV/AIDS information/education
- Participation in HIV education and TV are the main sources of HIV/AIDS information

## **Conclusions: Female Groups (4)**

- NGOs provide more HIV/AIDS information than PAO to IDFSWs
- VCT was the site most often reported for last HIV test among Karaoke Workers and DFSWs
- About 50% of the women in female groups want to keep it secret if any member of their families become infected with HIV
- Report of drug use was still low among female group though DFSW and Karaoke workers reported higher use of amphetamine (Yama)

## **Conclusions: Male Groups (1)**

- Younger men (20-24) purchase more commercial sex than older men
- Brothels are the most common places for buying sex services
- Men use more condom with sex workers than with other partners

## **Conclusions: Male Groups (2)**

- Few men reported urethral discharge
- Pharmacies are still the first source of STI care for men with urethral discharge
- > 80% of male groups reported receiving recent HIV/AIDS information
- The most reported sources of HIV/AIDS information are TV, participation in HIV/AIDS education, and radio

## **Conclusions: Male Groups (3)**

- Most HIV/AIDS education to male groups was provided by peer educators, followed by PAO and NGOs
- VCTs are the least reported facilities for last HIV test in male sentinel groups
- Many moto-taxi drivers (38.6%) reported HIV test prior to getting married
- Few male groups reported using drugs

## **Conclusions: Trends in Risk Behavior (1)**

- Consistent condom use among female groups continues to increase over time
- Although consistent condom use among DFSWs is approaching 100% in 2003, condom use with sweethearts remains low
- Among Beer girls, consistent condom use with both clients and sweethearts continues to increase, but condom use with all types of partners remains low
- Consistent condom use with sex workers increased among male groups

## **Conclusions: Trends in Risk Behavior (2)**

- Less men in all groups use commercial sex services
- More DFSWs are first seeking medical care for STI symptoms
- Medical care seeking for STI symptoms have not increased among IDFSWs
- Although more men are using VCT than in the past, still less men than women use VCT services

## **Recommendations (1)**

- Future rounds of BSS should include young men
- Efforts are needed to sustain high consistent condom use with commercial partners
- There is a need for innovative approaches to address sexual risk with sweethearts

## **Recommendation (2)**

- STI services should work to find effective approaches to target men and IDFSWs
- Though VCTs are expanding (~ 50 VCTs in 18 provinces), they should be better promoted
- The focus on sex workers needs to be maintained and should address risk from their non paying partners



## Recommendation (3)

- Greater access to VCTs is needed as hospitals and private clinics provide less counseling with testing than VCTs
- Condom promotion and risk reduction have been highly successful to date in Cambodia; program efforts must be maintained to sustain these changes

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