

# HIV in Bangladesh: THE PRESENT SCENARIO



A summary of key findings from the fifth round of serological and behavior surveillance for HIV in Bangladesh (2003-2004)



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# HIV in Bangladesh: The Present Scenario, 2004

## Introduction

The HIV epidemic in Bangladesh, from an epidemiological perspective, is evolving rapidly. While still a low prevalence country for overall HIV rates, a small pocket of IDU under second generation surveillance<sup>1</sup> has shown an HIV prevalence increase from 1.4% to 4% to 8.9% (in one locality) in the past three years. Simultaneously recent Behavioral Surveillance Survey (BSS) data indicate an increase in risk behaviors such as sharing of injecting equipment and a decline in consistent condom use in sexual encounters between IDUs and female sex workers. BSS data also indicate that the IDU population is well integrated into the surrounding urban community, socially and sexually, thus raising grave concern about the spread of HIV infection

Over the rounds, the total HIV prevalence remained below 1% (Table I).

Table I: HIV prevalence over the rounds

Surveillance rounds	Numbers tested	HIV (%)
1 <sup>st</sup> round (1998-1999)	3886	<1% (0.4)
2 <sup>nd</sup> round (1999-2000)	4634	<1% (0.2)
3 <sup>rd</sup> round (2000-2001)	7063	<1% (0.2)
4 <sup>th</sup> round (2002)	7877	<1% (0.3)
5 <sup>th</sup> round (2003-2004)	10445	<1% (0.3)

Bangladesh is a low prevalence nation for HIV and therefore, according to the guidelines of the Second Generation Surveillance system for HIV, surveillance should concentrate amongst selected groups of individuals who are known to be most at risk to HIV and some of the population groups that may bridge the epidemic into the general population. Therefore during all rounds of surveillance conducted so far in Bangladesh, including the 5th round, the population groups selected were confined to those considered to be most vulnerable and some bridging populations.

## Most At Risk Populations: Injecting Drug users

Injecting drug users (IDU) had the highest rate of HIV infection with 4% prevalence in Central Bangladesh and in one neighbourhood of Central-A, 8.9% of IDU were HIV positive. While HIV prevalence in IDU increased significantly in one specific area (Central Bangladesh), there were no changes between the 4th and 5th rounds in the rest of the country.

<sup>1</sup> The 5th round of both behavioral and serological surveillance was conducted by ICDDR,B between June 2003 to March 2004. Family Health International (FHI) provided technical support to behavioral surveillance as in all previous rounds. Funding for serological surveillance was from the GoB/IDA/DfID funds while for behavioral surveillance was by FHI/USAID.

Bangladesh, therefore, still remains a low prevalent nation for HIV. Furthermore active syphilis rates declined significantly in IDU over the rounds in Central Bangladesh. However, Hepatitis C (HCV) prevalence in IDU remained high.

HCV prevalence was high in IDU from most sites. The highest rates were recorded in IDU from Northwest-B2. The HCV rates were surprisingly low in two sites – Northwest-F and Central-H. In Central-A where the HIV prevalence was 4%, HCV prevalence was 59.2%. Overall, out of 1619 IDU sampled, 54.2% tested positive for HCV (Table 2).

Table 2: Prevalence of HCV in IDU

Study Populations, Geographical Location (numbers tested)	Hepatitis C virus n (%), 95% CI
Injecting Drug Users:	
NEP, Central-A (404)	239 (59.2), 54.2-64.0
NEP, Central-E (107)	32 (29.9), 21.4-39.5
NEP, Central-H (122)	7 (5.7), 2.3-11.5
NEP, Northwest-A (394)	264 (67.0), 62.1-71.6
NEP, Northwest-B (239)	184 (77.0), 71.1-82.2
NEP, Northwest-B1 (78)	43 (55.1), 43.4-66.4
NEP, Northwest-B2 (47)	39 (83.0), 69.2-92.4
NEP, Northwest-F (85)	7 (8.2), 3.4-16.2
NEP, Northwest-F1 (57)	17 (29.8), 18.4-43.4
NEP, Southeast-D (86)	45 (52.3), 41.3-63.2
Total (1619)	877 (54.2), 51.7-56.6

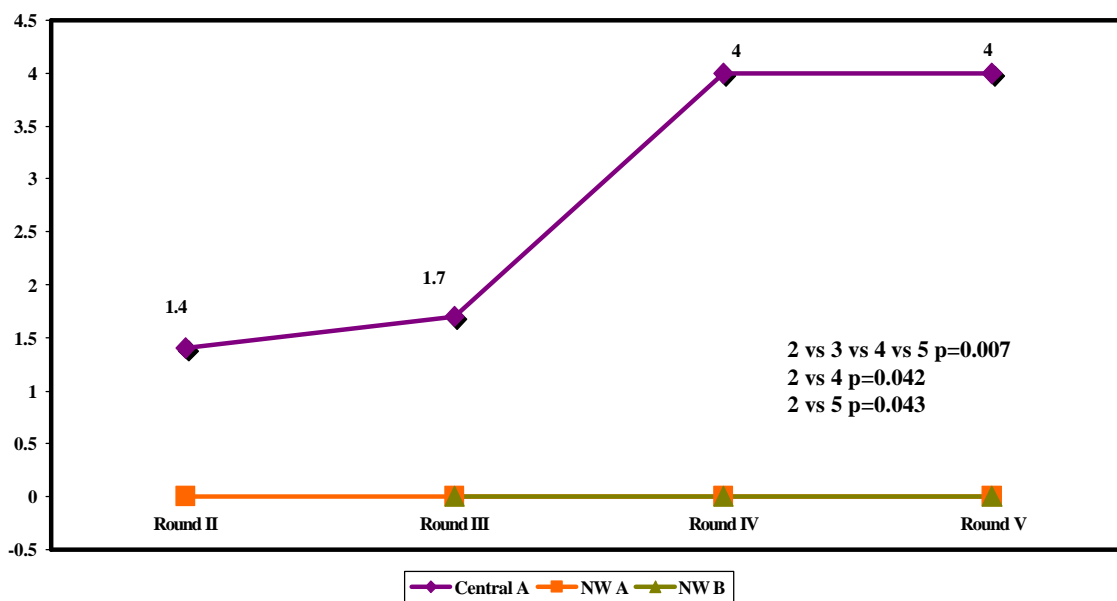
The 5th round BSS showed that needle/syringe sharing continued to be routine among IDU especially among those in Central-A. However, sharing was comparatively lower in the Northwest region than in Central-A. Most IDU used other modes of taking drugs before they started injecting. A large proportion of IDU had commercial and non-commercial female sex partners and condom use was infrequent. A proportion of IDU (4.3-6.7%) sold blood in the last year. IDU were highly mobile. IDU from other cities traveled to Central-A where they injected drugs. Injecting drugs while abroad was more commonly reported by IDU from Northwest-B and B1 (10-12%).

A considerable proportion of heroin smokers injected in the last six months and most shared needle/syringe during their last injection. More than half of the heroin smokers had commercial and non-commercial female sex partners in the last year and those who did had multiple sex partners. Condom use, both in the last sex act and consistently in the last month, was very low with both commercial and non-commercial partners.

### Comparison over previous surveillance rounds: IDU

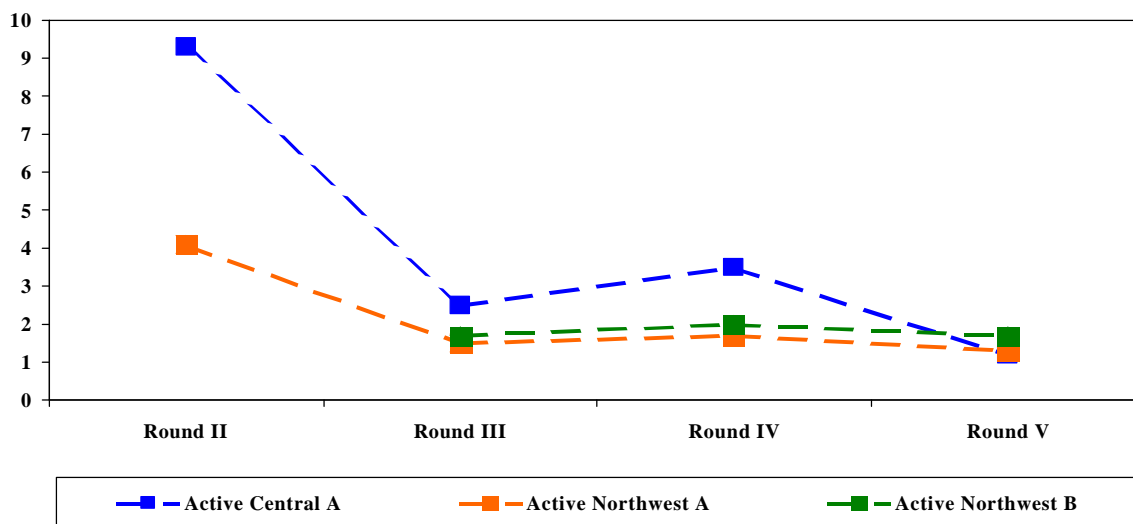
Over the rounds of serological surveillance, there has been a significant rise in HIV prevalence ( $p=0.007$ ) in Central-A as shown in Fig 1. The changes are also significant between 2<sup>nd</sup> and 4<sup>th</sup> rounds ( $p=0.042$ ) and between 2<sup>nd</sup> and 5<sup>th</sup> rounds ( $p=0.043$ ) of surveillance (Fig. 1).

Fig 1: HIV in IDU over the rounds of serological surveillance in Bangladesh



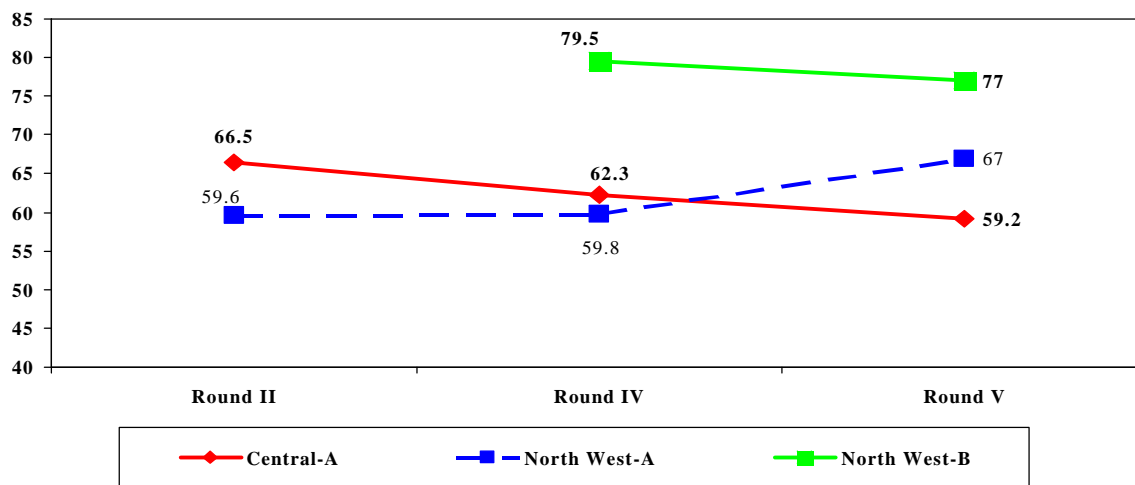
Among IDU in Central-A and Northwest-A, active syphilis rates declined significantly over the rounds ( $p < 0.001$  and  $0.01$ , respectively) as shown in Fig 2. For IDU from Northwest-B, no changes in active syphilis rates were recorded (Fig. 2).

Fig 2: Active syphilis in IDU over the rounds of serological surveillance in Bangladesh



HCV rates in all three sampled sites remained high as shown in Fig 3.

Fig 3: Hepatitis C in IDU over the rounds of serological surveillance



### Most At Risk Populations: Sex Workers

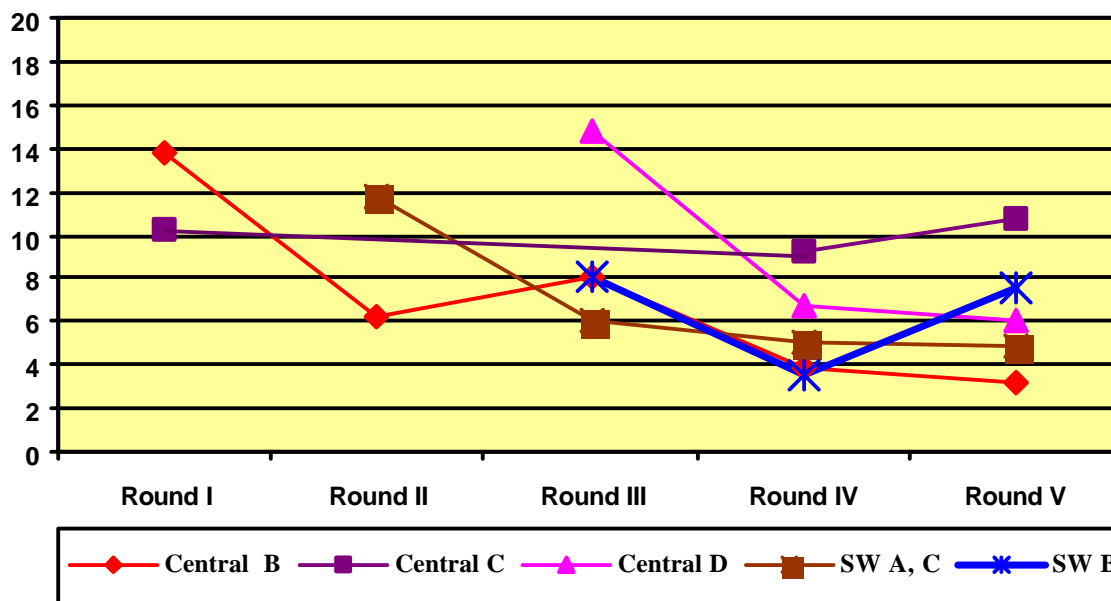
HIV prevalence remained low in female sex workers. Casual female sex workers in one of the northwest border areas had the highest rate of HIV prevalence, which is 2% but the total numbers of sex workers sampled were less than 400 (n=101). Active syphilis rates remained high among the female sex workers. However, active syphilis rates declined significantly over the rounds in most of the brothels and in the street based sex workers from Central-A. Female sex workers in the border areas were considerably mobile and sold sex across the border to India.

Hotel based sex workers were comparatively younger, and had highest number of clients among all female sex worker groups. Consistent condom use in female sex workers remained low in all groups.

### Comparison over the surveillance rounds: Sex Workers

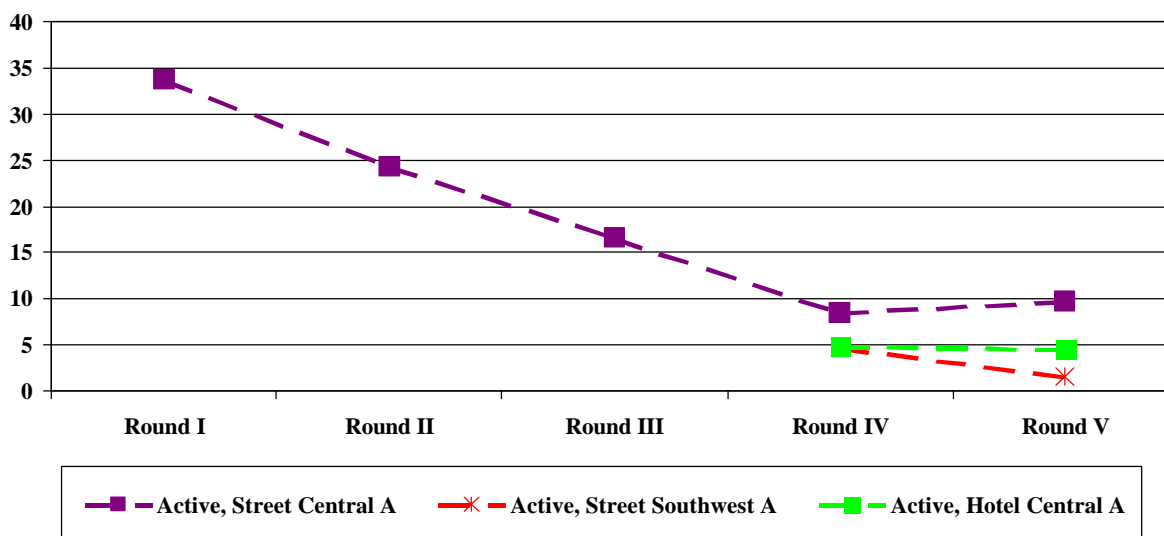
Among brothel based sex workers where sampling had been done for more than one round of surveillance, active syphilis rates over the rounds declined significantly ( $p < 0.001$ ) in all brothels except for two, Central-C and Southwest-B where rates remained unchanged (Fig 4).

Fig 4: Active syphilis in brothel sex workers over the rounds of serological surveillance



In street based sex workers from Central-A, significant decline in active syphilis rates were observed over the five rounds ( $p < 0.001$ ) (Fig 5). Between rounds IV and V in Southwest-A, significant decline in active syphilis rates ( $p = 0.01$ ) were also observed. However, changes in the active syphilis rates were not significant for the hotel based sex workers in Central-A.

Fig 5: Active syphilis in street and hotel based sex workers over the rounds of serological surveillance



## Most At Risk Populations: Males who have sex with males

HIV prevalence was low in males who have sex with males (MSM), male sex workers (MSW), Hijras and partners of Hijras. In Central-A, changes in the active syphilis rates in MSM and MSW over the rounds were not significant.

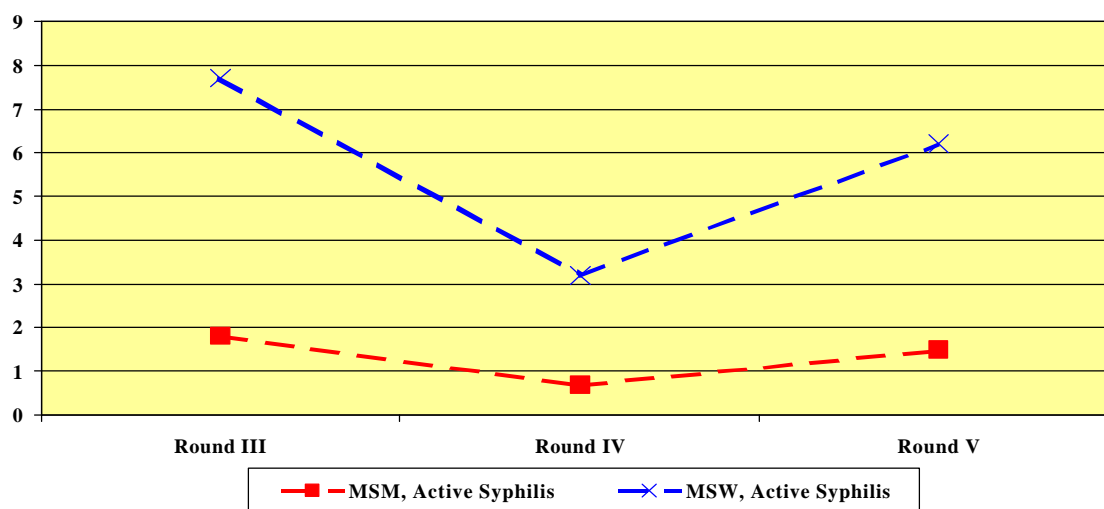
Almost all of the MSW and Hijras reported that they had new clients in the last week. Some MSW sold sex to females in the last month. Hijras reported more clients in the last week than MSW while condom use was low in this group.

All groups of sex workers reported violence in the last year. Both being raped and beaten was most commonly reported by Hijras and female street based sex workers from Central-A. Violence was reported to have been committed by both police and mastans.

## Comparison over the surveillance rounds: MSM

In Central-A, changes in the active syphilis rates in MSM and MSW were insignificant over the rounds of serological surveillance (Fig 6).

Fig 6: Active syphilis in MSM and MSW from Central-A over the rounds of serological surveillance



## Summary

The relatively low level of HIV in Bangladesh today does not guarantee low prevalence tomorrow. Experience teaches us that early epidemics do not show their magnitude at first and place few demands on the health sector. All the risk factors, which give birth to explosive HIV epidemics are present in Bangladesh today. In the absence of good quality and high coverage intervention programmes, HIV prevalence may jump to very high levels within months. Once HIV prevalence crosses the 10% level, epidemics become very difficult to control. Policy makers and programmers within the Government of Bangladesh, bi-lateral agencies, national and international NGOs have a key role to play in recognizing the urgency of the situation and taking immediate action.

The data from the 5th round of the serological surveillance confirm the fears from the previous 4th round that there is an impending epidemic among the injecting drug users in Central Bangladesh and one neighborhood in that city is already experiencing an epidemic.



**Key indicators from the fifth round of serological and behavioural surveillance for HIV in Bangladesh, 2003-2004**

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
<b>Serological surveillance</b>															
% HIV infection	Central A <sup>1</sup>	4.0	0.8		0.2	0	0.2		0	0.2	0				0
	Central B			0.5										0	
	Central C			0									0		
	Central D			0.5										0	
	Central E	0													
	Central G <sup>1</sup>									0.2					0
	Central H	0													
	Central L			0										0	
	Central N			0											
	Central P			0.5											
	Northwest A	0													
	Northwest B	0													
	Northwest B1	0													
	Northwest B2	0													
	Northwest F	0													
	Northwest F1	0													
Northwest K1												2.0			

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Northwest M1											0			
	Northeast A					0.6							0.3		
	South A											0			
	South E			0											
	Southwest – A <sup>2</sup>			0	0										
	Southwest B			0.6											
	Southwest C <sup>2</sup>			0											
	Southeast A				0	1.5	0						0.3		
	Southeast D	0													
% Syphilis infection (Total syphilis seropositive)	Central A <sup>1</sup>	11.9	9.7		32.9	10.5	3.0		5.8	30.9	15.0				6.8
	Central B			22.5										10.0	
	Central C			37.1									8.0		
	Central D			30.9										24.6	
	Central E	35.5													
	Central G <sup>1</sup>									30.9					6.8
	Central H	6.6													
	Central L			34.6										25.0	
	Central N			34.6											
	Central P			28.3											

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Northwest A	9.4													
	Northwest B	13.0													
	Northwest B1	2.6													
	Northwest B2	6.4													
	Northwest F	5.9													
	Northwest F1	17.5													
	Northwest K1											15.8			
	Northwest M1											2.9			
	Northeast A					17.5							6.3		
	South A											12.7			
	South E			33.9											
	Southwest – A <sup>2</sup>			23.5	7.7										
	Southwest B			33.9											
	Southwest C <sup>2</sup>			23.5											
	Southeast A				28.9	9.8	6.5						10.6		
	Southeast D	12.8													
% Syphilis (Active)	Central A <sup>1</sup>	1.2	2.6		9.7	4.5	0.2		1.5	10.4	6.2				2.3
	Central B			3.2										2.0	
	Central C			10.7									2.5		

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Central D			6.0										6.3	
	Central E	5.6													
	Central G <sup>1</sup>									10.4					2.3
	Central H	1.6													
	Central L			11.0										5.4	
	Central N			8.2											
	Central P			12.2											
	Northwest A	1.3													
	Northwest B	1.7													
	Northwest B1	1.3													
	Northwest B2	2.1													
	Northwest F	0													
	Northwest F1	3.5													
	Northwest K1											6.9			
	Northwest M1											1.0			
	Northeast A					5.4							3.3		
	South A											5.1			
	South E			5.1											
	Southwest – A <sup>2</sup>			4.8	1.5										

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras	
	Southwest B			7.6												
	Southwest C <sup>2</sup>			4.8												
	Southeast A				11.9	5.3	1.2						2.8			
	Southeast D	7.0														
Behavioural surveillance																
% who sold sex in the past week <sup>3</sup>	Central - A	1.3	2.8	100.0	98.6	99.2				100.0	100.0					
	Northwest - A	0.6														
	Northwest - B	3.2														
	Northwest - B1	0.0														
	Southeast - D	1.4														
	Southeast - A					96.2	100.0					99.2				
	Northeast - A															
	Southwest - A					98.2										
% who bought sex from female in the past month	Central - A	19.1	52.3				50.0	61.4	57.2		4.3					
	Northwest - A	21.2														
	Northwest - B	27.4														
	Northwest - B1	9.5														
	Southeast - D	14.2														
	Southeast - A							49.8				13.0				

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras	
	Northeast - A															
	Southwest - A								25.1							
% who bought sex from male/Hijras in the past month <sup>4</sup>	Central - A	2.3	0.4				7.1	7.0	73.2	0.5	12.2					
	Northwest - A	0.3														
	Northwest - B	2.6														
	Northwest - B1	0.0														
	Southeast - D	2.1														
	Southeast - A						8.6				9.9					
	Northeast - A															
	Southwest - A								97.2							
% condom use at last commercial sex with new clients past week <sup>5</sup>	Central - A			39.7	37.7	29.7				15.6	43.6					
	Northwest - A															
	Northwest - B															
	Northwest - B1															
	Southeast - D															
	Southeast - A					13.5	37.5					44.7				
	Northeast - A															
Southwest - A				20.6												
% condom	Central - A			24.1	34.3	19.4				17.0	34.8					

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras	
use at last commercial sex with regular clients past week <sup>5</sup>	Northwest - A															
	Northwest - B															
	Northwest - B1															
	Southeast - D															
	Southeast - A				8.1	27.1					30.2					
	Northeast - A															
	Southwest - A				15.1											
% consistent condom use with new clients past week <sup>6</sup>	Central - A			5.2	12.0	3.9				2.2	18.3					
	Northwest - A															
	Northwest - B															
	Northwest - B1															
	Southeast - D															
	Southeast - A					3.9	0.0					21.8				
	Southwest - A					3.4										
% consistent condom use with regular clients past week <sup>6</sup>	Central - A			2.8	15.3	3.0				2.5	11.6					
	Northwest - A															
	Northwest - B															
	Northwest - B1															

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Southeast - D														
	Southeast - A				3.7	0.0					19.1				
	Northeast - A														
	Southwest - A				5.8										
% condom use at last commercial sex with female past year <sup>7</sup>	Central - A	15.7	3.8				3.9	14.2	39.8		60.0				
	Northwest - A	37.9													
	Northwest - B	10.0													
	Northwest - B1	44.4													
	Southeast - D	21.0													
	Southeast - A						3.2				53.3				
	Northeast - A														
	Southwest - A								55.1						
% consistent condom use with female commercial partner past year <sup>7</sup>	Central - A	5.4	0.6				2.3	4.1	15.2		40.0				
	Northwest - A	9.1													
	Northwest - B	8.8													
	Northwest - B1	27.8													
	Southeast - D	9.7													
	Southeast - A						1.4				40.0				
	Northeast - A														



Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Southwest - A								42.9						
% condom use at last commercial sex with male/Hijras past year <sup>8</sup>	Central - A	13.0	0.0				0.0	0.0	46.7						
	Northwest - A	0.0													
	Northwest - B	0.0													
	Northwest - B1	--													
	Southeast - D	0.0													
	Southeast - A						0.0								
	Northeast - A														
	Southwest - A								51.2						
% consistent condom use with male/Hijras past year <sup>8</sup>	Central - A	6.4	0.0				0.0	0.0	5.3						
	Northwest - A	0.0													
	Northwest - B	0.0													
	Northwest - B1	--													
	Southeast - D	0.0													
	Southeast - A						0.0								
	Northeast - A														
	Southwest - A								8.0						
% injected drugs in past	Central - A	100.0	34.4*	0	0.7	0.8	6.4	0.3	2.1	0	0.5				
	Northwest - A	100.0													

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras	
year	Northwest - B	100.0														
	Northwest - B1	100.0														
	Southeast - D	100.0														
	Southeast - A					0	0	0.3				3.9				
	Northeast - A															
	Southwest - A						0			0.5						
% sought STI treatment at formal facilities among those with symptom for last STI <sup>9</sup>	Central - A	42.1	25.0	77.5	77.5	70.7	19.6	55.8	78.8	67.6	83.7					
	Northwest - A	42.9														
	Northwest - B	28.9														
	Northwest - B1	38.9														
	Southeast - D	53.3														
	Southeast - A					45.8	29.9	51.2				72.5				
	Northeast - A															
	Southwest - A					74.3				80.7						
% exposed to NGO intervention in past year	Central - A	88.9	7.0	88.5	96.1	44.4	0.5	39.5	58.2	15.4	66.0					
	Northwest - A	93.5														
	Northwest - B	89.0														
	Northwest - B1	97.6														
	Southeast - D	0.0														

Indicator	Geographic Location	Injection drug users	Heroin Smokers	Brothel Sex Workers	Street Sex Workers	Hotel Sex Workers	Rickshaw Pullers	Truckers (drivers and helpers)	Male having sex With male (MSM)	Hijras	Male Sex Workers (MSW)	Casual sex workers	MSM and MSW combined	Babus (Brothel)	Partners of Hijras
	Southeast - A				42.0	64.0	1.0				86.5				
	Northeast - A														
	Southwest - A				71.0				97.2						
% share passively in past week <sup>10</sup>	Central - A	86.0	78.6												
	Northwest - A	21.2													
	Northwest - B	63.7													
	Northwest - B1	4.8													
	Southeast - D	63.1													
	Southeast - A														
	Northeast - A														
	Southwest - A														
% share passively or actively last time <sup>10</sup>	Central - A	77.2	96.3												
	Northwest - A	15.8													
	Northwest - B	58.4													
	Northwest - B1	7.1													
	Southeast - D	68.8													
	Southeast - A														
	Northeast - A														
	Southwest - A														

**Notes:**

1. For Hijras and partners of Hijras in serology, Central-A and Central-G were sampled together.
  2. For serology, Southwest-A and Southwest-C were sampled together.
  3. For IDU and Heroin smokers the figures refer to last year that sold sex in exchange of money or drugs. For brothels, hotels and street sex workers the figure refers to past week that sold sex to new or regular clients. For Hijras and MSW the figures refer to past one month.
  4. For Hijras the figures refer to selling sex to males.
  5. For brothels, hotels and street sex workers the figures refer to vaginal sex only. For MSW and Hijras the figures refer to anal sex only. The percentages have been calculated among those who had clients past week.
  6. For brothels, hotels and street sex workers the figures refer to vaginal and anal sex. For MSW and Hijras the figures refer to anal sex only. The percentages have been calculated among those who had clients past week.
  7. For MSM and MSW the figures refer to past month. The percentages have been calculated among those who had commercial sex with female within past month/year.
  8. For MSM the figures refer to condom use with other males only in past one month. For other groups, the figures refer to condom use with males or Hijras past year. The percentages have been calculated among those who had commercial sex with male/Hijras within past month/year.
  9. Formal treatment refers to clinics (private or NGO), hospitals or private doctors being mentioned by name as the first choice of treatment for STI and the figures refer to among those who reported STI and had sexual experience.
  10. For IDU the figures refer to sharing injection last week passively 'always' and 'sometimes' are combined. For heroin smokers the figure refers to sharing last time. For IDU the figures refer to last 2 months recall period and the percentages have been calculated over full sample. For heroin smokers the figures refer to last 6 months recall period the percentage has been calculated among those who were injected last 6 months and shared (N=109). Active sharing refers to passing needles/syringes to someone else after using them, and passive sharing refers to using needles/syringes passed on after use by someone else.
- \* For the past 6 months

Blank cells refer to question not asked

-- Refers to none reported sex

