

# Annual HIV Sentinel Surveillance

Country Report  
2008-09

National Institute of Health and Family Welfare  
Munirka, New Delhi-110067

&  
National AIDS Control Organisation (NACO)  
Ministry of Health & Family Welfare  
New Delhi-110001



# Annual HIV Sentinel Surveillance

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## Country Report 2008-09

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आरोग्यम् सुखसम्पदा  
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# Acknowledgements

The Annual Sentinel Surveillance for HIV infection has been conducted in the country each year since 1998. This effort focuses on generating scientific data for ascertaining the status of the epidemic, for programme planning, including inter-vention projects, and for the estimation of the burden of HIV infection in the country. The sentinel surveillance is a joint effort of the National AIDS Control Organization (NACO), National Institute of Health Family Welfare (NIHFW), National Institute of Medical Statistics (NIMS) with the State AIDS Control Societies (SACS), and reputed regional institutes across the country. This report, based on the data of 2008–09, in conjunction with the past data, provides an insight into the epidemiology of HIV in the country.


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Prof. Deoki Nandan  
Director, NIHFW



## Abbreviations and Acronyms

|       |   |
|-------|---|
| AIDS  | Acquired Immuno Deficiency Syndrome             |
| ANC   | Antenatal Clinic                                |
| ASHA  | Accredited Social Health Activist               |
| ART   | Anti Retroviral Therapy                         |
| AWW   | Anganwadri Worker                               |
| BSS   | Behavioural Surveillance Survey                 |
| CHC   | Community Health Centre                         |
| CI    | Confidence Interval                             |
| CMO   | Chief Medical Officer                           |
| CBO   | Community Based Organization                    |
| FSW   | Female Sex Worker                               |
| HSS   | HIV Sentinel Surveillance                       |
| HIV   | Human Immunodeficiency Virus                    |
| HRG   | High Risk Group                                 |
| IBBS  | Integrated Biological and Behavioural Surveys   |
| ICTC  | Integrated Counseling and Testing Center        |
| IDU   | Injecting Drug Users                            |
| MARP  | Most At Risk Populations                        |
| MCH   | Maternal and Child Health                       |
| MSM   | Men who have Sex with Men                       |
| NACO  | National AIDS Control Organization              |
| NIHFW | National Institute of Health and Family Welfare |
| NGO   | Non-Government Organization                     |
| PHC   | Primary Health Centre                           |
| PPTCT | Prevention of Parent-to-Child Transmission      |
| RI    | Regional Institute                              |
| RCH   | Reproductive and Child Health                   |
| SACS  | State AIDS Control Society                      |
| SEARO | South East Asia Regional Office (of WHO)        |
| SST   | State Surveillance Teams                        |
| STD   | Sexually Transmitted Disease                    |
| TB    | Tuberculosis                                    |
| TC    | Testing Centre                                  |
| TI    | Targeted Intervention                           |
| VCTC  | Voluntary Counseling and Testing Centre         |
| WHO   | World Health Organization                       |
| CTM   | Central Team Member                             |
| MRG   | Migrants  |
| TRK   | Truckers  |
| EUN   | Eunuchs   |
| MP    | Madhya Pradesh                                  |

|               |   |
|---------------|---|
| TN            | Tamil Nadu                                  |
| AP            | Andhra Pradesh                              |
| UP            | Uttar Pradesh                               |
| WB            | West Bengal                                 |
| A & N Islands | Andaman & Nicobar Islands                   |
| J & K         | Jammu & Kashmir                             |
| UNAIDS        | United Nations Programme on HIV/AIDS        |
| NIMS          | National Institute of Medical Statistics    |
| VDRL          | Venereal Disease Research Laboratory        |
| ELISA         | Enzyme Linked Immuno Sorbent Assay          |
| EQUAS         | External Quality Assurance System           |
| DBS           | Dried Blood Spots                           |
| ICMR          | Indian Council of Medical Research          |
| RRL           | Regional Reference Laboratories             |
| SPSS          | Statistical Package for the Social Sciences |
| UT            | Union Territory                             |

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# Executive Summary

**T**he national response to the HIV epidemic is guided by data obtained through HIV sentinel surveillance. The HIV Sentinel Surveillance, conducted annually since 1998, generates data to improve tracking of HIV trends, as well as improves the understanding of the epidemic's characteristics and its level of proliferation across geographical areas. Surveillance data not only guide the planning of programmes for HIV prevention, treatment, care and support and resource allocation in India, but also inform advocacy efforts to mobilize political commitment. For this reason, the surveillance system has been tailored to the pattern of the epidemic in India and aims to concentrate data collection in populations considered vulnerable to HIV. Resources for HIV surveillance are thus concentrated where they will yield information most useful for reducing the spread of HIV and providing care for those affected.

The HIV Sentinel Surveillance is conducted annually by NACO/SACS, together with the National Institute of Health and Family Welfare (NIHFW) and National Institute of Medical Statistics (NIMS), and in collaboration with seven regional institutes (RIs), central team members (CTMs), and state surveillance teams (SSTs). HIV Sentinel Surveillance is implemented with the technical oversight and support of a surveillance working group, which includes representatives from the government organizations mentioned above and the technical partners, WHO and UNAIDS.

This report presents the methodology adopted by the surveillance working group to implement the 2008–09 HIV Sentinel Surveillance—a process which included training, supervisory visits, monitoring, data collection analysis, the writing of reports, and steps for quality assurance—along with the key findings on the epidemic, and recommendations for the next surveillance round.

## Methodology

The 2008–09 annual sentinel surveillance was conducted from 1 October 2008 to July 2009 in 35 states and Union Territories of India. The methodology adopted was more or less similar to that utilized during the previous round, although significant revisions were incorporated to overcome the weaknesses noted, as mentioned later.

## Sampling frame and methodology

The HIV Sentinel Surveillance was conducted among the following population groups at urban and rural sites: (i) the antenatal clinic (ANC) attendees who were representative of the general population; (ii) the key populations vulnerable to HIV, including men who have sex with men (MSM), transgender (TG), female sex workers (FSWs) and injecting drug users (IDUs) (these groups are collectively categorized as high-risk groups [HRG]); and (iii) population groups likely to act as a bridge for HIV transmission from the HRGs to the general population through unprotected sex or unsafe injecting drug use. The bridge population includes patients attending STI clinics, migrants and truckers.

The sampling frame encompassed all individuals attending the designated sentinel sites during the surveillance period. The sample size for ANC attendees was 400, while that for the HRGs and bridge population was 250. For ensuring sex-disaggregated data for the STI clinic attendees, the total sample size was broken down to 150 males and 100 female patients. The sampling units for ANC attendees, HRGs and the bridge population consisted of people between 15 and 49 years of age.

The unlinked anonymous method of sample collection was utilized at each ANC and STI surveillance site, that is, the sampling units were selected according to the inclusion criteria by consecutive sampling for a period of three months or until the sample size was completed. At the HRG and bridge population sites, the method used



was either random sampling or consecutive sampling. The approach depended on the data available for the HRGs. At selected HRG sites, and wherever line lists were available, the method used was random sampling. Line lists were obtained from non-governmental organizations. This method was adopted at surveillance sites in Gujarat, where the line list of all the registered HRGs was available. In the majority of the remainder of the HRG and bridge population sites in the country, the consecutive sampling method was utilized.

The following background characteristics of the sampling frame were collected from the ANC, HRG and bridge population groups on an individual proforma: age, sex, residence, literacy status, occupation of self and spouse, order of pregnancy, migrant status, and diagnosis of STIs based on a 'syndromic approach'. Additional information on risk behaviours, such as the number of sex partners, needle-sharing behaviour and typology of MSM, and the reasons for attending the targeted intervention (TI) site were also obtained from all.

The process used for venous blood collection and testing at the ANC, STI and HRG sites was as follows. At the ANC and STI clinics, venous blood was collected from the sampling frame. The serum was separated from the whole blood, coded and forwarded to recognized laboratories—ensuring that the temperature was regulated during transportation—for HIV and VDRL testing. At the HRG sites, to overcome the practical problems encountered under the previous surveillance rounds in serum separation, storage and transport of blood samples—particularly for sites in geographically inaccessible areas—the dried blood spot (DBS) method was introduced. In DBS testing, the specimens are collected by applying a few drops of blood, through a finger prick, onto specially manufactured filter papers. With the method of processing specimens via DBS—which includes air drying for several hours, storage in low gas-permeability plastic bags with the addition of desiccant to reduce humidity—the specimen may be kept at ambient temperature, even in tropical climates. The samples have a longer lifespan and the need for refrigeration is reduced. The specimens were collected with informed consent, which was obtained in the case of all TI site-based HRG groups. The process was voluntary but unlinked anonymous, i.e. after the participants' consent was obtained, the identifying information was not included in the DBS cards which were sent to the testing site. The cards mentioned only the age, sex and code. The results of the HIV test were communicated through sample codes.

Under the sentinel surveillance, the samples were tested through two ELISA / rapid tests or a combination of these. ANC and STI attendees' samples were tested at designated laboratories identified by NACO, while the DBS samples of the HRGs were tested at the National Institute of Virology, Pune (Maharashtra).

## Surveillance sites

For more comprehensive generation of information on the nature of the HIV epidemic across the country, the number of HIV sentinel surveillance sites was expanded from 1134 in 2007 to 1190 in 2008. Thus, geographical coverage as well as the representation of the various population groups increased. This scale-up was effected in continuation of the sustained initiative over the previous rounds to increase the participation of the states in the surveillance process beyond the six high-prevalence states where sites were previously concentrated, and to achieve adequate representation of the various population groups, particularly those in rural areas and the HRGs.

The number of sites increased particularly in the case of HRGs as new sites were instituted in states that previously had no sites for one or all of the three HRGs. The number of FSW sites increased by 51, from 137 in 2007 to 188 in 2008, while that of MSM sites increased by 29, from 40 in 2007 to 69 in 2008. The number of sites for IDUs increased by 5, from 52 in 2007 to 57 in 2008. As for the bridge populations, an increase was noted only among the migrant sites—8 were instituted in 2008, which was an increase by 5 sites from the previous round. The number of truckers and transgender sites remained at 7 and 1, respectively. The total number of ANC sites (648) was comparable to the number in previous rounds. Of these, 486 were urban ANC sites in the high- and low-prevalence states and 162 were rural sites. Of the latter, 126 were in six high-prevalence states and 36 in the low-prevalence states.

STI sites were considered redundant in certain of the southern high-prevalence states, where TI sites through



NGOs for the HRGs had increased, and were thus closed under the 2008–09 surveillance round. The total number of STI sites under the 2008–09 round was 212.

Despite the fact that the number of sites has increased, it has been recognized that the population and geographical coverage of these sites is not uniform across the states. For example, there are no HRG sites in Meghalaya, Uttarakhand and Chhattisgarh. Rajasthan does not have any MSM or IDU sites, while Goa and Gujarat have no IDU sites. There is only one TG site in the country. The focus of the subsequent surveillance rounds will be on rectifying this state of affairs.

### **Steps taken to assure quality in the surveillance process**

A stringent process was adopted for ensuring quality of the HIV Sentinel Surveillance, and during the stages of planning, implementation and data analysis. The principle steps taken included adherence to the latest WHO / UNAIDS guidelines on HIV sentinel surveillance to guide national policy on strengthened application of surveillance and the technical aspects of the various processes involved in surveillance. Secondly, operational guidelines were developed for the surveillance coordinators, programmers and health professionals involved in the sentinel surveillance to clarify the method and approach for implementing the surveillance activities effectively. The guidelines included recommendations on the identification of the sampling frame, the sampling methodology, blood collection, testing and storage, and the need for quality assurance. Thirdly, all stakeholders supporting the implementation of the HIV Sentinel Surveillance were imparted technical training on the surveillance process following a participatory approach, such as through workshop discussions.

Fourthly, close oversight and monitoring functions were performed by the members of the RIs, central team, SACS and the SSTs. Supervisory visits to the field—to each sentinel site and testing centre—were made to support all programmers and health professionals implementing the surveillance activities. The surveillance working group provided close mentoring to trouble-shoot and address problems or challenges arising in the field. Fifthly, for ensuring the quality of venous testing, the laboratories adhered to internal and external quality control mechanisms (EQAS). They were monitored by the reference laboratories, which provided regular feedback to institute corrective measures as and when required.

Sixthly, data verification was facilitated through corroboration of the data entered by the RIs and SACS. This ensured the correctness and completeness of the data. This task was performed by the NIFHW. Finally, technical guidance was provided by the Task Force on Surveillance, WHO and UNAIDS. These agencies also lent their support for the preparation of this report.

### **HIV epidemic trends**

India's HIV epidemic continues to be concentrated among the high-risk population groups and is not yet well established among the general population. This is confirmed by the 2008–09 HIV Sentinel Surveillance data, which shows that the prevalence of HIV among the HRGs is over 5% and that among ANC attendees is below 1%. Active networks of risk exist within and between sub-populations, particularly via the bridge populations. Whilst this overarching characteristics is translated to sub-national or state level, the trends are clearly not consistent and are changing rapidly, as described below.

### **HIV prevalence among ANC attendees at national level and across sites**

HIV prevalence at the national level is stable to declining among the general population. HIV testing of the 252,650 ANC attendees at 648 ANC sites revealed a national prevalence rate of 0.47% (unadjusted). However, the prevalence was not low in all the Indian states. There were certain high-prevalence states where the prevalence of HIV was over 1%. For example, Andhra Pradesh and Nagaland had a prevalence rate of 1.22% and 1.12%, respectively. The high-prevalence state of Manipur, however, reported an HIV prevalence of less than 1% for the first time since 1998.



In terms of site-wise prevalence, a total of 105 sites—in rural and urban areas—reported a seropositivity rate of between 1% and 1.99%. Whilst the majority of the sites were in the states categorized as high-prevalence states (Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu), a quarter or 27 of the 105 sites were in moderate- to low-prevalence states. Fifteen ANC sites had an HIV prevalence rate of between 2% and 2.99%, while 6 had an HIV seropositivity rate of over 3%. The districts with a prevalence of over 3% included Guntur, Ramanathanpur and Tuensang. HIV prevalence was found to be increasing at ANC sites—particularly in comparison with previous years—in the states categorized as moderate- to low-prevalence states, i.e. Assam, Chhattisgarh, Haryana, Jharkhand and Orissa.

An analysis of increased vulnerability to HIV according to the characteristics of the population makes it evident that women who have had school education are more informed, and thus better able to protect themselves from HIV. This was apparent in Manipur and Nagaland, where educated women comprised a lower proportion of the total number of seropositive ANC attendees than their illiterate counterparts. The surveillance data reflected the susceptibility to HIV of illiterate urban women between the ages of 15 and 49 years. This was particularly the case if they were married to truck drivers, auto drivers and skilled/semi-skilled workers. The highest rate of VDRL positivity in the country was reported among young mothers from the rural areas of Manipur and Nagaland.

### **HIV prevalence among HRGs at national level and across sites**

HIV remained concentrated among the HRGs in India, the prevalence among these groups being over 5%. The prevalence trend, however, was not uniform across all the HRGs, both in India and across the states. A total of 69,276 individuals were tested at 284 HRG sites. Of these sites, 56 reported an HIV prevalence of between 5% and 9.99%, while 44 had an HIV prevalence rate equivalent to 10%.

At the national level, HIV prevalence among FSWs was stable to slightly declining and was at 4.8% in 2008–09. The sentinel surveillance, however, found a slight increase in HIV prevalence among the IDU and MSM population groups (9.86% and 6.9%, respectively).

Considering state prevalence trends, HIV prevalence among the FSWs in Andhra Pradesh, Karnataka, Maharashtra, Manipur and Nagaland was over 10%. It was the highest (14.2%) in Karnataka, followed by Nagaland, Andhra Pradesh and Manipur (14.1%, 11.5% and 10.9%, respectively). Seropositivity increased in 12 of the states with moderate to low prevalence in 2008 in comparison with 2007. Considering site-wise seropositivity, two FSW sites in Maharashtra (Pune and Mumbai) and one in Karnataka (Bagalkot) had a prevalence rate of over 30%. Five sites in Maharashtra and Andhra Pradesh each and two sites in Karnataka and Tamil Nadu each reported a seropositivity rate between 10% and 30%.

Surveillance was conducted among IDUs across 24 states, including Madhya Pradesh and Jharkhand, where IDU sites were instituted under the 2008–09 surveillance round. Forty per cent of the IDU sites reported an HIV prevalence rate of more than or equal to 5%. The sentinel surveillance found that HIV prevalence was increasing among the IDU population—particularly in states with moderate and low prevalence—whilst it was declining in certain -prevalence states, such as Maharashtra and Tamil Nadu. An increasing trajectory was noted predominantly in Punjab, Delhi, Chandigarh, Andhra Pradesh and Assam. Clearly, the epidemic among the IDUs is no longer restricted to the north-eastern states. The prevalence is over 5% in 10 states in India, which are Madhya Pradesh (39.6%), Manipur (28.3%), followed by Punjab, Maharashtra, Delhi, Orissa, West Bengal, Bihar, Assam, and Mizoram with seropositivity rates of 27.6%, 20%, 18.6%, 6.6%, 5.6%, 5.5%, 5.3% and 5.0%, respectively.

HIV surveillance was conducted at MSM sites across 21 states, with new sites instituted in Andhra Pradesh, Bihar, Himachal Pradesh, Jharkhand and Madhya Pradesh. Approximately 35% of the districts and 28 sites in 10 of the 21 states recorded an HIV prevalence of over 5%. HIV prevalence was comparatively higher among MSM than FSWs in Andhra Pradesh, Manipur, Maharashtra and Madhya Pradesh. The prevalence among MSM in these states was 22.1%, 17.2%, 11.9% and 11.6%, respectively. It was reportedly higher among MSM in urban





rather than rural areas of the country, such as in north-east Delhi, Pune, Bangalore, Surat, Rajkot and Kolkata. Regarding the occupation profile, the prevalence of HIV was the highest among MSM in service (government/private) in urban areas and those working as non-agricultural labourers in rural areas.

Surveillance at the TG site in Mumbai found that the seropositivity rate among this population was over 16%. A trend cannot be established since 2005, although a slight increase was observed from the time of the 2007 surveillance round.

### **HIV prevalence among bridge population groups**

Surveillance was conducted at eight migrant sites in India. There were two sites in Gujarat and Maharashtra each and one each in Mizoram, Orissa, Himachal Pradesh and West Bengal. A total of 1742 migrants were tested for HIV under the 2008–09 sentinel surveillance round. As five of these sites were instituted under the 2008–09 round, establishing a prevalence trend was not possible across all sites. It can, however, be stated that the prevalence of HIV was the highest at the MRG site in Thane, the seropositivity rate among the 250 migrants tested being 5.2%. Thane was one of the newly established sites. The prevalence of HIV was between 1% and 4% at the two sites in Gujarat and one site in Orissa. Whilst the prevalence among MRG declined from the 2007 to the 2008–09 round in the West Bengal site from 9.27% to 2.48%, it increased at the site in Mumbai (Maharashtra).

The prevalence of HIV was stable to declining among the trucker population in the majority of the sites where surveillance was conducted. Of the seven sites in existence for truckers in 2008–09, five were in West Bengal and one each in Kerala and Himachal Pradesh. The HIV prevalence rate for this population declined in five of the seven sites. The rate varied across districts from nil to 2.8% in Burdwan, which recorded the highest seropositivity rate.

### **HIV and VDRL prevalence among STI clinic attendees**

Surveillance was conducted amongst 3005 individuals at valid STI sites in the high-prevalence states and 42,993 individuals at sites in states with moderate and low prevalence. While the seropositivity rate was 11.19% in the high-prevalence states and 1.70% in the moderate and low-prevalence states, the trend at the national level was stable to declining. At the state level, it was increasing slightly, more notably among the states with moderate and low prevalence. Two sites in Gujarat, one site in Mizoram and one in West Bengal reported a prevalence of over 10%.

VDRL prevalence was 1.08% in the high-prevalence states and 0.70% in the states with moderate to low prevalence.

### **State-level analysis**

As mentioned above, the trend of HIV prevalence was not consistent across states—whether high-prevalence or moderate- to low-prevalence—and across population groups.

HIV prevalence among ANC attendees in the high-prevalence states was stable to declining, considering the moving average of the previous surveillance data. It was, however, stable to increasing among specific age groups—particularly among people between 15 and 19 years of age—in certain high-prevalence states, including Nagaland and Andhra Pradesh. It was also found that HIV prevalence was increasing in rural areas. At surveillance sites in Karnataka, Tamil Nadu and Andhra Pradesh, the prevalence was above 3%. HIV prevalence among the IDU and MSM populations was the highest in Andhra Pradesh and Manipur, where the seropositivity rates were between 10% and 28%. The prevalence of HIV among FSWs and MSM was above 10% and among IDUs, above 20%, in Maharashtra. In Nagaland, the prevalence among FSWs was over 14% and among IDUs, 4%. HIV prevalence among ANC and STI clinic attendees, IDUs and FSWs was stable to increasing in Mizoram.

In Goa and Gujarat, states with moderate to low prevalence, HIV prevalence among ANC attendees was below 1%,



whilst it was above 5% among MSM and FSWs. Due to the absence of any IDU site in the state, determining the prevalence among this population, as well as the trajectory of the epidemic, to guide programme interventions was not possible.

It was not possible to gain a comprehensive understanding of the nature of the epidemic in the northern low-prevalence states, considering the few surveillance sites for HRGs. This was particularly true in the case of Orissa, Mizoram, West Bengal, Delhi, Chandigarh, Kerala, Jharkhand, Haryana, Uttar Pradesh and Assam, where there are known 'hot spots'. Recent evidence coming in following the creation of new surveillance sites for HRGs under the 2008–09 round revealed a high prevalence rate among them. For example, HIV prevalence among IDUs at the new sites in Madhya Pradesh and Punjab was 40% and 28%, respectively. Wherever sites were instituted under the previous surveillance rounds to make a comparative assessment possible, the trend was stable to increasing among the various sub-populations. A slight increase was seen in the prevalence among ANC attendees.

### **Recommendations for next round of surveillance**

We make two overarching recommendations for the next Annual HIV Sentinel Surveillance. Firstly, foreseeable operational challenges must be avoided through timely preparation and secondly, the number of surveillance sites should be expanded to achieve increased geographical and population coverage. These two points are elaborated upon in the following paragraphs.

Smooth implementation of HIV sentinel surveillance is possible if any foreseeable logistical, administrative and procedural delays are avoided prior to the surveillance. All supplies—for example, HIV kits and DBS cards—should be procured and forwarded to the relevant organizations and bodies prior to the set time-line. States should prepare themselves in advance by ensuring the availability of human resources for the implementation of surveillance within the time-line. Ideally, each state should designate an officer in-charge who is to be responsible for overseeing and coordinating the activities in the state.

To gain a comprehensive understanding of the epidemic across all states and population groups, it is necessary to expand the number and type of sites. At least one site for FSWs, MSM and IDUs should be instituted in each of the high-priority districts (A and B category districts in the country, as classified by NACO)—based on mapping data—across all high- and moderate- to low-prevalence states. This is particularly essential for the states that currently do not have any such sites, including Gujarat, Goa, Chhattisgarh, Jharkhand, Madhya Pradesh, Jammu and Kashmir, and Rajasthan, where there is a high level of migration out of and into the state and tourism is flourishing.

There is a need to expand the number of TG sites, particularly in the states with moderate and low prevalence. The creation of additional ANC sites in rural areas and sites for the bridge population at source and destination sites is also recommended. It is essential to set up such sites in Uttar Pradesh, Bihar, Madhya Pradesh, Orissa and Jharkhand, which have a high level of out-migration and where access to healthcare is inequitable.

### **Conclusion and recommendations for HIV programme**

Considering the trajectory and spread of the HIV epidemic in the states and among sub-populations, the following recommendations are made for the national and state programmes:

- It is essential to increase awareness and knowledge among the general population, HRGs and bridge population through IEC, BCC, life skills education in schools and colleges, and counselling. This will empower them to protect not only themselves against HIV, but also their partners and children.
- The access of women and children to HIV treatment and care services should be expanded through increased programmatic referrals and linkages. Also, support must be extended particularly to those belonging to the lower socioeconomic strata.



- There is a need to empower adolescent girls and street children, who are especially vulnerable to HIV.
- Efforts are required to strengthen HIV and STI syndrome management, particularly for syphilis.
- Comprehensive counselling services need to be provided at all STI clinics and gynaecology OPDs for HIV/AIDS and all STI/reproductive infections.
- Targeted interventions for HRGs should be sustained, and coverage of migrants and truckers must be expanded. More NGOs and CBOs need to be identified and supported for initiating TIs among MSM, IDUs and FSWs. Transgenders deserve a separate intervention strategy.
- There is a need to strengthen strategic information generation—surveillance, data generation, data analysis and operations research—by increasing linkages and collaboration between the monitoring and evaluation units between SACS and with the NIHFW, NIMS, RIs and Department of Biostatistics. The surveillance unit at NACO, together with the Task Force on Surveillance, could play the leading role in the coordination of strategic information generation, with technical support from WHO and UNAIDS.
- Partnerships with the private sector and civil society could be forged to strengthen the response to AIDS.
- There should be greater convergence between the National AIDS Control and Prevention Programme and the National Rural Health Mission.







# Chapter 1

## Introduction

**H**IV sentinel surveillance (HSS) is the core focus of India's National AIDS Control Programme (NACP) and response strategy. Since the detection of the first AIDS case at Chennai in 1986, the initial focus of the Government of India was on sero-surveillance. India built its surveillance system on the basis of the early sero-surveillance initiatives undertaken during the epidemic's first decade, coupled with the introduction of standardized and globally accepted methodologies. By 1998, annual HIV sentinel surveillance was initiated in India among the antenatal clinic (ANC) attendees and sexually transmitted infection (STI) clinic attendees.

In the initial years, comprehensive data on high-risk population groups were not available owing to the few sites and limited mapping information on these sub-populations. In the beginning, there were four high-risk group sites each for injecting drug users (IDU) and female sex workers (FSW), while there were none for men who have sex with men (MSM). The concept of targeted intervention (TI) sites under the NACP II and NACP III, however, opened up avenues for increasing surveillance among these groups. Ever since, there is an increased representation of sub-populations and constant efforts are being made to expand it even further.

This introductory chapter highlights the importance accorded by India to HSS. The second chapter deals with the methodology adopted for the implementation of the 2008–09 HSS. Chapter 3 includes a detailed presentation and analysis of the key findings emerging from surveillance according to sub-population and geography. The recommendations for the programme and the next round of annual HSS are presented in Chapter 4. Detailed state-wise surveillance data are presented in the annexures.

### **Centrality of annual HIV sentinel surveillance for AIDS response**

HIV sentinel surveillance has been imperative for generating public response to HIV in India, particularly when the epidemic was in its nascent stage and not visible across country and population groups. In India, national leaders seized the opportunity to formulate a response strategy as soon as the first AIDS case was detected in 1986. This early intervention was followed by more comprehensive and improved policy and strategic interventions to help contain the epidemic in the country, under the NACP II and NACP III.

One of the many factors contributing to India's effective AIDS programme is the use of surveillance data to direct efforts appropriately and thereby enable a slowdown of the spread of HIV. Surveillance data have demonstrated which population group, in which geographical location, is vulnerable to HIV. They have helped to identify sub-populations which must be the target of especially designed interventions. They have also helped in planning interventions for reducing the impact of HIV and AIDS.

Since HIV typically takes many years to develop into symptomatic illness, the impact of the epidemic is not visible for some time, until or after the infection levels begin to rise. Surveillance data provided inputs for models from which national estimates and projection of infections, AIDS-related deaths and treatment needs were derived. National estimates and projections have been useful in India for planning how to mitigate the impact of the epidemic by providing evidence to help direct resources efficiently. HSS data have also been of use in monitoring HIV infection trends over a period of time. Coupled with behaviour surveillance survey data, the data have provided an indication of the impact of national efforts to reduce HIV infection and increase safe behaviour.

Despite having much strength in HSS, there is scope for achieving greater advantage through the surveillance system. A central focus of sentinel surveillance has been tracking HIV by recording infections that have already taken place. The very nature of HSS leads to missed opportunity of providing early warning of the potential for



infection. Early warning systems are based mainly on data that record risk, such as the number of partners, condom use or the use of unsterilized injecting equipment. Such data, however, may come from other sources, including behavioural surveillance survey. Thus, inter-linkage between HSS and behavioural surveillance survey is essential and is being considered by India.

Realizing the need for HSS to provide greater coverage for high-risk population groups, the number and location of surveillance sites were expanded under the 2008–09 round. Sites were introduced in states that were previously without a site for one or all the high-risk populations. This was a significant measure, firstly because of the concentrated nature of the epidemic among key population groups. Secondly, the trends in infection in these populations would not be captured by HSS designed to track infection in the general population. While sufficient coverage for high-risk groups has not been ensured with sites not established across all high-priority districts, the scale-up has nevertheless been notable. More details on the increased surveillance sites introduced under HSS 2008–09 may be found in the second chapter.

### **Objectives of 2008–09 HIV sentinel surveillance**

HSS 2008–09 was conducted on the basis of the realization that HIV infections are not uniformly distributed in a population group. The distribution depends on the prevalence of behavioural and biological factors associated with an increased risk of HIV transmission. There are a number of modes of HIV transmission, which include sexual transmission—through vaginal and anal intercourse, parenteral transmission, mother-to-child transmission during pregnancy, birth or breastfeeding, and transmission through contact equipment contaminated by infected blood. HIV infection enters different geographical areas and populations at different times and spreads at different rates.

The objectives of HSS 2008–09 were to firstly, assess the prevalence of HIV among the general population, high-risk groups—FSW, MSM, transgender (TG) and IDU, and bridge population, i.e. migrants and truckers. The second objective was to assess the magnitude of the epidemic at the country and state levels and across sites. The third aim was to monitor trends in HIV prevalence over time and the fourth, to identify behaviours and risk factors for HIV transmission, such as syphilis infection.

The data generated under HSS 2008–09 will assist in public health decision-making and effective and efficient programme planning. More specifically, HSS data will be relevant for advocacy and mobilizing political commitment, targeting and prioritizing prevention and care programmes, monitoring and evaluating prevention and care programmes, resource allocation, programme planning and guiding scientific research. HSS data will be required for making estimates and projections for new and total HIV infections, AIDS cases, AIDS deaths and treatment needs through mathematical modelling and the use of statistical software.

### **Conclusion**

HSS 2008–09 was implemented in India through collective partnership between the staff of sentinel sites—from the site-in-charge to the nurse /counsellor and laboratory technicians—who are responsible for arranging and implementing surveillance activities at the site, along with state surveillance teams, regional institutes, and central team members (CTMs) from National AIDS Control Organization (NACO), National Institute of Health and Family Welfare (NIHFW), National Institute of Medical Statistics (NIMS), WHO and UNAIDS.

The following chapter specifies the methodology adopted for implementing HSS 2008–09.



# Chapter 2

## Methodology

**A**nual HSS is a joint effort of NACO, which acts as the central coordinating authority of the National HIV-AIDS Prevention and Control Programme, and the Task Force on Surveillance and Estimation, and the Working Group on Surveillance and Estimation. Their central focus for the 2008–09 round of annual HSS was to define a comprehensive methodology that considered country requirements and the current surveillance system in an effort to overcome previous weaknesses in HSS. Moreover, it aimed to generate surveillance data that were of improved quality.

A significant part of the pre-surveillance phase thus was devoted to planning and preparing for HSS execution. The Task Force and the Working Group on Surveillance and Estimation collaborated closely with national and international experts, starting in mid-2008, to strengthen the surveillance network for increased geographical and population coverage. Remedial measures for addressing the challenges noted during the previous round, such as transportation of blood samples in geographically inaccessible areas, were identified. By reviewing the latest methodologies for conducting HSS and reviewing the application of methodologies under the previous HSS round, the Working Group on Surveillance and Estimation developed the strategy and plan for the execution of HSS 2008–09 at the national, state and district levels.

This chapter focuses on the process and methodology applied for conducting HSS 2008–09 and data analysis. It is divided into three broad sections. The first section highlights the planning process for conducting HSS 2008–09 and the role of national partners in HSS implementation and oversight. The second section details the sample population, sampling frame, sampling methodology and size. Analysis of surveillance data and interpretation is included in section three. The weaknesses noted during the implementation of HSS are also summarized here.

### 2.1 Planning for 2008–09 HIV sentinel surveillance

HSS is the principal method for collecting information on the geographical, demographic and temporal distribution of HIV in India. It is an expansive technical process, particularly considering the geographical coverage and density of population across the 35 states and Union Territories of the country. It requires, firstly, sufficient infrastructure in terms of manpower, laboratory support and logistics. Secondly, adequate attention must be given to training and supervision at all levels. Thirdly, maintenance of quality assurance procedures is required during data collection and analysis at all levels, including HIV testing.

As stated above, the foremost steps undertaken by NACO and NIHFV for the execution of HSS 2008–09 were to finalize the process and methodology in close consultation with the Task Force and Working Group on Surveillance and Estimates. Rounds of pre-surveillance consultations were conducted to, firstly, review the methodology and process of the previous HSS round, taking into account the weaknesses and best practices. Secondly, the rounds aimed to review the epidemic's pattern on the basis of strategic information and programme data. The third objective was to discuss the type of epidemiological surveillance data needed for planning and monitoring HIV control activities. Fourthly, the rounds aimed to develop a consensus on the methodologies for executing surveillance from sample collection, to testing, analysing surveillance data and reporting. The methodologies were identified considering internationally prescribed norms and country-level requirements. A fifth objective was to agree on the roles and responsibilities of the primary stakeholders responsible for executing HSS or supporting it and the flow of information. Sixthly, requirements for HSS implementation and infrastructure



requirements, including human resources, were identified for the formulation of appropriate directions and recommendations to states. Finally, India's strategy and plan for HSS 2008–2009 were developed with set time-lines.

### 2.1.1 Role of partners

For the successful execution of HSS, NACO and the Working Group on Surveillance and Estimation focused on multi-level stakeholder ownership through comprehensive partnership coupled with close supportive supervision and mentoring by national, sub-regional and state institutes and organizations. At the helm of the HSS 2008–09 process was the NIHF, which was given the responsibility by NACO of providing oversight for the overall implementation of HSS. The key responsibilities assigned to the NIHF included collaborating with NACO and the Working Group on Surveillance and Estimation to finalize the process and methodology for HSS, with a focus on improving the quality of data as well as ensuring timely and complete reporting. Secondly, the NIHF was to orient members from regional institutes, state AIDS control societies and CTMs on the HSS methodology and process, and guide them on implementation of HSS. Performing coordination functions with stakeholders at the national, state and district levels was another of the responsibilities given to the NIHF. Further, it was to monitor the implementation of the HSS and troubleshoot emerging problems. It was also made responsible for compiling and reviewing supervisory visit reports received from regional institutes and CTMs for quality. The NIHF was to update the data entry software, as well as train manpower for data collection and entry, using web-based software. Finally, it was entrusted with the job of preparing the country report on HSS.

Closely supporting the NIHF in the task of oversight and data quality control functions was the NIMS. The main responsibilities of NIMS included the provision of supportive supervision to HSS sites and the testing centres, as well as mentoring functions. The NIMS analysed surveillance data for estimating the HIV burden at the national and state levels, and also analysed adult HIV prevalence, the number of people living with HIV, the incidence of HIV, AIDS-related deaths and treatment needs for India.

Senior epidemiologists and microbiologists from national medical colleges and national institutes were identified by NACO and the NIHF to form a central support team (CST). The CST members assisted in supervising the functioning of sentinel sites and testing centres. Their responsibilities included supervisory visits and preparation of reports on the quality of the surveillance activities at sites for review and compilation by the NIHF. Annexure 1 lists the CTMs.

As soon as the HSS 2008–09 operational guidelines were finalized by NACO and the NIHF completed the process of HSS orientation, the regional institutes (RIs) had to commence with their functions and responsibilities. The RIs identified new sites to be included under HSS 2008–09. Following the finalization of sites for HSS, together with the state support team, they undertook the responsibility of building up the capacity of the personnel in charge of sentinel sites and testing centres through training workshops. The RIs closely supervised HSS implementation in the states to ensure the quality of activities. These institutes also supported in double data entry—in coordination with NACO, the State AIDS Control Society (SACS) and NIHF—under HSS 2008–09.

Seven RIs were identified to support HSS 2008–09. Five of them had been engaged in HSS activities since 2005. These were the National Institute of Epidemiology, Chennai; All India Institute of Hygiene and Public Health, Kolkata; Post-Graduate Institute of Medical Education and Research, Chandigarh; National AIDS Research Institute (NARI), Pune; and All India Institute of Medical Sciences, New Delhi. Two new RIs were identified to support surveillance in the north-eastern and eastern states under the 2008–09 round. These were the Regional Institute of Medical Sciences, Imphal and National Institute of Cholera and Enteric Diseases, Kolkata. Box 2.1 provides details of the states falling under each of the RIs' purview.





**Box 2.1**  
**Regional Institutes for HIV Sentinel Surveillance 2008**

| Name of Regional Institutes   | States  |
|---|---|
| National Institute of Epidemiology, ICMR, Chennai                     | Orissa, Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Pondicherry and Lakshadweep                  |
| All India Institute of Hygiene and Public Health, Kolkata             | Assam, Arunachal Pradesh, Meghalaya and Nagaland  |
| Post-graduate Institute of Medical Education and Research, Chandigarh | Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab and Chandigarh                                 |
| National AIDS Research Institute, Pune                                | Maharashtra, Mumbai, Gujarat, Goa, Madhya Pradesh, Rajasthan, Daman & Diu, and Dadar & Nagar Haveli |
| All India Institute of Medical Science, New Delhi                     | Uttar Pradesh, Bihar, Jharkhand, Uttaranchal and Delhi  |
| National Institute of Cholera and Enteric Diseases                    | West Bengal, Chhattisgarh, Sikkim and Andaman & Nicobar Islands                                     |
| Regional Institute of Medical Sciences                                | Manipur, Mizoram and Tripura  |

The RIs and SACS were closely supported by the state surveillance teams (SSTs) in the supervision of sentinel sites and testing centres, as well as the provision of feedback.

### 2.1.2 Supportive supervision for HSS implementation

As highlighted in Fig. 2.1, certain mechanisms were employed to improve the quality of the surveillance data generated under the 2008–09 round. Principal among them were the protocols and guidelines that were developed and disseminated. Further, a series of training sessions were conducted to build the capacity of human resource personnel in the technical and operational aspects of HSS. For example, all staff and medical officers engaged in HSS received induction training on HSS, including training on the process, methodology, data entry formats, data reporting and forwarding. Practical training was also provided to medical and technical staff on the dried blood spot (DBS) testing method.

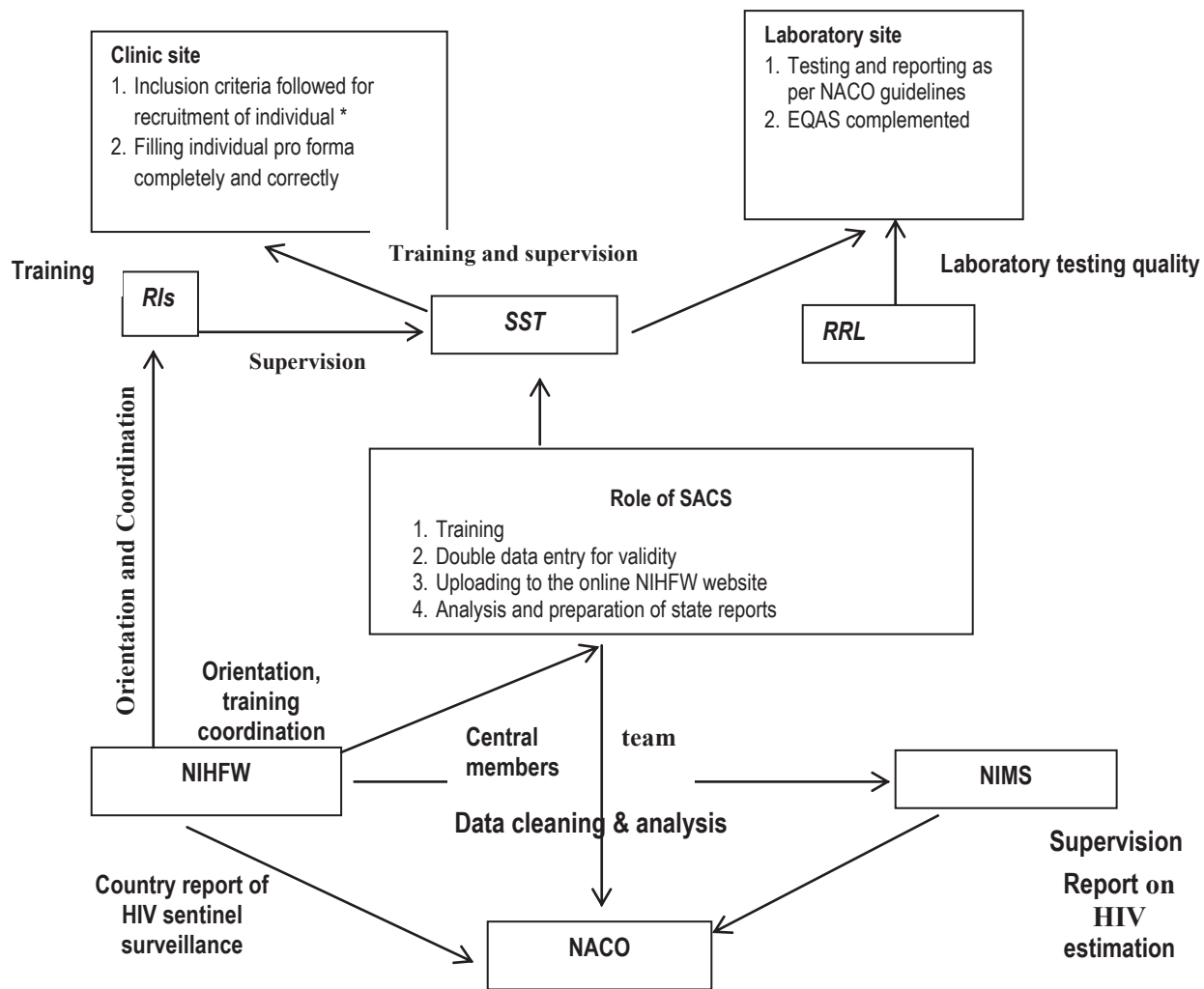
Infrastructure availability was ensured through forwarding of directives and instructions for timely procurement and or supply of equipment necessary for surveillance and testing. This included testing kits and laboratory supplies. The testing laboratories were monitored to ensure adherence to internal quality control and external quality assessment via implementation of External Quality Assessment System (EQAS). The names of external reference laboratories and the states allotted to them for quality control are presented in Box 2.2.

Finally, the multi-tiered supervisory structure instituted across India—and as highlighted earlier—provided oversight and monitoring to HSS implementation. Supervisory teams ensured all units' compliance with HSS guidelines and standard protocols for surveillance and testing. All surveillance sites were visited at least one time—or more depending on the requirement—for constant mentoring and supportive supervision. Supervisory teams ensured that the emergent bottlenecks or practical problems were addressed on the spot through application of corrective measures. A two way communication channel ensured that information flowed both ways.

Data was screened at two levels for quality. The supervisory teams at the RIs and SACS ensured data accuracy, data validity and data completeness prior to its upload to the NIHFWS website. (Annexure II) The data was re-checked by NIHFWS before analysis and use. Technical inputs from WHO and UNAIDS were consistently sought through HSS implementation; and particularly data analysis for presentation to the other members of Task Force on Surveillance and Estimation.



Figure 2.1  
Implementation of 2008-09 Annual Sentinel Surveillance



NIHFW: National Institute of Health and Family Welfare  
 NIMS: National Institute of Medical Statistics.  
 SACS: State AIDS Control Society.  
 SST: State Surveillance Team

RI: Regional Institute  
 NACO: National AIDS Control Organization  
 EQAS: External Quality Assessment System  
 \* Operational Guidelines

## 2.2 Methodology

HIV sentinel surveillance is a core activity of HIV sero-surveillance in India. This section highlights the methodology adopted under the HSS 2008–09 round, including the selection of sentinel populations, sites, the sampling process, method for HIV testing and ensuring reliability of the results of tests, data collection and analysis.

### 2.2.1 Sentinel population

Under HSS 2008–09, information on prevalence was collected for the general population as well as populations considered to be at higher risk for infection and transmission. Blood specimens were taken consensually from the sample of ANC attendees (as proxy for the general population), STI clinic attendees, FSWs, IDUs, MSM, TGs, migrants and truckers, and screened for HIV. Information on certain demographic characteristics and limited data on risk behaviour were also collected.

Measuring HIV prevalence in ANCs was essential for detecting the bridging of infection to the general population. At the same time, given the concentrated nature of the HIV epidemic, India is increasingly focused on measuring



HIV prevalence among higher risk groups (HRGs) and bridge populations. The number and type of sentinel sites for these sub-populations increased under the HSS 2008–09 round, while the number of ANC sites was stable. Details of the number and type of sites are given in the sub-section below.

Access to HRGs is challenging given that certain behaviours of theirs may be considered illegal or else highly stigmatized. Increased access to them was obtained via the STI facilities and TI. STI clinics are a useful source for accessing these sub-populations as a large number of sexually active adults—male and female—belonging to the HRGs and bridge population seek treatment there. STI clinics provide referrals to HIV care. Moreover, testing can be accomplished on an unlinked, anonymous basis as blood specimens are taken for other purposes, such as syphilis screening. This was a particularly useful method for reaching HRGs in the moderate-to-low prevalence states.

NACO is collaborating with non-governmental organizations (NGOs) for implementing TI projects, and through these, HIV sero-surveillance data on HRGs were collected. The method for surveillance was unlinked anonymous testing for the HRGs attending the drop-in centres and drug de-addiction centres for IDUs. Pregnant women attending ANCs in government and some private sector hospitals were tested for HIV via the unlinked anonymous method.

As HIV is not uniformly distributed among the population, HSS focused on three variables to obtain a more comprehensive measurement of HIV prevalence. These were person variables of the sample population, i.e. their sex and age; the place variable, i.e. the rural and urban population across states; and the time variable, which was necessary for determining a trend. HSS did not involve a single method but instead, a collection of methods based on certain principles for tracking the infection. To monitor trends in HIV infection over person, place and time, HSS was conducted among the same population groups as consistently as possible with previous years and in the same manner, although the methodologies were updated and the number of sites increased. Further, better understanding of behaviours that drive the epidemic was tried to put on analysis for explaining trend and distribution of epidemic in the country. Finally, there was a focus on sub-populations which are at a higher risk for HIV, including FSWs, MSM, TGs, IDUs, and migrants and truckers.

### **2.2.2 HIV sentinel surveillance sites**

The number of HSS sites under the 2008–09 round was 1190, compared to 1134 in 2007. The sites for HSS 2008–09 were identified according to a list of selection criteria. The RIs took into consideration the recommendations of the respective SACS and the final decision was made in consultation with NACO, the NIHFW and Technical Resource Group (TRG) members. The factors taken into account included whether the sites provided information on the select sentinel population, whether information on the client make-up of the site was available to achieve the required sample size, whether blood was drawn from patients as part of routine care, whether reliable laboratories were available on site or if a reference laboratory was available at a motorable distance to send specimens, and whether the on-site staff was cooperative and capable of conducting surveillance.

Under the 2008–09 HSS round, composite sites were introduced in select geographical locations where the recommended sample size was not likely to be achieved at a select location because the target population was spread among multiple facilities. Thus, sub-sites were included that together constituted a composite site at a geographical location.

As Table 2.1 shows, it was primarily the number of HRG sites that increased, and the increase in the number of sites for FSWs and MSM was greater than that for IDUs. Specifically, the number of sites for FSWs increased from 137 in 2007 to 188 in 2008–09, while in the case of MSM, it increased from 40 to 69 in the same period. The number of IDU sites increased by 5 (52 in 2007 to 57 in 2008–09). The number of TG sites remained static at 1. Regarding the bridge populations, the number of migrant sites increased by 5 (3 in 2007 to 8 in 2008–09), while the number of trucker sites remained static at 7. As several STI sites were closed in the southern states categorized as high-prevalence states—where TI sites through NGOs for the HRG had increased—the total number stood at 212 under HSS 2008–09.





While HRG sites under the 2008–09 round comprised a near quarter of the total sites, there were certain states that had no HRG sites. These included Uttarakhand, Jammu and Kashmir, the Andaman and Nicobar Islands, Chhattisgarh, Meghalaya and smaller Union Territories. Rajasthan, with its sizable population and large tourist influx, had only one FSW site and no IDU or MSM sites.

Of the six high-prevalence states of Andhra Pradesh, Karnataka, Maharashtra, Manipur, Nagaland and Tamil Nadu, only Maharashtra had sites for truckers and migrants. Andhra Pradesh had 72 sites, of which 12 were FSW sites, 6 MSM sites and 2 IDU sites. The total number of ANC (urban and rural) sites was 52. STI sites were closed down in the state during this HSS. Karnataka, with a total 75 sites, had 6 FSW sites, 3 MSM sites, 1 IDU site and 7 STI sites. The number of ANC (urban and rural) sites in Karnataka was 58. Maharashtra had 98 HSS sites. While there was a total of 6 STI sites, the number of FSW and MSM sites was 16 and 3, respectively. There were no IDU sites in the state. There were 66 ANC (urban and rural) sites in Maharashtra. The number of HSS sites in Manipur was 24, of which 3 were FSW sites, 4 IDU sites and 1 an MSM site. Nagaland had 29 HSS sites. There were 8 IDU sites, 1 FSW site and no MSM site. The number of ANC (urban and rural) sites was 19 in Nagaland. Of the total of 110 HSS sites in Tamil Nadu, the number of FSW, MSM and IDU sites was 28, 17 and 2, respectively. Most of the remaining sites were ANC (urban and rural) sites. Further state-wise details are given in Annexure II.

Of the ANC sites under HSS 2008–09, the number of urban sites was 486 and that of rural sites, 162. Certain states in north-east India, Jammu and Kashmir, Himachal Pradesh, Punjab, Uttar Pradesh, Bihar, Madhya Pradesh and Jharkhand had districts with no ANC sites. This was on account of practical challenges, particularly in rural areas without health facilities, with an inadequate client load at ANC clinics or without properly functioning NGOs. The TRG for surveillance recommends that greater population coverage and more nuanced understanding of the epidemic can be achieved with an increase in the number and type of sites—particularly HRG, bridge population and ANC rural sites in states with a low HIV prevalence.

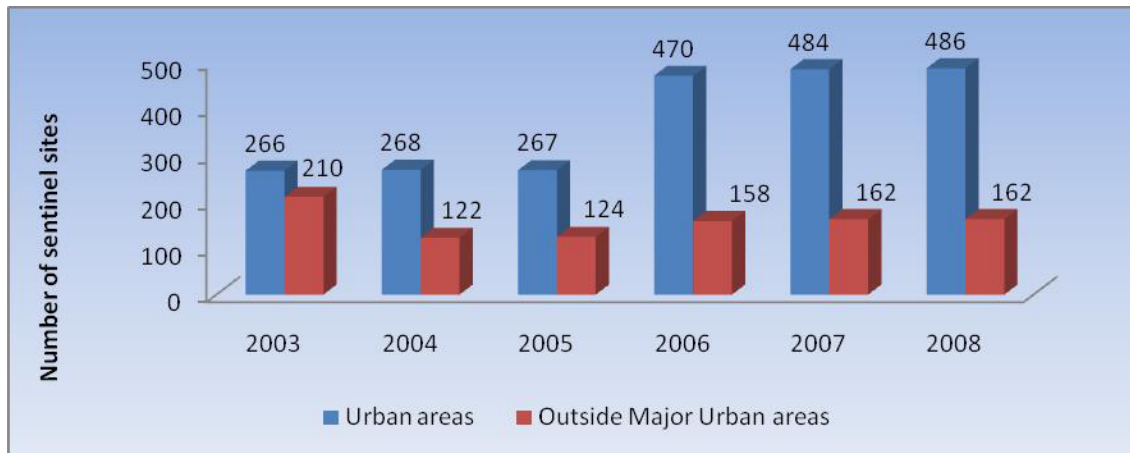
**Table 2.1**  
**Number of Sentinel Sites by Year and Type from 2003 to 2008, India**

| Site type/Year  | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-----------------|------|------|------|------|------|------|
| STD             | 163  | 171  | 175  | 251  | 248  | 212  |
| ANC             | 266  | 268  | 267  | 470  | 484  | 486  |
| ANC ( R )       | 210  | 122  | 124  | 158  | 162  | 162  |
| IDU             | 18   | 24   | 30   | 51   | 52   | 57   |
| MSM             | 9    | 15   | 18   | 31   | 40   | 69   |
| FSW             | 32   | 42   | 83   | 138  | 137  | 188  |
| TB              | -    | 7    | 4    | -    | -    |      |
| Migrant         | -    | -    | 1    | 6    | 3    | 8    |
| EUN             | -    | -    | 1    | 1    | 1    | 1    |
| TRK             | -    | -    | -    | 15   | 7    | 7    |
| Fisher folk     | -    | -    | -    | 1    | -    |      |
| Others (seamen) | 1    | -    | -    | -    | -    |      |
| Total           | 699  | 649  | 703  | 1122 | 1134 | 1190 |

Note: The state-wise distribution of sites and site-wise prevalence are given in Annexure II, Fig. 2.2 and Map 2.1.



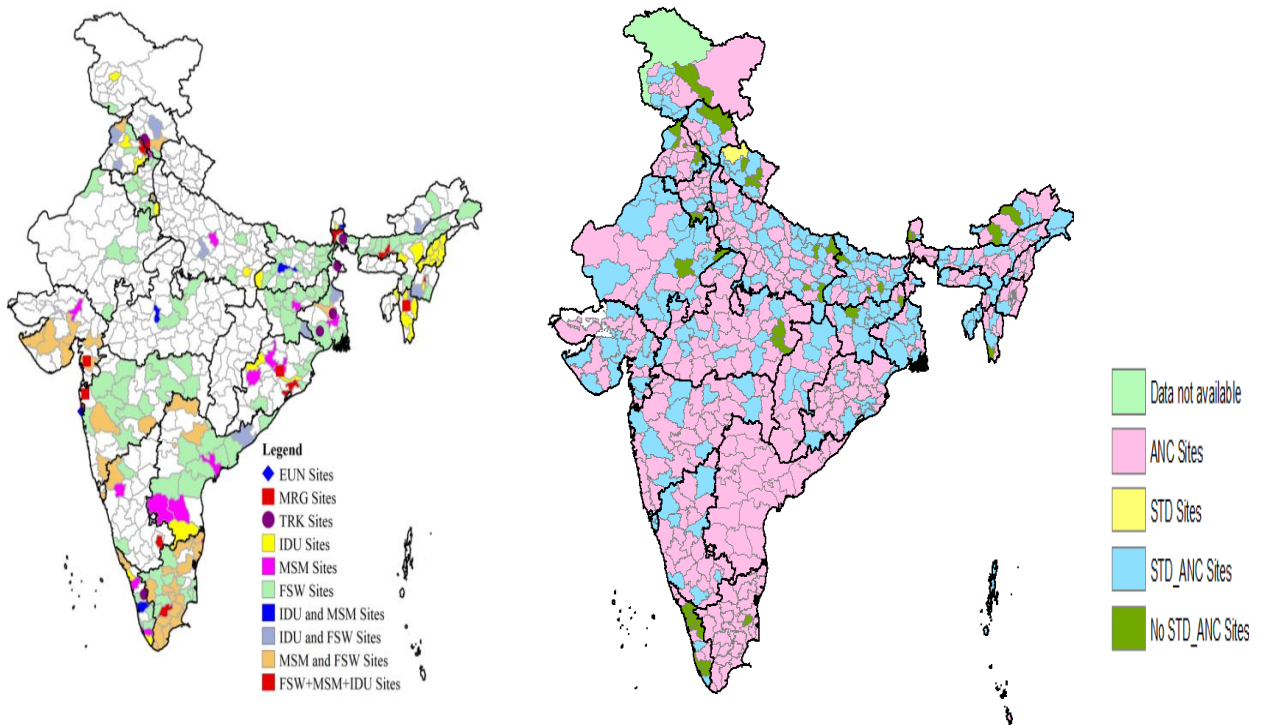
**Figure 2.2**  
**Number of Antenatal Sentinel Sites by Location, India, 2003-2008**



### 2.2.3 Sampling

For each HSS site, the sample size (or the number of individuals included in the sample) and the sampling scheme (or procedure for choosing individuals to be included in the sample) were factored in. Each of these is briefly highlighted below.

**Map 2.1**  
**District wise distribution of Sites (India) (districts as per 2001 Census)**



### **Sample size and inclusion criteria**

The number of individuals included in a sentinel surveillance sample was guided by the need to determine trends in HIV prevalence over time and identify sub-populations at an increased risk of infection. The sample size needed to be large enough to detect the difference between two prevalence estimates—for instance, between two ANC sites or between two surveillance rounds. The sample size was determined using a statistical approach that requires firstly, an estimate of HIV prevalence in the population to be surveyed. The second factor was the margin of error considered acceptable. A reasonable margin of error of  $\pm 3\%$  was applied. The third was the level of confidence desired or the confidence intervals desired. A 95% confidence interval would mean that if the survey was conducted 100 times, the prevalence in 95 surveys out of the 100 would fall within the specified margin of error. For HSS 2008–09, a confidence interval of 90% was applied. The sample size was balanced against the technical and financial resources available for survey implementation and data collection.

A sample size of 400 for ANC sites and 250 for STI sites and HRG (TI) sites was calculated. As the focus was on ensuring adequate representation of women in the sample collected at STI sites, the sample of 250 at the STI sites was completed from two sources. A total of 150 samples were collected from the STI clinic, while 100 were from the gynaecology clinic.

The eligibility criteria for HSS included an age range of 15–49 years to facilitate comparability across sites. It was necessary to ensure that no client, especially an STI client, was sampled more than once. To avoid this, sampling was restricted to their first visit.

The duration of sampling varied according to the type of site. For ANC and STI sites, the period of sampling extended from 1 November 2008 to 31 January 2009. The duration for HRG (TI) sites was 1 May 2009 to 31 July 2009. Individuals meeting the inclusion criteria and attending the HSS sites during these specified time periods were included in the survey using a sampling scheme.

### **Sampling scheme**

Three sampling schemes were utilized for selecting individuals for inclusion in HSS. The sampling scheme varied according to the type of site. The scheme for ANC and STI sites was consecutive sampling. According to this method, all individuals who visited the clinic and who met the inclusion criteria were included in the survey until the required sample size was obtained or the survey period was over. For maintaining the quality of data collection, no more than 20–25 consecutive attendees were included per day at a site. This method was relatively easy to employ. Moreover, it was likely that consecutive sampling would minimize the probability of unintentional manipulation by clinic staff or errors due to confusion.

For the HRG (TI) sites, the proposed scheme for sampling was simple random sampling (Annexure III). Under this, the TI line list of members would be utilized to draw up random numbers to identify the clients to be included in the sample. This method, if executed correctly, would most likely produce a true sample of the total population.

As complete TI line lists of members were available only for the state of Gujarat, the sampling scheme used in the remaining states was voluntary, unlinked anonymous testing with informed consent. The sample was obtained on the basis of consent received from the clients on a consent form. Unlinked anonymous testing with informed consent reduces the probability of participation bias or the degree to which higher or lower risk persons may choose to be tested based on their individual rationale. Under this method, all personal identifying information of clients choosing to be tested is removed from specimen tubes and other records before testing for HIV. The HIV test results thus cannot be linked to an individual person. Data are recorded using codes.

#### **2.2.4 Method for blood sample collection and HIV antibody test**

The method for blood sample collection varied according to the type of HSS site.

At the ANC and STI sites, whole venous blood was collected from the sample population, using safe injection practices. The serum was separated from the whole blood and split into two parts. One part, preserved along with



the individual identifiers, was tested for syphilis by VDRL. The test result was communicated to the individual. The second part, without personal identifiers, was coded separately such that it may not be linked back to the individual. This coded specimen, along with filled individual formats for HIV and syphilis, was sent to recognized laboratories under cold conditions for testing for HIV and syphilis. HIV antibodies were tested using two ELISA tests or rapid tests to determine whether the sample was positive or negative. ELISA is a conventional screening test for the enzyme immunoassay (EIA).

Rapid HIV testing differs from ELISA in that the results of the test become available in 5–30 minutes. Under HSS 2008–09, the DBS method for blood sample collection was introduced at the HRG (TI) sites to overcome the practical challenges faced in blood sample collection under the previous rounds. Owing to the limited blood storage facilities, the blood samples had often got spoiled and needed to be discarded. With the DBS method, samples have a longer life span and the need for refrigeration is reduced.

Under the DBS method, blood specimens are collected by applying a few drops of blood—drawn by lancet from the finger, heel or toe—onto specially manufactured absorbent filter paper. Once the blood saturates the paper, it is air-dried for several hours in low gas-permeability plastic bags, with the addition of a desiccant to reduce humidity. DBS specimens also pose less of a biohazard risk to handlers, and are easier to transport or store than liquid blood specimens. There is no scope for cross-contamination.

### 2.2.5 Ensuring quality of HIV testing

The reliability of ELISA/rapid test results was ensured through quality control and EQAS mechanisms that were put in place at the laboratory level. A quality control method was used to assess the functionality of the laboratory’s machinery and check whether the HIV test results obtained from a specimen were correct. For this, positive and negative controls were periodically run on the machines to verify whether the test device was detecting antibodies accurately.

External quality assurance was ensured by regional reference laboratories that monitored the entire HIV testing process. This included the pre-analytical phase, before testing of the specimen; the analytical phase, during the actual testing of the specimen; and the post-analytical phase, after HIV testing.

The laboratories’ results for a specific specimen were compared with tests conducted on the specimen at the reference laboratory. All the positive samples and 5% of the negative samples were sent by the laboratories to the regional reference laboratories under appropriate conditions to ensure sample quality. The reference laboratories communicated the results back to the testing laboratories.

The names of the reference laboratories maintaining the quality of ELISA/rapid test results in the states are listed in Box 2.2. DBS samples were tested only at the designated laboratory at the NARI. This was a quality assurance mechanism.

#### Box 2.2

##### List of Reference Laboratories and states allotted to them for testing of samples from ANC and STD sites

| National Reference Centre   | States                                  |
|---|---|
| National Institute of Biologicals, Noida                          | Uttar Pradesh and Uttaranchal           |
| National Institute of Communicable Diseases, New Delhi            | Delhi, Jammu and Kashmir, and Rajasthan |
| All India Institute of Medical Sciences, New Delhi                | Himachal Pradesh, Chandigarh, Punjab    |
| National Institute of Mental Health and Neuro Sciences, Bangalore | Karnataka                               |
| National Institute of Haematology, Mumbai                         | Mumbai, Madhya Pradesh and Chhattisgarh |





|  |  |
|--|--|
| National AIDS Research Institute (NARI), Pune                | Maharashtra, Goa, Gujarat, Daman and Diu, D and N Haveli |
| School of Tropical Medicine, Kolkata                         | West Bengal, Bihar, Jharkhand and Sikkim                 |
| National Institute of Cholera and Enteric Diseases, Kolkata. | Assam, Orissa, Andaman and Nicobar Islands, Meghalaya    |
| Dr. MGR University, Chennai.                                 | Andhra Pradesh   |
| Madras Medical College, Chennai                              | Tamil Nadu, Pondicherry                                  |
| Christian Medical College, Vellore                           | Kerala, Lakshadweep                                      |
| Regional Institute of Medical Sciences, Manipur              | Manipur, Tripura, Arunachal Pradesh, Mizoram, Nagaland   |

### 2.2.6 Data management, analysis and interpretation

A comprehensive structure for data entry and management was utilized, with the SSA-SACS overseeing the process at the state level, the RIs overseeing it at the regional level, and the NIHFV and TRG overseeing it at the national level.

Following the collection of demographic data and laboratory testing for HIV of ANC, STI and HRG (TI) site attendees, the results were collected by the respective SACS, using individual pro forma. This pro forma template may be referred to under Annexure V. Following data collation, data entry was done via the web-based data entry system at two levels—by the SACS and RIs—using an offline version. This mechanism was introduced for facilitating accuracy of data entry through cross-validation of uploaded files. The data were subsequently uploaded to the NIHFV website.

The NIHFV was the nodal government institute responsible for data cleaning and verification at the national level. It was also in charge of data analysis of sites achieving at least 75% of the recommended sample size—that is, 300 samples for ANC sites and 187 samples for HRG (TI) and STI sites—and interpretation. The process of data analysis and interpretation was guided by certain pertinent considerations, such as whether HIV prevalence was increasing, decreasing or stable at the national and state levels across and among sub-populations. The HIV prevalence trend across age brackets, particularly among young people of the age of 15–24 years, was also taken into account. An attempt was made to determine the HSS sites with the highest HIV prevalence among sub-populations and examine the trends over time, as well as to determine the HSS sites where HIV prevalence was <1%, >5% and >10%.

Along with HIV prevalence, the per cent positivity proportion for VDRL was calculated for the ANC and STI attendees.

The following tools/computer programmes were utilized to allow for statistical analysis and analysis of the geographical spread of HIV and its presentation on thematic maps: Statistical Package for the Social Sciences / SPSS (Version: 18), MS EXCEL (Version: 2007) and JT Maps (Version: 1.2). The 594 districts identified under the 2001 Census were reflected on JT maps.

### Trends

The analysis of the trends in HIV prevalence was done by person, place and time. Trends in HIV prevalence among young people between 15 and 24 years of age were of special significance as they reflect a potential increase or decrease in the number of new HIV cases, given that this age group would have become sexually active in recent years. Trends in the prevalence of HIV among HRGs and the bridge population were also of special significance. This was because of the concentrated nature of the HIV epidemic at the national level, coupled with trends from previous HSS and programme data that reflected an increased number of hotspots in areas previously classified as low-prevalence areas.

Recording the change in HIV prevalence over time is central to understanding whether there is an increasing,



decreasing or stabilized trend. If only absolute prevalence were considered there would be an increased possibility of the surveillance data over- or underestimating the true prevalence of HIV in a population. A three-year moving average was utilized with time series data to smooth out short-term fluctuations and highlight longer-term trends in HIV prevalence.

For analysing HIV prevalence among the urban and rural populations in the states, the country was divided into four zones, as follows:

- High-prevalence southern states (H1 zone): This included Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu, where HIV prevalence among ANC clinic attendees was >1% and the main mode of HIV transmission was heterosexual intercourse.
- High-prevalence north-eastern states (H2 zone): This included Manipur and Nagaland, where HIV prevalence among ANC clinic attendees was >1% and the main mode of HIV transmission was unsafe injecting practices.
- Moderate-prevalence states: This included the three states of Goa, Gujarat and Pondicherry, where HIV is concentrated among HRGs. Thus, while the prevalence among ANC clinic attendees was <1%, that among HRGs was 5%.
- Low-prevalence states: These are the states that are not included in the above three zones and where the HIV prevalence among ANC clinic attendees and HRGs was <1% and <5%, respectively.

#### **Analysis of variables by background characteristics**

In addition to analysis by year of survey for each sentinel site, district and state; and age group, sentinel surveillance data were also analysed by each of the variables collected and according to background characteristics. The analysis included HIV prevalence by gender, residence, marital status, demographic characteristics (e.g. education, occupation of spouse) and the presence of STIs.

The results were summarized for the entire sample population at each site level and each sub-group for which information on age and sex was collected.

### **2.3 Certain factors affecting the pace of HSS implementation**

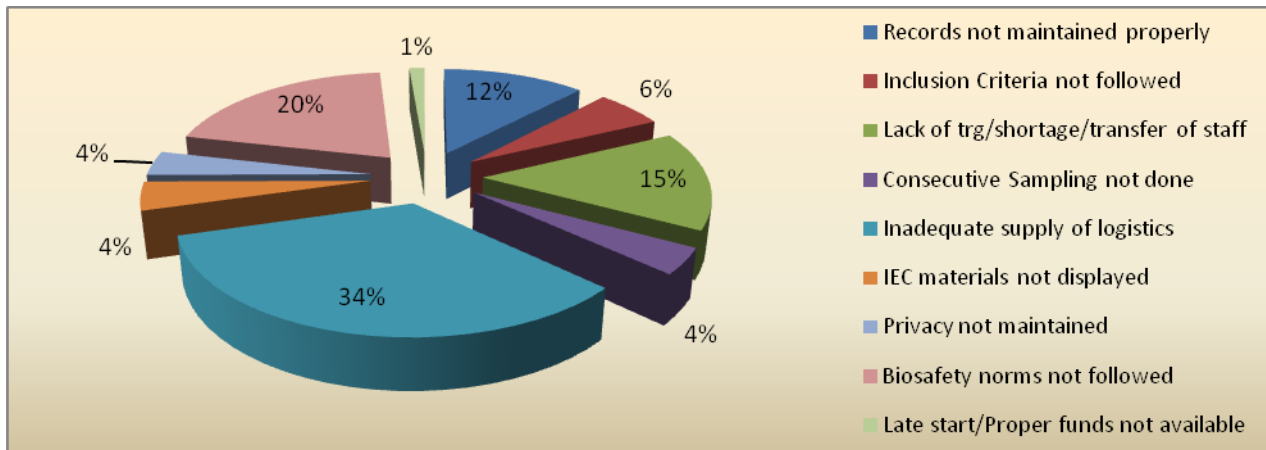
Despite the robust mechanism and new directives issued to ensure that HSS 2008–09 was implemented without bottlenecks, certain factors affecting the pace of HSS implementation were identified during the supervisory visits. These factors have been tabulated so that appropriate remedial measures can be incorporated to overcome them and so that they are not encountered under subsequent surveillance rounds.

As Fig. 2.3 shows, the practical challenges to HSS implementation at ANC / STI clinics include inadequate logistics and supply of consumables, which was noted in 34% of the total sites. Twenty per cent of the sites did not adhere to bio-safety norms and at 15% of the sites, human resources were insufficient due to transfers. Elsewhere, untrained staff was filling the individual pro forma at the sentinel sites or testing laboratories.

Concerns over timely supply of procurement are remnant at HRG sites as well, where 49% reported the late supply of DBS cards. Human resource availability to support HSS execution was noted with 13% reporting inadequately trained staff or shortage of staff. Bio-safety norms were not adhered to at 11% of the total sites.



**Figure 2.3**  
**Problems Identified during the Supervisory visit in ANC/STD Clinics, 2008**



## Chapter 3

# Results

**H**IV surveillance has been an annual process since 1998. However, in the case of the 2008 round, which started in November, the period of three months spilled over to the next year, i.e. 2009, and got extended further due to delay in the procurement of the consumables for the DBS method introduced for the first time in this round. Hence, the activity was completed in August 2009, leaving no scope for holding another round in 2009.

The pace of the HIV epidemic in India has slowed down and a declining trend has been noted, particularly in the southern high-prevalence states among antenatal women. The epidemic is concentrated in the HRGs, among which the prevalence continues to be >5%, though the antenatal prevalence is low. Thus the country is classified epidemiologically as having a concentrated epidemic.

The impact of the measures taken by the NGOs for FSWs was evident, as there was a decreasing trend in prevalence at the national level and in many states. But the same was not true for the other two core risk groups—MSM and IDUs, among whom there was a rising trend. It is possible that these two new emerging HRGs are hindering the rapid decline in HIV prevalence in the states. A major constraint to the efforts for control is that there are few MSM and IDU sites. The prevalence of HIV among IDUs and MSM in the high-prevalence states of Andhra Pradesh and Manipur was the highest in the country, between 10% and 28%, and may be contributing to the continued prevalence of >1% among antenatal women in these states, though Manipur recorded a prevalence of <1% in ANCs this year.

The prevalence of HIV among antenatal women in Nagaland, another high-prevalence state, was >1%, and that among FSWs and IDUs was 14% and 4%, respectively. The absence of an MSM site was a limitation and no information was available for this group. The perennial prevalence of 3%–4% among antenatal women at the Tuensang site, year after year, needs further exploration. The role of cross-border influx of foreign migrants from Myanmar has to be investigated.

Another state in the North-East which needs attention is Mizoram, where an increasing trend in the prevalence of HIV was observed among IDUs and patients attending STI clinics. The prevalence among FSWs was also high, at 9.2%.

In Maharashtra and Karnataka, the epidemic was yet to be stabilized. Though the antenatal prevalence was <1%, the prevalence among FSWs and MSMs was >10% in these states. The prevalence among IDUs in Maharashtra was very high, at 20%. It was only in Tamil Nadu that the values for each of the HRGs were close to 5%.

In Goa and Gujarat, the prevalence in ANCs was <1%, but it continued to be >5% among the core risk groups of MSM and FSWs. In the absence of any IDU sites, the situation with respect to this group was not clear. This is important, given the fact that there is a large floating population, either in the form of tourists or migrants, in both these states. This situation calls for immediate action, and neglecting intervention activities, including surveillance, for this group may change the trajectory of the epidemic there.

In the northern low-prevalence states, the aggregate prevalence of HIV infection at the state level among the risk groups masks the pockets of “hot spots” existing within each state. It is particularly important to recognize this situation in the case of the northern states, where, due to the low prevalence of HIV, efforts at programme implementation have been maintained at a low level. The result of this course of action is evident, with new





HRG sites or the existing sites reporting an unexpectedly high prevalence of HIV, e.g. 39.6% and 15.2% at the IDU sites of Madhya Pradesh and Punjab, respectively. HIV prevalence among HRGs is becoming high in more and more states with low HIV prevalence. This is particularly true for the states of Orissa, Mizoram, West Bengal and Assam. Prevalence among these groups is also increasing in some sites in several other low-prevalence states, such as Bihar, Uttar Pradesh, Jharkhand, Haryana and Kerala.

Particularly vulnerable were the states of Chhattisgarh, Rajasthan and Uttarakhand, where sites for HRGs were not available. These states need to identify reliable NGOs to start surveillance among HRGs in the next round. The emerging high prevalence among MSM and IDUs calls for improved coverage and for an increase in the number of surveillance sites in all the states.

It was observed that the major population groups coming to the sites and infected with HIV belong to the lower socioeconomic strata. The members of these groups were employed mostly as labourers, truck/vehicle drivers or skilled workers, or were in service. They formed the bulk of the attendees at the IDU and MSM sites, and were the spouses of the infected antenatal women. Due to their risk behaviour of multi-partner/commercial sex, they form a bridge for HIV transmission from HRGs to the general population, e.g. to wives and partners. Unemployed men formed nearly 50% of IDUs and many were into MSM activity. HIV prevalence among them was on the rise.

HIV prevalence was high among the HRGs in the cities of Delhi and Chandigarh. There is a large influx of migrants seeking work as labourers in these cities. New strategies are required to control HIV infection among these hard-to-reach groups.

Overall, evidence from surveillance data indicates that the country has a grip over the HIV epidemic, but the vulnerability of the low-prevalence states raises the risk quotient, which cannot be underestimated as unknown pockets with high prevalence exist for all the risk groups.

This chapter describes the findings of the 2008–09 surveillance round. The chapter is divided into sections to make for better comprehension of the epidemic. The first section describes the situation with respect to the sites and the need for more sites. The second section provides a snapshot of HIV prevalence in the states and the sites. The third section contains details regarding the risk populations, and discusses the current status and trends for the nation, zone-wise and state-wise, as well as with respect to the sites. Annexure II contains state-wise and site-wise details of HIV prevalence from 2003 to 2008–09. The data is further disaggregated to highlight the picture as per the socioeconomic variables for the country and in different zones.

### **3.1 Status of sites and samples**

The 2008–09 Annual Sentinel Surveillance round was conducted from 1 November 2008 to 31 January 2009 at the ANC and STI sites, and from May 2009 to August 2009 at the HRG (TI) sites, in all the states.

#### **3.1.1 Incomplete sample sizes**

The number of sites covered in India was 1190, which is the highest number for any country in the world. However, a small number of sites (64) were unable to complete the requisite sample size. Notable among the states in which the sample size could not be completed was Tamil Nadu, where the required sample size could not be completed in one-fourth of the FSW sites (total sites 28) and nearly half of the MSM sites (total sites 17). Similarly, the STI site samples fell short of the required number in four sites each in Maharashtra and Gujarat, and three sites in Karnataka, in spite of the fact that the sites were based in the big city hospitals of these states.

Lack of HRG sites: There was a total absence of sites for HRGs in four states and two Union Territories. The lack of IDU sites in the vulnerable states of Rajasthan, Goa and Chhattisgarh, and the fact that more sites are needed in all the states, restricted the ability of the surveillance system to detect the HIV epidemic in areas or groups, before their entry into the general population. This is true for the low-prevalence states, as the quantum of



infection is likely to be picked up in the HRG population if sites are present and less likely in the ANC. An increase in HRG sites in the high-prevalence states would also help track the epidemic better.

Lack of rural sites: The ANC clinics located in urban hospitals were usually accessed by women in urban areas and those from the surrounding rural areas under surveillance. In the six states with a high HIV prevalence, besides the urban clinics, there were rural clinics for pregnant women located at the block level. In the low-prevalence states, more rural ANC sites are needed, given the inability to open HRG sites in rural areas. There were a few sites (36) in West Bengal, Punjab, Uttar Pradesh and Meghalaya, but these are inadequate to improve representation from remote parts in the rural areas. The number of rural sites has been nearly constant for the past three years (Fig. 2.3).

The state-wise distribution of sites is given in Annexure II.

**Table 3.1**  
**Prevalence of HIV among Different Risk Groups, India 2008-09\***

| Clinic               | No. of samples tested | Number Found HIV Positive | HIV % prevalence & Confidence Interval 90% |
|----------------------|-----------------------|---------------------------|--|
| STD                  | 45998                 | 1015                      | 2.21 (2.09 - 2.32)                         |
| ANC(Urban clinics)*  | 190101                | 898                       | 0.47 (0.45 - 0.50)                         |
| ANC (Rural clinics)* | 62549                 | 301                       | 0.48 (0.44 - 0.53)                         |
| IDU                  | 12302                 | 1213                      | 9.86 (9.42 - 10.30)                        |
| MSM                  | 14825                 | 1021                      | 6.89 (6.54 - 7.23)                         |
| FSW                  | 42419                 | 2022                      | 4.77 (4.60 - 4.94)                         |
| Truckers             | 1488                  | 22                        | 1.48 (0.96 - 1.99)                         |
| Migrants             | 1742                  | 40                        | 2.30 (1.71 - 2.89)                         |
| Transgender          | 250                   | 41                        | 16.40 (12.55 - 20.25)                      |

Note: Includes sites with sample size  $\geq 75\%$ . ANC prevalence on actual data.

### 3.2 Overview of HIV status

The prevalence of HIV among various risk groups at the country level for 2008–09 (Table 3.1) indicated that the IDU and MSM sub-groups were emerging as the groups that were increasing the intensity of HIV transmission. The only site for TG also repeatedly indicated very high HIV prevalence each year, including in 2008–09, the figure for which was 16.4%.

**Table 3.1a**  
**Trends in HIV percent Prevalence, 2003-2008, India**

| Site type/ Year | 2003  | 2004  | 2005  | 2006 | 2007  | 2008 |
|-----------------|-------|-------|-------|------|-------|------|
| STD             | 5.68  | 5.54  | 5.6   | 3.73 | 3.59  | 2.21 |
| ANC (U)         | 0.86  | 0.88  | 0.87  | 0.57 | 0.47  | 0.47 |
| ANC( R) *       |       | 1.08  | 0.94  | 0.67 | 0.52  | 0.48 |
| IDU             | 16.73 | 15.94 | 10.16 | 6.9  | 7.23  | 9.86 |
| MSM             | 9.06  | 10    | 8.7   | 6.4  | 7.4   | 6.89 |
| FSW             | 43.72 | 7.08  | 8.4   | 4.8  | 5.06  | 4.77 |
| Truckers        |       | ...   | ...   | 2.3  | 2.51  | 1.48 |
| Migrant         |       | ...   | 0     | 1.6  | 3.6   | 2.3  |
| Transgender     |       | ...   | 43.9  | 29.6 | 42.21 | 16.4 |

ANC rural has data from ANC sites in 4 high prevalence southern and two north-eastern states.

Except for the steady declining trend for the STD group, all other groups have stagnating trends since 2006 (Table 3.1a). The predominance of HIV in the urban population tested for various risk groups is notable except for an marginal increase in migrants from rural areas in table 3.1b.

**Table 3.1b**  
**Prevalence of HIV among High Risk Groups by locality, India 2008-09\***

| Locality/ Type | Urban                 |                           |                | Rural                 |                           |                |
|----------------|-----------------------|---------------------------|----------------|-----------------------|---------------------------|----------------|
|                | No. of samples tested | Number Found HIV Positive | HIV prevalence | No. of samples tested | Number Found HIV Positive | HIV prevalence |
| IDU            | 9605                  | 999                       | 10.4           | 2697                  | 214                       | 7.9            |
| MSM            | 10088                 | 750                       | 7.43           | 4737                  | 271                       | 5.7            |
| FSW            | 26236                 | 1491                      | 5.68           | 16183                 | 531                       | 3.3            |
| Migrants       | 1268                  | 27                        | 2.13           | 474                   | 13                        | 2.7            |
| Transgender    | 245                   | 41                        | 16.73          | 5                     | 0                         | 0              |
| Truckers       | 272                   | 7                         | 2.57           | 1216                  | 15                        | 1.23           |

Note: The summary for all the risk groups is shown in Maps 3.1 to 3.7 and Boxes 3.1 to 3.5.

**Box 3.1**  
**Summary of HIV % prevalence for All Sites “Annual Sentinel Surveillance” 2008-09**

**Total number of sentinel sites: 1,190\***

**2, 52,650 women were tested for HIV at 648 ANC sentinel sites\*\***

- 105 ANC sentinel sites with prevalence 1% to 2% HIV seropositivity
- 15 ANC sentinel sites >2 % to < 3% HIV seropositivity
- 6 ANC sentinel sites ≥3% HIV seropositivity
- Rest of the sites had prevalence less than 1% at the ANC sites

**45,998 individuals were tested at 189 STD sentinel sites\*\***

- 16 sites >5% to <10% HIV seropositivity
- 11 sites ≥10% HIV seropositivity

**69,546 individuals were tested at 284 core risk group (MSM, FSW, and IDU) sentinel sites\*\***

- 56 sites ≥5% to <10% HIV seropositivity
- 44 sites ≥10% HIV seropositivity

\*Valid sites, with sample size 75% or more, i.e., 300+ at ANC sites and > 187 in other sites

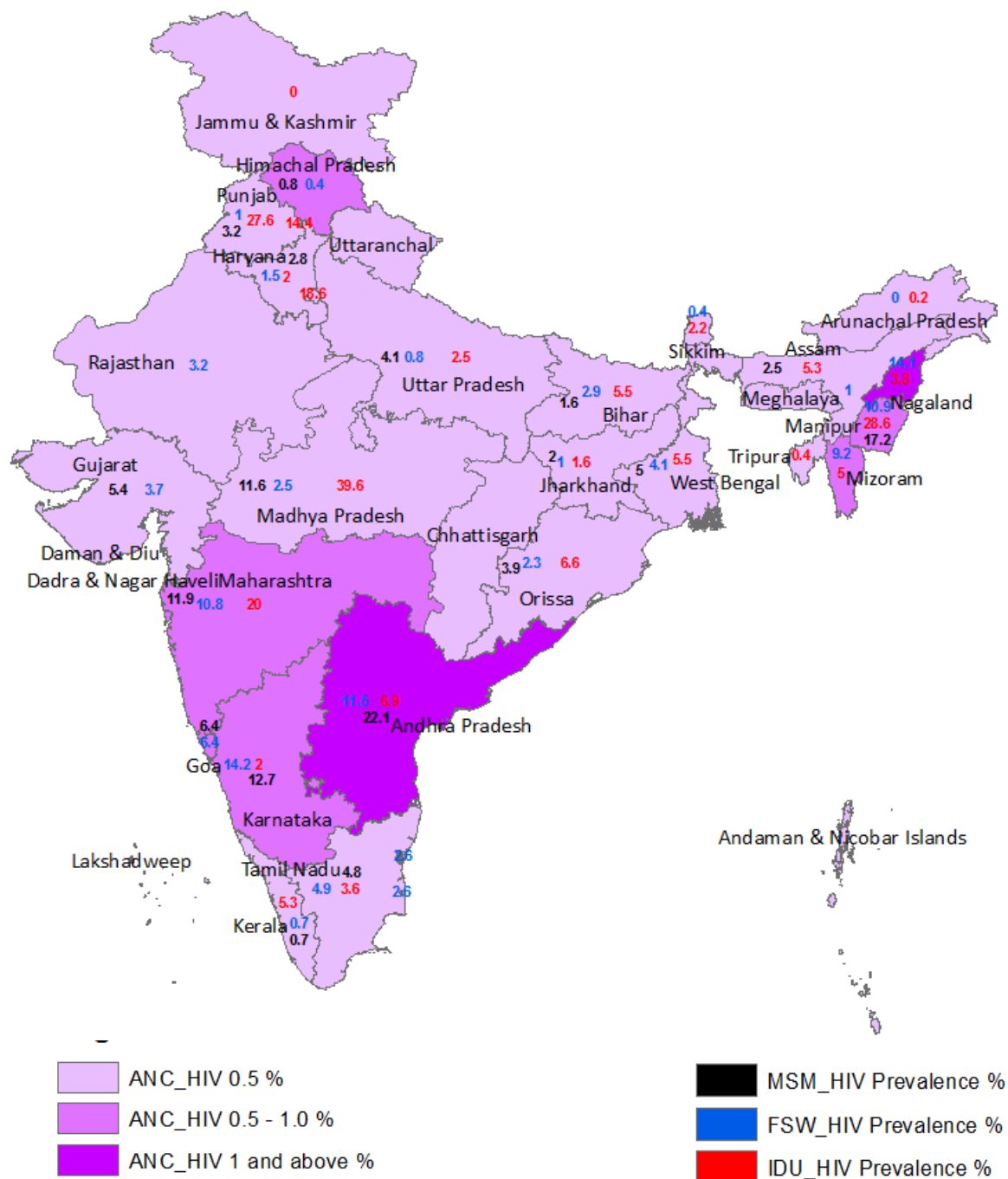
**3230 individuals were tested at 13 (TRK, MRG) sentinel sites\*\***

- 6 sites > 1% to 3% HIV seropositivity
- 2 sites > 3% HIV seropositivity

\*Valid sites, with a sample size of 75% or more, i.e. 300+ at ANC sites and > 187 in other sites



**Map 3.1**  
**State wise HIV % Prevalence in Antenatal Women, IDU, MSM and FSW for 2008-09**



### Box 3.2

#### State wise summary of HIV% prevalence in Antenatal Clinic Attendees and HRGs, 2008-09

##### Antenatal Clinic Attendees

In the four southern states, the HIV prevalence in antenatal women is high, i.e., above 1% in Andhra Pradesh and between 0.5% to 1% in the other states.

In North Eastern States, the HIV prevalence in antenatal women in Nagaland is 1.12%, Mizoram 0.72%, and Manipur is 0.54 %.

In the moderate and low HIV prevalence states the prevalence in antenatal women is less than 1%.

##### High Risk groups

The states of J&K, Meghalaya, Uttarakhand and Chhattisgarh did not have any surveillance site for the High Risk Groups.

In the three southern states of Andhra Pradesh, Maharashtra and Karnataka, the HIV prevalence in FSW and MSM is above 10%. (It is only in Tamil Nadu that the values in each of these groups are close to 5%.) Maharashtra has very high prevalence among IDUs (20%).

In the North East states, Manipur has high prevalence amongst all the high risk groups ie more than 10% for FSWs & MSMs and the prevalence is 28% among IDUs. Mizoram and Nagaland have prevalence among IDUs between 3 to 5% but higher figures 9 to 14 % prevalence amongst FSWs. No MSM sites are there.

The rest of the states in the country have an increase in HIV prevalence with more than 5% for IDUs seen in states of Punjab, Kerala, Orissa, Madhya Pradesh, Bihar, Mizoram, Assam and West Bengal. HIV % prevalence amongst MSM is more than FSWs and above 5% in Goa, Gujarat, Delhi, Madhya Pradesh and West Bengal.

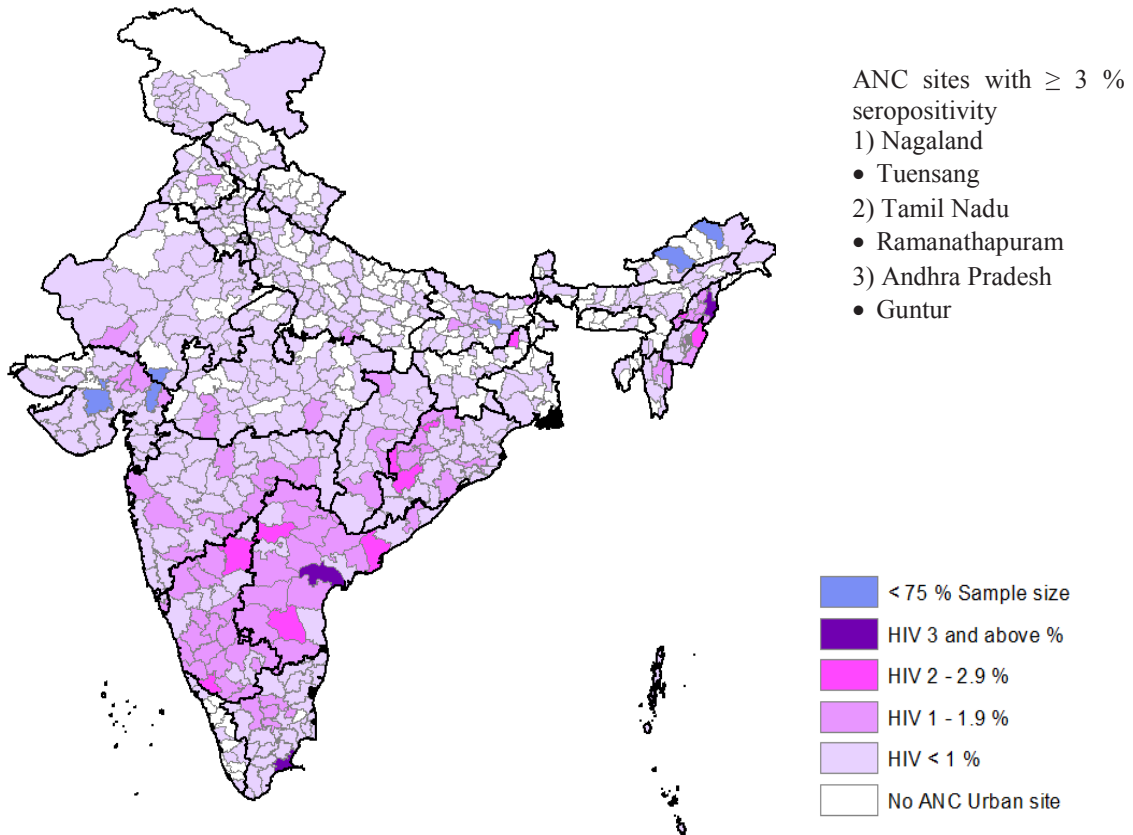
\* The state wise and site wise HIV Prevalence in different risk groups is given in - State Wise and Site Wise Summary Tables-2008 (Annexure-II).



**Map 3.2**  
**ANC Sentinel Sites Located in Urban Areas**

- Of a total of 486 valid urban ANC sentinel sites, as in urban areas among the 94 sites had HIV seropositivity  $\geq 1\%$  and 3 sites had seropositivity  $\geq 3\%$
- While majority (67) urban sites with HIV seropositivity  $\geq 1\%$  prevalence were in six high HIV prevalence states (Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, Nagaland and Manipur), a significant number i.e. 27 out of 94 sites were in other states.

**HIV % prevalence among antenatal clinic attendees at sentinel sites located in urban areas, by district, 2008**

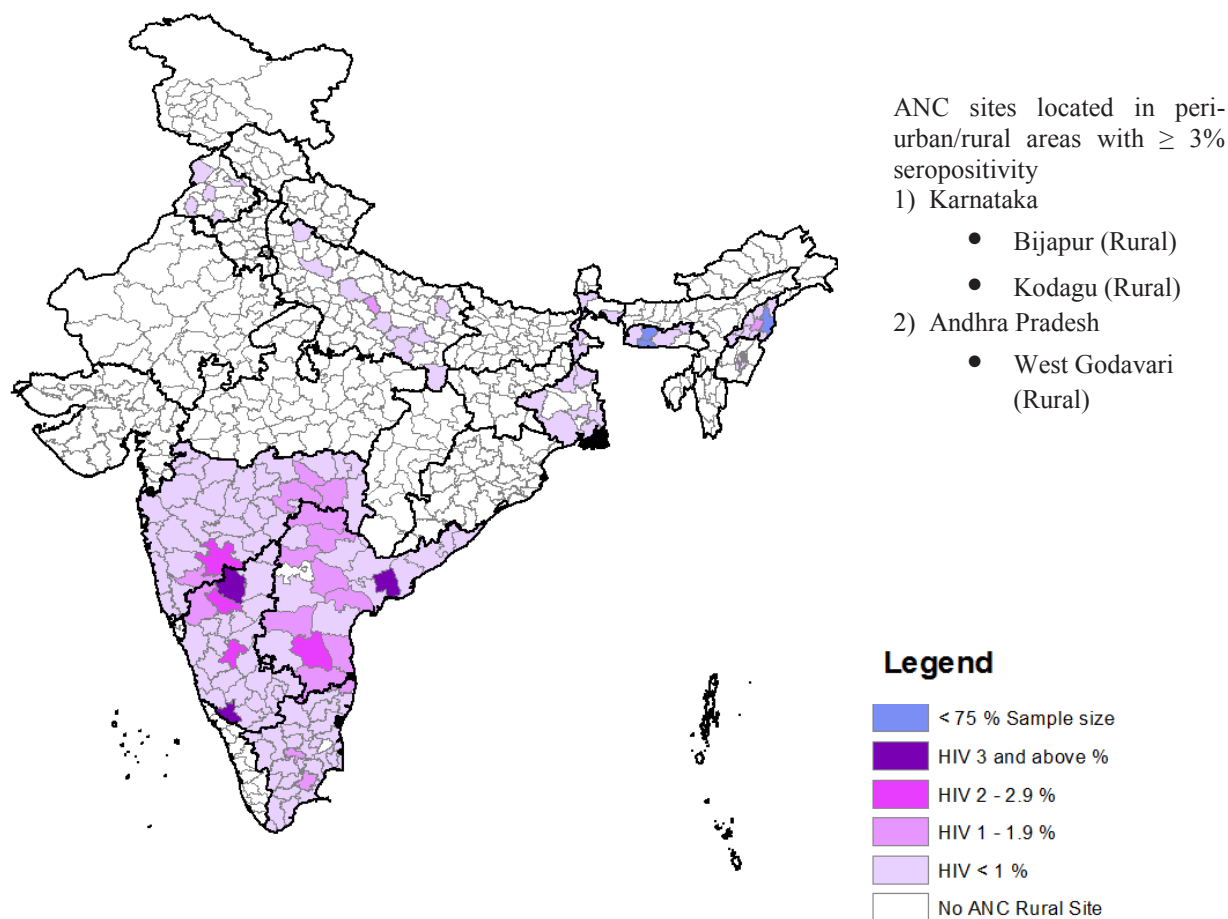




### Map 3.3 ANC Sentinel Sites in Rural Areas

- Out of 648 sites, a total of 162 sites were located in rural areas. At the CHCs such sites are in all the four Southern states (Maharashtra, Andhra Pradesh, Tamil Nadu and Karnataka) and the two states of Northeast (Manipur and Nagaland) with high HIV prevalence. Besides, 33 such rural ANC sites are also located in the four states of West Bengal, Uttar Pradesh, Meghalaya and Punjab.
- Out of 162 sites, 33 valid sites had HIV seropositivity  $\geq 1\%$  and at 3 sites  $\geq 3\%$ .

#### HIV % positivity among antenatal clinic attendees at sentinel sites located in peri-urban/rural areas, by district, 2008–09



### Box 3.3

#### Summary of Results of Sentinel Surveillance in Antenatal Clinics, 2008-09

- 2,52,650 women were tested for HIV at 648 (valid) ANC sentinel sites.
- 97,131 antenatal women were tested in four southern high HIV prevalence states.
- 12,344 pregnant women were tested for HIV in North Eastern states
- 1,43,175 women were tested for HIV in Moderate & Low HIV prevalence states.
- Zone wise unadjusted HIV prevalence among ANC attendees in H1 zone (Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu) – 0.74%, H2 zone (Manipur and Nagaland) –0.86%, moderate and low prevalence states – 0.26%.
- Considerable differences continue to exist in the prevalence rates across different geographical regions. Andhra Pradesh and Nagaland have HIV prevalence greater than 1% among ANC attendees and all other states have less than 1%.
- A total of 105 sites, that include both urban and rural sites, have shown HIV prevalence from 1% to 1.99%. One-fourth of these (27) sites are in moderate and low prevalence states, namely Orissa (4 Sites), Madhya Pradesh(4 Sites), Gujarat(2 Sites), Chhattisgarh(4 Sites), Bihar(3 Sites), Mizoram(2 Sites), Uttar Pradesh(2 Sites), Jharkhand 2 sites, and 1 site each in Goa, Himachal Pradesh, Rajasthan and Punjab.
- 15 sites have shown HIV prevalence 2% to 2.99% distributed as 5 sites in Andhra Pradesh, 4 in Karnataka, 2 sites in Nagaland and 1 site each in Maharashtra, Manipur, Jharkhand and Mizoram.
- Six sites have shown a very high prevalence of  $\geq 3\%$  among ANC clinic attendees. These are Tuensang in Nagaland, Guntur and West Godavari in Andhra Pradesh, Ramananthapuram in Tamil Nadu, Kodagu & Bijapur in Karnataka.

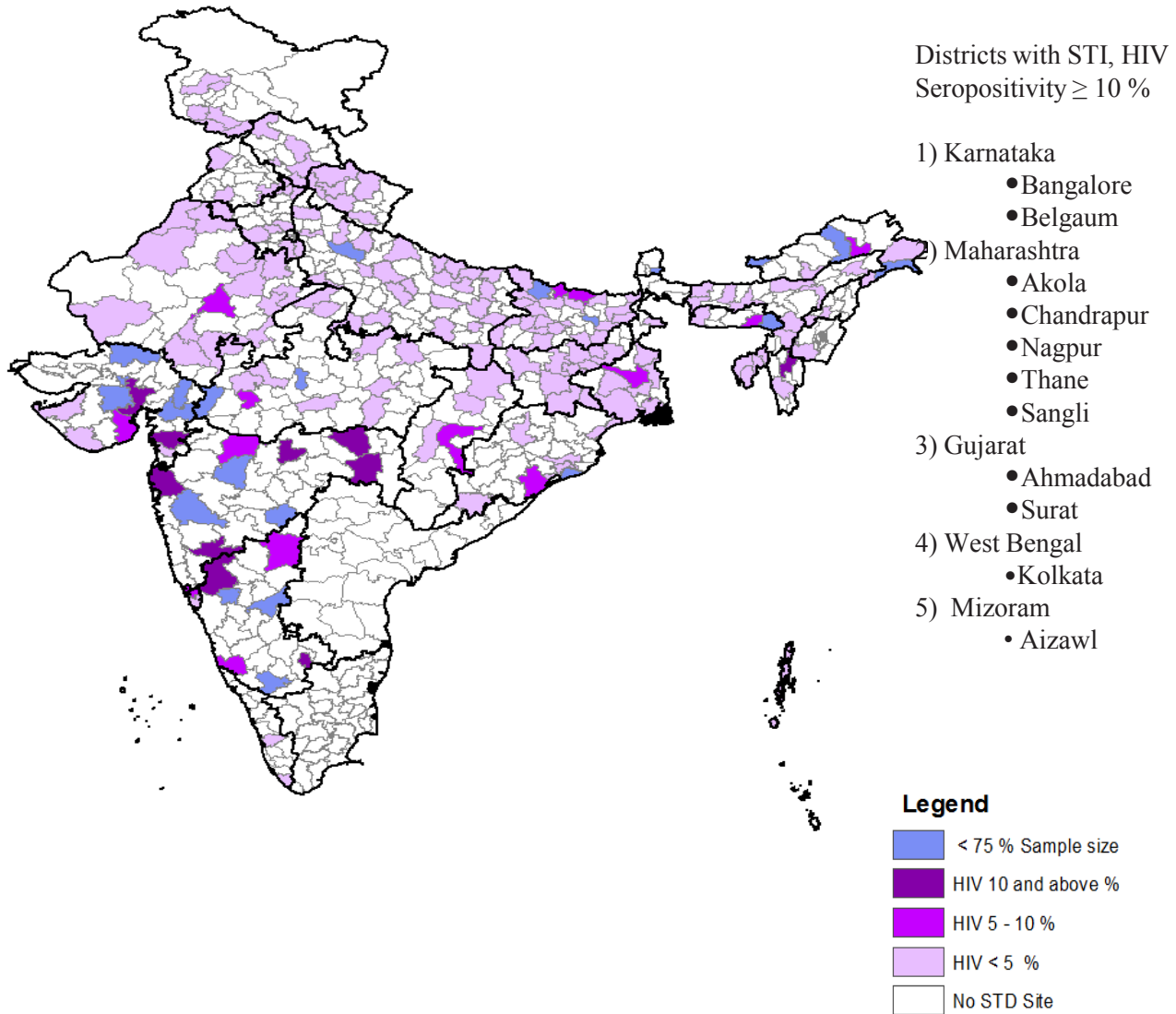




**Map 3.4**  
**HIV Prevalence among STD Patients, All India 2008-09**

- Sentinel surveillance among STD patients was conducted at 212 sentinel sites; of these, 16 sentinel sites had  $\geq 5\%$  HIV Prevalence and 11 sites had  $\geq 10\%$  HIV seropositivity and rest had  $< 5\%$ .
- Ten STD sites with  $\geq 5-10\%$  HIV seropositivity were in low prevalence states and the remaining 6 sites were in the rest of the states.

**HIV % Positivity among patients with sexually transmitted diseases, India, 2008-09**



### Box 3.4 Summary of Findings among STD Patients

- 45,998 individuals were tested at 189 valid sites out of 212 STD sentinel sites.
- The average HIV prevalence percentage in Maharashtra was the highest (11.52%; range –7.05% to 14.05%), Karnataka (10.66%; range – 5.62% to 16.74%), Gujarat (7.62 %; range – 0% to 22%) and Mizoram (6.4%; range – 2.8% to 10%).
- 2 sites have shown very high prevalence of greater than 15%. These sites are one each in Gujarat (22%) and Karnataka (16.74%).
- More than 10% HIV prevalence were found in 5 sites in Maharashtra, 2 sites each in Karnataka and Gujarat and 1 site in Mizoram.
- Out of total STD sites participating in surveillance, 27 sites had HIV prevalence greater than 5% among STD clinic attendees. Of these, 13 sites are in moderate and low prevalence states, i.e., 3 sites in Gujarat, 2 sites each in Bihar and West Bengal, and 1 site each in Chhattisgarh, Goa, Meghalaya, Mizoram, Orissa and Rajasthan
- Goa and Manipur show a declining trend while a rising trend was noted for Mizoram and Gujarat from 2003.

Prevalence of HIV was higher amongst those educated till 5th standard, between 25 to 49 years, and in both sexes. HIV infection was more in persons engaged in occupations as Local transport/auto drivers, truck drivers or cleaners, hotel staff and unemployed. However, men in service and Business are also into risk behaviour.

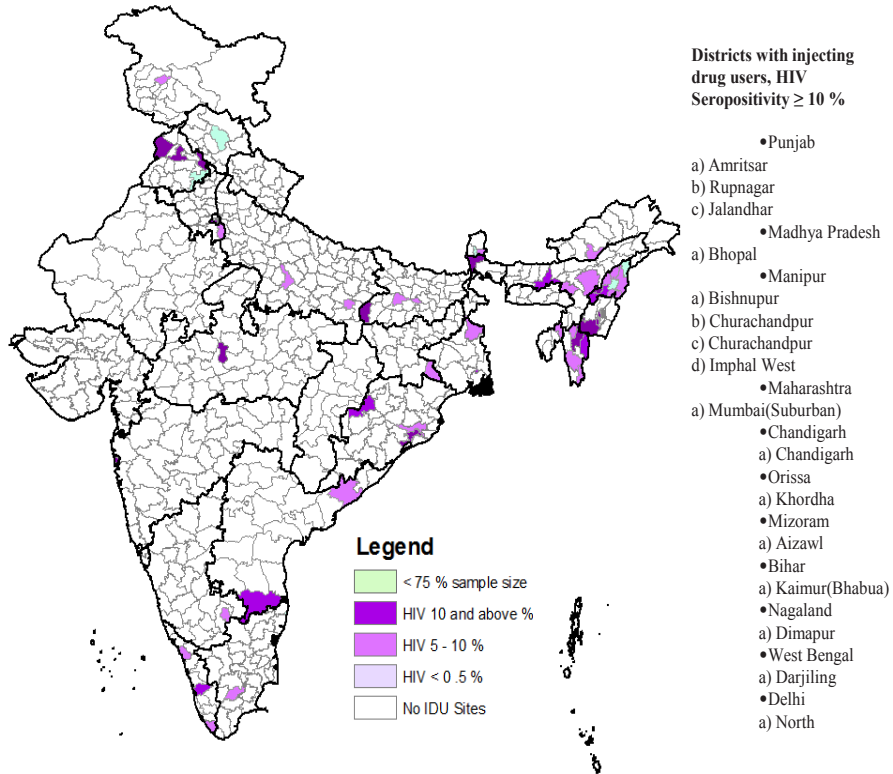
- Sentinel surveillance among injecting drug users was conducted at 57 sentinel sites; of these, 8 sentinel sites had equal or more than 5% but less than 10% HIV seropositivity and 16 sentinel sites had more than 10% HIV seropositivity
- The majority of IDU sites have more than or equal to 5% HIV prevalence, but more than 10% HIV seropositivity was observed in low prevalence states.



### Map 3.5 HIV Prevalence among Injecting Drug Users, India

- Sentinel surveillance among injecting drug users was conducted at 57 sentinel sites, of these, 8 sentinel sites had equal or more than 5% but less than 10% HIV seropositivity and 16 sentinel sites had more than 10% HIV seropositivity.
- The majority of IDU sites have more than or equal to 5% HIV prevalence but more than 10% HIV seropositivity was observed in low prevalence states.

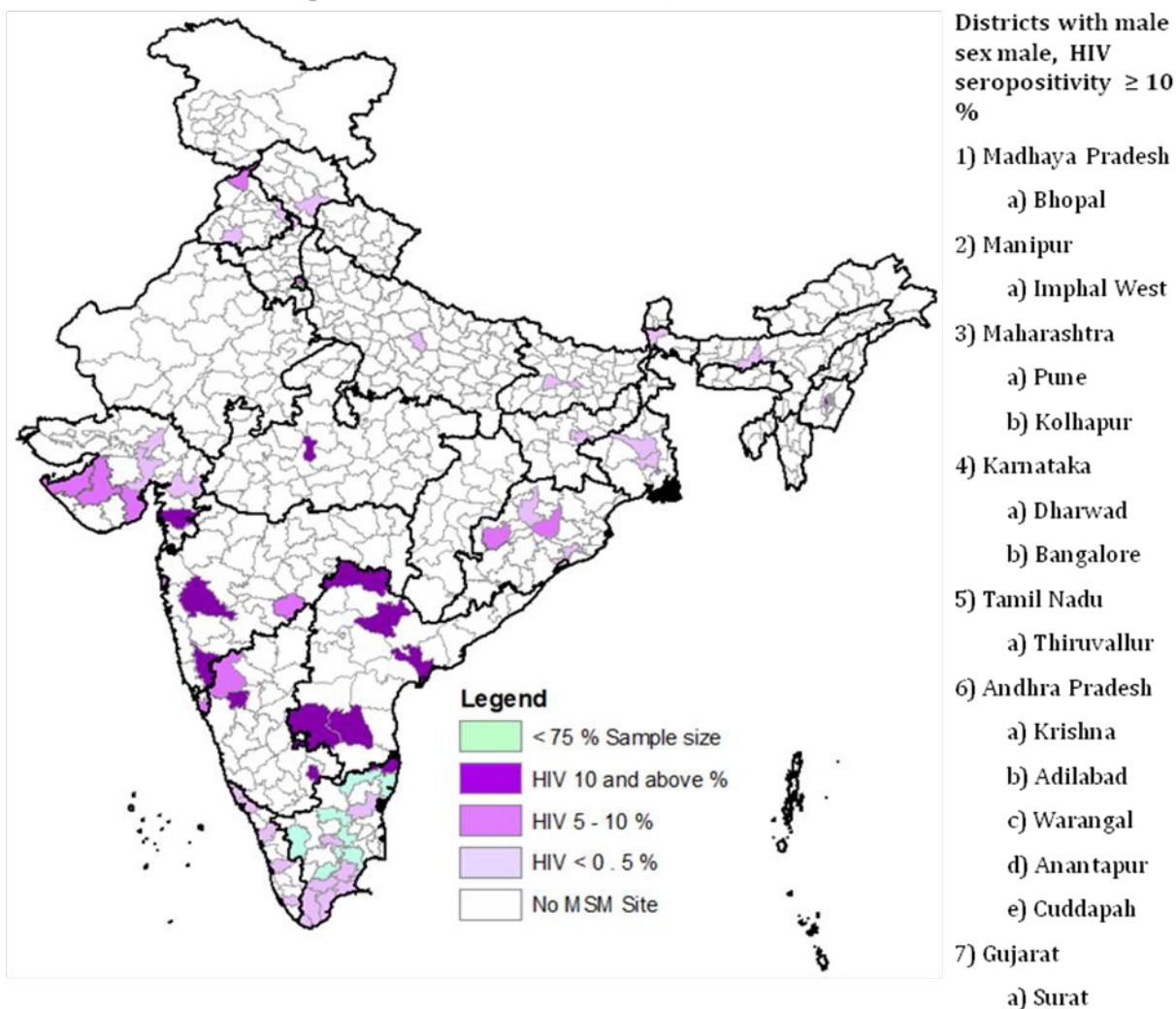
HIV % Prevalence among Injecting Drug Users, India 2008



### Map 3.6 HIV prevalence among Men who have Sex with Men, India

- Sentinel surveillance among men who have sex with men was conducted at 69 sentinel sites of these 60 sites were valid, 15 sentinel sites had more than or equal to 5% HIV seropositivity, and 13 sentinel sites had more than 10 % HIV seropositivity.
- The majority of MSM sites have more than or equal to 5% but less than 10% HIV seropositivity.

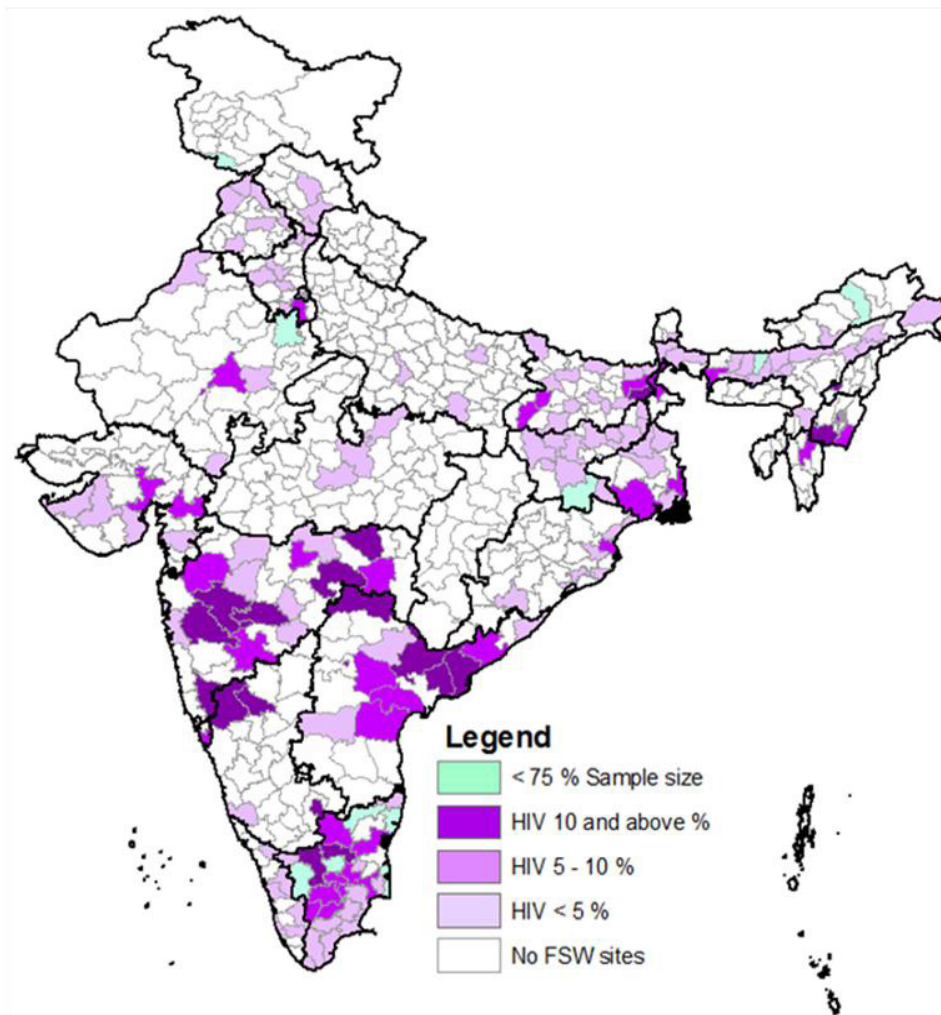
HIV %Prevalence among men who have sex with men, India 2008



**Map 3.7**  
**HIV % Prevalence among Female Sex Workers, India 2008-09**

- Sentinel surveillance among female sex workers was conducted at 188 sentinel sites; of these 173 were valid sites, 36 sentinel sites had  $\geq 5\%$  HIV seropositivity and 20 sentinel sites had  $\geq 10\%$  HIV seropositivity.
- The majority of FSW sites with  $\geq 5\%$  HIV seropositivity were in high prevalence states.

**HIV % Prevalence among female sex workers, India 2008**



Districts with female sex workers, HIV seropositivity  $\geq 10\%$

- 1) Manipur
  - a) Churachandpur
- 2) Maharashtra
  - a) Mumbai
  - b) Pune
  - c) Kolhapur
  - d) Nagpur
  - e) Ahmednagar
  - f) Bid
  - g) Yavatmal
- 3) Bihar
  - a) Katihar
- 4) Nagaland
  - a) Dimapur
- 5) Karnataka
  - a) Bagalkot
  - b) Bangalore
  - c) Belgaum
- 6) Andhra Pradesh
  - a) Khammam
  - b) East Godavari
  - c) Adilabad
  - d) Hyderabad
  - e) West Godavari
- 7) Tamil Nadu
  - a) Salem
  - b) Erode

**Legend**

- < 75 % Sample size
- HIV 10 and above %
- HIV 5 - 10 %
- HIV < 5 %
- No FSW sites





### Box 3.5 Summary of Findings among HRGs, 2008

IDUs: 12,302 individuals tested at 51 IDU sentinel sites\*

- The epidemic among IDUs is spreading from the North-East to more regions of the country. The prevalence of HIV among IDUs was observed to be 39.6% in Madhya Pradesh, 28.7% in Manipur, 27.6% in Punjab, 20% in Maharashtra, 18.6% in Delhi, 6.6% in Orissa, 5.6% in West Bengal, 5.5% in Bihar, 5.3% in Assam and 5% in Mizoram. HIV prevalence among IDUs was found to be > 5% in 40% sites (22 sites).
- HIV prevalence among IDUs increased as compared to the previous year in Manipur, Punjab, Delhi, Chandigarh, Andhra Pradesh and Assam.
- Women comprised 3.7% of the total IDUs tested in the country.
- In consistent sites, in Mizoram and West Bengal, an increase was noted since 2003 .

MSM: 14,825 individuals tested at 60 MSM sentinel sites\*

- The prevalence of HIV among MSM was high in Andhra Pradesh (22.1%), Manipur (17.2%), Maharashtra (11.9%) and Madhya Pradesh (11.6%).
- The prevalence of HIV was found to be high—>5%—in new MSM sites established in Madhya Pradesh, Maharashtra, West Bengal, Delhi and Gujarat, suggesting that there may be many pockets of high prevalence among MSMs in areas with no sites. These pockets need to be detected.
- In 35% of districts and 28 sites in 10 states, HIV prevalence was found to be >5%.
- The nascent epidemic among MSM is becoming visible and may be termed the hidden driver for the continuing high transmission trend in the already high-prevalence state of Andhra Pradesh (where the HIV positivity figure for MSM is greater than that for FSWs).
- HIV prevalence among MSM is higher than among FSWs in 11 low-prevalence states.

FSWs: 42,419 individuals tested at 173 FSW sentinel sites\*

- Nineteen sites in 6 states had a prevalence of >10%. These included the high-prevalence states of Maharashtra (including Mumbai) (7 sites), Andhra Pradesh (5 sites), Karnataka (2 sites), Tamil Nadu (2 sites) and Manipur and Nagaland (1 site each).
  - In moderate and low-prevalence states, 18 sites showed an HIV prevalence of >5%. These states are West Bengal (4 sites), Bihar (4 sites), Gujarat (2 sites), Rajasthan (2 sites), and Assam, Delhi, Goa, Haryana, Mizoram and Orissa (1 site each).
- \* Includes sites with sample size of  $\geq 75\%$ .

The state-wise and site-wise HIV prevalence in different risk groups is given in Annexure II.

The following section contains a detailed description for each risk group.



### 3.3 Antenatal clinic attendees

HIV sentinel surveillance is done among antenatal women as a surrogate marker for the assessment of the magnitude of HIV prevalence in the general population, in the absence of any other suitable group. The surveillance system has helped unmask many antenatal sites with high HIV prevalence in states classified as moderate or low for HIV prevalence. In spite of the expansion in the number of sites, there are still a few districts that do not have any ANC site.

**Table 3.2**  
**Zone wise HIV Prevalence among Antenatal Clinic Attendees in different Age groups in 2008**

| Zones                                    | Age    | Urban         |                 |                  | Rural         |                 |                  |
|--|--------|---------------|-----------------|------------------|---------------|-----------------|------------------|
|  |        | Number Tested | Number Positive | Percent Positive | Number Tested | Number Positive | Percent Positive |
| High Prevalence                          | 15 -24 | 15799         | 118             | 0.75             | 18591         | 170             | 0.91             |
| Southern States (H1)*                    | 25 -49 | 8032          | 76              | 0.95             | 8374          | 87              | 1.04             |
| High prevalence (North-eastern States)** | 15 -24 | 1556          | 20              | 1.29             | 1531          | 14              | 0.91             |
|  | 25 -49 | 2673          | 41              | 1.53             | 2403          | 21              | 0.87             |
| Moderate & Low Prevalence States***      | 15 -24 | 32203         | 82              | 0.25             | 39553         | 107             | 0.27             |
|  | 25 -49 | 25655         | 64              | 0.25             | 33731         | 98              | 0.29             |
| Total                                    |        | 85918         | 401             | 0.46             | 104183        | 497             | 0.477            |

Note: Prevalence data in ANCs are unadjusted.

\*The states in the H1 zone are Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu.

\*\*The states in the H2 zone are Manipur and Nagaland.

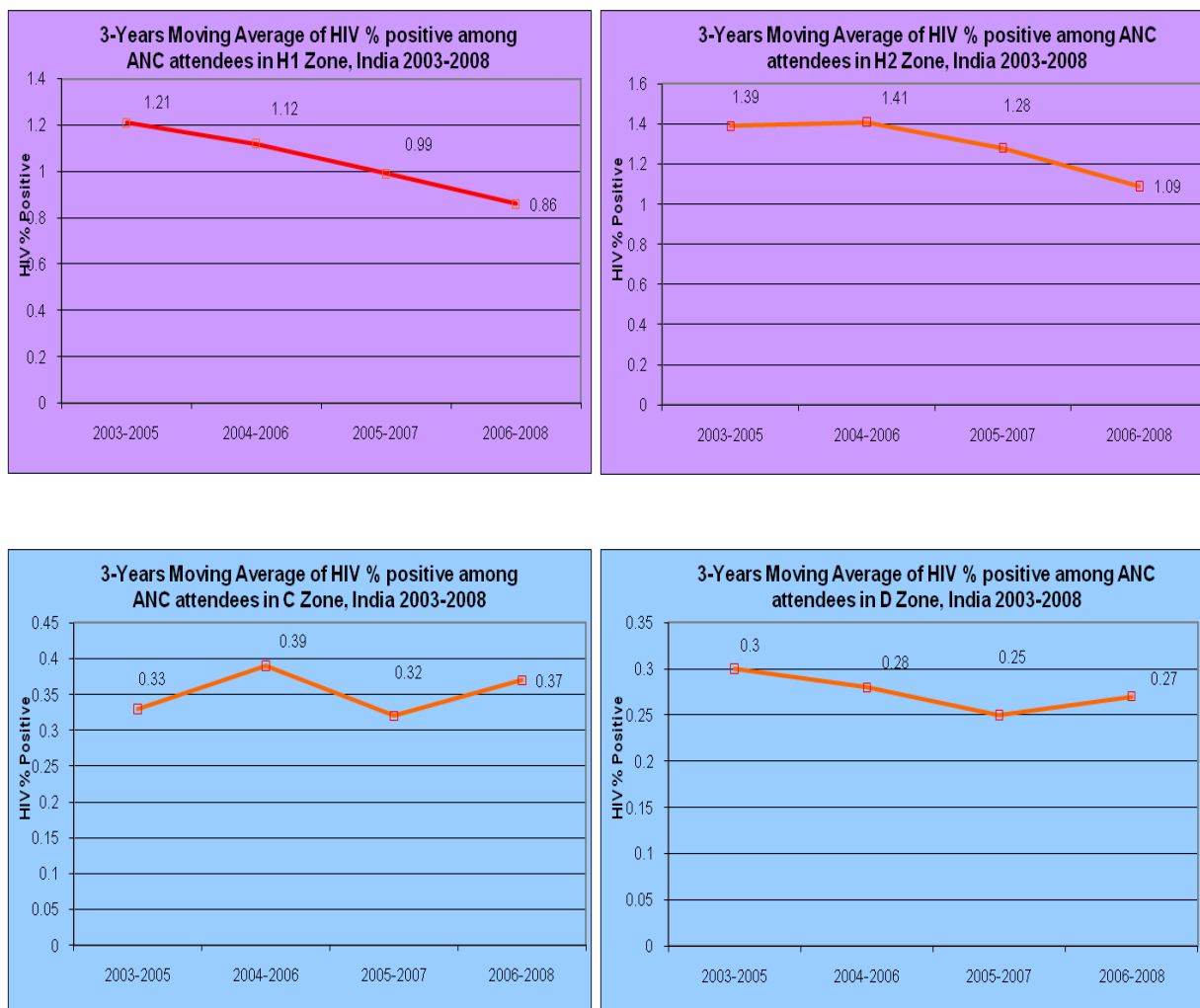
\*\*\*The states considered to have moderate prevalence are Goa, Gujarat and Pondicherry, and the low-prevalence states are the rest of the states.

The prevalence in the age group of 25–49 years was lower in urban areas than in rural areas in the high-prevalence southern states. In the high-prevalence north-eastern states, the prevalence among both the age groups of 15–24 years and 25–49 years in urban areas was higher than in the rural areas. In the moderate- and low-prevalence states, HIV prevalence was the same for rural and urban areas (Table 3.2). There were few sites in rural areas.



**Figure 3.1**  
Trends in Various Zones according to HIV % Prevalence in Antenatal Clinic Attendees

### Trends in various zones according to HIV prevalence



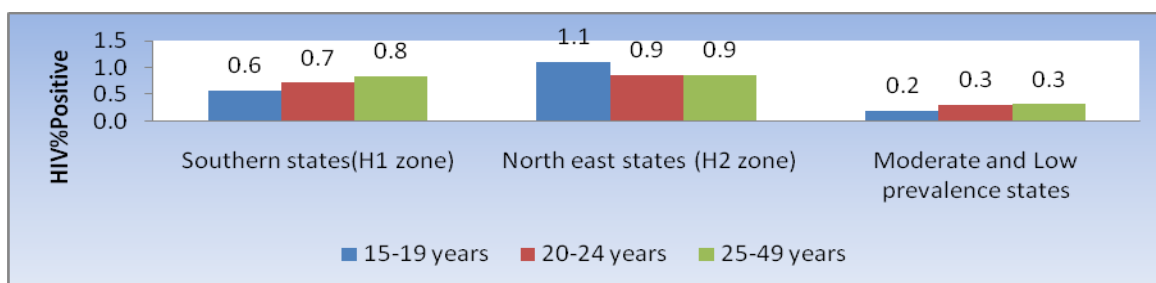
The HIV % prevalence for India is 0.47% (unadjusted). The zone-wise analysis of trends for pregnant women coming to ANCs showed a downward trend in the H1 and H2 zones, but the trends in the zone comprising states with moderate and low HIV prevalence have remained the same over time.

The HIV % prevalence figures at the ANC sites were the highest, i.e. >1%, for the age group of 15–19 years in the H2 zone. In the rest of the country, including the H1 zone, the positivity is the lowest in the age group of 15–19 years and nearly the same for the other age groups (Fig. 3.2).



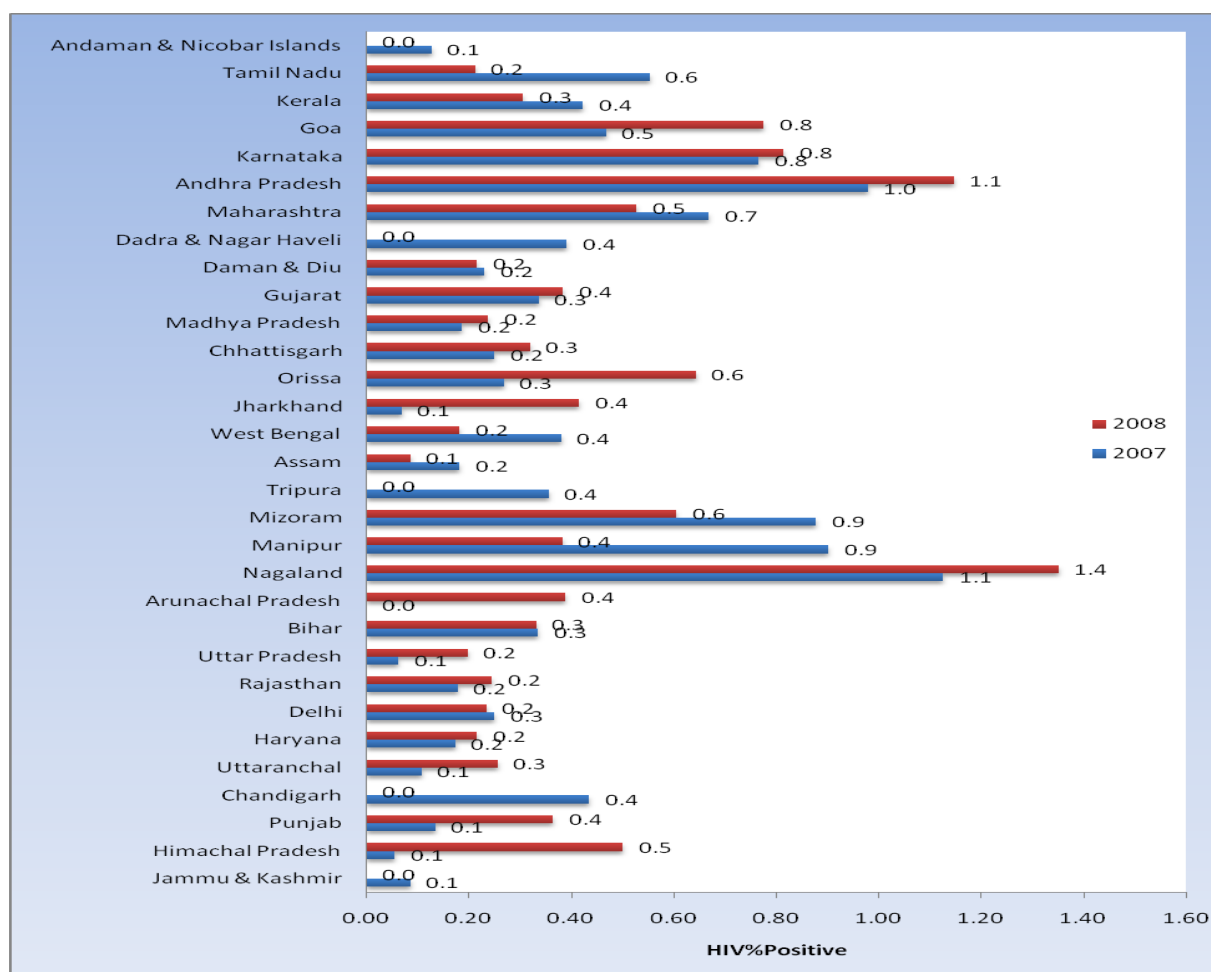


**Figure 3.2**  
**Zonewise HIV prevalence among Antenatal Clinic Attendees by AGE Group, 2008-2009**



Note: HIV prevalence data are unadjusted.

**Figure 3.3**  
**State wise HIV % prevalence in Antenatal Clinic Attendees of age 15-19 years for 2007 and 2008-09**



The age of first infection is 15–19 years, and the prevalence of HIV in this age group provides indirect evidence of new infections. Among the southern states, Andhra Pradesh and Karnataka had a higher prevalence in 2008–09 than 2007 (Fig. 3.3). In the north-eastern states, there was an increase in prevalence only in Nagaland, other than Arunachal Pradesh. Other states in which the prevalence of HIV increased in 2008 were Himachal Pradesh, Punjab, Orissa, Goa and Jharkhand.

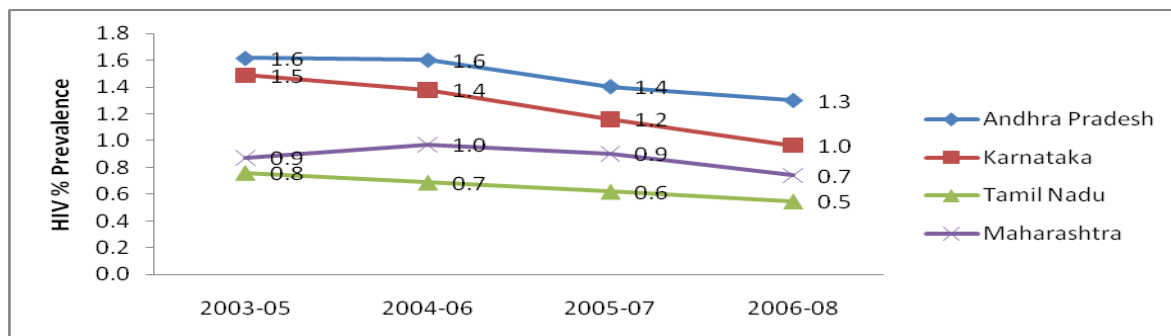


### 3.4 Southern High HIV Prevalence States

In the southern states, the main mode of transmission was sexual and the prevalence of HIV among pregnant women was higher than in the moderate- and low-prevalence states. This year (2008-09), 97,131 antenatal women were tested for HIV in Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu. Details of state-wise and site-wise prevalence among different groups can be found in Annexure II.

State wise trends for HIV amongst antenatal clinic attendees reflects decline (Fig 3.4)

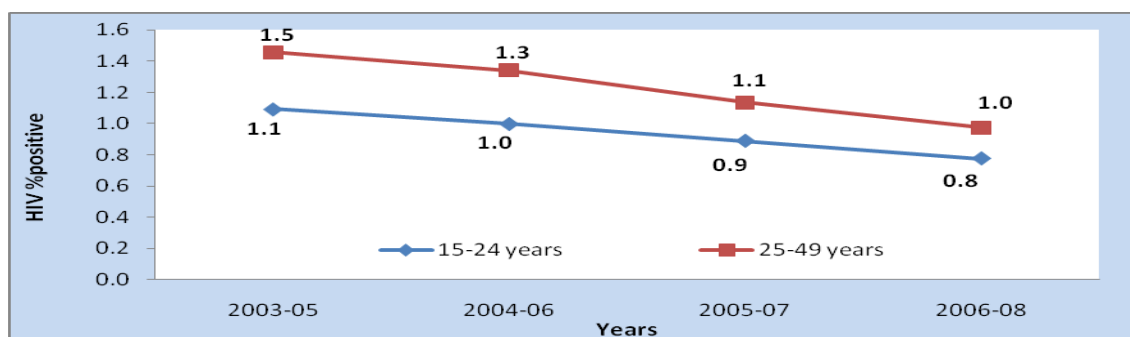
**Figure 3.4**  
HIV Prevalence among Antenatal Clinic Attendees in Southern States, 2003 to 2008-09\*



Note: Number of consistent sites: 219 (Andhra Pradesh=43; Karnataka=54; Maharashtra=70; Tamil Nadu=52) Unadjusted data.

The combined age wise trends for these states show gradual decline since 2003 (Fig 3.5)

**Figure 3.5**  
HIV Prevalence among Antenatal Clinic Attendees in Southern States by Age Group, India, 2003 to 2008-09\*



Note: The number of consistent sites is 219 (Andhra Pradesh=43; Karnataka=54; Maharashtra=70; Tamil Nadu=52). Both urban and rural clinics were included.

The combined age-wise trends for these states show a gradual decline in prevalence since 2003 (Fig. 3.5).

More sites in the southern states had an HIV prevalence of 1% or more compared to the rest of the country. Of the 126 sites with an HIV prevalence of 1% or more, 85 were in the southern states. In Andhra Pradesh, the HIV prevalence among ANC attendees in 32 out of 52 sites was >1%. A very high prevalence of  $\geq 3\%$  was observed among ANC clinic attendees in 5 sites both in the urban and rural areas of the southern states. These sites are in Guntur and West Godavari in Andhra Pradesh, Ramananthapuram in Tamil Nadu, and Kodagu and Bijapur in Karnataka. The past prevalence in these sites, since 2003, is given in Table 3.3. A sudden increase can be noted for 2008-09.



**Table 3.3**

**Trend in Sites with HIV Prevalence  $\geq$  3% among Antenatal Clinic Attendees from 2003 to 2008-09**

| State                     | District                       | Clinic type | 2003 | 2004 | 2005 | 2006 | 2007 | 2008-09 |
|---------------------------|--------------------------------|-------------|------|------|------|------|------|---------|
| Karnataka                 | Bijapur ,G.H. Indi             | ANC Rural   | 0.75 | 0.75 | 0.00 | 0.73 | 0.50 | 3.00    |
| Karnataka                 | Kodagu ,G.H. Siddapur          | ANC Rural   | 0.25 | 1.25 | 0.50 | 0.50 | 1.25 | 3.00    |
| Tamil Nadu                | Ramanathapuram                 |             |      |      |      |      |      |         |
| Govt. Distt. Hq. Hospital | ANC                            | 0.50        | 0.75 | 0.00 | 0.25 | 1.00 | 3.25 |         |
| Andhra Pradesh            | Guntur, Guntur Medical College | ANC         | 3.75 | 3.50 | 3.00 | 2.25 | 1.75 | 3.75    |
| Andhra Pradesh            | West Godavari CHC, Bhimavaram  | ANC Rural   | 2.53 | 2.00 | 3.00 | 1.76 | 1.25 | 3.75    |

\*Samples with <75% of the total have been included.

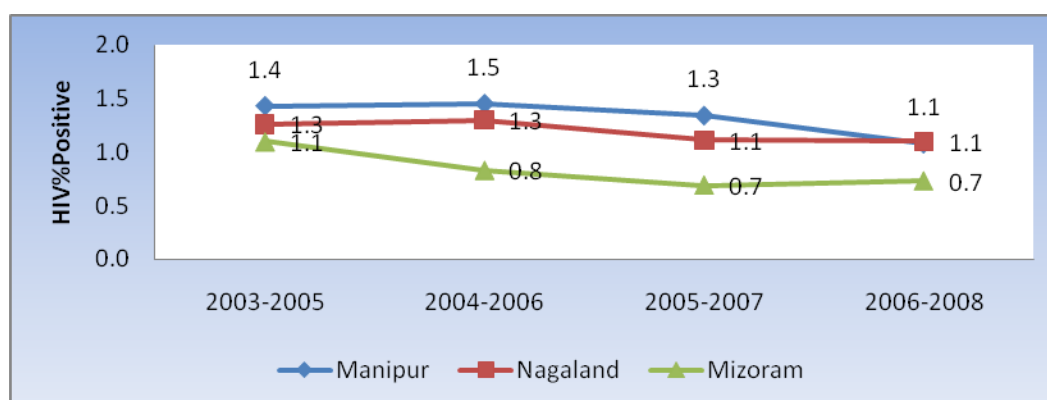
**3.5. North-eastern states**

**HIV prevalence among antenatal clinic attendees in selected north-eastern states (Manipur, Nagaland and Mizoram)**

The burden of infection was high among ANC attendees in these three states. Although the mode of transmission was mainly through IDUs, the sexual mode of transmission was also reported. This was observed notably in the eastern border district sites in Manipur and Nagaland, which have international borders with Myanmar, and in Mizoram, to the west of which lies Bangladesh. In Nagaland, the prevalence of HIV was very high in the urban sites in the district of Tuensang—it has been greater than 3% since 2003 (Fig. 3.8). In Manipur, HIV prevalence in the urban ANC sites of Ukhrul district have been >2% year after year (Fig. 3.7). HIV prevalence among ANC attendees was  $\geq$ 1% in 4 sites in Manipur, 9 sites in Nagaland and 3 sites in Mizoram. The prevalence among ANC attendees was >1% in all districts but one in Nagaland.

The trend was one of a gradual decline in all three states till the year 2005, but there has been no change since then in Nagaland and Mizoram (Fig. 3.6).

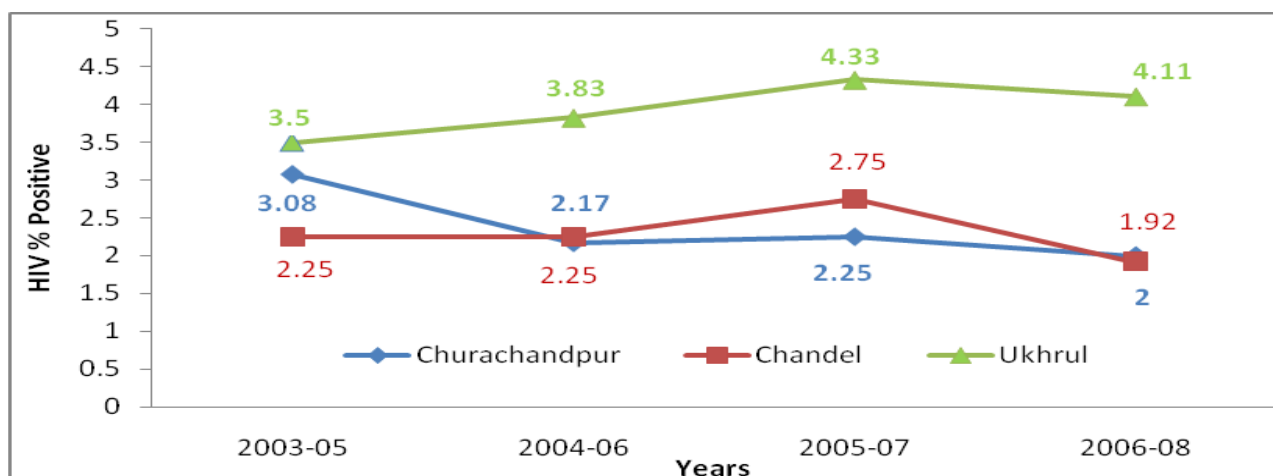
**Figure 3.6**  
**Trends of HIV Prevalence among Antenatal Clinic Attendees in the States of Manipur, Nagaland and Mizoram, India, 2003 to 2008-09\***



\*Three Year moving average, based on consistent site, with 14 sites in Manipur, 5 sites in Nagaland and 4 sites in Mizoram.



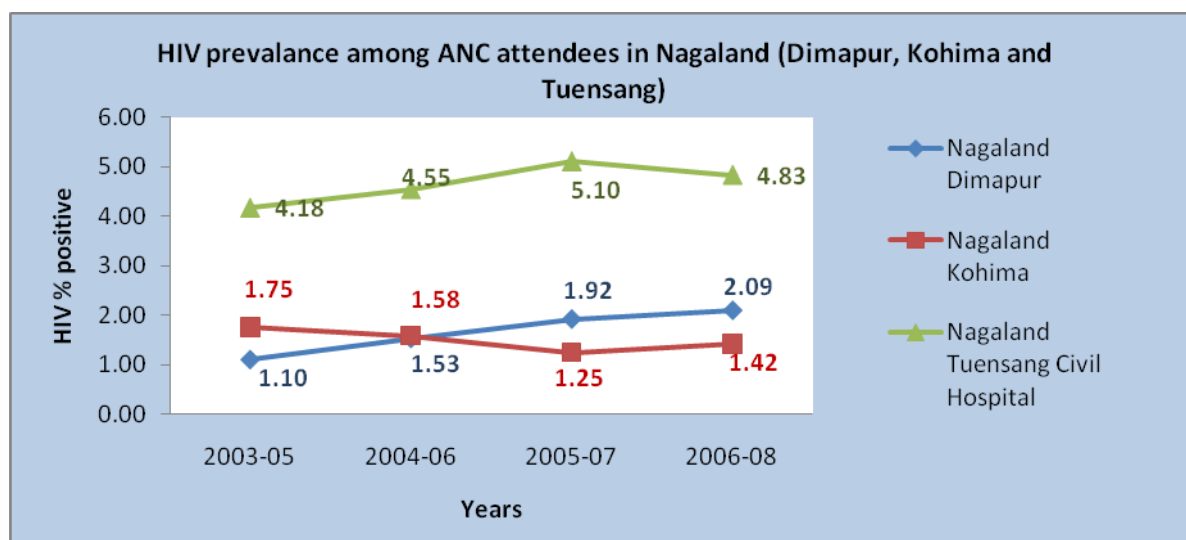
**Figure 3.7**  
**HIV Prevalence among Antenatal Clinic Attendees in Selected Sites of Manipur, 2003 to 2008-09**



\*Three Year moving average.

The ANC sentinel sites situated in the border districts had a high prevalence, but in 2008–09 the prevalence came down. No comments can be made about the decrease in these sites on the basis of one year’s data (Fig. 3.8). There has been an increasing trend in the site at Dimapur, where, together with Kohima, the prevalence has constantly been between 1% and 2%. Tuensang had the highest prevalence, of 4.83%, and no change in this trend has been observed.

**Figure 3.8**  
**HIV Prevalence among Antenatal Clinic Attendees in Selected Sites of Nagaland, 2003 to 2008-09**



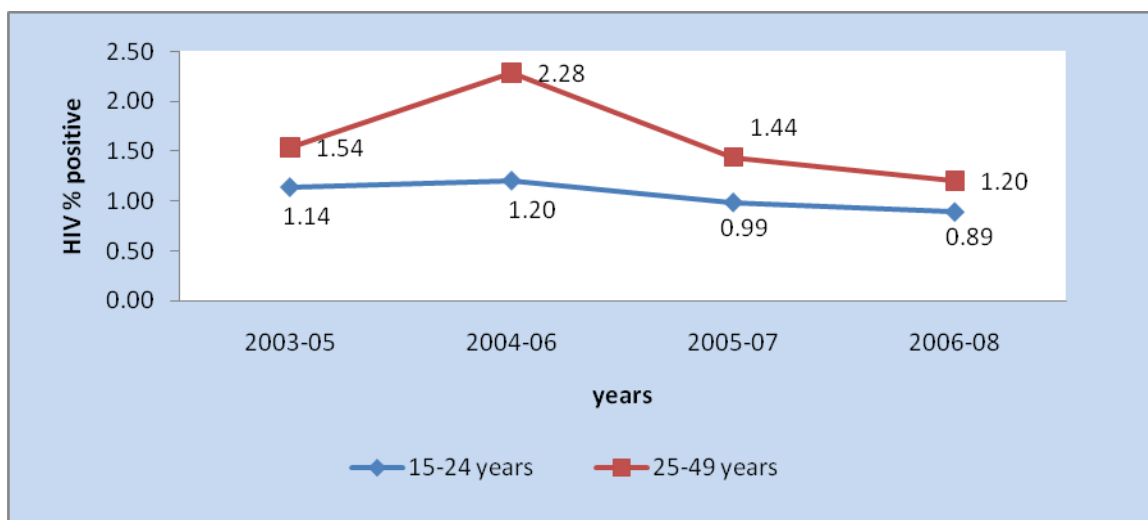
There was a gradual decline in HIV prevalence among both age groups in the twin states of Manipur and Nagaland, and the decline noted in 2008–09 needs to be watched for next 2 rounds of surveillance before interpreting it as a decline in HIV prevalence.

### 3.6 Moderate- and low-prevalence states

Antenatal clinic attendees in states with moderate and low HIV prevalence



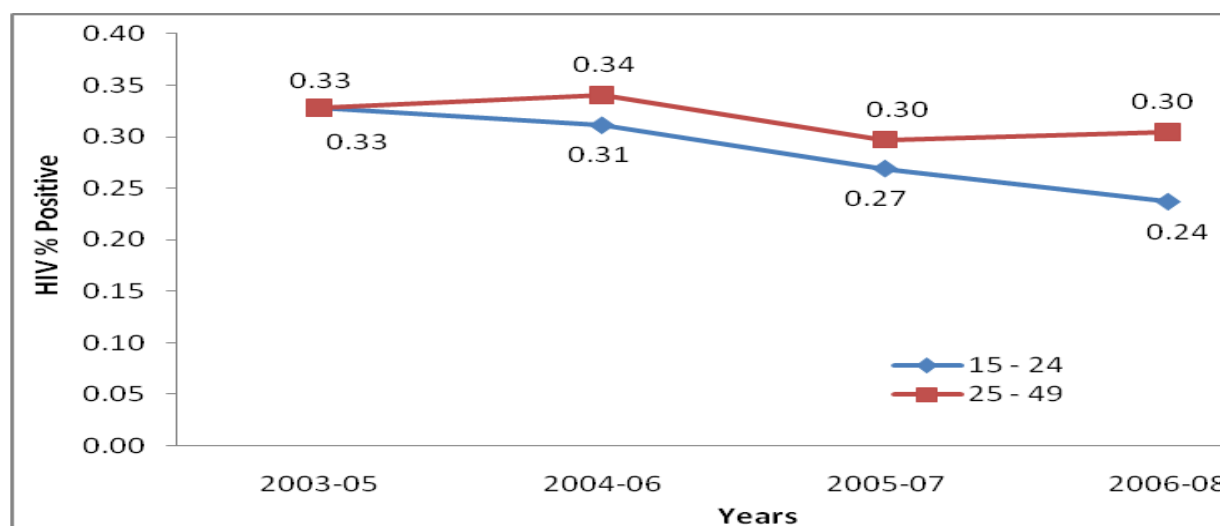
**Figure 3.9**  
**HIV Prevalence among Antenatal Clinic Attendees in Manipur and Nagaland (Combined) by Age Group, 2003 to 2008-09\***



Note: Based on three year moving average on actual data.

The ANC sentinel surveillance was held in 370 sites, of which 362 could complete 75% of the sample size (valid sites). The data has been analysed for a population numbering 13,142 in urban sites and 12,033 in rural sites. The sentinel sites were distributed in 23 states and 6 Union Territories. The state-wise and site-wise prevalence are given in Maps 3.1 to 3.3, and the detailed table may be found in Annexure II. HIV prevalence was high (>1%) in the new sites in South Goa and Hamirpur in Himachal Pradesh.

**Figure 3.10**  
**HIV Prevalence among Antenatal Clinic Attendees in Low Prevalence States by Age Group, India, 2003 to 2008-09\***



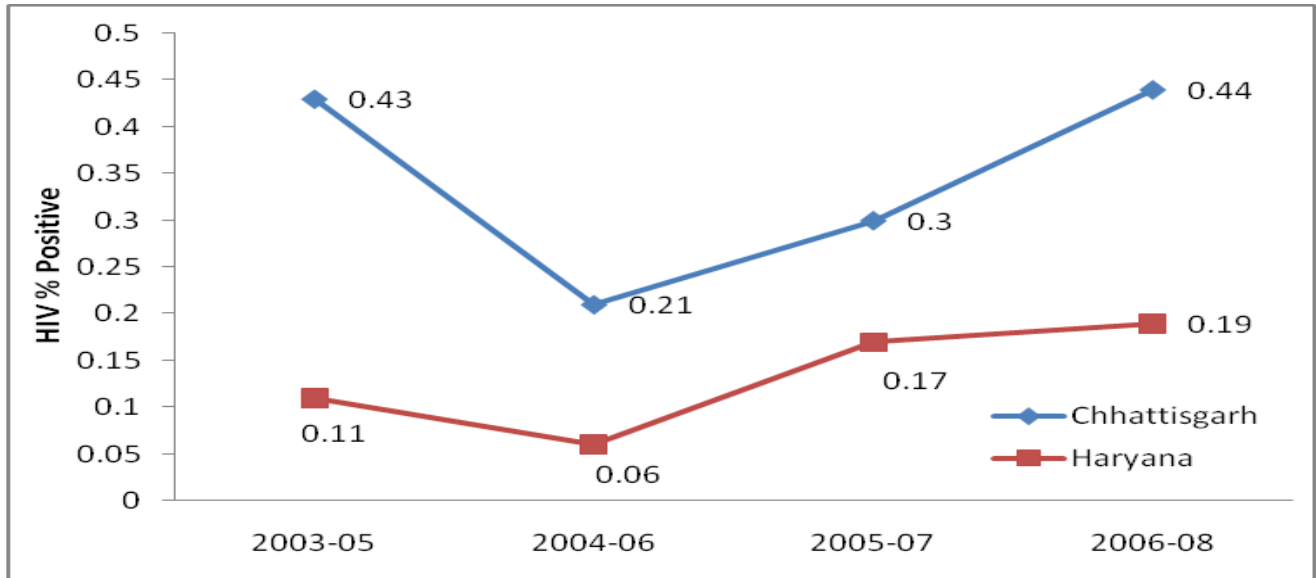
[Low-prevalence states: Andaman and Nicobar Islands, Assam, Bihar, Chandigarh, Chhattisgarh, Dadra and Nagar Haveli, Daman and Diu, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Meghalaya, Orissa, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh and West Bengal]

Note: The number of consistent sites was 86 and included only urban clinics. Sites with a sample size of  $\geq 75\%$  have been included.



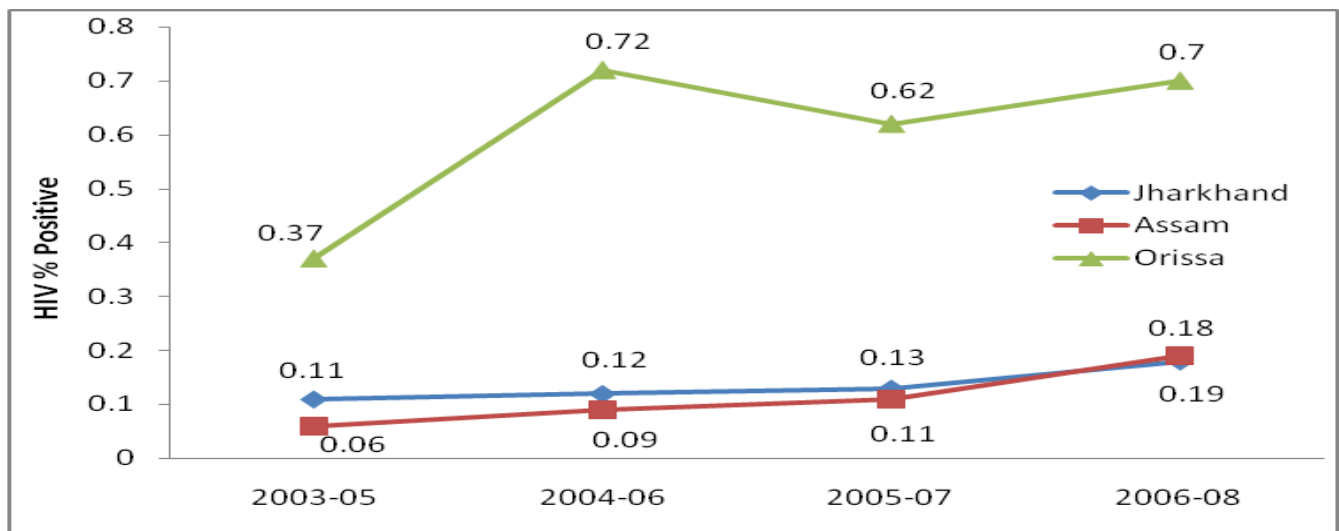
The trends in HIV prevalence in the antenatal sites in low-prevalence states were analysed by age group. A stable trend was observed for the past three years in the age group of 25–49 years (Fig. 3.10). The extent of positivity was found to be declining in the age group of 15–24 years.

**Figure 3.11**  
**HIV Prevalence among Antenatal Clinic Attendees in Chhattisgarh and Haryana from 2003 to 2008-09\***



Note: Three year moving average has taken. Only 3 consistent sites have been included from 2003-2008 for each state.

**Figure 3.12**  
**HIV Prevalence among Antenatal Clinic Attendees in Orissa, Jharkhand and Assam from 2003 to 2008-09\***



Note: Three year moving average has taken. Only 5 consistent sites have been included from 2003 to 2008 for each state.

An increase in prevalence in the year 2008–09 was noted in Chandigarh, Himachal Pradesh, Jharkhand and Uttarakhand. Chandigarh is a Union Territory and the capital of Punjab and Haryana. The increased prevalence there could be explained by the fact that there is an influx of people from these two states into Chandigarh, where many come for testing or seeking medical treatment. The reasons with respect to the other states need to be explored. A marginal upward trend was noted in Gujarat (Annexure II).



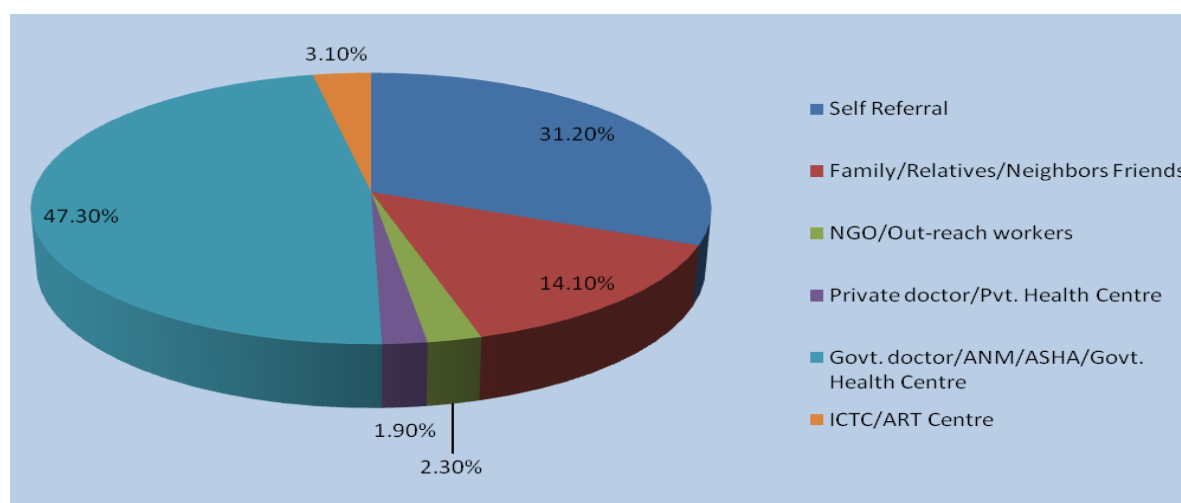
No significant change in trend was observed in Bihar, Meghalaya, Mizoram, Pondicherry, Punjab, Rajasthan, Uttar Pradesh, Kerala, Goa and Delhi. The details of state-wise and site-wise prevalence are given in Annexure II.

The surveillance at the ANC sites in the rural areas showed that HIV prevalence was the highest in Uttar Pradesh (0.29%), whereas in urban clinic sites it was 0.15%. In the rural sites of Punjab, Meghalaya and West Bengal, the prevalence, on an average, was 0.2%.

#### Differentials of HIV among antenatal clinic attendees

The age-wise HIV prevalence among urban pregnant women was the lowest (0.12%) in the age group of 15–19 years and was, on an average, 0.3% for all the age groups from both urban and rural areas. The HIV prevalence was uniform, at 0.3%, across all levels of literacy and with all orders of pregnancy.

**Figure 3.13**  
Proportion Tested for HIV by Source of Referral to Antenatal Clinic Attendees in India, 2008-09



The source of referral for the ANC attendees tested was mainly government agencies (47%). Forty-five per cent of the ANC attendees had come by themselves or on the advice of friends and relatives (Fig. 3.13). Only 1.9% had been referred by the private sector.

**Table 3.4**  
HIV Prevalence among Antenatal Clinic Attendees by Spouse Occupation, India, 2008

| Spouse Occupation            | Urban         |                 |                | Rural         |                 |                |
|------------------------------|---------------|-----------------|----------------|---------------|-----------------|----------------|
|                              | Number Tested | Number Positive | HIV % Positive | Number Tested | Number Positive | HIV % Positive |
| Agricultural labourer        | 8762          | 45              | 0.51           | 43136         | 197             | 0.46           |
| Non-agricultural labourer    | 17686         | 78              | 0.44           | 24779         | 116             | 0.47           |
| Domestic servant             | 1826          | 10              | 0.55           | 1804          | 15              | 0.83           |
| Skilled/semiskilled worker   | 12764         | 60              | 0.47           | 13245         | 67              | 0.51           |
| Petty business/small shop    | 14862         | 56              | 0.38           | 12732         | 41              | 0.32           |
| Large business/self-employed | 5490          | 18              | 0.33           | 3693          | 10              | 0.27           |
| Service (Govt/Pvt.)          | 22075         | 97              | 0.44           | 16920         | 69              | 0.41           |
| Student                      | 820           | 0               | 0.00           | 1206          | 3               | 0.25           |
| Truck driver/helper          | 2816          | 32              | 1.14           | 3927          | 29              | 0.74           |



| Spouse Occupation  | Urban         |                 |                | Rural         |                 |                |
|--|---------------|-----------------|----------------|---------------|-----------------|----------------|
|  | Number Tested | Number Positive | HIV % Positive | Number Tested | Number Positive | HIV % Positive |
| Local transport worker (auto/taxi driver/handcart pullers/rickshaw pullers, etc) | 8213          | 42              | 0.51           | 7272          | 57              | 0.78           |
| Hotel staff  | 2238          | 16              | 0.71           | 2045          | 20              | 0.98           |
| Agricultural cultivator/landholder   | 2630          | 13              | 0.49           | 15558         | 62              | 0.40           |
| Unemployed   | 2369          | 17              | 0.72           | 3509          | 21              | 0.60           |
| Not applicable (for never married/widows/widowers)                               | 119           | 4               | 3.36           | 154           | 4               | 2.60           |

Amongst the ANC clinic attendees in urban areas (102,670), it was the wives of truck drivers/helpers (1.14%), hotel staff and the unemployed who had the highest prevalence. In rural areas (149,980), HIV prevalence was the highest among the wives of hotel staff (0.98%) followed by domestic servants (0.83%). The number of ANC attendees tested for HIV whose spouses were migrants was 660, of which 6 were positive. So, the HIV positivity percentage was 0.9.

**Table 3.5**  
**VDRL\*% Prevalence amongst Antenatal Clinic Attendees by Age group**

|                                     | Age-group | Total  | VDRL | Unadjusted% Positive | Age adjusted% positive |
|-------------------------------------|-----------|--------|------|----------------------|------------------------|
| India                               | 15-19     | 21776  | 68   | 0.31                 | 0.31                   |
|                                     | 20-24     | 128921 | 388  | 0.30                 | 0.3                    |
|                                     | 25-49     | 101953 | 317  | 0.31                 | 0.44                   |
|                                     | Total     | 252650 | 773  | 0.31                 | 0.39                   |
| H1 zone*                            | 15-19     | 9792   | 24   | 0.25                 | 0.25                   |
|                                     | 20-24     | 57477  | 128  | 0.22                 | 0.22                   |
|                                     | 25-49     | 29862  | 54   | 0.18                 | 0.39                   |
|                                     | Total     | 97131  | 206  | 0.21                 | 0.33                   |
| H2 zone**                           | 15-19     | 982    | 15   | 1.53                 | 1.53                   |
|                                     | 20-24     | 3550   | 56   | 1.58                 | 1.58                   |
|                                     | 25-49     | 7812   | 82   | 1.05                 | 1.32                   |
|                                     | Total     | 12344  | 153  | 1.24                 | 1.41                   |
| Moderate & Low Prevalence states*** | 15-19     | 11002  | 29   | 0.26                 | 0.26                   |
|                                     | 20-24     | 67894  | 204  | 0.30                 | 0.30                   |
|                                     | 25-49     | 64279  | 181  | 0.28                 | 0.22                   |
|                                     | Total     | 143175 | 414  | 0.29                 | 0.24                   |

Note: Sites with a sample size of  $\geq 75\%$  have been included.

\* Andhra Pradesh, Maharashtra, Tamil Nadu, Karnataka

\*\* Manipur, Nagaland

\*\*\* Moderate: Goa, Gujarat, Pondicherry

Low: Other states

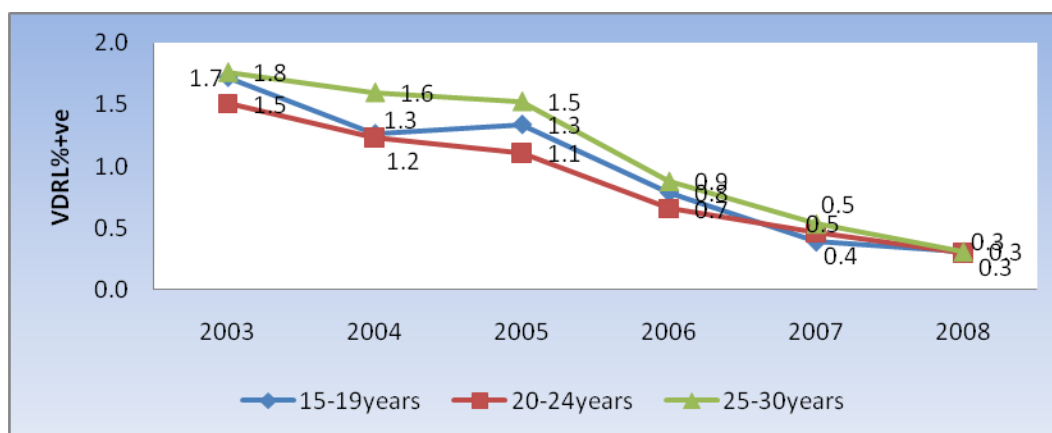
The age-adjusted positivity rate for VDRL at the all-India level was 0.39%. The H2 zone had the highest value (1.41%) and also, the value for this zone was higher for all ages compared to the other zones (Table 3.5). There was a significant decline in VDRL positivity in all age groups at the all-India level (Fig. 3.14).





**Figure 3.14**

**Trend in VDRL positivity age wise among Antenatal Clinic Attendees in India, 2003 to 2008-09**



### 3.7 STI clinic attendees

STI sentinel sites were opened in all states from 1998 onwards to find the level of HIV prevalence among populations engaged in multi-partner sex, e.g. the clients of sex workers. There were very few sites for HRG groups, such as FSWs, MSM and IDUs, in the initial years of surveillance, till 2006, and these sites were mainly for IDUs in the north-eastern states and FSWs in some states like Mumbai and Goa. STI sites were needed all the more because in the moderate- and low-prevalence states, HIV positivity among antenatal women was very low and nearly undetectable, and only other group, in which surveillance could be done, were the attendees at clinic-based STI sites. However, with the inclusion of TI sites (through NGOs) for the HRG populations under surveillance, the number of HRG sites increased. Given this, the STI sites were considered redundant by some of the southern states, such as Andhra Pradesh and Tamil Nadu, and no surveillance was conducted in the year 2008-09.

**Table 3.6**

**Zone Wise HIV Prevalence of STD Patients for Sentinel Surveillance 2008-09**

| Zones  | Total | Positive | %+ve  |
|--|-------|----------|-------|
| High HIV Prevalence southern States(H1 zone)*    | 2314  | 259      | 11.19 |
| High HIV Prevalence north east States(H2 zone)** | 691   | 21       | 3.04  |
| Moderate and Low Prevalence States***            | 42993 | 735      | 1.70  |

**Table 3.7**

**Zone Wise VDRL Prevalence of STD Patients for Sentinel Surveillance 2008-09**

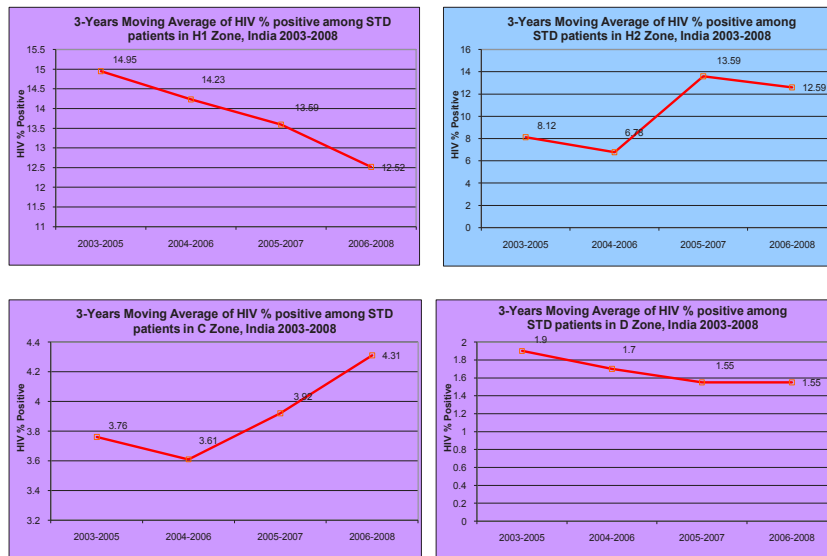
| Zones  | Total | VDRL | %+ve |
|--|-------|------|------|
| High HIV Prevalence southern States(H1 zone)*    | 2314  | 25   | 1.08 |
| High HIV Prevalence north east States(H2 zone)** | 691   | 12   | 1.74 |
| Moderate and Low HIV Prevalence States***        | 42993 | 303  | 0.70 |

The HIV prevalence does not tally with the prevalence of VDRL—in the H1 zone, the former is 11%, compared to a VDRL prevalence of 1%. VDRL prevalence is the highest in the north-eastern states, at 1.74%, while HIV prevalence is lower (Tables 3.6 and 3.7).

#### **HIV Prevalence trends in various Zones**

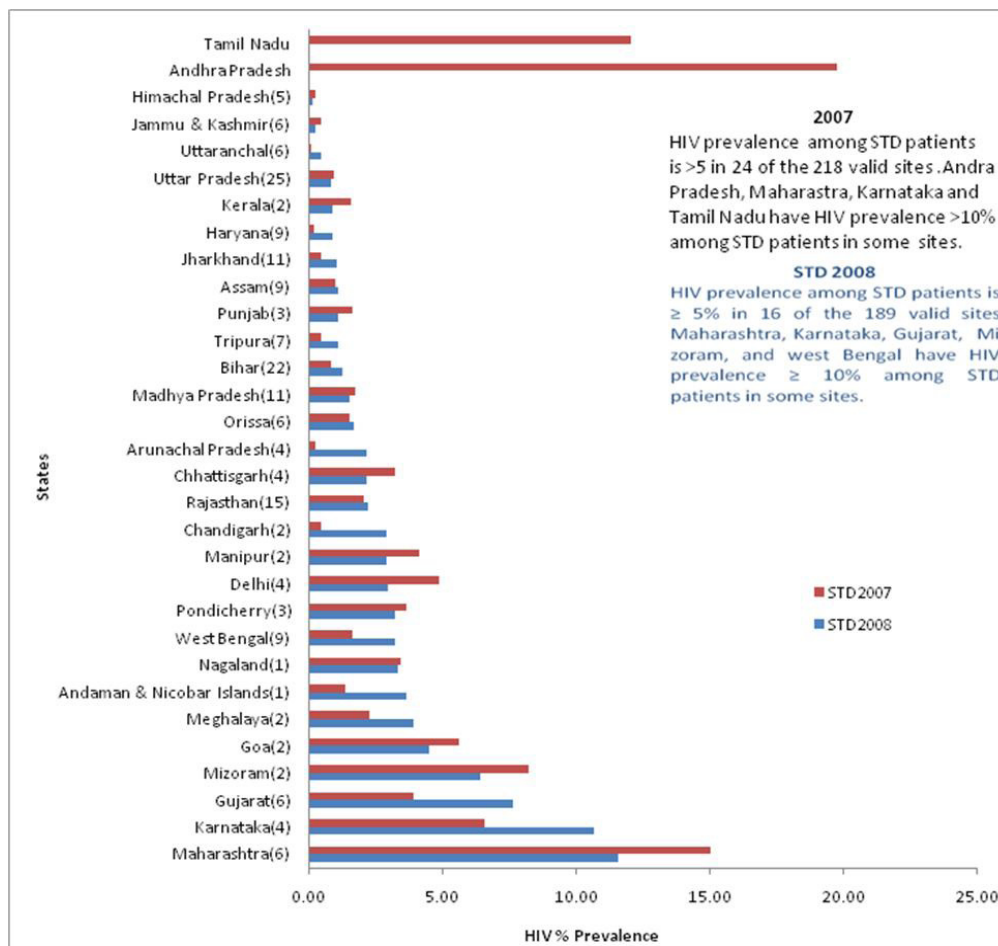


**Figure 3.15**  
Trends in Patients with Sexually Transmitted Diseases in Various Zones



There was a declining trend in HIV prevalence in the H1 zone, but prevalence in the H2 zone and in zone C, consisting of Goa, Gujarat and Pondicherry, increased. There was no change in the trend in the low-prevalence states (Fig. 3.15).

**Figure 3.16**  
HIV Prevalence among STD Patients by States, India, 2007 and 2008-09

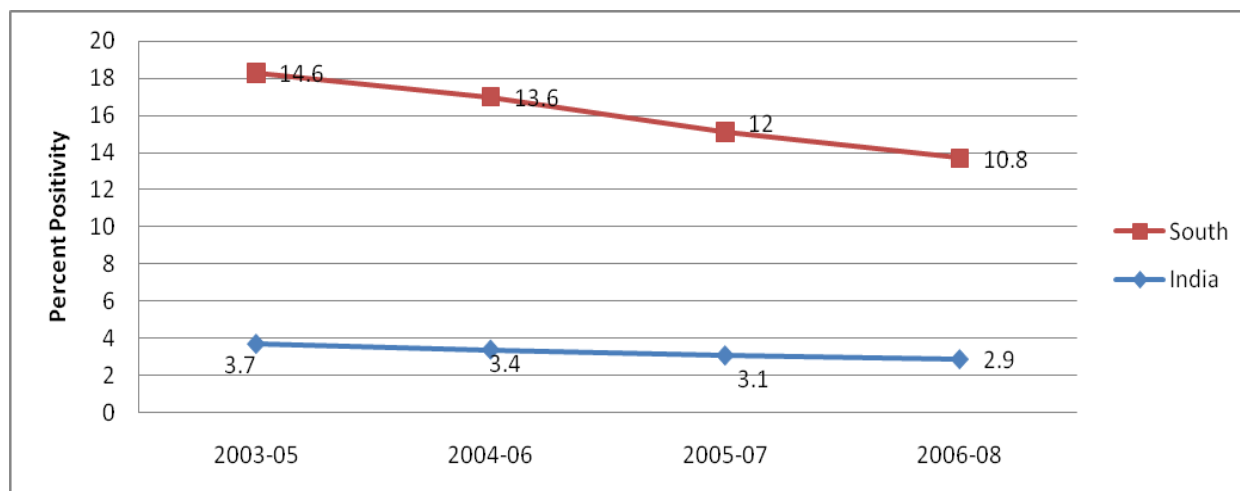


In the absence of STI sites in Andhra Pradesh and Tamil Nadu, the percentage of sites with an HIV prevalence of >5% decreased from 12% in 2007 to 8% in 2008–09, but the majority of the increases in prevalence in sites were in the states with moderate and low HIV prevalence (Fig. 3.16). An increase occurred in 11 states, though many states had values below 5%.

### Trends among STI clinic attendees

Figure 3.17

Trends for HIV Positivity among STD Clinic Attendees in Maharashtra and Karnataka (Combined) and India, from 2003 to 2008-09

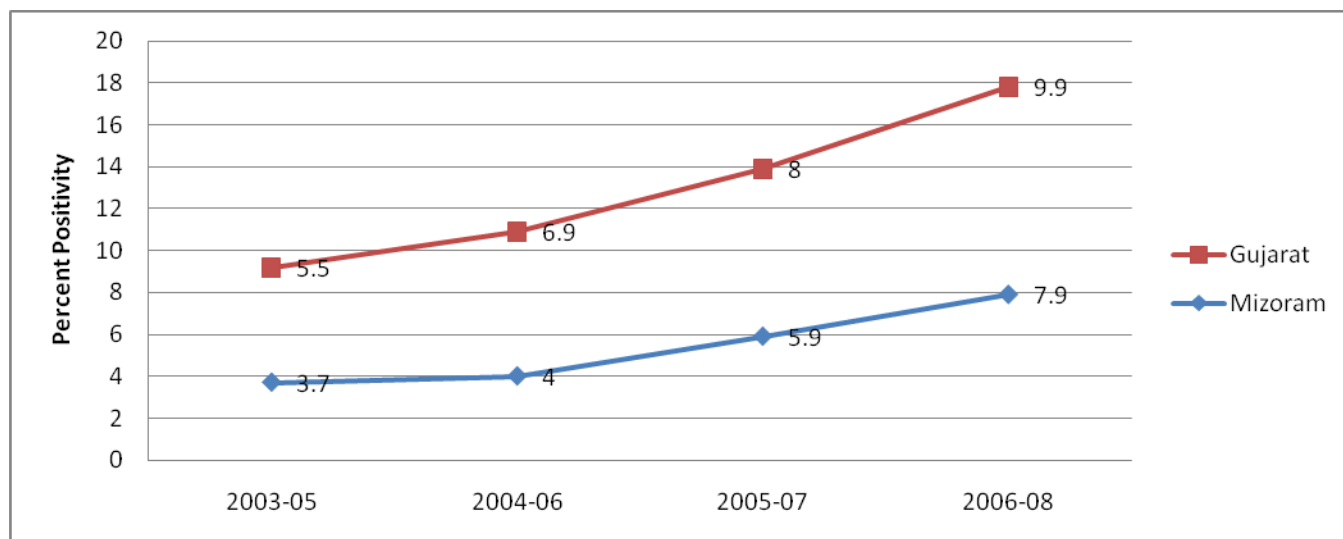


Note: A three-year moving average has been used, based on consistent sites—India: 91 sites; south: 10 sites (Karnataka: 3, Maharashtra: 7).

HIV prevalence in STI sites at the country level showed a gradually declining trend from 2003 to 2008–09 (Fig. 3.17), with a significant decline in the two southern states. Though there was a downward trend in prevalence in STI sites in Maharashtra and Karnataka, the values were still high, being 14.05% (range: 7.05%–14.05%) in the former and 16.74% (range: 5.62%–16.74%) in the latter.

Figure 3.18

Trends for HIV Positivity among STD Clinic Attendees in Gujarat and Mizoram, from 2003 to 2008-09

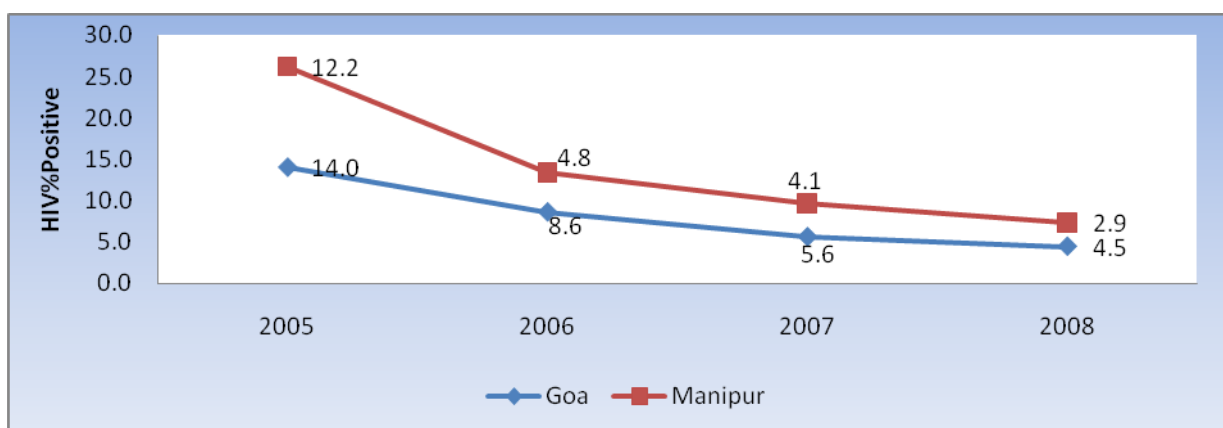


Note: A three-year moving average has been used. Only consistent sites have been included—3 in Gujarat and 1 in Mizoram. Samples with <75% of the total have been excluded.



In Gujarat and Mizoram, states with moderate to low HIV prevalence, a marked increase was noted (Fig. 3.18). There was no significant increasing trend in the rest of the states (Table 3.8). A consistently declining trend was observed in Goa and Manipur (Fig. 3.19), something which was not noted in the other states.

**Figure 3.19**  
HIV Prevalence among STD Patients in Goa and Manipur, 2005 to 2008-09



Note: Only consistent sites have been included—Manipur: 2 sites; Goa: 2 sites. Samples with <75% of the total have been excluded.

States in the moderate and low prevalence category have shown an increasing trend and have sites with an HIV prevalence of >10%. Examples are Gujarat, Mizoram and West Bengal (Table 3.8).

**Table 3.8**  
STD Sites with HIV Prevalence  $\geq$  10% from 2003 to 2008-09

| State       | District   | 2003  |       | 2004  |       | 2005  |       | 2006  |       | 2007  |       | 2008  |       |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|             |            | Total | %+ve  | Total | %+ve  | Total | %+ve  | Total | %+ve  | Total | %+ve  | Total | %+ve  |
| Gujarat     | Ahmadabad  | 243   | 5.76  | 250   | 4.80  | 250   | 4.80  | 250   | 18.00 | NA    | NA    | 250   | 22.00 |
| Gujarat     | Surat      | 243   | n/a   | 185   | 8.11  | 229   | 11.79 | 250   | 8.80  | 250   | 8.00  | 242   | 13.22 |
| Karnataka   | Bangalore  | 250   | 10.40 | 250   | 12.00 | 250   | 13.20 | 250   | 5.60  | 250   | 1.60  | 221   | 16.74 |
| Karnataka   | Belgaum    | 250   | 27.20 | 250   | 29.60 | 250   | 23.60 | 250   | 3.60  | 250   | 10.80 | 210   | 14.76 |
| Maharashtra | Akola      | 250   | 8.80  | 250   | 8.80  | 250   | 10.00 | 250   | 9.20  | 250   | 13.20 | 227   | 11.01 |
| Maharashtra | Chandrapur | 250   | 8.80  | 250   | 11.20 | 250   | 15.20 | 250   | 8.40  | 250   | 16.80 | 244   | 11.89 |
| Maharashtra | Nagpur     | 250   | 22.00 | 250   | 18.80 | 250   | 20.40 | 250   | 20.40 | 250   | 13.60 | 244   | 13.11 |
| Maharashtra | Sangli     | 250   | 15.60 | 250   | 32.80 | 250   | 25.20 | 250   | 28.40 | 250   | 30.00 | 242   | 14.05 |
| Maharashtra | Thane      | 250   | 14.40 | 250   | 4.00  | 250   | 8.00  | 250   | 6.00  | 250   | 7.20  | 248   | 11.69 |
| Mizoram     | Aizawl     | 250   | 6.00  | 250   | 1.20  | 250   | 4.00  | 250   | 6.80  | 250   | 6.80  | 250   | 10.00 |
| West Bengal | Kolkata    | 250   | 9.60  | 233   | 19.74 | 250   | 4.80  | 250   | 3.60  | 222   | 4.95  | 188   | 11.17 |

### Differentials for HIV prevalence among STI patients

The age-related HIV prevalence was the highest beyond the age of 25 years among both sexes. No significant difference was observed between the sexes among those attending STI clinics (Table 3.9) for the ages of 20–24 years, but prevalence was higher among males in the age group of 25–49 years. In the age group of 15–19 years, prevalence among females was double that among males.



**Table 3.9**  
**HIV Prevalence by Age and Sex among Patients Attending STD Clinics, India 2008**

| Age   | Sex   |     |      |        |     |      |
|-------|-------|-----|------|--------|-----|------|
|       | Male  |     |      | Female |     |      |
|       | Total | HIV | %+ve | Total  | HIV | %+ve |
| 15-19 | 1844  | 13  | 0.7  | 1136   | 17  | 1.5  |
| 20-24 | 4414  | 69  | 1.6  | 5803   | 79  | 1.4  |
| 25-49 | 15834 | 478 | 3.0  | 16967  | 359 | 2.1  |
| Total | 22092 | 560 | 2.5  | 23906  | 455 | 1.9  |

Note: Only valid sites have been included.

Those who were illiterate or literate till the 5th standard and were from urban areas had higher HIV infection rates. The rates of infection declined with an increase in the literacy status in both urban and rural areas (Table 3.10).

**Table 3.10**  
**HIV Prevalence among STD Patients by Locality and Literacy Status, India, 2008**

| Education                      | Locality  |     |      |       |     |      |
|--------------------------------|---|-----|------|-------|-----|------|
|                                | Urban(Municipal Corporation/Council/Cantonment) |     |      | Rural |     |      |
|                                | Total   | HIV | %+ve | Total | HIV | %+ve |
| Illiterate                     | 3630  | 94  | 2.6  | 7218  | 150 | 2.1  |
| Literate and till 5th standard | 5870  | 165 | 2.8  | 7706  | 176 | 2.3  |
| Till 12th standard             | 7735  | 185 | 2.4  | 7133  | 132 | 1.9  |
| Till Graduation                | 3397  | 62  | 1.8  | 1708  | 28  | 1.6  |
| Graduate and above             | 1122  | 17  | 1.5  | 479   | 6   | 1.3  |
| Total                          | 21754   | 523 | 2.4  | 24244 | 492 | 2.0  |

Note: Only valid sites have been included.

The prevalence of HIV in the urban areas was the highest among those working as local transport workers, non-agricultural labourers or hotel staff, or those who were unemployed. In the rural areas, it was high among truck drivers and local transporters (Table 3.11). Skilled and semi-skilled workers from urban and rural areas were equally at risk. HIV rates among housewives were the same (1.6%) in both rural and urban areas.

**Table 3.11**  
**HIV Prevalence among STD Patients (both Male and Female) by Locality and Occupation, India, 2008**

| Self Occupation            | Locality  |          |      |                   |          |      |
|----------------------------|---|----------|------|-------------------|----------|------|
|                            | Urban(Municipal Corporation/Council/Cantonment) |          |      | Rural(Peri urban) |          |      |
|                            | Total   | Positive | %+ve | Total             | Positive | %+ve |
| Agricultural labourer      | 581   | 8        | 1.4  | 3915              | 87       | 2.2  |
| Non-agricultural labourer  | 1188  | 57       | 4.8  | 1700              | 41       | 2.4  |
| Domestic servant           | 458   | 11       | 2.4  | 477               | 7        | 1.5  |
| Skilled/semiskilled worker | 1528  | 65       | 4.3  | 954               | 43       | 4.5  |
| Petty business/small shop  | 1625  | 45       | 2.8  | 1011              | 24       | 2.4  |



|   |       |     |     |       |     |     |
|---|-------|-----|-----|-------|-----|-----|
| Large business/self employed  | 491   | 9   | 1.8 | 316   | 9   | 2.8 |
| Service (Govt/Pvt.)   | 3625  | 88  | 2.4 | 1692  | 25  | 1.5 |
| Student   | 2231  | 25  | 1.1 | 1548  | 14  | 0.9 |
| Truck driver/helper   | 334   | 12  | 3.6 | 476   | 28  | 5.9 |
| Local transport worker (auto/taxi driver/handcart pullers/rickshaw pullers etc) | 634   | 33  | 5.2 | 416   | 24  | 5.8 |
| Hotel staff   | 354   | 17  | 4.8 | 292   | 8   | 2.7 |
| Agricultural cultivator/landholder  | 126   | 2   | 1.6 | 756   | 9   | 1.2 |
| Unemployed  | 548   | 24  | 4.4 | 589   | 16  | 2.7 |
| Housewife   | 8031  | 127 | 1.6 | 10102 | 157 | 1.6 |
| Total   | 21754 | 523 | 2.4 | 24244 | 492 | 2.0 |

Note: Only valid sites have been included.

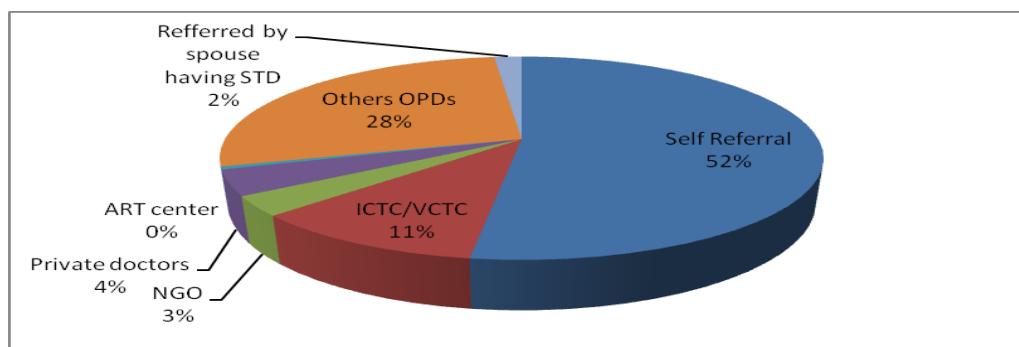
**Table 3.12**  
**HIV Prevalence among Patients with Sexually Transmitted Diseases by Type of Sexually Transmitted Diseases and Gender, India, 2008**

| Type of sexually transmitted diseases                | Sex   |     |      |        |     |      |       |      |      |
|--|-------|-----|------|--------|-----|------|-------|------|------|
|  | Male  |     |      | Female |     |      | Total |      |      |
|  | Total | HIV | %+ve | Total  | HIV | %+ve | Total | HIV  | %+ve |
| Ano-genital Ulcer                                    | 6853  | 232 | 3.4  | 1527   | 59  | 3.86 | 8380  | 291  | 3.5  |
| Urethral/Cervical Discharge                          | 9196  | 166 | 1.8  | 17103  | 263 | 1.54 | 26299 | 429  | 1.6  |
| Both (Genital-Urethral Discharge)/Cervical discharge | 3710  | 83  | 2.2  | 4270   | 97  | 2.27 | 7980  | 180  | 2.3  |
| Ano-genital Warts                                    | 2089  | 75  | 3.6  | 759    | 32  | 4.22 | 2848  | 107  | 4    |
| Total  | 21848 | 556 | 3    | 23659  | 451 | 2    | 45507 | 1007 | 2.2  |

Note: Only valid sites have been included.

At the country level, HIV infection rates were high among both sexes and the highest among those with genital warts and anal or genital ulcer. They were the lowest among those with urethral or cervical discharge. Females with genital ulcer were more likely than males to be HIV-positive (Table 3.12).

**Figure 3.20**  
**Distribution of Sources of Referral of STD Patients, India, 2008**





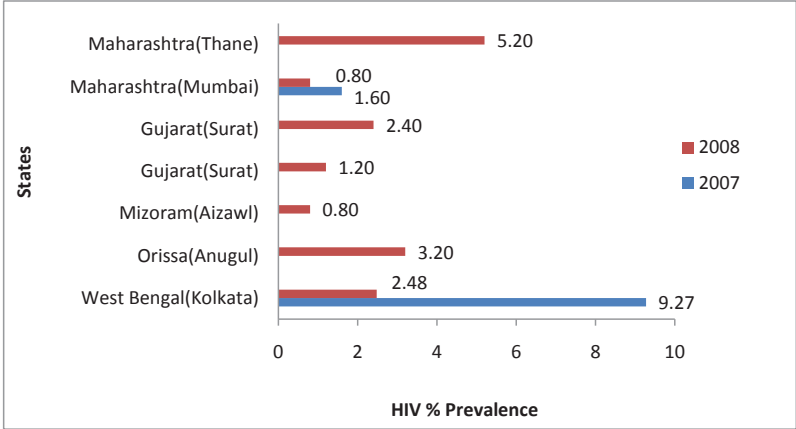
Self-referral accounted for the majority (52%) of patients. Twenty-eight per cent of patients were referred from other OPDs, indicating that these patients were unaware of their disease. NGO referral was low, at only 3%.

### 3.8 Migrants and truckers (bridge population)

#### Migrants

There were 7 sites for migrants in India—2 each in Gujarat and Maharashtra, and 1 each in Mizoram, Orissa and West Bengal. In the sentinel surveillance programme of 2008–09, 1742 migrants were tested for HIV.

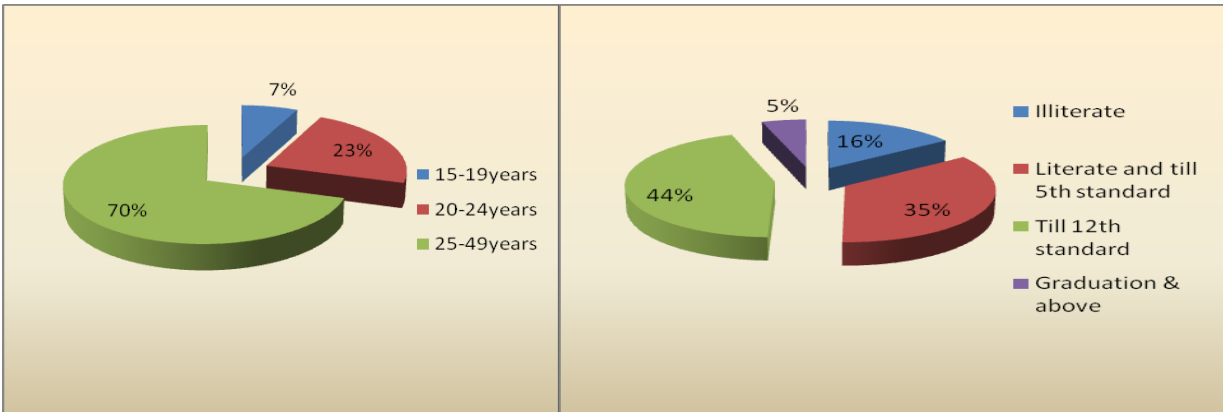
**Figure 3.21**  
State wise HIV% Prevalence among Migrants at Migrant Sites, India, 2007 to 2008-09



Note: In 2008, all the migrant sites, except the West Bengal (Kolkata) and Maharashtra (Mumbai) sites, were new sites.

The HIV prevalence rate among the 250 migrants tested in the newly established site at Thane was as high as 5.2%, while the site at Mumbai showed a decrease in prevalence from 1.6% in 2007 to 0.8% in 2008–09. The prevalence in Kolkata was very high (9.27%) in 2007, and decreased to 2.48% in 2008–09. In the rest of the sites, HIV prevalence was below 5% (Fig. 3.21).

**Figure 3.22**  
Proportion of Migrants tested by age and education in selected sites India, 2008-09



Very few migrated in their teens. The majority (70%) of migrants were above the age of 25 years. The majority (44%) were educated till Standard 12. Skilled and semi-skilled migrants constituted the biggest group among the migrants. As for the occupational profile of the migrants in different states, 76% were agricultural labourers in Kolkata, 56% and 70% were skilled/semi-skilled workers in Maharashtra and Mizoram, respectively, and 71% were employed in petty business in Orissa.



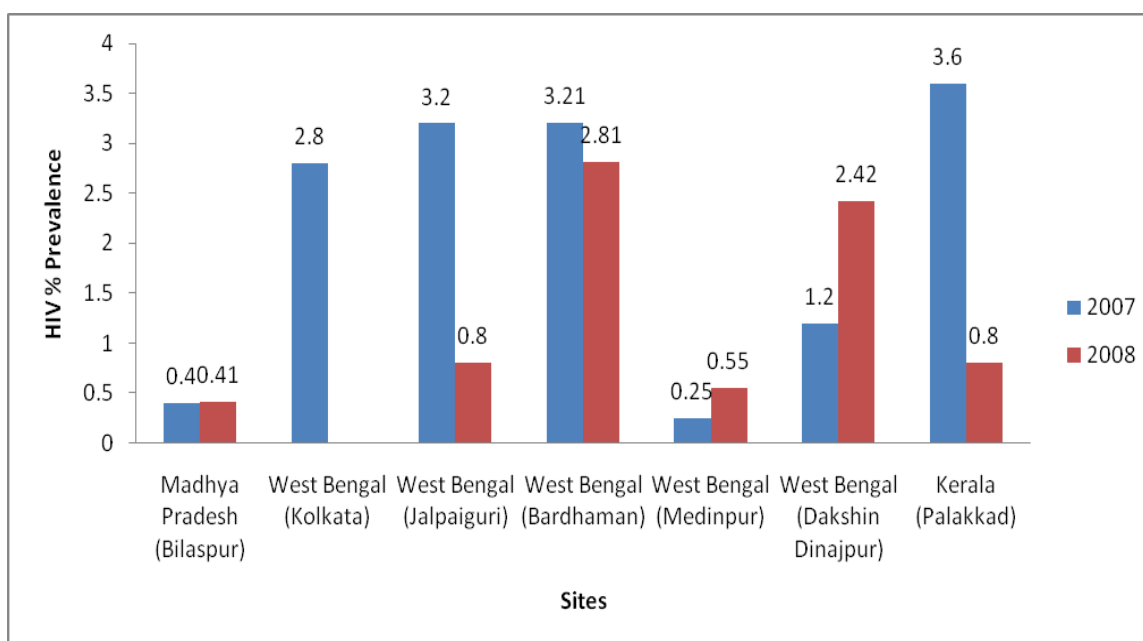


In Mizoram, Orissa and Maharashtra, the majority of migrants were educated till the secondary level. In West Bengal, 43% had studied till the primary level. It was difficult to access the migrants as none of them had come to the service point for the treatment of STIs and very few had come for other medical reasons.

### Truckers

There were 7 sites for truckers in 2008–09. Of these, 5 were in West Bengal and 1 each in Kerala and Madhya Pradesh (Fig. 3.23). The HIV prevalence rate among truckers dropped in 5 out of 7 sites from 2007 to 2008–09 (Fig. 3.23). It varied from 0 in the site in Kolkata to 2.8% at Bardhaman, with the values for the other sites falling in between. The majority of the truckers were above 25 years of age and educated up to the 12th standard. Out of the total of 1488 who were tested, only 208 had come for treatment of STIs and these had the highest prevalence. About the same number had come for other medical reasons.

**Figure 3.23**  
HIV Prevalence among Trucker sites for India, 2007 to 2008-09



### 3.9 High-risk groups (IDUs, MSM and FSWs)

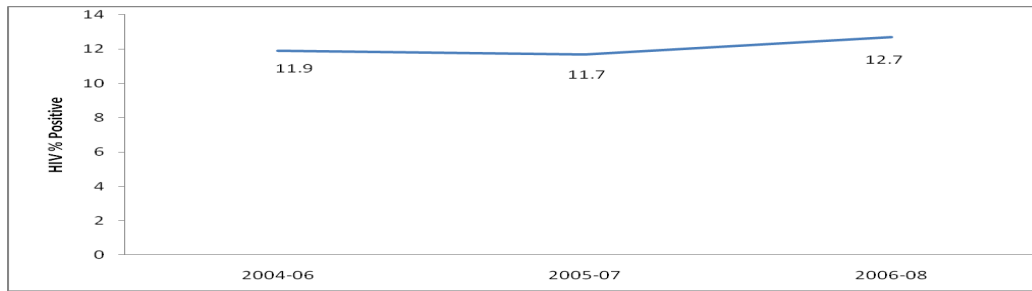
The epidemic in an area is driven by three groups—IDUs, MSM and FSWs. The epidemic in India was initially attributed to commercial sex work by FSWs. However, now the IDUs and MSM have also been included in the ambit of populations requiring intervention to prevent the spread of HIV.

#### HIV prevalence among injecting drug users

The prevalence of HIV among IDUs at the country level is 9.9%. The trend for consistent sites at the all-India level has been stationary since 2004, with a gradual increase between 2006 and 2008 (Fig. 3.24). At the all-India level, 3.7% of the IDUs tested for HIV were women. The figure was 4.9% in the high-prevalence states of the North-East, 2.7% in the states with moderate and low prevalence, and only 1.2% in the southern high-prevalence states. The majority of those tested across the country were between the ages of 25 and 49 years.



**Figure 3.24**  
**HIV Prevalence among Injecting Drug Users in India, 2004 to 2008-09\***

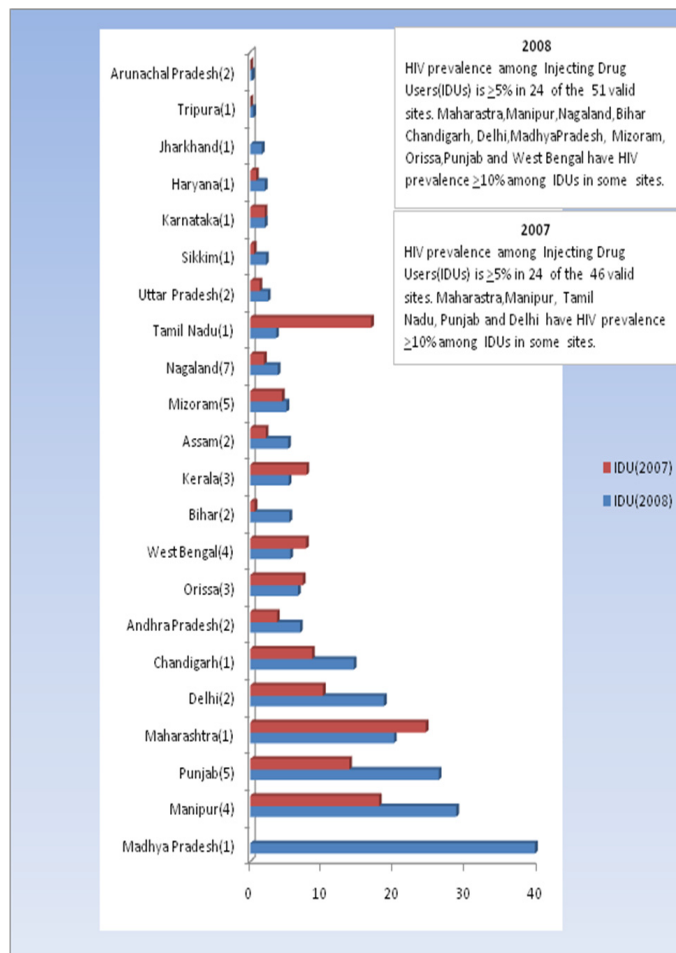


Note: A three-year moving average has been taken and 13 consistent sites have been included from 2004–2008—Nagaland: 5; Manipur: 3; Mizoram: 1; Maharashtra: 1; Delhi: 1; West Bengal: 1; and Chandigarh: 1.

### HIV prevalence among IDUs in the states

HIV prevalence among IDUs was >5% at nearly 50% of the sites in 2008 (Fig. 3.25). The same trend was observed in 2007.

**Figure 3.25**  
**HIV prevalence among Injecting Drug Users by State, India, 2007 and 2008**



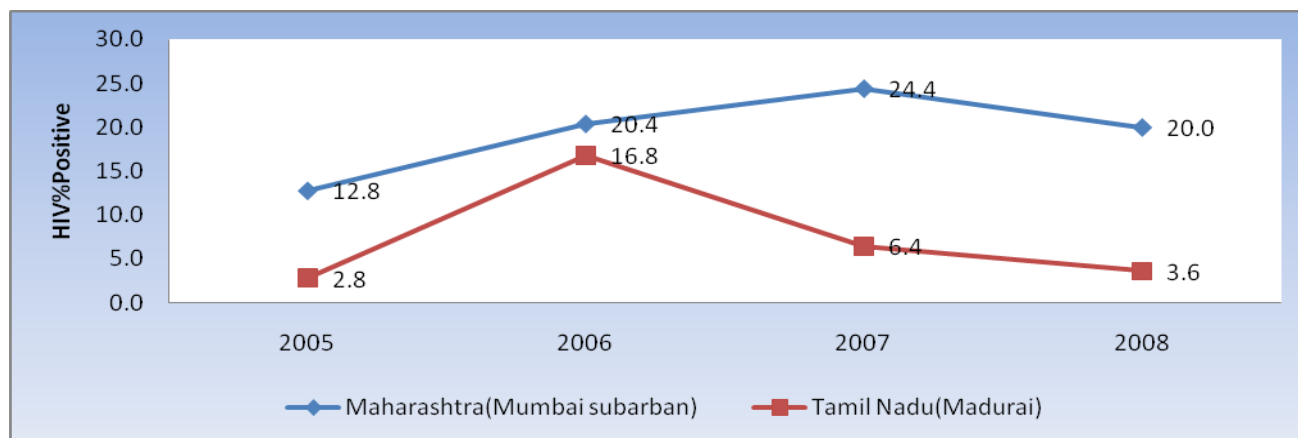
Note: The values in parentheses are the number of sentinel sites for each state. Sites with a sample size of  $\geq 75\%$  are included.



### Southern states with high HIV prevalence

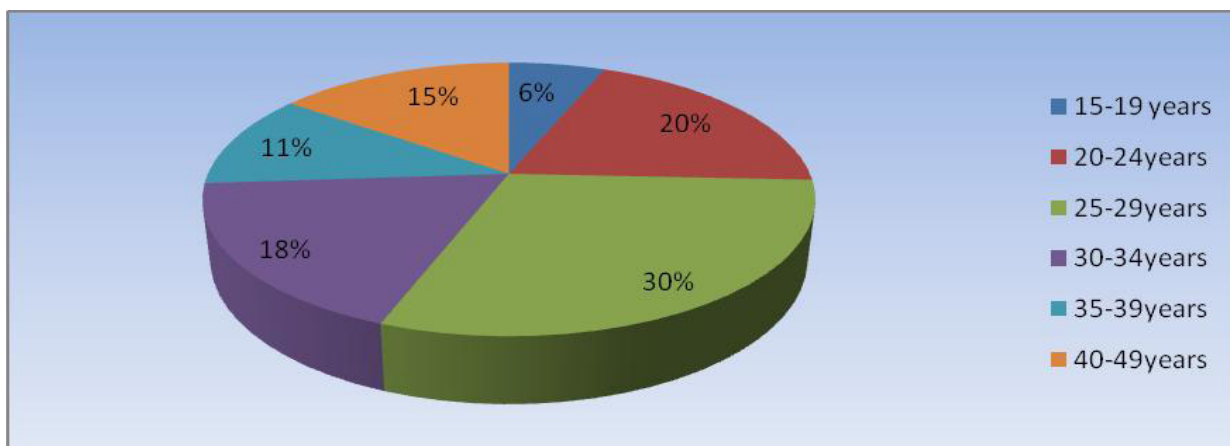
The IDUs in the four southern high-prevalence states continued to be a problem. Positivity was the highest (20%) among them in Maharashtra. In Tamil Nadu and Karnataka, the prevalence of HIV among IDUs was <5%, but in Andhra Pradesh, there was an increasing trend and the prevalence had doubled compared to the previous year, crossing 5%. The increase could be observed particularly in the site at Chitoor. In Tamil Nadu there was a declining trend (Fig. 3.26). Consistent sites with an adequate sample size are not available for Andhra Pradesh and Karnataka to draw the trend lines.

**Figure 3.26**  
HIV Prevalence Trends among Injecting Drug Users in states of Maharashtra and Tamil Nadu 2005-08\*



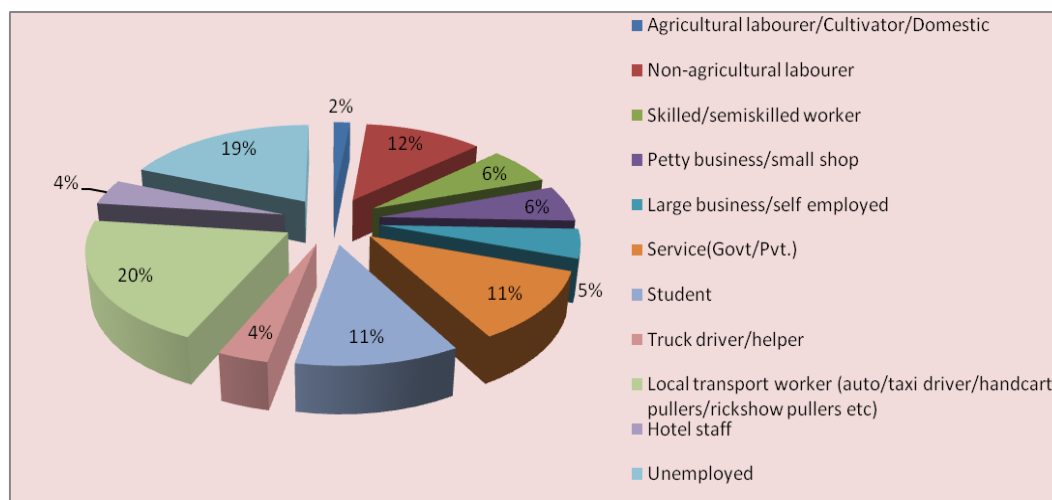
Note: Only those sites from which there was consistent data available from 2005 to 2008 have been included. Two consistent sites each for Maharashtra and Tamil Nadu are included.

**Figure 3.27**  
Age-Wise Persons Tested for HIV in Southern States among Injecting Drug Users, 2008



The IDUs belong predominantly to the age group of 20–29 years. Only 6% of those tested were below 19 years of age (Fig. 3.27). Most people tested were illiterate and a majority were injecting two to three times a week.

**Figure 3.28**  
**Proportion Tested for HIV by Occupation in Southern States among Injecting Drug Users, 2008**

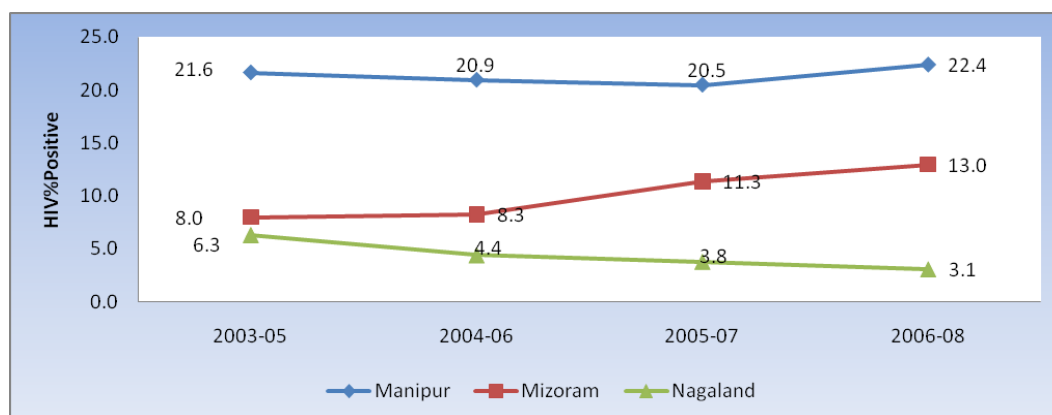


Of the total population of IDUs tested at these centres, 50% comprised local transport drivers or rickshaw pullers, labourers and unemployed people. Other segments, like those in service and students, who constituted 22% of the population tested, were also taking drugs (Fig. 3.28). The de-addiction or drop-in centres were utilized by this population mainly for the needle exchange programme or substitution therapy, and very few came for treatment of STIs or for other facilities.

#### North-eastern region

The prevalence of HIV among IDUs in Manipur was much higher than that in Nagaland and Mizoram (Fig. 3.29). The trend of increase in prevalence was the most marked in Manipur. There was a rising trend in Mizoram and a gradual decline was observed in Nagaland (Fig. 3.29). The problem of HIV continues to be one of considerable magnitude in the North-East, with 4 sites in Manipur showing a range of prevalence of 17%–34% and prevalence at the new site in Bishnupur being 34% (Table 3.13). Two sites in Nagaland had an HIV prevalence of >5% (range 5%–10%) and the rate had not decreased since 2004 (Table 3.13). There was no decline (to <5%) in the Mizoram sites of Aizwal and Champhai (Table 3.13).

**Figure 3.29**  
**HIV Prevalence among Injecting Drug Users in the States of Manipur, Mizoram and Nagaland, 2003 to 2008-09\***



Note: A three-year moving average was taken. Only consistent sites were included from 2003 to 2008—Manipur: 2 sites; Mizoram:1 site; and Nagaland: 4 sites.



**Figure 3.30**  
**HIV Prevalence among Injecting Drug Users in the States of Manipur, Mizoram and Nagaland (Combined) by Age Group, 2003 to 2008-09\***



Note: A three-year moving average was taken. Only consistent sites were included from 2003 to 2008—Manipur: 2 sites; Mizoram: 1 site; and Nagaland: 4 sites.

There has been no significant change in the trend in HIV prevalence among IDUs in the age groups of 15–24 years and 25–49 years since 2004 (Fig. 3.30) in the north-eastern states.

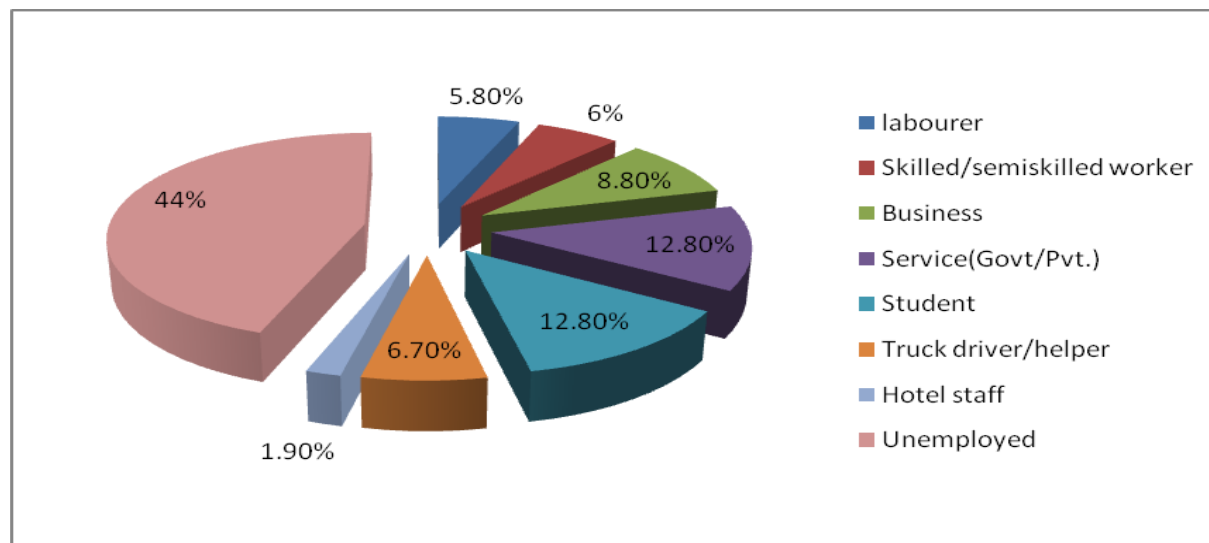
**Table 3.13**  
**Site-wise Table of Injecting Drug Users with HIV Prevalence more than 5% in Manipur, Nagaland and Mizoram from 2003 to 2008-09**

| State    | District / Site name                | 2003  |      | 2004  |      | 2005  |      | 2006  |      | 2007  |      | 2008  |      |
|----------|-------------------------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|          |                                     | Total | %+ve | Total | %+ve | Total | %+ve | Total | %+ve | Total | %+ve | Total | %+ve |
| Manipur  | Churachandpur DDAC, SHALOM          | 249   | 32.9 | 250   | 29.2 | 250   | 20   | 250   | 24   | 250   | 28   | 244   | 28.3 |
| Manipur  | Churachandpur DDAC, LLRC            | N/A   | N/A  | 250   | 29.2 | 250   | 33.6 | 250   | 17.2 | 250   | 18   | 235   | 34   |
| Manipur  | Bishnupur ESEWOSA, Moirang [New 08] |       |      |       |      |       |      |       |      |       |      | 248   | 34.3 |
| Manipur  | Imphal West (DDAC),                 | 249   | 18.1 | 250   | 14.8 | 250   | 14.8 | 250   | 22.8 | 250   | 13.2 | 240   | 17.9 |
| Mizoram  | Aizawl Aizwal, SHALOM               | 250   | 8.8  | 250   | 6.8  | 250   | 8.4  | 250   | 9.6  | 249   | 16.1 | 249   | 13.3 |
| Mizoram  | (TNT) Champhai / RTCT, Champhai     | N/A   | N/A  | 250   | 6.8  | N/A   | N/A  | 250   | 4.8  | 250   | 14.4 | 250   | 8.4  |
| Nagaland | (Kirpa) Kohima                      | N/A   | N/A  | 250   | 4    | 250   | 4    | 250   | 6    | 250   | 2    | 232   | 5.6  |
| Nagaland | Dimapur Dimapur Civil Hospital      | 249   | 10.4 | 245   | 4.5  | 250   | 8.4  | 250   | 3.2  | 250   | 5.2  | 236   | 10.2 |

In Manipur, Nagaland and Mizoram, unemployed persons (44%), people in service (13%) and students (12%) formed the bulk of those accessing the drop-in centres, though other groups were also involved in injecting drugs (Fig. 3.31).



**Figure 3.31**  
**Proportion % of IDUs Tested for HIV by Occupation (Manipur, Nagaland and Mizoram), 2008-09**



**Table 3.14**  
**HIV Prevalence among Injecting Drug Users by Literacy and Residence (Manipur & Nagaland), 2008-09**

| Literacy                       | Urban |     |      | Rural |     |      |
|--------------------------------|-------|-----|------|-------|-----|------|
|                                | Total | HIV | %+ve | Total | HIV | %+ve |
| Illiterate                     | 47    | 11  | 23.4 | 23    | 4   | 17.4 |
| Literate and till 5th standard | 795   | 85  | 10.7 | 396   | 41  | 10.4 |
| Till 12th standard             | 1375  | 155 | 11.3 | 469   | 37  | 7.9  |
| Till Graduation                | 289   | 36  | 12.5 | 76    | 7   | 9.2  |
| Graduate and above             | 99    | 12  | 12.1 | 23    | 4   | 17.4 |
| Total                          | 2605  | 299 | 11.5 | 987   | 93  | 9.4  |

The majority of the population coming to the centres was either literate or educated up to the 12th standard and the range of HIV positivity among those both from an urban and rural background in this population was 8%–11% (Table 3.14). Very few illiterate people came to the centres.

#### States with moderate and low HIV prevalence

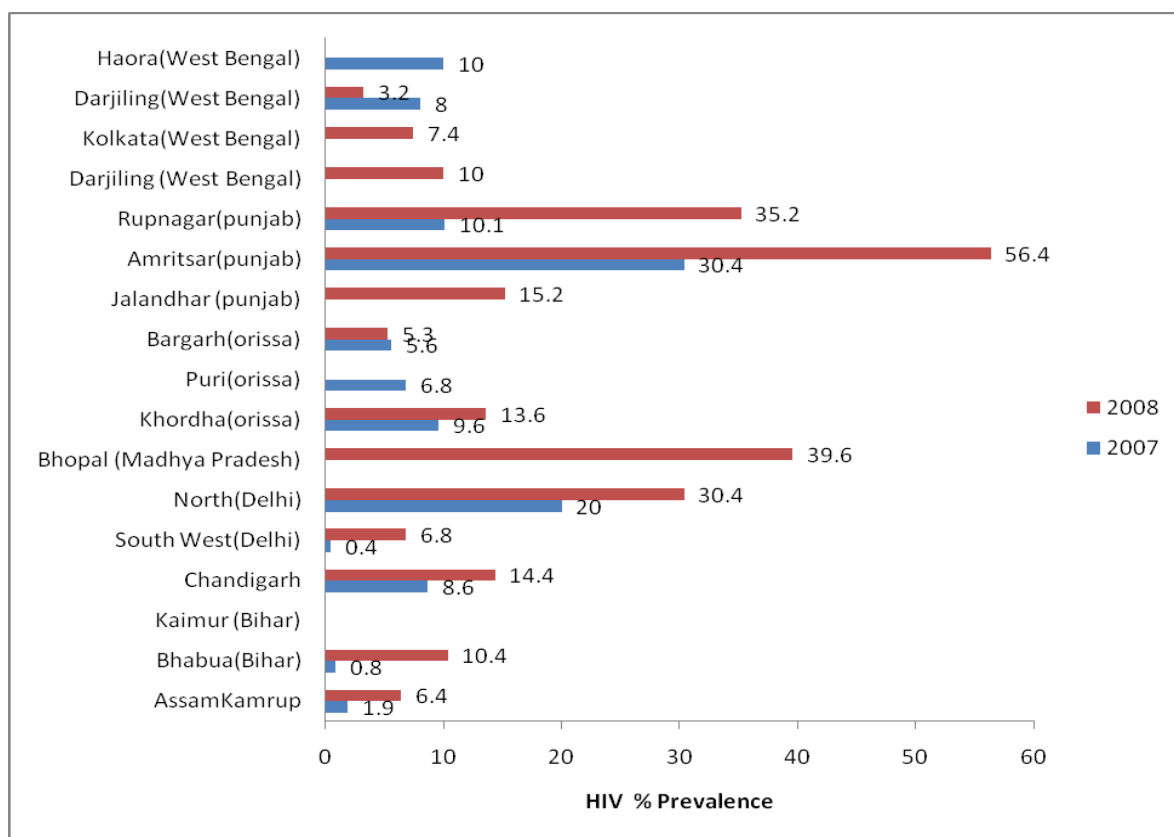
Sixteen states in this category conducted surveillance among IDUs and of them, Madhya Pradesh and Jharkhand did it for the first time. Very high prevalence (39%) was noted in Madhya Pradesh at the site in Bhopal. There was an increase in prevalence in 10 of the states with moderate and low prevalence, the values being higher than in 2007. In Punjab, HIV positivity was 13% in 2007 and this doubled to 27% in 2008, there being an alarming increase at the sites in Amritsar (56%) and Rupnagar/Ropar (35%). Prevalence was >5% in 10 sites.

In West Bengal, a significant linear increase was seen in HIV prevalence amongst IDUs since 2003, with HIV prevalence above 5% in one consistent site (Fig 3.33). Consistent sites were not available from 2003 for other states in this region. Details of site wise prevalence given in Annexure II.



**Figure 3.32**

**Sites with  $\geq 5\%$  HIV Prevalence among Injecting Drug Users in Low Prevalence States, 2007 and 2008-09**



In West Bengal, there has been a significant linear increase in HIV prevalence among IDUs since 2003, with the prevalence being  $>5\%$  in one consistent site (Fig. 3.33). Consistent sites were not available from 2003 for other states in this category.

**Figure 3.33**

**HIV Prevalence among Injecting Drug Users in West Bengal, 2003 to 2008-09\***



Note: A three-year moving average has been taken. Only 1 consistent site has been included from 2003 to 2008 (1 site in West Bengal).

**Differentials at the all-India level**

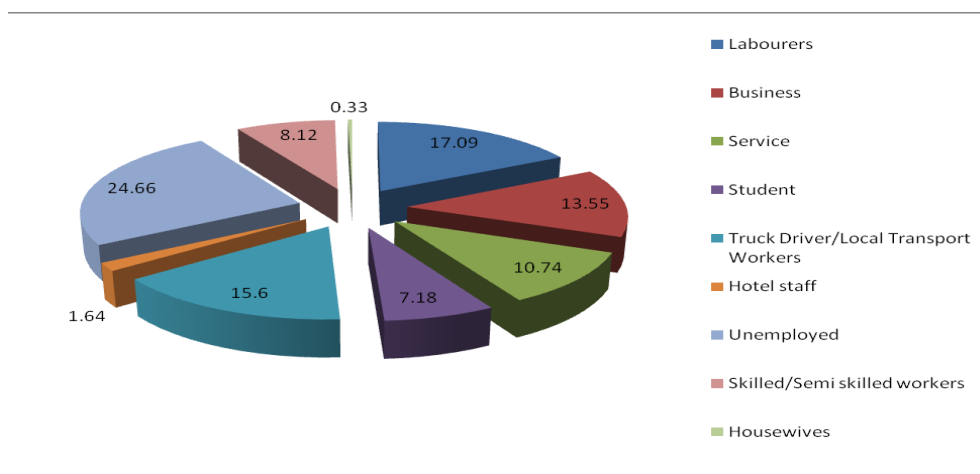
The IDUs visiting NGOs were usually unemployed and formed 25% of the total number of those visiting these sites. Others coming to the sites were labourers, truckers and local transporters, who formed nearly 16% of the total, followed by those in business (14%).





At the country level, the majority of the IDUs attending intervention centres were unemployed persons, local transport workers, non-agricultural labourers or those in service from urban areas (Table 3.15). The prevalence of HIV was high among the unemployed (12%) and labourers (13%), but it was the highest among skilled and semi-skilled workers from both the urban (18.81%) and rural areas (11.43%). Prevalence was lower among those from the rural areas, except among those in business (petty and large business).

**Figure 3.34**  
Proportion % of IDUs Tested for HIV by Occupation, India 2008-09



**Table 3.15**  
HIV Prevalence among Injecting Drug Users by Occupation and Residence, India, 2008-09

| Self Occupation   | Urban         |                 |                | Rural         |                 |                |
|---|---------------|-----------------|----------------|---------------|-----------------|----------------|
|   | Number Tested | Number Positive | HIV % Positive | Number Tested | Number Positive | HIV % Positive |
| Agricultural labourer   | 145           | 15              | 10.34          | 253           | 26              | 10.28          |
| Non-agricultural labourer   | 1189          | 156             | 13.12          | 285           | 34              | 11.93          |
| Domestic servant  | 52            | 2               | 3.85           | 29            | 0               | 0              |
| Skilled/semiskilled worker  | 808           | 152             | 18.81          | 175           | 20              | 11.43          |
| Petty business/small shop   | 828           | 89              | 10.75          | 238           | 16              | 6.72           |
| Large business/self employed  | 448           | 21              | 4.69           | 127           | 13              | 10.24          |
| Service (Govt/Pvt.)   | 1034          | 93              | 8.99           | 267           | 20              | 7.49           |
| Student   | 709           | 4               | 0.56           | 161           | 2               | 1.24           |
| Truck driver/helper   | 224           | 15              | 6.7            | 66            | 5               | 7.58           |
| Local transport worker (auto/taxi driver/handcart pullers/rickshaw pullers etc) | 1454          | 137             | 9.42           | 145           | 8               | 5.52           |
| Hotel staff   | 184           | 11              | 5.98           | 15            | 1               | 6.67           |
| Agricultural cultivator/landholder  | 31            | 2               | 6.45           | 166           | 7               | 4.22           |
| Unemployed  | 2414          | 295             | 12.22          | 572           | 48              | 8.39           |
| Housewife   | 40            | 1               | 2.5            | 1             | 0               | 0              |
| Unknown   | 27            | 5               | 18.52          | 16            | 0               | 0              |
| <b>Total</b>  | <b>9587</b>   | <b>998</b>      | <b>10.4</b>    | <b>2516</b>   | <b>200</b>      | <b>7.95</b>    |

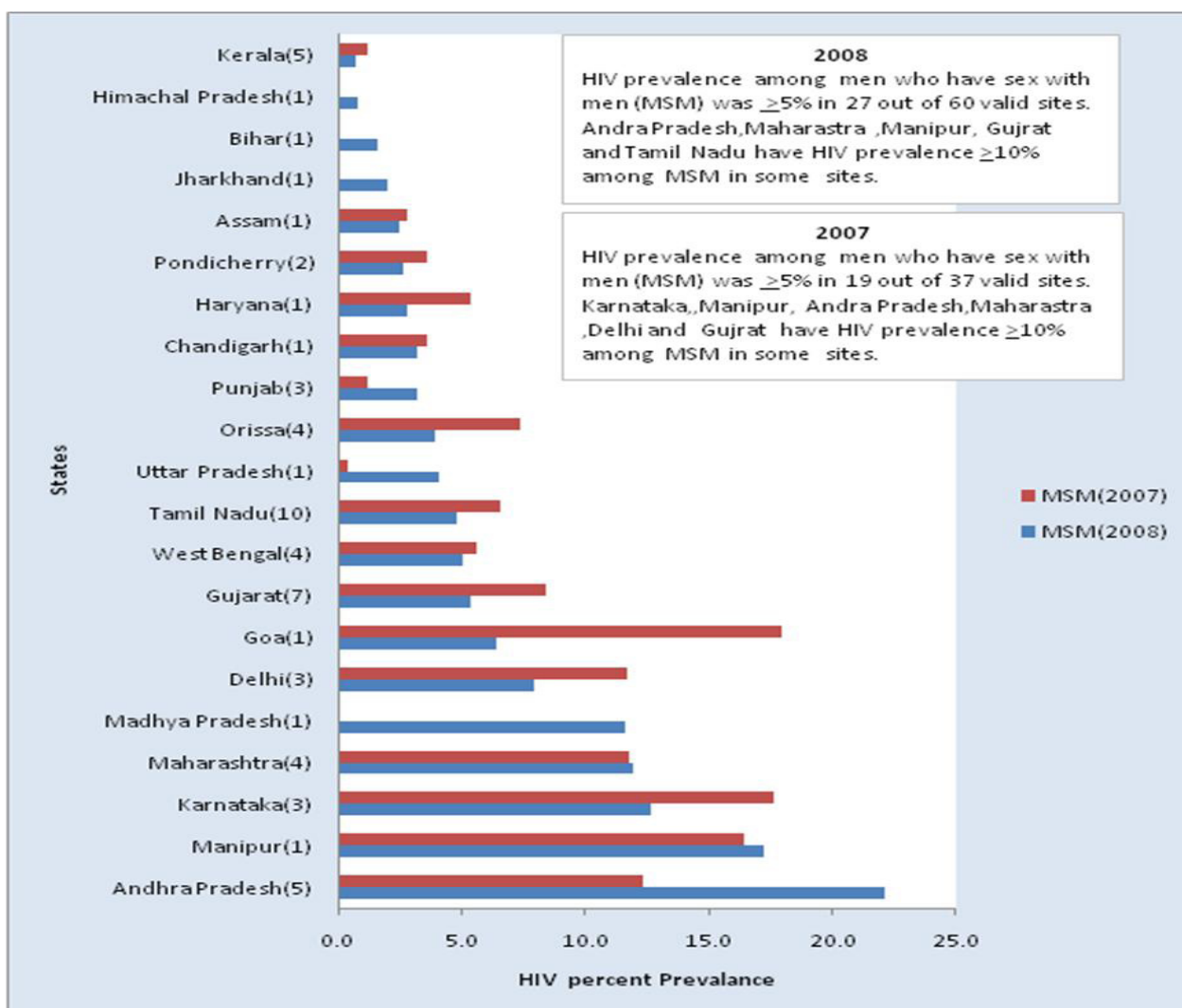


## HIV prevalence among MSM

There were MSM sites in 21 states. The sites may not give an adequate picture of the epidemic in this group across the country, but they are suffice to draw attention for the intervention (unclear). HIV among MSM has added to the HIV burden in nearly all the states of the country (Fig. 3.35). It may be noted that HIV was detected among the population at all the new sites started, e.g. in Andhra Pradesh, Madhya Pradesh, Bihar, Himachal Pradesh and Jharkhand.

The prevalence of HIV increased in 7 states compared to the 2007 values. Nearly half the sites had a prevalence of >5% and of these, 11 had a prevalence of  $\geq 10\%$  (Fig. 3.35).

**Figure 3.35**  
HIV prevalence among Men having sex with Men by States, 2007 and 2008-09

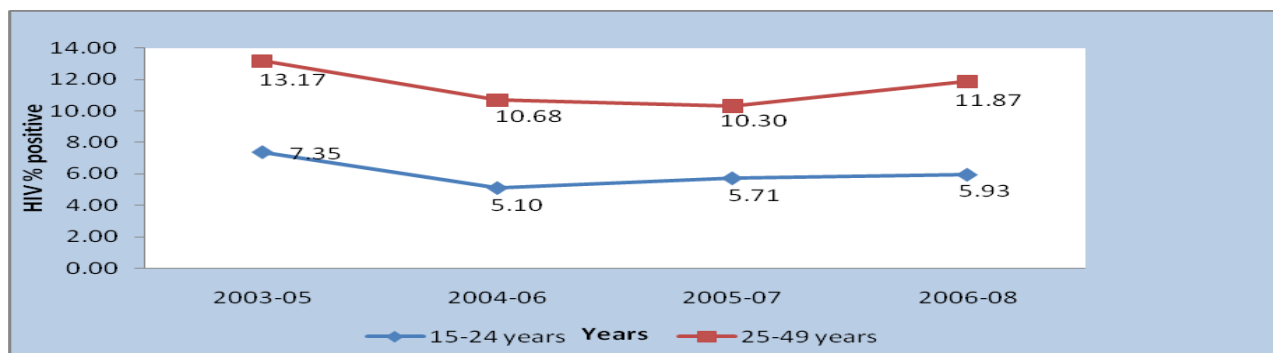


Note: The values in parentheses are the number of sentinel sites for each state. Sites with a sample size of  $\geq 75\%$  have been included.

At the all-India level, there was no significant change in the trend of HIV infection among MSM, even by age differentiation (Fig. 3.36). The trend has been the same for the four southern states and the low-prevalence states since 2004 (Fig. 3.37). HIV prevalence has not declined since 2004 among MSM in the consistent sites of the high-prevalence southern states and the low-prevalence states.

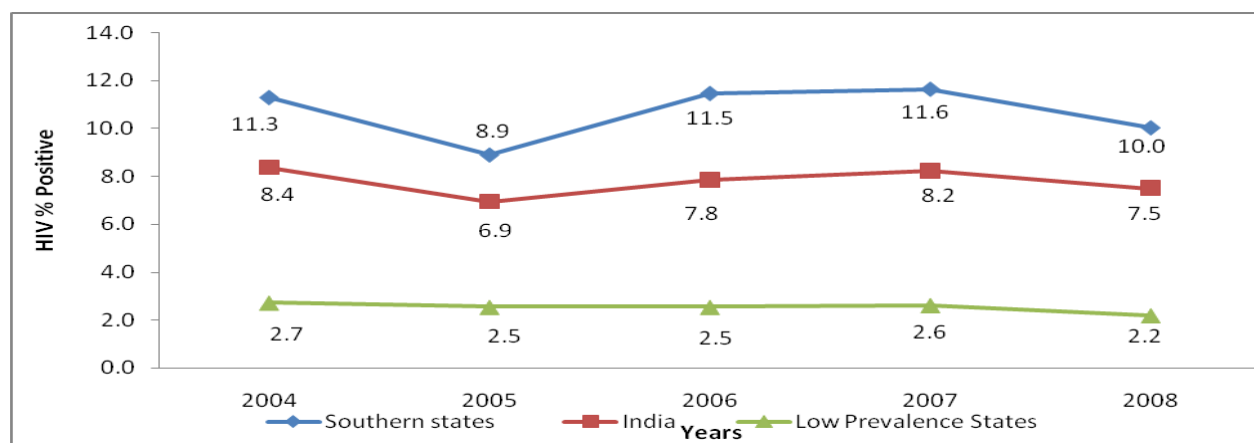
**Figure 3.36**

**Age wise HIV Prevalence among Men Having Sex with Men (MSM) in Consistent Sites of India, 2003 to 2008-09**



**Figure 3.37**

**HIV Prevalence among Men Having Sex with Men in India, Southern States and Low Prevalence States, 2004 to 2008-09**



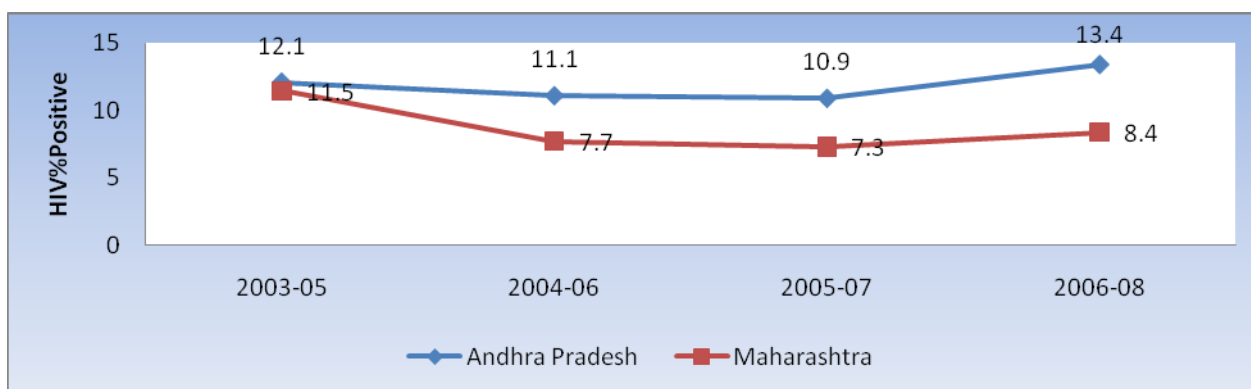
- Sites in India: Tamil Nadu 1, Manipur 1, Andhra Pradesh 1, Maharashtra 2, Chandigarh 1, Bihar 1, Gujarat 1, Pondicherry 1
- Sites in southern states: Tamil Nadu 1, Andhra Pradesh 1, Maharashtra 2
- Sites in low-prevalence states: Chandigarh 1, Bihar 1
- Karnataka had a sample size of <75% and Nagaland did not have any sites.

#### **Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka**

MSM are emerging as an important group in Andhra Pradesh, with the prevalence of HIV among them almost doubling (22%). There was a significant increase in prevalence at three sites—Adilabad, Ananatpur and Kadapa—in 2008 compared to 2007, and the trend of HIV prevalence continued to be high in consistent sites since 2005 (Fig. 3.37). In both Karnataka and Maharashtra, the prevalence was >10%. Only Tamil Nadu had a prevalence of <10%, though it was >5%.



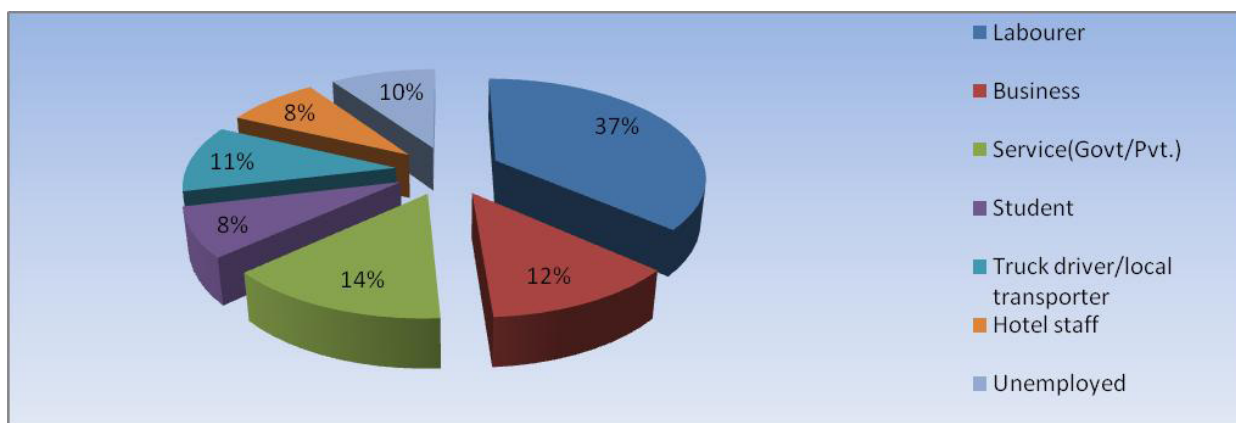
**Figure 3.38**  
Trend in HIV Prevalence among Men Having Sex with Men in Andhra Pradesh and Maharashtra, 2003 to 2008-09\*



Note: A three-year moving average has been taken and only consistent sites have been included from 2003–2008—1 each in Andhra Pradesh and Maharashtra. Sites with a sample size of  $\geq 75\%$  have been included.

Andhra Pradesh and Maharashtra show gradual increase since 2004 trend (Fig 3.38).

**Figure 3.39**  
Proportion % of MSM tested for HIV by Occupation in Southern States 2008-09



The occupations of the population coming for testing were varied, but the biggest group comprised labourers and those in business or service (Fig. 3.39). HIV prevalence among this population ranged from 8% to 14%. Most of the MSM were kothis. Though the unemployed formed only 10% of those tested, HIV positivity was the highest among them (16%).

#### North-eastern states

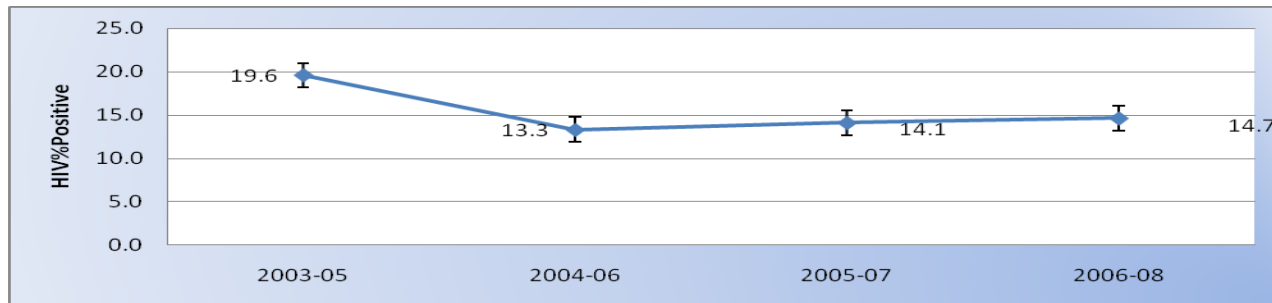
The only site in Manipur registered a slow increase in prevalence (Fig. 3.40) and in 2008–09, the figure stood at 17% (Annexure II).

#### MSM in states with moderate and low prevalence

Surveillance for MSM was held in sites situated in 14 states with moderate and low prevalence. In 2008–09, no state except Punjab and Bihar had crossed the prevalence level of 2007. A new site in Bhopal, Madhya Pradesh, registered a prevalence of 11%, while prevalence was 2% at the new site in Jharkhand. The presence of sites with an HIV prevalence of  $>5\%$  (Fig. 3.40) indicates that MSM are gradually emerging as a problem, especially in

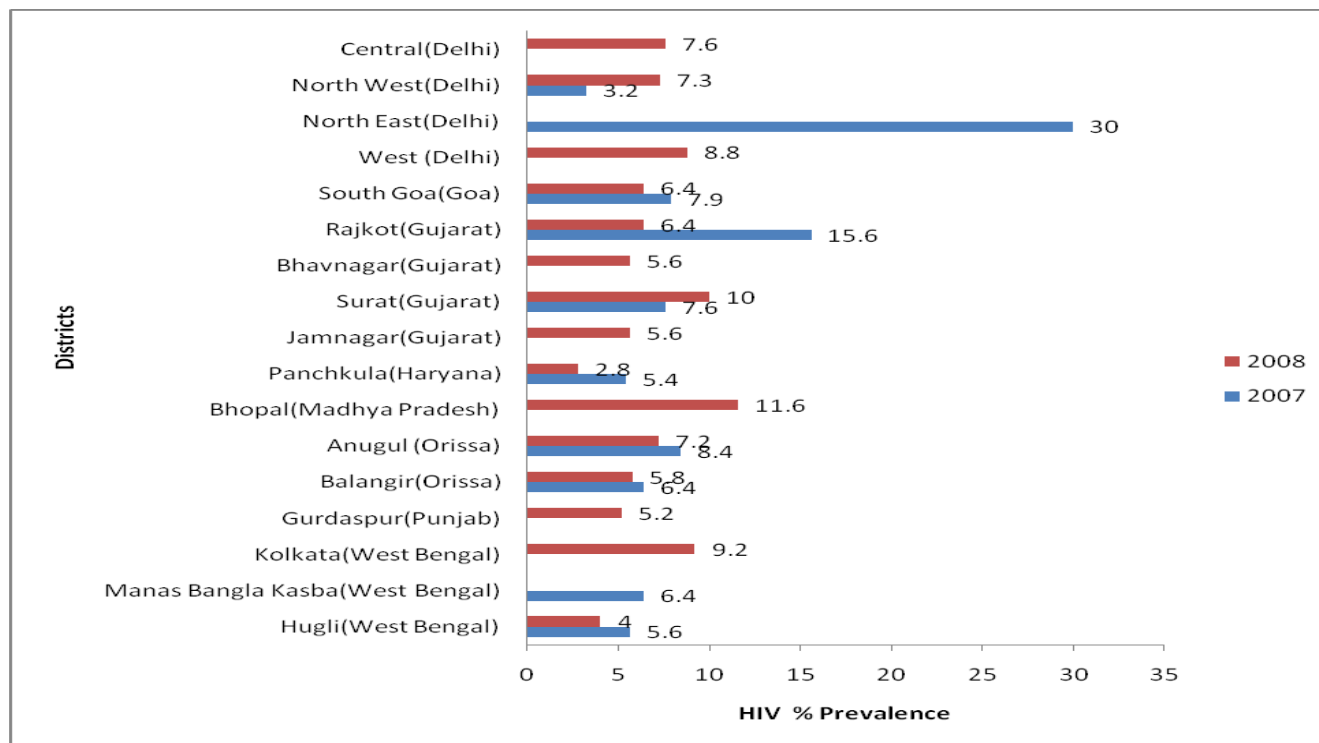
Gujarat, Delhi and Orissa, with pockets of high prevalence in Punjab and Goa.

**Figure 3.40**  
Trend in HIV Prevalence among Men Having Sex with Men in Manipur, 2003 to 2008-09\*



Note: Three-year moving average is taken and only 1 consistent site have been included from 2003-2008. Includes sites with sample size of  $\geq 75\%$ .

**Figure 3.41**  
Districts with  $\geq 5\%$  HIV Prevalence among Men Having Sex with Men in Northern states, Moderate and Low Prevalence States, 2008

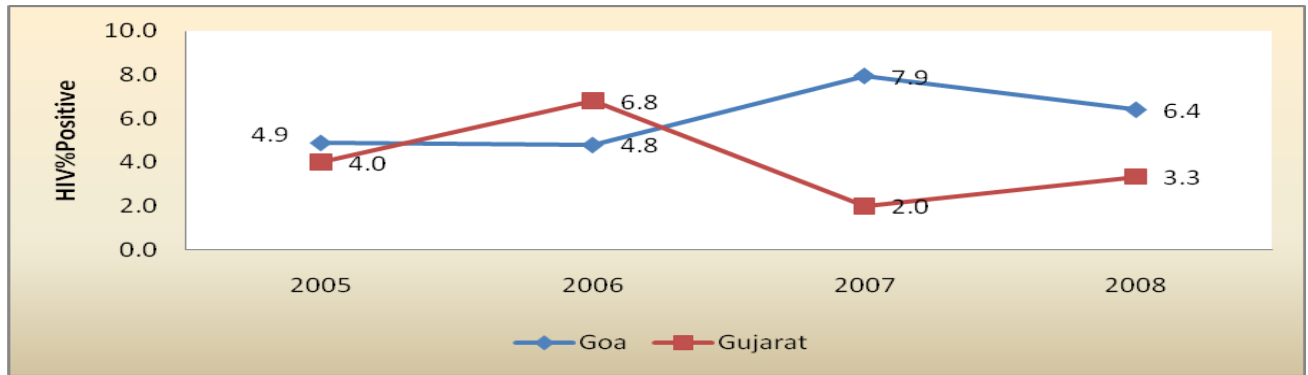


In the states of Gujarat and Goa, with concentrated epidemic, the trends have yet to take a definite direction (Fig. 3.42). Similarly, in the three low prevalence states the trends do not suggest a definite decline (Fig. 3.43).



**Figure 3.42**

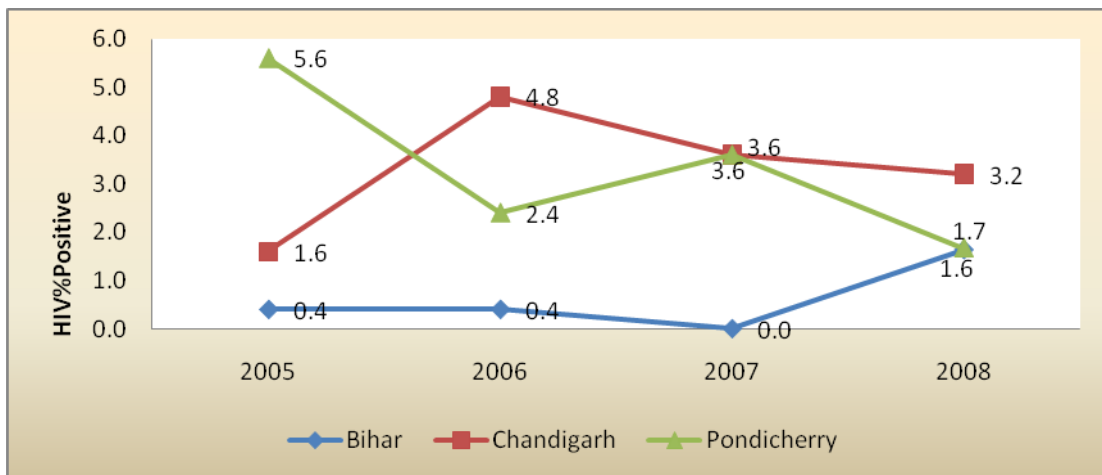
**HIV prevalence among Men Having Sex with Men in consistent sites of Goa & Gujarat, 2005 to 2008-09**



Note: \*Includes only those sites from which there was consistent data available from 2005 to 2008. 4 consistent sites were included, 3 sites in Gujarat & 1 site in Goa.

**Figure 3.43**

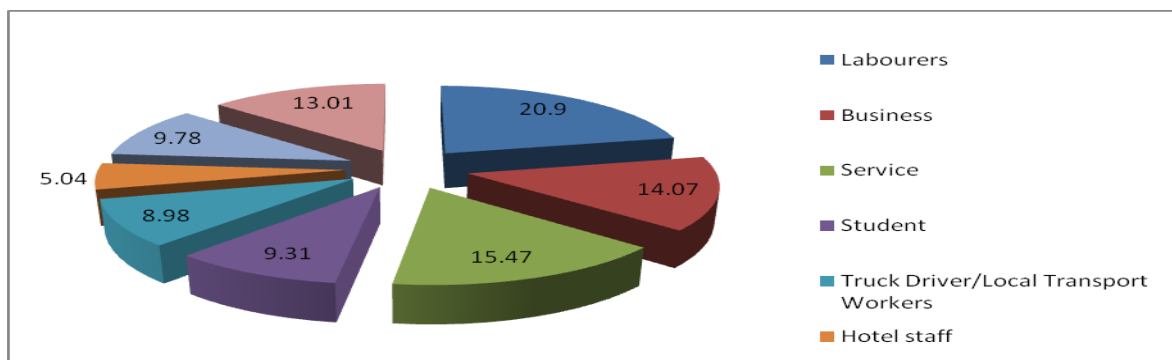
**HIV Prevalence among Men Having Sex with Men in Consistent Sites of Bihar, Chandigarh and Pondicherry, 2005 to 2008-09**



Note: \*Includes Consistent sites, 1 site each in Bihar, Chandigarh and Pondicherry.

**Figure 3.44**

**Proportion % of MSM Tested for HIV by Occupation in India, 2008-09**





**Table 3.16**  
**HIV Prevalence among Men having Sex with Men by Occupation, 2008-09, in India**

| Self Occupation  | Urban         |                 |              | Rural         |                 |              |
|--|---------------|-----------------|--------------|---------------|-----------------|--------------|
|  | Number Tested | Number Positive | HIV Positive | Number Tested | Number Positive | HIV Positive |
| Agricultural labourer  | 241           | 24              | 9.96         | 633           | 41              | 6.48         |
| Non-agricultural labourer  | 1256          | 82              | 6.53         | 756           | 39              | 5.16         |
| Domestic servant   | 307           | 15              | 4.89         | 168           | 9               | 5.36         |
| Skilled/semiskilled worker   | 1413          | 100             | 7.08         | 461           | 18              | 3.9          |
| Petty business/small shop  | 1262          | 101             | 8            | 414           | 25              | 6.04         |
| Large business/self employed   | 233           | 17              | 7.3          | 117           | 4               | 3.42         |
| Service (Govt/Pvt.)  | 1925          | 162             | 8.42         | 303           | 31              | 10.23        |
| Student  | 912           | 46              | 5.04         | 429           | 12              | 2.8          |
| Truck driver/helper  | 245           | 13              | 5.31         | 112           | 5               | 4.46         |
| Local transport worker (auto/taxi driver/handcart pullers/rickshaw pullers, etc) | 728           | 40              | 5.49         | 208           | 9               | 4.33         |
| Hotel staff  | 492           | 36              | 7.32         | 235           | 8               | 3.4          |
| Agricultural cultivator/landholder   | 28            | 2               | 7.14         | 96            | 2               | 2.08         |
| Unemployed   | 1030          | 110             | 10.68        | 379           | 27              | 7.12         |
| Not applicable(for never married/widows/widowers)                                | 13            | 1               | 7.69         | 1             | 0               | 0            |
| Total  | 10085         | 749             | 7.4          | 4312          | 230             | 5.33         |

In urban areas the prevalence among MSMs is observed to be higher (all above 5%) in various groups than in those from the rural areas. The highest number of attendees belongs to service class in urban areas and non agricultural labourer in rural areas. High prevalence is observed amongst unemployed (10.7%) in urban areas and the service class in rural areas.

**Transgender:** The HIV prevalence among eunuchs in Mumbai is showing a significant increase since last year, but no clear trend is seen since 2005. This group, amongst MSM, has a very high HIV prevalence (nearly 16.40 %) but do not attract attention for extensive intervention though they indulge in commercial sex.

#### **HIV Prevalence among Female Sex Workers**

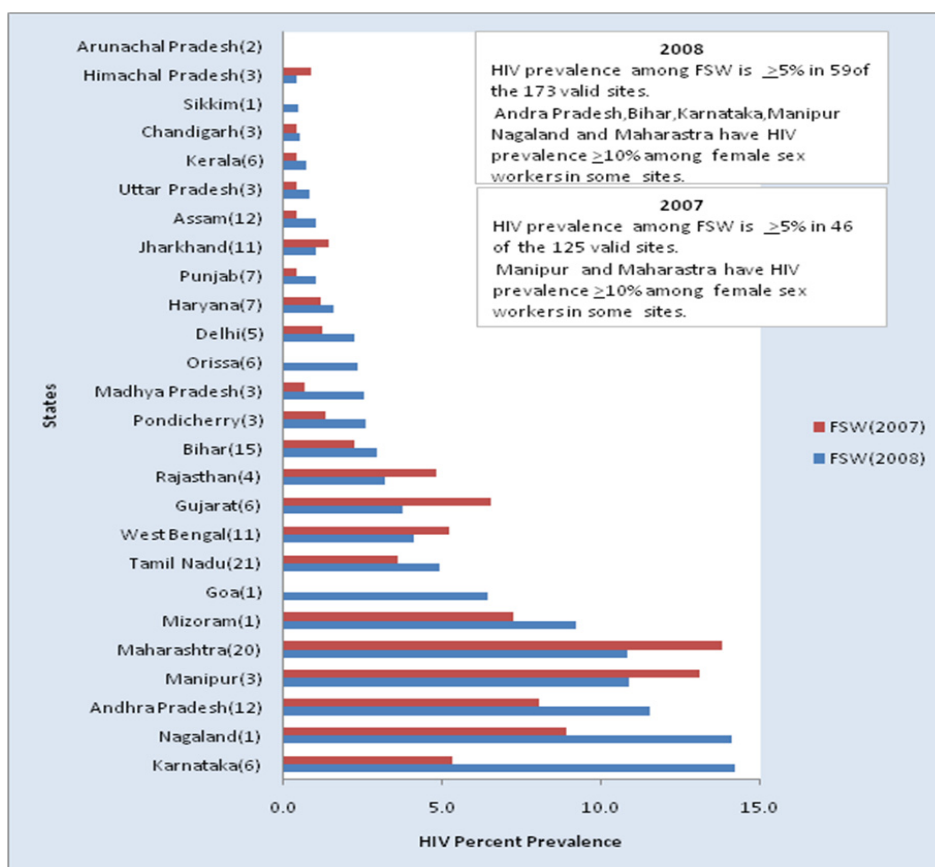
FSW sites are maximum in number amongst the high risk group (188) but majority of the sites are distributed in states of Maharashtra, Tamil Nadu, Bihar, Assam, Andhra Pradesh, Jharkhand, Kerala, Orissa and West Bengal. In 2008 -09, HIV prevalence among FSWs was highest in Karnataka (14.2%) and Nagaland (14.1%), followed by Andhra Pradesh (11.5%), Manipur (10.9%) and Maharashtra (10.8%) (Fig 3.45).

There has been no change in the percentage of sites with HIV prevalence more than 5% compared to last year (36% in 2007 and 34% in 2008). Karnataka, Andhra Pradesh, Nagaland and Tamil Nadu have exceeded the 2007 HIV prevalence values and have HIV prevalence above 12% in 2008-09. Twelve states with moderate and low HIV prevalence have registered an increase in 2008-09 compared to 2007 (Fig 3.45). Details of state wise and site wise prevalence given in Annexure II.



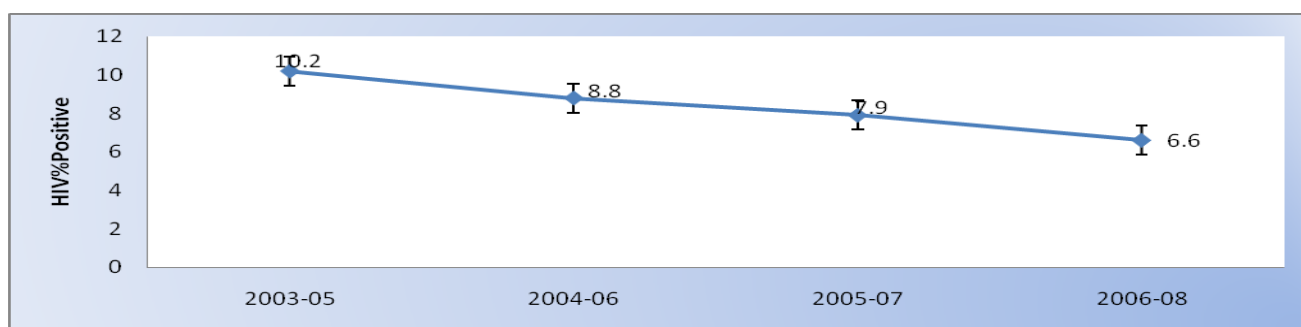


**Figure 3.45**  
**HIV prevalence among Female Sex Workers by State, India, 2007 and 2008**



Note: Values in parentheses are the number of sentinel sites for each state. Includes sites with sample size of  $\geq 75\%$ .

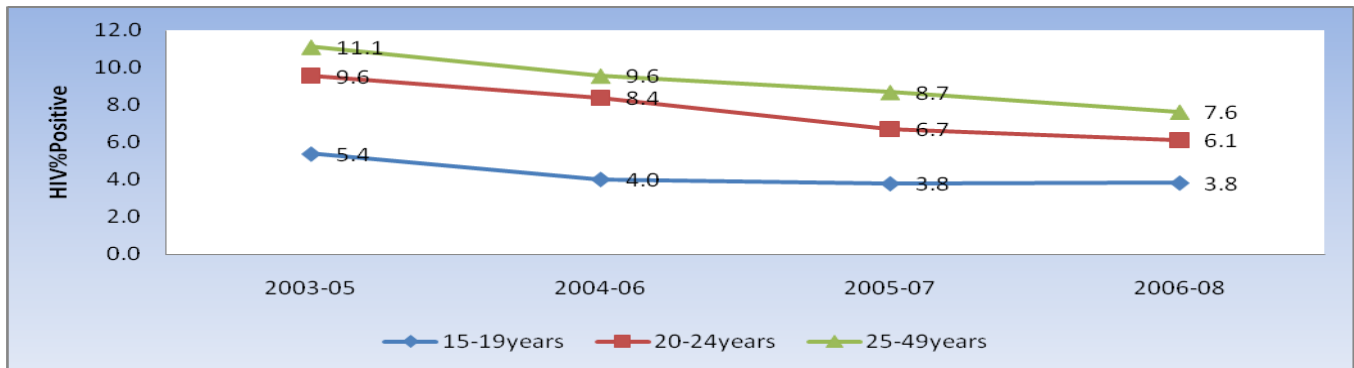
**Figure 3.46**  
**Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in India 2003 to 2008-09**



Note: A three-year moving average has been taken and 18 consistent sites have been included from 2003 to 2008—6 sites in West Bengal, 4 in Andhra Pradesh, 2 in Chandigarh, and 1 each in Bihar, Delhi, Himachal Pradesh, Manipur, Nagaland and Uttar Pradesh.

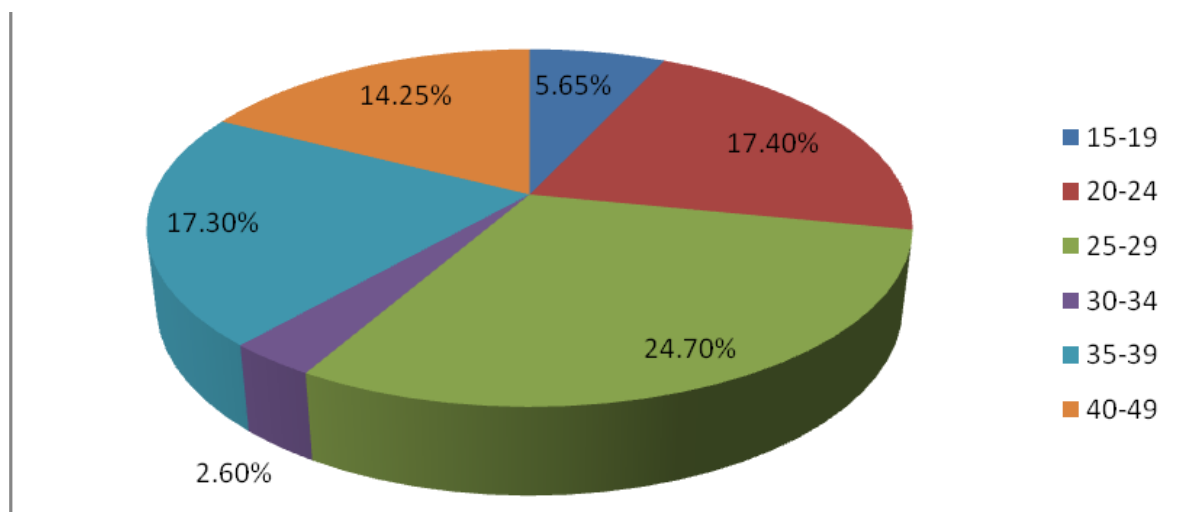
At the country level, the trend of HIV infection amongst FSWs has a declining trend at the consistent sites existing since 2003 for all the age groups (Fig 3.47) but the maximum decline has occurred in those above 25 years and least amongst 15-19 years.

**Figure 3.47**  
**Age-wise trend in HIV Prevalence in Consistent Sites among Female Sex Workers in India, 2003 to 2008-09**



Note: A three-year moving average has been taken and 18 consistent sites have been included from 2003 to 2008—6 sites in West Bengal, 4 in Andhra Pradesh, 2 in Chandigarh, and 1 each in Bihar, Delhi, Himachal Pradesh, Manipur, Nagaland and Uttar Pradesh.

**Figure 3.48**  
**Proportion % of Female Sex Workers tested for HIV by Age Group India, 2008**



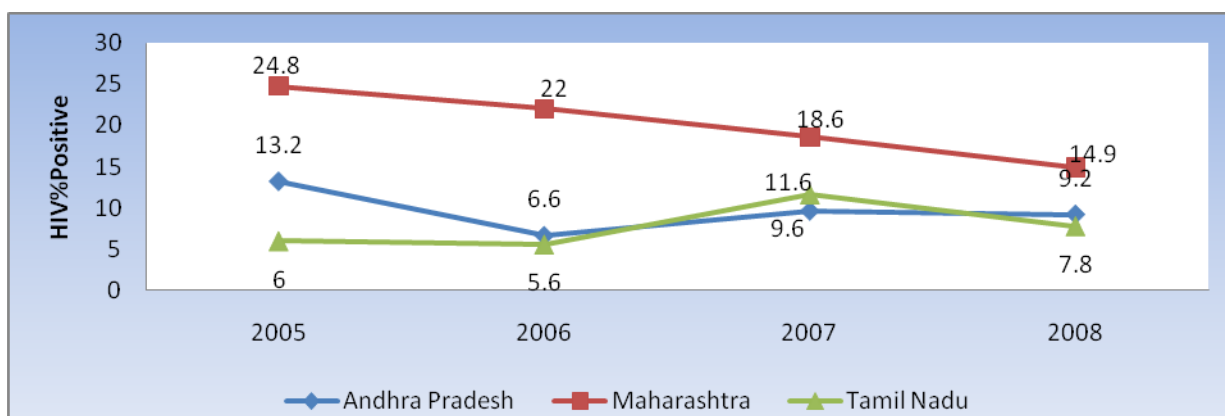
The majority (25%) of FSWs getting tested belonged to the age group of 25–29 years; 17.4% were in the age group of 20–24 years and only 5.7% were <19 years old.

#### **FSWs in Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka**

The FSWs were the risk group which was considered as the conduit for the spread of HIV in the country and they were the first among whom TIs were started in Tamil Nadu and Maharashtra. Given this, the HIV prevalence in these two states decreased and a distinct decline can be noted in the case of Maharashtra, though the intensity of HIV prevalence is higher than that in Tamil Nadu and Andhra Pradesh. However, no declining trend was noted for the latter two states (Fig. 3.49).



**Figure 3.49**  
**HIV prevalence Trends among Female Sex Workers in southern states, 2005-08\***



Note:\*Includes only those sites from which there was consistent data available from 2005 to 2008. Consistent sites included 9 sites in Maharashtra, 5 sites in Andhra Pradesh & 2 sites in Tamil Nadu. No consistent sites found in Karnataka.

**Table 3.17**  
**Site-wise Table with HIV Prevalence more than 10% among Female Sex Workers in 2008-09**

| State          | District      | Site name  | Total | HIV | %+ve  |
|----------------|---------------|--|-------|-----|-------|
| Maharashtra    | Pune          | Pune Saheli NGO                                  | 250   | 102 | 40.80 |
| Karnataka      | Bagalkot      | Mudhol (New 08)                                  | 232   | 79  | 34.05 |
| Maharashtra    | Mumbai        | Gaurabai CHCU                                    | 250   | 75  | 30.00 |
| Andhra Pradesh | Khammam       | JAGRUTI (New 07)                                 | 247   | 66  | 26.72 |
| Maharashtra    | Kolhapur      | Muslim Samaj Probodhan Va Shikshan Sanstha       | 250   | 65  | 26.00 |
| Karnataka      | Bangalore     | Avalahalli (New 08)                              | 250   | 46  | 18.40 |
| Andhra Pradesh | East Godavari | East Godawari/ CHANGES, Kakinada                 | 244   | 44  | 18.03 |
| Maharashtra    | Nagpur        | Nagpur (New 08)                                  | 250   | 43  | 17.20 |
| Andhra Pradesh | Adilabad      | AIRTDs, Mancherial (New 07)                      | 248   | 42  | 16.94 |
| Karnataka      | Belgaum       | BIRDS, NGO, Belgaum (New08)                      | 251   | 41  | 16.33 |
| Andhra Pradesh | Hyderabad     | Chaitanya Mahila Mandali/ Hyderabad              | 249   | 37  | 14.86 |
| Maharashtra    | Ahmadnagar    | Snehalaya Project                                | 250   | 37  | 14.80 |
| Maharashtra    | Yavatmal      | Yawatmal (New 08)                                | 250   | 36  | 14.40 |
| Andhra Pradesh | West Godavari | Action for Development, Bhimavaram (New 07)      | 247   | 35  | 14.17 |
| Tamil Nadu     | Salem         | Village Reconstruction and Dev. Project (New08)  | 249   | 33  | 13.25 |
| Tamil Nadu     | Erode         | Centre For Action & Rural Edu.,CARE TAI (New 08) | 247   | 30  | 12.15 |
| Maharashtra    | Bid           | Beed-Ambejogai (New 08)                          | 250   | 29  | 11.60 |

Note: Only those sites from which consistent data were available from 2005 to 2008 have been included. The consistent sites included 9 sites in Maharashtra, 5 in Andhra Pradesh and 2 in Tamil Nadu. No consistent sites were found in Karnataka.

Seventeen sites had an HIV prevalence of >10%. Of these, 7 were in Maharashtra and 5 in Andhra Pradesh. All these sites were situated in the high-prevalence states. In Maharashtra, the prevalence of HIV decreased



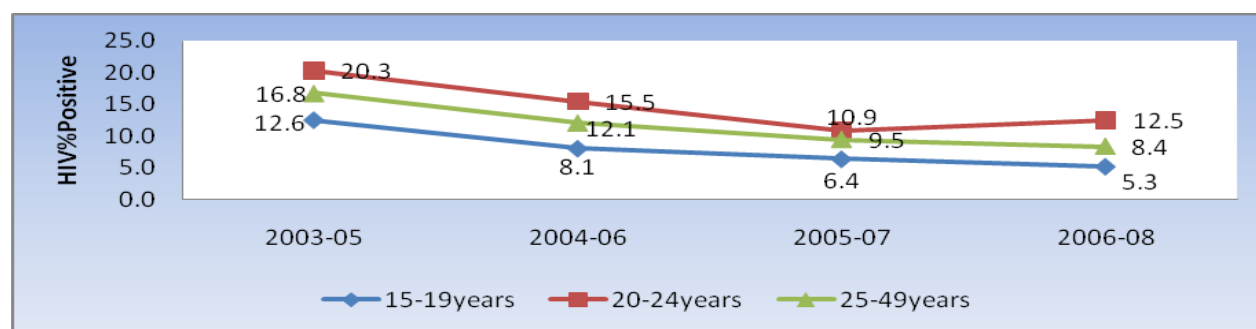
significantly in Jalgaon, Pune, Chandrapur, Parbhani and Akola, while there was an increase in Ahmednagar and Kolhapur compared to 2007. Pockets of high prevalence persist in Pune, and even after a decrease, the prevalence is 41%. In Mumbai, (Gaurabai Hospital), it is 30% (see Table 3.17 and Annexure II). In Tamil Nadu, Salem and Theni witnessed a significant increase and the prevalence was higher than in 2007.

The state of Karnataka introduced 5 new sites in 2008. Of these, 3 FSW sites in Bangalore were replaced with NGO sites and the HIV positivity at these sites rose three-fold, with the prevalence among the Bagalkot FSWs being 30%. No trend could be elicited due to change in sites. It is difficult to comment on one year's data, but definitely there is a high prevalence of HIV among this group in Bangalore.

Andhra Pradesh has yet to get a grip over the spread of HIV among FSWs, with an increase in prevalence compared to 2007. An analysis of the trends indicated that HIV prevalence among FSWs was exhibiting a gradual downward trend, especially in the consistent sites of Andhra Pradesh with the maximum number of sites for FSWs.

**Figure 3.50**

**Age-wise trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Andhra Pradesh, 2003 to 2008-09\***



Note: A three-year moving average has been taken and 4 consistent sites have been included from 2003 to 2008.

In Andhra Pradesh, an increase in HIV prevalence was observed among FSWs in the age group of 20–24 years in 2006–08. However, there was a gradually decreasing trend for other age groups.

#### North-eastern states

There was a significant downward trend in HIV prevalence among FSWs in Manipur (Fig. 3.51). Nagaland exhibited a consistent upward trend (Fig. 3.52). HIV prevalence of >10% was noted at 1 site each in Manipur and Nagaland.

**Figure 3.51**

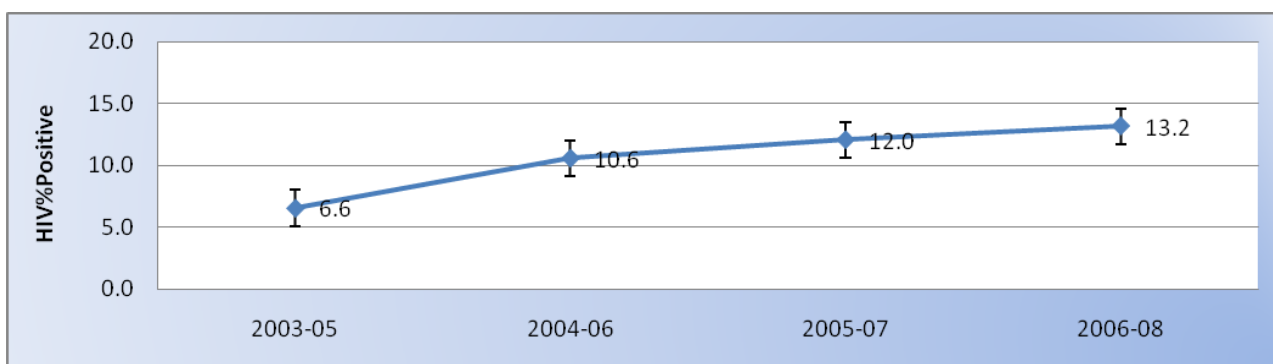
**Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Manipur, 2003 to 2008-09\***



Note: Three year moving average is taken and 1 consistent site have been included from 2003 to 2008-09.

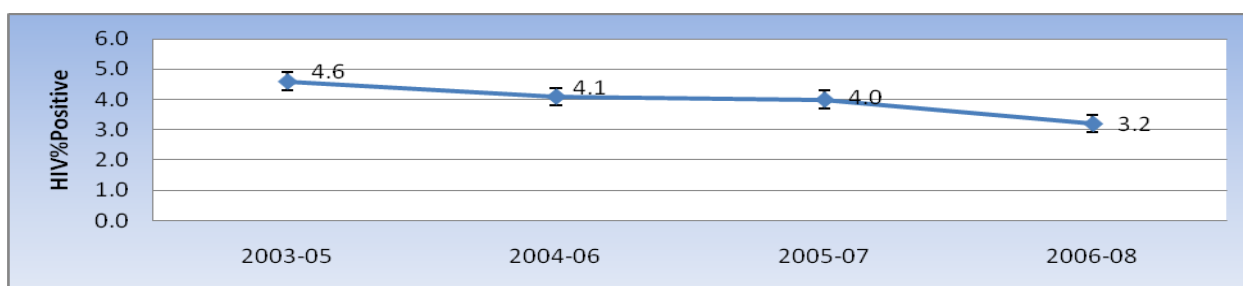


**Figure 3.52**  
Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Nagaland, 2003 to 2008-09\*



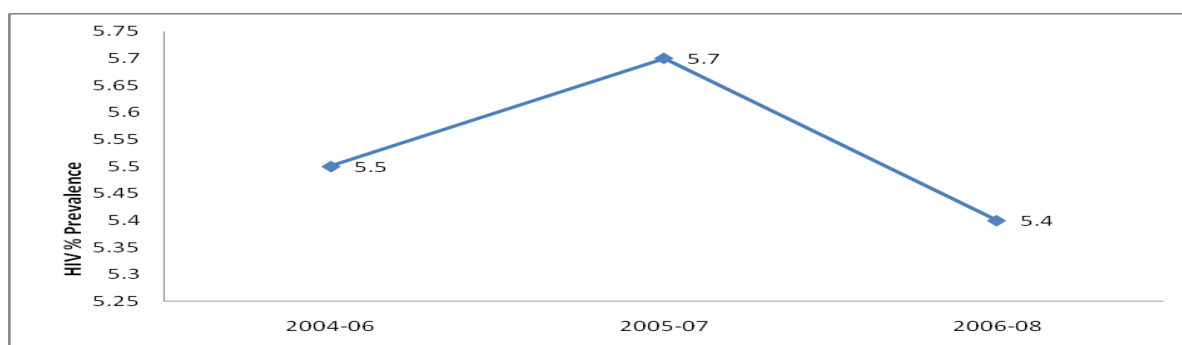
Note: A three-year moving average has been taken and 1 consistent site has been included from 2003 to 2008-09.

**Figure 3.53**  
Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Low Prevalence states, 2003 to 2008-09\*



Note: Three year moving average is taken and 12 consistent site have been included from 2003 to 2008-09. West Bengal-6 sites Chandigarh-2 sites, 1 site each in Delhi, Uttar Pradesh, Bihar and Himachal Pradesh.

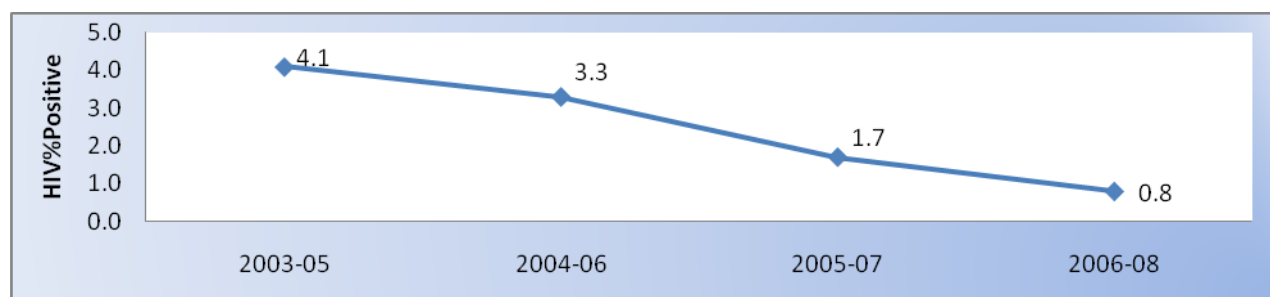
**Figure 3.54**  
Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in West Bengal, 2004 to 2008-09\*



Note: Three year moving average is taken and 7 consistent sites have been included from 2004 to 2008-09.

Figure 3.55

Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Chandigarh, Delhi and Uttar Pradesh (combined) 2003 to 2008-09\*



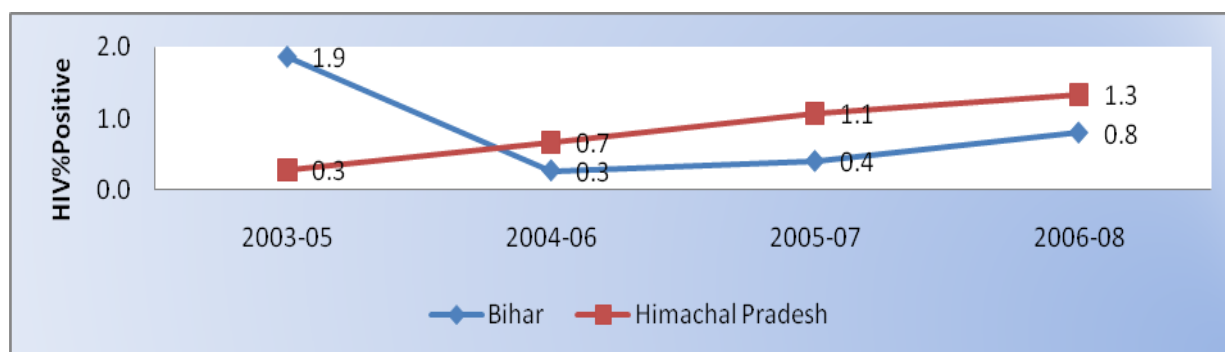
Note: Three year moving average is taken and only consistent sites have been included from 2003-2008. Chandigarh-2 sites, 1 site each in Delhi and Uttar Pradesh.

States with moderate and low HIV prevalence

Assam, Delhi, Bihar, Madhya Pradesh and Punjab experienced an increase in HIV prevalence compared to 2007, though prevalence among FSWs showed a downward trend (Fig. 3.53) in 2008-09. A strict watch must be kept to prevent HIV infection rates from flaring up, especially in states with a prevalence of >5%, e.g. in West Bengal, Gujarat and Bihar. A significant downward trend in prevalence was observed for the combined consistent sites of Chandigarh, Delhi and Uttar Pradesh (Fig. 3.55), whereas an upward trend was noted in Bihar and Himachal Pradesh (Fig. 3.56).

Figure 3.56

Trend in HIV Prevalence in Consistent Sites among Female Sex Workers in Bihar and Himachal Pradesh, 2003 to 2008-09\*



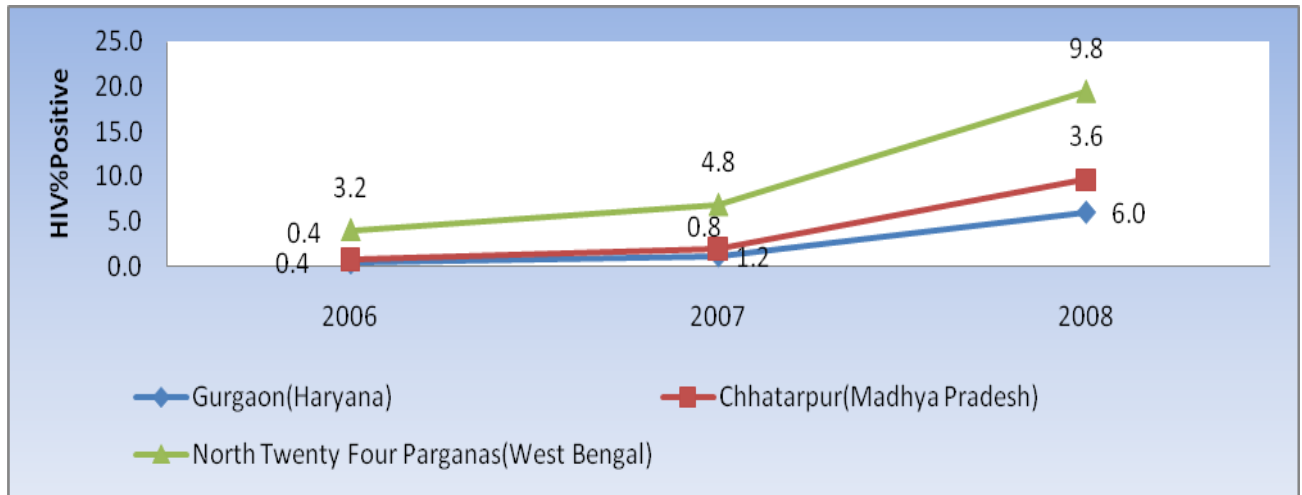
Note: A three-year moving average has been taken and only consistent sites have been included from 2003-2008—1 site each in Bihar and Himachal Pradesh.

HIV prevalence among FSWs in the three districts of Bihar\* showed an increasing trend from 2006-08. These were pockets of high prevalence, with prevalence being >5% in 16 sites.



Figure 3.57

Trend in HIV Prevalence among Female Sex Workers for those sites which have increasing trend 2006-08 in Low HIV Prevalence States







# Chapter 4

## Conclusion

Surveillance is the tool to determine the extent of the HIV/AIDS epidemic in India and to track the changes or trends over time. The data generated by the Annual Sentinel Surveillance for HIV identify the risk groups with their risk behaviours and their area of location. This, in turn, guides programme planning and acts as a surrogate measure for the evaluation of programme responses at various levels.

The Annual Sentinel Surveillance for HIV held in 2008–09 was similar to the one held in the previous year. Active steps were taken to improve the quality to meet international standards. The activity extended from 2008 to 2009; hence, it was not possible to hold another round of surveillance in 2009 and the next round was shifted to 2010.

In 2007, an international journal conducted an assessment of the HIV surveillance systems across the world, and India's system was described as a 'fully implemented surveillance system'. This signifies that according to their criteria, India's HIV surveillance system is of good quality.

HSS in India is well institutionalized and has been consistent over the years. It is flexible enough to accommodate an evolving epidemic and incorporate new surveillance technologies. The following are the key strengths of the system.

- The sentinel surveillance system is self-sufficient, both technically and financially.
- A task force of national and international experts on HIV surveillance is in place.
- Documented guidelines for site selection, client sampling, blood collection and other operations have been prepared and disseminated by NACO. A supportive network of technical partners from national institutes has been identified and their roles have also been identified.
- Site coverage has expanded over time to represent various risk groups.
- The concept of composite sites with fixed samples to complete the sample sizes is being implemented.
- All site managers and testing personnel, including NGOs and laboratory personnel, receive extensive pre-surveillance training.
- There is internal and external quality assurance in HIV testing laboratories.
- The DBS method of blood collection has been introduced at NGO sites.
- 'Unlinked anonymous' testing is being carried out, whereby the persons sampled are not aware that they are being tested for HIV and the surveillance staff cannot identify them. The advantage of this is that it prevents selection and participation biases.
- Web based data double entry.
- Multi-layered supervision is conducted so that immediate corrective action can be taken.
- On-job training is conducted.
- There is regular monitoring of activities.
- A budget has been identified for all the partners.

However, a few constraints remain, such as the lack of trained staff at a few sites, delay in the delivery of supplies and choosing participants not based on eligibility criteria in STI clinics. Some of the sites were unable to complete the sample size, but these comprise only 5% of the total sample of the 1190 sites.

HIV surveillance has provided an evidence base for HIV infections at the country, state and site levels. A clear picture has emerged of the current prevalence, together with the profile of the groups that are the most



vulnerable and their geographical distribution. The extent of HIV infection is not uniform and varies not only from state to state, but also within a state between districts and between talukas, depending on the type of risk groups and the risk behaviour networks. The pattern of the epidemic is of a concentrated nature, with pockets of high prevalence among HRGs and/or pregnant women in the districts of many states. The prevalence among pregnant women in some districts is not commensurate with the intensity of infection among the HRGs, and this needs to be explored.

Tamil Nadu and Maharashtra may be taken off the list of southern high-prevalence states as the prevalence in ANCs was noted to be <1% among antenatal women from 2006 to 2009. Thus they do not fulfil the qualifying criteria of >1% prevalence in the ANCs. They can be placed in a separate category of a waning epidemic, and the successful strategies employed in these states should be identified for replication in the moderate- and low-prevalence states to stop the progression of the epidemic.

The report on the global AIDS epidemic by UNAIDS in 2008 states that several modes of HIV transmission make Asia's epidemic one of the world's most diverse. Among the many risk factors, injecting drug use is a major risk factor in the epidemics of several Asian countries (Slightly, 2006). These observations match the findings of this report, which has noted that prevalence among IDUs continues unabated in India, starting from Manipur, Mizoram and Assam in the north-east, and extending to West Bengal and Orissa in the east, Punjab, Chandigarh and Delhi in the north, Jharkhand and Madhya Pradesh in central India, and Maharashtra and Kerala in the south. The presence of IDUs with HIV is also being reported from other states. The UNAIDS report has further underlined the threat due to overlap of injecting drug use and sex work. This applies particularly to Manipur, Maharashtra, Mizoram and Nagaland, where the rate of sexual transmission of HIV is increasing parallel to a high rate of infection among IDUs.

MSM may also be driving the HIV epidemic as the prevalence rates among them are high not only in many conventional high-prevalence states of southern India, such as Andhra Pradesh and Maharashtra, and Manipur in the north-east, but also in states with moderate and low prevalence, such as Delhi, Gujarat, Goa, Orissa and Madhya Pradesh. There are similar concerns regarding MSM in most other regions in Asia, where unprotected anal sex between men and between men and female partners is a potentially significant factor in driving the HIV epidemic, though adequate research has not been carried out in this area (UNAIDS 2008).

Moving from place to place for work increases the risk of exposure to HIV in several ways. Individuals move from areas of low prevalence to areas of higher prevalence, increasing the risk of contracting HIV. An example is the migrants of Uttar Pradesh, Bihar and Orissa who go to higher-prevalence states, such as Maharashtra, Andhra Pradesh, Tamil Nadu and Gujarat, in search of work. Cut off from their families or social support networks and with limited access to prevention services, they engage in high levels of risk behaviour. The high prevalence in migrants has also been observed by White (2003) and Khan et al. (2007). Frequent movement away from the home provides opportunities to indulge in risky behaviour, as has been observed in the case of truckers and those in business. Unemployment has also emerged as an important factor that predisposes people to indulge in risky behaviour and needs to be addressed urgently. Many of the unemployed are into injecting drug use or are MSM. HIV is gradually becoming entrenched in the local population and the high prevalence among those in service provides evidence. The UN report suggests that the strategy in countries with low-level and concentrated HIV/AIDS epidemics should be to have a central prevention focus on populations at the greatest risk. To reduce the likelihood of a low-level or concentrated epidemic becoming generalized, prevention programmes should also focus on potential epidemiological bridges, such as the sexual partners of IDUs or MSM, with FSW and other female partners. These observations are very much relevant for India in the light of this report, which highlights that the magnitude of HIV infection among populations at the greatest risk (core risk groups) is >5%, and among the population visiting STI clinics in the states with moderate and low prevalence, too, it is >5% in 14 sites.

Prevention programmes will not be optimally effective unless they are supported by initiatives to address the social factors that increase risk and vulnerability. Societal factors that affect the risk of and vulnerability to HIV are gender inequality and lack of empowerment of women and girls. The data collected under the surveillance round strongly highlight a high level of positivity among the wives of labourers and skilled workers, transporters



like truckers or auto-rickshaw drivers, and men in government or private service, besides others. These poor women, though mainly monogamous, are contracting the infection and have no social support to take care of their needs in the future. Long-term success in responding to the HIV epidemic will require sustained progress in addressing gender inequality, stigma and discrimination, especially in the case of women from the lower socioeconomic strata.

Efforts should be more strategically focused and based on the evidence generated by surveillance. Indications are that workplace intervention strategies are important for HIV prevention services (including HIV testing). Truck drivers, local transport workers and those in service may be approached through their professional associations. The unorganized labour sector is the most vulnerable, and intensive IEC and BCC are urgently required in the case of this population to close gaps in the utilization of the critical prevention services. Not to be overlooked is the mass of unemployed men testing positive, as they are not easily accessible and thus pose a challenge to the programme.

## Key findings

### 1) Number and type of sites

- Surveillance was held in 1190 sites, the largest number in the world. Only 162 ANC (R) sites were included, mostly in six high-prevalence southern and north-eastern states. There were only 36 such sites in other states.
- Many first-time ANC sites in the low-prevalence states yielded an HIV prevalence of >1%, indicating the need for more sites.
- The HRG sites comprised 26% of the total sites.
- There were few sites for populations like truckers and migrants, who act as a bridge between the HRGs and the population with a low risk.
- More sites are needed for transgenders as the prevalence among them was consistently high (16%) in the 2008–09 round.

### 2) Surveillance process

- During supervisory visits to the surveillance sites and testing centres, it was observed that late supply of consumables was the major issue (34%), followed by procedural issues, such as consecutive sampling not being done, trained staff not doing surveillance work and staff being transferred (11%) during surveillance.
- There were delays in the procurement of DBS cards by NACO for sample collection through the DBS method, resulting in a delay in the commencement of surveillance at the HRG sites.
- Lack of coordination between NACO, SACS and the Indian Postal Service resulted in delays in the transfer of the samples of DBS cards from the HRG sentinel sites to the testing centres.
- In each state, there were some sites which were experiencing problems in the implementation of surveillance.
- Officers were not deputed by SACS for the supervision of surveillance activities.

### 3) HIV status

- The HIV epidemic in India is a concentrated epidemic, with prevalence being low among ANC (<1%) but >5% among HRGs.
- The changing pattern of the epidemic is different in different states. HIV prevalence among ANC has fallen to <1% in Karnataka, Maharashtra and Manipur, but pockets of high prevalence are still present.
- Prevalence among IDUs and MSM is increasing. A decline was observed only in the case of FSWs.
- Hot spots for all risk groups exist in the low-prevalence northern and eastern states. For example, HIV prevalence at the new sites was >1% among ANC at Hamirpur (Himachal Pradesh) and West Nimar (Madhya Pradesh), and 39% among IDUs in Bhopal in Madhya Pradesh.
- There was a declining trend in HIV prevalence in the ANCs in six high-prevalence states, but the trends remained static in the states with low and moderate prevalence.
- Significantly low levels of HIV prevalence were noted consistently among all groups in Tamil Nadu.



### 3.1) HIV prevalence among antenatal clinic attendees

- 252,650 women were tested for HIV at 639 (valid) ANC sentinel sites.
- There were downward trends in prevalence in six high-prevalence states, but the trends were static in the states with low and moderate prevalence.
- HIV prevalence was the highest in the age group of 15–19 years in Manipur and Nagaland, but not in the other states.
- HIV prevalence ranged from 1% to 1.99% in 105 sites, including both urban and rural sites. One-fourth of these (27) were in the states with moderate and low prevalence.
- HIV prevalence among antenatal women was 0.47% at the all-India level (unadjusted). It was the highest in Andhra Pradesh (1.22%) and Nagaland (1.12%). Tuensang, Ramanathapuram and Guntur had a prevalence of >3%.
- Prevalence in ANCs in the district of Tuensang in Nagaland has been >3% for the past 5 years. There is a need to explore cross-border HIV transmission from Myanmar.
- A significant increasing trend has been observed for the past three years in Haryana, Chhattisgarh, Assam, Jharkhand and Orissa.
- Urban illiterate women between the ages of 15 and 49 years were more vulnerable than their rural counterparts. Education of women in the north-eastern states plays a protective role as the prevalence of HIV was the lowest among graduate women.
- The prevalence of HIV was the lowest in the age group of 15–24 years in all parts of India. This trend is more apparent in urban than rural areas.
- The wives of truck drivers, auto drivers, etc., skilled/unskilled workers/labourers and hotel staff were particularly vulnerable.
- HIV prevalence was very high among the wives of the unemployed.
- VDRL positivity was higher among young mothers in the North-East than in the rest of the country.

### 3.2) HIV prevalence among STI clinic attendees

- The prevalence of HIV among STI patients was 2.21% at the all-India level.
- HIV prevalence among STI patients was the highest (>10%) in the south Indian states of Maharashtra and Karnataka (Tamil Nadu and Andhra Pradesh did not conduct STI surveillance), followed by Mizoram and Gujarat.
- Rising trends were observed in Gujarat and Mizoram.
- At the district level, 27 sites had an HIV prevalence of more than or equal to 5% among STI clinic attendees. Thirteen of these sites were in states with moderate and low prevalence.
- The prevalence of HIV was the highest among those with ano-genital ulcer and warts.
- Housewives formed the bulk of the attendees and the prevalence among them was >1%.
- Those in service and students also came to the clinics in large numbers and were observed to be HIV-positive, though the prevalence among them was lower than that among labourers, skilled workers, truckers, hotel staff, etc.

### 3.3) Truckers and migrants sites

- The HIV prevalence rates among truckers at these sites were found to be decreasing compared to 2007. The prevalence ranged between 0% and 3%.
- The HIV prevalence rate among 250 migrants tested in the newly established site at Thane was as high as 5.2%.
- HIV prevalence among migrants in Kolkata was very high (9.27%) in 2007, but the value fell to 2.48% in 2008–09. The rest of the sites had a prevalence of <5%.
- The majority of truckers and migrants were above 25 years of age and their level of education varied from primary to secondary.

### 3.4) Injecting drug users

- The HIV prevalence among IDUs was 9.86%—the highest among all HRGs at the all-India level. The trend has been stationary since 2003.
- The situation in 2008–09 had not improved over the previous year. The HIV prevalence among IDUs in





nearly 50% of the sites was >5%. The same was observed in 2007.

- A significant increase in prevalence was observed in Maharashtra, Manipur, Madhya Pradesh and Punjab. High prevalence persists among IDUs in Chandigarh, Delhi, Orissa, Kerala and West Bengal. There is a rising trend among IDUs in states with low and moderate prevalence.
- Women IDUs form 3.7% of the total IDUs tested at the country level.
- The trend in Manipur has been stable and that in Mizoram rising since 2003.
- Most of the IDUs are labourers, persons in service, students and unemployed persons, but HIV prevalence is the highest among labourers, skilled/semi-skilled workers and truckers.

### 3.5) HIV prevalence among MSM

- The HIV prevalence among MSM was 6.9% at the all-India level, with the prevalence in 11 states being >5%.
- There was evidence of HIV infection among MSM in new sites in Andhra Pradesh, Madhya Pradesh, Bihar, Himachal Pradesh and Jharkhand. There may be hidden pockets in each state.
- The trends across all zones have been stationary since 2004.
- Urban areas in the country, such as north-east Delhi, Pune, Bangalore, Surat, Rajkot and Kolkata, recorded very high HIV prevalence rates among MSM in 2008–09.
- HIV prevalence among this group and other HRGs was high in Andhra Pradesh and Maharashtra. MSM are potential transmitters to wives and female partners.
- The majority of MSM were labourers, in business or in service.

### 3.6) HIV prevalence among FSWs

- The trend of HIV infection among FSWs has been one of gradual decline at the all-India level.
- HIV prevalence among FSWs at the all-India level was 4.8% lower than the rate for MSM. Five high-prevalence states had a prevalence of >10%. Tamil Nadu was an exception. The range of HIV prevalence in 4 sites in Andhra Pradesh (Khamann), Maharashtra (Pune, Kolhapur), Mumbai (Gaurabai CHCU) and Karnataka (Bagalkot) was 20%–40%.
- The trend in the low-prevalence states was stationary.
- There was no change in the percentage of sites with a prevalence of >5% in 2008–09 compared to 2007.

## Recommendations for the surveillance strategy

- Continue with the strategy employed in the 2008–09 round, with improvements in implementation.
- Problems with logistics and staff may be reduced by starting activities during a fixed time period so that states are prepared for the surveillance on time and can arrange for the trained staff to conduct the activities.
- Participatory planning by NACO and SACS is recommended so as to iron out the gaps in communication regarding funds, HIV kits and the number of sites.
- An officer should be designated for surveillance activities. He should be responsible for overseeing and coordinating the activities in each state. Absence of supervision and ad hoc arrangements created problems in the 2008–09 round.
- The procurement process at NACO for HIV kits and DBS cards can be planned for execution in time.
- The number of HRG sites should be increased and all states should have sites for all the HRGs.
- Many more sites for transgenders are required in the low-prevalence states as they indulge in commercial sex at low rates.
- More sites for vulnerable population groups, like migrants, may be considered for surveillance so that TIs for these groups can be prioritized in the programme on a wider scale.

## Recommendations for programme based on evidence from surveillance

### For women

- Specific strategies are needed to address housewives with a low socioeconomic status, especially those whose husbands are migrants. Steps should be taken to empower them with knowledge and negotiation skills



- o Stronger convergence with the NRHM programme is required to improve antenatal care and increase PPTCT coverage. Multipurpose female workers may be trained jointly to refer women to ICTCs.
- Comprehensive counselling services should be made available at all STI clinics and gynaecology OPDs for not only HIV/AIDS but also reproductive health, to enhance attendance of both males and females.
- Measures should be taken for the social rehabilitation of FSWs.

#### For high-risk groups

- The prevention programme for IDUs should be strengthened across the country.
- Focused attention should be given to women IDUs and the partners of MSM.
- There is a need to identify NGOs and CBOs to undertake TI among MSM and IDUs, and to support their efforts.
- TI sites should be increased to enhance the access to and effectiveness of prevention programmes for MSM.
- Transgenders deserve a separate intervention strategy because of their unique customs and because so many of them are providers of commercial sex.
- The interventions for FSWs should be sustained in all states to help bring down the prevalence further.
- The mass media should be involved to spread messages that would help to reduce stigma and create an enabling environment for people living with HIV/AIDS (PLHA). Such efforts would encourage voluntary testing among those indulging in high-risk behaviour.
- There is a need to strengthen partner testing, as well as the treatment of HIV-positive people and those with STIs.
- The sustainability of surveillance activities should be ensured by fostering ownership and commitment at all levels—national, state and district—and identifying synergies with integrated disease surveillance systems.

#### Recommendations for research

- The Task Force on Surveillance should review the status, and all the organizations involved in surveillance, such as the NIHF, NIMS and RIs, may be allotted different states to track the HIV epidemic and recommend research in accordance with their observations. The surveillance unit at NACO can coordinate and the external members of the Task Force may advise. WHO/UNAIDS may facilitate this process technically.
- More behavioural research is required to assess the transmission of HIV by bisexual MSM and by transgenders.
- Research is required on cultural factors, sexual networks and HIV.





# References

- Lyerla R, Gouws E, Garcia-Calleja JM. The quality of sero-surveillance in low- and middle income countries: status and trends through 2007. *Sex Transm Infect* 2008;84(Suppl 1):i85–i91.
- Walker N, Garcia-Calleja JM, Asamoah-Odei E, Pomeroy G, Lazzari S, Ghys PD, et al. Epidemiological analysis of the quality of HIV sero-surveillance in the world: how well do we track the epidemic. *AIDS* 2001;15(12):1545–54.
- UNAIDS: 2008 Report on the global AIDS epidemic.





## Annual Sentinel Surveillance for HIV Infection-2008

### List of Members for the Central Surveillance Team-2008

| S. No | Name   | States allotted for visits to TI sites in 2008 | Phone/Fax/Email   |
|-------|--|--|---|
| 1     | Prof. Deoki Nandan<br>Director<br>National Institute of Health & Family Welfare,<br>New Mehrauli Road, Munirka,<br>New Delhi-110067  | Problem sites in any state                     | 9971104666<br>91-11-26165959, 26166441 Ext. 302<br>(Fax): 011-26101623<br>dnandan51@yahoo.com   |
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## State-wise summary tables, 2008–09

**TABLE SS 1a**  
Andaman and Nicobar Islands (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 1593          | 0.06 (-0.04–0.17)       |                        |
| Urban women                               | 1593          | 0.06 (-0.04–0.17)       |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| Andaman and Nicobar Islands |                                     |                  |      |      |      |      |      |      |
|-----------------------------|-------------------------------------|------------------|------|------|------|------|------|------|
| ANC attendees               |                                     |                  |      |      |      |      |      |      |
| District                    | Site name                           | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Andamans                    | Diglipur, Port Blair (R)            | ANC              | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Andamans                    | Port Blair, GB Pant Hospital        | ANC              | 0.50 | 0.00 | 0.00 | 0.50 | 0.50 | 0.00 |
| Andamans                    | Rangat (R)                          | ANC              | 0.50 | n/a  | n/a  | n/a  | n/a  | 0.00 |
| Andamans                    | Rangat CHC Hospital                 | ANC              | 0.50 | n/a  | n/a  | 0.00 | 0.00 | 0.00 |
| Andamans                    | PHC Garacharma, Port Blair (New 08) | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.00 |
| Nicobar                     | Car Nicobar BJR Hospital            | ANC              | 0.75 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 |

**TABLE SS 1b**  
Andaman and Nicobar Islands (2008 summary)

| *HIV prevalence among populations with high-risk behaviours |               |                         |   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) | Remarks   |
| All STI patients  | 249           | 3.61 (1.67–5.56)        | Total number of sentinel sites 1<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| Populations with high-risk behaviours |                              |                  |      |      |      |      |      |      |
|---------------------------------------|------------------------------|------------------|------|------|------|------|------|------|
| District                              | Site name                    | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Andamans                              | NGO SEEDS, Port Blair        | FSW              | n/a  | n/a  | 0.50 | 0.40 | n/a  | n/a  |
| Andamans                              | Haddo                        | MSM              | 1.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Andamans                              | Port Blair, GB Pant Hospital | STI              | 0.00 | 1.20 | 0.40 | 0.80 | 1.60 | 3.61 |
| Andamans                              | Port Blair district jail     | STI              | 3.60 | 2.00 | 0.40 | 0.80 | 1.00 | n/a  |

**TABLE SS 2a**  
**Andhra Pradesh (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |           |           |           |
|---|---------------|-------------------------|------------------------|-----------|-----------|-----------|
| Group                                     | Number tested | HIV % positive (90% CI) | 2003-2005              | 2004-2006 | 2005-2007 | 2006-2008 |
| All women                                 | 20,800        | 1.22 (1.10–1.35)        | 1.62                   | 1.60      | 1.40      | 1.30      |
| Urban women                               | 10,400        | 1.37 (1.18–1.55)        |                        |           |           |           |
| Rural women                               | 10,400        | 1.08 (0.91–1.24)        |                        |           |           |           |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |   |                  |      |      |      |      |      |      |
|---------------|---|------------------|------|------|------|------|------|------|
| District      | Site name                               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Adilabad      | Adilabad District Headquarters Hospital | ANC              | 0.75 | 0.75 | 1.75 | 0.50 | 1.50 | 1.75 |
| Adilabad      | Area hospital, Mancherla                | ANC (R)          | 1.50 | 0.25 | 1.00 | 0.25 | 1.75 | 1    |
| Anantapur     | Ananthapur Medical College              | ANC              | 1.25 | 1.75 | 1.75 | 2.25 | 1.75 | 1.5  |
| Anantapur     | Area hospital, Guntakal                 | ANC (R)          | 0.75 | 1.25 | 1.00 | 0.50 | 0.25 | 0.25 |
| Chittoor      | Chittoor District Headquarters Hospital | ANC              | 0.00 | 1.25 | 1.25 | 0.25 | 1.00 | 1.5  |
| Chittoor      | Area hospital, Srikalahasti             | ANC (R)          | 1.50 | 2.00 | 2.00 | 0.50 | 0.25 | 1.75 |
| Cuddapah      | Cuddapah DH                             | ANC              | 2.50 | 2.75 | 0.75 | 1.50 | 1.25 | 2    |
| Cuddapah      | Area hospital, Rajampeta                | ANC (R)          | 1.25 | 1.25 | 0.50 | 1.75 | 0.50 | 2.5  |
| East Godavari | Kakinada Rangaraya Medical College      | ANC              | 2.50 | 3.00 | 2.75 | 1.25 | 2.00 | 2.5  |
| East Godavari | Area hospital, Ramachandrapuram         | ANC (R)          | 3.75 | 1.75 | 2.25 | 2.25 | 1.75 | 0.5  |
| Guntur        | PHCs Guntur (New 07)                    | ANC - PHC        | n/a  | n/a  | n/a  | n/a  | 1.52 | n/a  |
| Guntur        | Guntur Medical College                  | ANC              | 3.75 | 3.50 | 3.00 | 2.25 | 1.75 | 3.75 |
| Guntur        | Area hospital,                          | ANC (R)          | 2.76 | 1.50 | 2.50 | 1.25 | 2.25 | 2.5  |





| ANC attendees |  |            |      |      |      |      |      |      |
|---------------|--|------------|------|------|------|------|------|------|
|               | Narsorapet                                     |            |      |      |      |      |      |      |
| Guntur        | PHC, Pedanandipadu (New 08)                    | ANC (R)    | n/a  | n/a  | n/a  | n/a  | n/a  | 1.25 |
| Hyderabad     | St Theresa Hospital (New 07)                   | ANC - Pvt. | n/a  | n/a  | n/a  | n/a  | 1.00 | 1.5  |
| Hyderabad     | Hyderabad Gandhi Medical College               | ANC        | 1.00 | 0.75 | 2.00 | 2.00 | 1.50 | 0.75 |
| Karimnagar    | Karimnagar DH                                  | ANC        | 2.00 | 3.50 | 2.25 | 0.50 | 1.00 | 1.5  |
| Karimnagar    | Area hospital, Jagtial                         | ANC (R)    | 2.01 | 1.50 | 0.57 | 1.50 | 2.00 | 1.5  |
| Khammam       | Area hospital, Kothagudem                      | ANC        | 1.50 | 2.00 | 3.50 | 2.75 | 2.25 | 1.5  |
| Khammam       | Area hospital, Bhadrachalam                    | ANC (R)    | 1.50 | 2.00 | 3.50 | 2.75 | 0.25 | 1    |
| Khammam       | PHCs Khammam (New 07)                          | ANC - PHC  | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |
| Khammam       | PHC, Julurupadu (New 08)                       | ANC (R)    | n/a  | n/a  | n/a  | n/a  | n/a  | 0.75 |
| Krishna       | Machilipatnam DH                               | ANC        | 1.75 | 2.25 | 2.00 | 1.75 | 2.25 | 1.25 |
| Krishna       | Area hospital, Nuzividu                        | ANC (R)    | 1.00 | 1.50 | 1.50 | 1.27 | 3.50 | 0.5  |
| Krishna       | St. Ann's Hospital/ American Hospital (New 07) | ANC - Pvt. | n/a  | n/a  | n/a  | n/a  | 0.00 | 0.25 |
| Kurnool       | Kurnool Medical College                        | ANC        | 0.50 | 0.75 | 1.50 | 0.75 | 1.00 | 1.5  |
| Kurnool       | Women and Child Hospital, Adoni                | ANC (R)    | 0.25 | 0.25 | 0.00 | 1.00 | 0.00 | 1    |
| Mahbubnagar   | Mehboobnagar DH                                | ANC        | 0.25 | 0.75 | 0.25 | 3.02 | 0.75 | 1.75 |
| Mahbubnagar   | Area hospital, Gadwal                          | ANC (R)    | 0.50 | 0.75 | 0.25 | 0.75 | 0.00 | 0.5  |
| Medak         | Sangareddy DH                                  | ANC        | 0.50 | 1.00 | 2.00 | 2.00 | 0.25 | 2.25 |
| Medak         | CHC, Narsapur                                  | ANC (R)    | 0.00 | 0.50 | 0.72 | 1.50 | 1.50 | 1    |
| Nalgonda      | Nalgonda DH                                    | ANC        | 1.50 | 2.25 | 2.75 | 2.00 | 0.75 | 1.5  |
| Nalgonda      | Area hospital, Bhongir                         | ANC (R)    | 0.75 | 0.75 | 1.00 | 1.00 | 1.00 | 1.25 |
| Nellore       | Nellore GMH Hospital                           | ANC        | 2.50 | 2.75 | 1.50 | 2.00 | 2.25 | 0.5  |
| Nellore       | Area hospital, Kavali                          | ANC (R)    | 0.50 | 2.25 | 0.75 | 1.50 | 0.75 | 1.5  |
| Nizamabad     | PHCs Nizamabad (New 07)                        | ANC - PHC  | n/a  | n/a  | n/a  | n/a  | 0.25 | n/a  |
| Nizamabad     | Nizamabad DH                                   | ANC        | 1.00 | 2.25 | 0.75 | 0.50 | 0.75 | 0.25 |
| Nizamabad     | Area hospital, Kamareddy                       | ANC (R)    | 1.00 | 1.75 | 2.50 | 3.00 | 1.26 | 0.75 |
| Nizamabad     | CHC, Madnoor (New 08)                          | ANC (R)    | n/a  | n/a  | n/a  | n/a  | n/a  | 0.5  |
| Prakasam      | PHCs Prakasam (New 07)                         | ANC - PHC  | n/a  | n/a  | n/a  | n/a  | 1.00 | n/a  |
| Prakasam      | Ongole Maternal and Child Health Hospital      | ANC        | 3.00 | 4.00 | 2.50 | 3.02 | 1.75 | 1.5  |
| Prakasam      | Area hospital, Chirala                         | ANC (R)    | 2.50 | 1.75 | 3.25 | 2.25 | 1.25 | 1    |
| Prakasam      | PHC, Santhanuthalapadu (New 08)                | ANC (R)    | n/a  | n/a  | n/a  | n/a  | n/a  | 0.75 |
| Rangareddi    | Rangareddy DH                                  | ANC        | 0.50 | 0.50 | 1.75 | 1.25 | 0.50 | 0.5  |



| ANC attendees |                                       |            |      |      |      |      |      |      |
|---------------|---------------------------------------|------------|------|------|------|------|------|------|
| Srikakulam    | Srikakulam DH                         | ANC        | 1.00 | 4.00 | 1.50 | 1.75 | 0.25 | 0.75 |
| Srikakulam    | CHC, Tekkali                          | ANC (R)    | 0.75 | 1.00 | 0.25 | 1.02 | 0.25 | 0    |
| Visakhapatnam | Apurva Hospital, Seetaampeta (New 07) | ANC - Pvt. | n/a  | n/a  | n/a  | n/a  | 0.39 | 0.25 |
| Visakhapatnam | Ankapalli DH                          | ANC        | 1.00 | 1.50 | 2.50 | 0.50 | 0.25 | 1    |
| Visakhapatnam | CHC, Aganampudi                       | ANC (R)    | 2.25 | 0.75 | 0.50 | 0.25 | 0.50 | 0.5  |
| Vizianagaram  | Vizianagaram DH                       | ANC        | 1.25 | 1.75 | 1.25 | 1.25 | 1.00 | 1.25 |
| Vizianagaram  | Area hospital, Parvathipuram          | ANC (R)    | 1.00 | 0.50 | 2.00 | 0.50 | 0.25 | 0.5  |
| Warangal      | GMH, Hanumakonda                      | ANC        | 1.50 | 2.50 | 2.50 | 0.75 | 0.50 | 1    |
| Warangal      | Area hospital, Jangaon                | ANC (R)    | 1.00 | 1.25 | 0.75 | 0.25 | 0.25 | 0.75 |
| West Godavari | PHCs West Godavari (New 07)           | ANC - PHC  | n/a  | n/a  | n/a  | n/a  | 2.25 | n/a  |
| West Godavari | Eluru DH                              | ANC        | 1.00 | 1.25 | 0.75 | 0.25 | 2.01 | 1.75 |
| West Godavari | CHC, Bhimavaram                       | ANC (R)    | 2.53 | 2.00 | 3.00 | 1.76 | 1.25 | 3.75 |
| West Godavari | PHC, Ganapavaram (New 08)             | ANC (R)    | n/a  | n/a  | n/a  | n/a  | n/a  | 0.75 |

**TABLE SS 2b**

**Andhra Pradesh (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         | Remarks   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) |   |
| Female sex workers  | 2938          | 11.47 (10.50–12.44)     | Total number of sentinel sites 20<br>5 sites (≥75% sample size) had prevalence ≥5%<br>11 sites (≥75% sample size) had prevalence ≥10% |
| Injecting drug users  | 492           | 6.91 (5.03–8.79)        |   |
| Men who have sex with men                                   | 1240          | 22.10 (20.16–24.03)     |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Andhra Pradesh                        |  |                  |      |      |      |      |       |       |
|---------------------------------------|--|------------------|------|------|------|------|-------|-------|
| Populations with high-risk behaviours |  |                  |      |      |      |      |       |       |
| District                              | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007  | 2008  |
| Adilabad                              | AIRTDS, Mancherial (New 07)                        | FSW              | n/a  | n/a  | n/a  | n/a  | 4.60  | 16.94 |
| East Godavari                         | East Godavari                                      | FSW              | 45.2 | 40.8 | 26.8 | 9.2  | 15.60 | 17.96 |
| Guntur                                | Needs Society, Chilakaluripet, Guntur              | FSW              | n/a  | 14.4 | 13.2 | 6    | 12.80 | 8.05  |
| Hyderabad                             | Hyderabad  | FSW              | 16   | 10   | 12   | 9.6  | 7.23  | 14.81 |
| Khammam                               | JAGRUTI (New 07)                                   | FSW              | n/a  | n/a  | n/a  | n/a  | 15.60 | 26.72 |
| Kurnool                               | Parameswari, Kurnool                               | FSW              | 8.8  | 10   | 3.2  | 2.41 | 3.61  | 4.82  |
| Nalgonda                              | ANKITA (New 07)                                    | FSW              | n/a  | n/a  | n/a  | n/a  | 10.00 | 8.68  |
| Prakasam                              | Lakshmi Development Society, Ongle, Prakasam       | FSW              | 24.4 | 10.8 | 7.2  | 4.4  | 7.20  | 6.88  |
| Srikakulam                            | Swageti Project, Youth Club of Bejjipuram (New 07) | FSW              | n/a  | n/a  | n/a  | n/a  | 6.00  | 4.12  |



| Andhra Pradesh |  |                |       |      |       |       |       |       |
|----------------|--|----------------|-------|------|-------|-------|-------|-------|
| Visakhapatnam  | Priyadarshini Service Organization, Vishakhapatnam | FSW            | 12.8  | 14   | 15.6  | 10.8  | 8.80  | 9.27  |
| Warangal       | Warangal   | FSW            | 12.8  | 18.8 | 12.8  | 8.84  | n/a   | 4.82  |
| West Godavari  | Action for Development, Bhimavaram (New 07)        | FSW            | n/a   | n/a  | n/a   | n/a   | 16.47 | 14.11 |
| Chittoor       | PASS, Tirupati (New 07)                            | IDU            | n/a   | n/a  | n/a   | n/a   | 3.85  | 9.5   |
| Visakhapatnam  | Priyadarsini Service Organization (New 07)         | IDU            | n/a   | n/a  | n/a   | n/a   | 3.60  | 4.4   |
| Adilabad       | Adilep, Nirmal (New 07)                            | MSM (Alliance) | n/a   | n/a  | n/a   | n/a   | 9.95  | 18.4  |
| Anantapur      | HANDS, Gooty (New 07)                              | MSM            | n/a   | n/a  | n/a   | n/a   | 9.20  | 17.6  |
| Hyderabad      | MITRUDU (New 07)                                   | MSM            | n/a   | n/a  | n/a   | n/a   | 41.22 | 41.1  |
| Kadapa         | PAID (New 07)                                      | MSM            | n/a   | n/a  | n/a   | n/a   | 17.20 | 33.2  |
| Krishna        | Saathi, Vijayawada, Krishna                        | MSM            | 13.2  | 16   | 6.45  | 10.25 | 15.45 | 14.5  |
| Warangal       | MARI, Hanmakonda (New 07)                          | MSM            | n/a   | n/a  | n/a   | n/a   | 17.54 | 26.8  |
| Chittoor       | Tirupati SV Medical College and Hospital           | STI            | 37.8  | 31.2 | 22.8  | 16.8  | 17.20 | n/a   |
| East Godavari  | Rajahmundry District Hospital                      | STI            | 25.2  | 16   | 14.8  | 14    | 18.80 | n/a   |
| Hyderabad      | Hyderabad Osmania Medical College and Hospital     | STI            | 34.4  | 36   | 32.4  | 36.95 | 28.23 | n/a   |
| Karimnagar     | Area hospital, Ramagundam                          | STI            | 4.8   | 5.6  | 20.4  | 13.2  | 12.40 | n/a   |
| Khammam        | Khammam District Headquarters Hospital             | STI            | 10    | 16   | 31.2  | 26.4  | 11.60 | n/a   |
| Krishna        | Vijayawada GGH                                     | STI            | n/a   | 28.8 | 26.4  | 24.4  | 17.20 | n/a   |
| Kurnool        | Kurnool GGH  | STI            | n/a   | 7.2  | 15.2  | 8.4   | 7.60  | n/a   |
| Medak          | Sangareddy District Hospital                       | STI            | 2     | 6    | 4     | 5.6   | 13.60 | n/a   |
| Prakasam       | Ongole District Hospital                           | STI            | 17.74 | 14.4 | 19.6  | 36.8  | 39.20 | n/a   |
| Visakhapatnam  | Vishakhapatnam Andhra Medical College and Hospital | STI            | 29.72 | 35.6 | 32    | 30    | 34.40 | n/a   |
| Warangal       | Warangal MGM Hospital                              | STI            | n/a   | 31.2 | 23.74 | 30.4  | 16.80 | n/a   |
| Guntur         | Guntur district TB centre                          | TUB            | n/a   | 11   | 16.75 | n/a   | n/a   | n/a   |

**TABLE SS 3a**

**Arunachal Pradesh (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         |
|---|---------------|-------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |
| All women                                 | 1510          | 0.33 (0.09–0.57)        |
| Urban women                               | 1510          | 0.33 (0.09–0.57)        |
| Rural women                               |               |                         |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| ANC attendees       |                                     |                  |      |      |      |      |      |      |
|---------------------|-------------------------------------|------------------|------|------|------|------|------|------|
| District            | Site name                           | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bomdila             |                                     | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Lohit               | Tezu DH                             | ANC              | n/a  | 0.34 | 0.87 | 1.27 | 0    | 0    |
| Lower Dibang Valley | DH Roing, Lower Dibang Valley (New) | ANC              | n/a  | n/a  | n/a  | 0.00 | 0    | 0.56 |
| Lower Subansiri     | Ziro DH                             | ANC              | n/a  | n/a  | n/a  | 0.00 | 0    | n/a  |
| Papum Pare          | RK Mission Hospital, Itanagar       | ANC              | n/a  | n/a  | n/a  | 0.00 | 0    | 0.75 |
| Tezu                | CHC                                 | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Uppur Siang         | Yingkiong DH (New 07)               | ANC              | n/a  | n/a  | n/a  | n/a  | 0    | n/a  |
| West Kameng         | Bomdila DH                          | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0    | 0    |

#### Arunachal Pradesh (2008 summary)

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number Tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 951           | 2.10 (1.34–2.87)        | Total number of sentinel sites 12<br>1 site (≥75% sample size) had prevalence ≥5%<br>1 site (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 393           | 0.0 (0.0–0.0)           |  |
| Injecting drug users  | 429           | 0.23 (-0.15–0.62)       |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Arunachal Pradesh                     |  |                  |      |      |      |      |      |      |
|---------------------------------------|--|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |  |                  |      |      |      |      |      |      |
| District                              | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Lohit                                 | Arun Pali Vidhyapith Society, Tezu (New 08)              | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Papum Pare                            | Turbu Daleh MPC Society, Naharlagun (New 08)             | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Papum Pare                            | TI, Banderdewa   | FSW              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Papum Pare                            | Voluntary Health Association of India, Itanagar (New 09) | IDU              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.49 |
| Papum Pare                            | TI, Naharlagun   | IDU              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Papum Pare                            | Hidden Land Exploration Society (New 07)                 | IDU TI           | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |
| Changlang                             | Changlang DH   | STI              | n/a  | n/a  | n/a  | 1.21 | 0.00 | n/a  |
| East Siang                            | Pasighat General Hospital                                | STI              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.57 |
| Lohit                                 | Tezu DH  | STI              | n/a  | n/a  | n/a  | 2.33 | 0.00 | 0    |
| Papum Pare                            | Naharlagun General Hospital                              | STI              | 0.63 | 1.24 | 2.00 | 0.80 | 1.26 | 0.83 |
| Tawang                                | Tawang DH  | STI              | n/a  | 0.00 | 0.00 | 0.00 | 0.00 | n/a  |
| Tirap                                 | Khonsa DH  | STI              | n/a  | n/a  | n/a  | 0.42 | 0.00 | 0    |
| West Siang                            | Along DH   | STI              | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | n/a  |



**TABLE SS 4a**

**Assam (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 6370          | 0.13 (0.05–0.20)        |                        |
| Urban women                               | 6370          | 0.13 (0.05–0.20)        |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites (≥75% sample size).

| ANC attendees    |   |                  |      |      |      |      |      |      |
|------------------|---|------------------|------|------|------|------|------|------|
| District         | Site name                               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bongaigaon       | Bongaigaon Civil Hospital               | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| Darrang          | Mangaldoi Civil Hospital                | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| DHemaji          | Demaji Civil Hospital                   | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Goalpara         | Goalpara Civil Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Hailakandi       | Hailakandi Civil Hospital               | ANC              | n/a  | n/a  | n/a  | 0.36 | 0.00 | 0    |
| Jorhat           | Jorhat Civil Hospital                   | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 |
| Jorhat           | CHC, Teok                               | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Kamrup           | Mahendra Mohan Chaudhary Civil Hospital | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Karbi Anglong    | Diphu Civil Hospital                    | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.34 | 0    |
| Karimganj        | Karimganj Civil Hospital                | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Lakhimpur        | Lakhimpur Civil Hospital                | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0    |
| Marigaon         | Morigan Civil Hospital                  | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.26 | 0.25 |
| Nagaon           | CHC, Dhing                              | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Nagaon           | Nagaon Civil Hospital                   | ANC              | 0.00 | 0.62 | 0.00 | 0.25 | 0.00 | 0    |
| Nalbari          | Nalbari Civil Hospital                  | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| North Lakhimpur  | CHC, Naobcicha                          | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Sibsagar         | Sibsagar Civil Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Tinsukia         | Tinsukia Civil Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Udalguri/Darrang | Udalguri CHC (New 07)                   | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |



**TABLE SS 4b**

**Assam (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |             |  |
|---|---------------|-------------------------|-------------|--|
| Group   | Number tested | HIV % positive (90% CI) |             | Remarks  |
| All STI patients  | 2086          | 1.05                    | (0.69–1.42) | Total number of sentinel sites 26<br>2 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 2838          | 0.99                    | (0.68–1.29) |  |
| Injecting drug users  | 437           | 5.26                    | (3.51–7.02) |  |
| Men who have sex with men                                   | 242           | 2.48                    | (0.84–4.12) |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Assam                                 |   |                  |      |      |      |      |      |      |  |
|---------------------------------------|---|------------------|------|------|------|------|------|------|--|
| Populations with high-risk behaviours |   |                  |      |      |      |      |      |      |  |
| District                              | Site name                                   | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |  |
| Barpeta                               | Gauhati Youth Society (New 07)              | FSW              | n/a  | n/a  | n/a  | n/a  | 0.89 | 0    |  |
| Barpeta                               | NEVARD                                      | FSW              | n/a  | n/a  | 0.88 | 0.00 | n/a  | n/a  |  |
| Baska/ Nalbari                        | Weavers Development Society (New 07)        | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |  |
| Bongaigaon                            | Nagen Sarmah Memorial Society               | FSW              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |  |
| Bongaigaon                            | Progotishil Janakalayan Samity (New 07)     | FSW              | n/a  | n/a  | n/a  | n/a  | 0.40 | 0    |  |
| Cachar                                | Silchar Nibedita Nari Sangtha               | FSW              | 0.00 | 0.00 | 2.40 | 2.29 | n/a  | n/a  |  |
| Cachar                                | Deshbandhu Club (New 07)                    | FSW              | n/a  | n/a  | n/a  | n/a  | 0.40 | 0.82 |  |
| Darrang                               | North-East Regional Institute of Management | FSW              | n/a  | n/a  | n/a  | 0.40 | 0.39 | 0.88 |  |
| Dibrugarh                             | Socio-Educational Welfare Association       | FSW              | n/a  | n/a  | n/a  | 0.00 | 1.96 | 1.69 |  |
| Goalpara                              | Ramdia Youth Centre (New 07)                | FSW              | n/a  | n/a  | n/a  | n/a  | 0.38 | 0.45 |  |
| Goalpara                              | Society for Appropriate Technology          | FSW              | n/a  | n/a  | 0.00 | 0.00 | n/a  | n/a  |  |
| Golaghat                              | North-East Nature Club                      | FSW              | n/a  | n/a  | n/a  | 0.75 | n/a  | n/a  |  |
| Kamrup                                | Bhoruka Public Welfare Trust                | FSW              | n/a  | n/a  | n/a  | 0.95 | 0.00 | 2.94 |  |
| Marigaon                              | Progoti                                     | FSW              | n/a  | n/a  | n/a  | 0.65 | n/a  | n/a  |  |
| Marigaon                              | Zeal Thrill Friendship Group (New 07)       | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |  |
| Nalbari                               | Nalbari Yubasammanay                        | FSW              | n/a  | 0.00 | 0.00 | 0.00 | n/a  | n/a  |  |
| Nalbari                               | DREESTEE (New 07)                           | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |  |
| Tinsukia                              | Socio-Economic and Development Organization | FSW              | n/a  | n/a  | n/a  | 0.43 | n/a  | n/a  |  |
| Dhubri                                | NEVARD (New 08)                             | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 5.17 |  |
| Jorhat                                | IMPACT NE (New 08)                          | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |  |
| Sibsagar                              | SHAPE (New 08)                              | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |  |
| Sonitpur                              | SNEH (New 08)                               | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |  |



| Assam                  |   |      |      |      |      |      |      |      |
|------------------------|---|------|------|------|------|------|------|------|
| Kamrup                 | Global Organization for Life Development                    | IVDU | n/a  | n/a  | n/a  | 1.18 | 1.90 | 6.42 |
| Kamrup                 | Guwahati AIDS Prevention Society                            | IVDU | 5.56 | 4.48 | 9.84 | n/a  | n/a  | n/a  |
| Sonitpur/Karbi Anglong | DAIPARC   | IVDU | n/a  | n/a  | 7.14 | 4.00 | 2.38 | 4.11 |
| Kamrup                 | Association for Sociocultural and Environmental Development | MSM  | n/a  | n/a  | n/a  | 0.78 | n/a  | n/a  |
| Kamrup                 | Rural Multimedia Publicity and Promotion (New 07)           | MSM  | n/a  | n/a  | n/a  | n/a  | 2.78 | 2.48 |
| Barpeta                | Barpeta Civil Hospital                                      | STI  | n/a  | n/a  | n/a  | 0.40 | 0.00 | 0    |
| Cachar                 | Silchar Medical College                                     | STI  | 0.00 | 2.65 | 2.36 | 2.00 | 3.60 | 2.26 |
| Dibrugarh              | Dibrugarh Assam Medical College                             | STI  | 0.80 | 0.80 | 0.89 | 0.40 | 0.80 | 1.65 |
| Dhubri                 | Dhubri Civil Hospital                                       | STI  | 1.20 | 0.00 | 0.00 | 0.40 | 0.40 | 0.51 |
| Golaghat               | Golaghat Civil Hospital                                     | STI  | n/a  | n/a  | n/a  | 1.20 | 0.80 | 0.4  |
| Kamrup                 | Guwahati Medical College, Guwahati                          | STI  | 1.72 | 1.34 | 4.40 | 1.82 | 1.75 | 3.6  |
| Kokrajhar              | Kokrajhar Civil Hospital                                    | STI  | n/a  | n/a  | n/a  | 0.50 | 0.39 | 0.86 |
| North Cachar Hills     | Haflong Civil Hospital                                      | STI  | n/a  | n/a  | n/a  | 0.50 | 0.50 | 0    |
| Sonitpur               | Kanak Lata Civil Hospital Tezpur                            | STI  | 1.20 | 0.00 | 0.40 | 2.00 | 0.00 | 0    |

**TABLE SS 5a**  
**Bihar (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 8693          | 0.31 (0.21–0.41)        |                        |  |
| Urban women                               | 8693          | 0.31 (0.21–0.41)        |                        |  |
| Rural women                               |               |                         |                        |  |
|   |               |                         |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                           |                  |        |                       |      |      |      |      |
|---------------|---------------------------|------------------|--------|-----------------------|------|------|------|------|
| District      | Site name                 | Population group | 2003   | 2004                  | 2005 | 2006 | 2007 | 2008 |
|               |                           |                  | Araria | Araria Sadar Hospital | ANC  | 0.00 | 0.00 | 1.75 |
| Aurangabad    | Aurangabad Sadar Hospital | ANC              | n/a    | n/a                   | n/a  | 0.50 | 0.00 | 0    |
| Banka         | Banka Sadar Hospital      | ANC              | n/a    | n/a                   | n/a  | 0.75 | 1.23 | 0.25 |
| Begusarai     | Begusarai Sadar Hospital  | ANC              | 0.25   | 0.50                  |      | 0.50 | 0.50 | 0    |





| ANC attendees      |  |     |      |      |      |      |      |      |
|--------------------|--|-----|------|------|------|------|------|------|
| Bhagalpur          | Bhagalpur Jawahar Lal Nehru Medical College Hospital | ANC | 0.00 | 0.25 | 0.50 | 0.25 | 0.00 | 0    |
| Darbhanga          | Laheerisarai Darbhanga Medical College Hospital      | ANC | n/a  | n/a  | n/a  | 0.25 | 0.25 | 1    |
| Khagaria           | Khagaria Sadar Hospital                              | ANC | n/a  | n/a  | n/a  | 0.00 | 0.25 | n/a  |
| Kishanganj         | Mata Gujri Memorial Medical College Hospital         | ANC | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.25 |
| Lakhisarai         | Lakhisarai Sadar Hospital                            | ANC | n/a  | n/a  | n/a  | 1.00 | 0.50 | 0.33 |
| Madhepura          | Madhepura Sadar Hospital                             | ANC | n/a  | n/a  | n/a  | 0.58 | 0.00 | 0    |
| Madhubani          | Madhubani Sadar Hospital                             | ANC | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.5  |
| Muzaffarpur        | Muzaffarpur Sri Krishna Medical College Hospital     | ANC | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0    |
| Nalanda            | Biharsharif Sadar Hospital                           | ANC | n/a  | n/a  | n/a  | 0.25 | 0.25 | 0    |
| Nawada             | Nawada Sadar Hospital                                | ANC | n/a  | n/a  | n/a  | 0.25 | 0.50 | 0.75 |
| Pashchim Champaran | Betiah MJK Hospital                                  | ANC | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Patna              | Patna Patna Medical College Hospital                 | ANC | 0.50 | 0.75 | 0.00 | 0.75 | 1.00 | 1    |
| Purba Champaran    | Raxaul Duncan Hospital                               | ANC | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.5  |
| Rohtas             | Rohtas Sadar Hospital/ Sasaran Sadar Hospital        | ANC | 0.00 | 0.00 | 0.00 | 0.50 | 0.50 | 0    |
| Saharsa            | Saharsa Sadar Hospital                               | ANC | n/a  | n/a  | n/a  | 1.14 | 0.00 | 0.25 |
| Samastipur         | Samastipur Sadar Hospital                            | ANC | n/a  | n/a  | n/a  | 0.75 | 0.50 | 0    |
| Sheohar            | Sheohar Sadar Hospital                               | ANC | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Sitamarhi          | Sitamarhi Sadar Hospital                             | ANC | n/a  | n/a  | n/a  | 0.50 | 2.20 | 0.75 |
| Vaishali           | Hajipur Sadar Hospital                               | ANC | n/a  | n/a  | n/a  | 0.50 | 0.75 | 0    |



**TABLE SS 5b**

**Bihar (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |             |  |
|---|---------------|-------------------------|-------------|--|
| Group   | Number Tested | HIV % positive (90% CI) |             | Remarks  |
| All STI patients  | 5492          | 1.24                    | (0.99–1.48) | Total number of sentinel sites 42              |
| Female sex workers  | 3730          | 2.92                    | (2.47–3.38) | 6 sites (≥75% sample size) had prevalence ≥5%  |
| Injecting drug users  | 495           | 5.45                    | (3.78–7.13) | 2 sites (≥75% sample size) had prevalence ≥10% |
| Men who have sex with men                                   | 244           | 1.64                    | (0.30–2.98) |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Bihar                                 |  |                  |      |      |       |       |      |      |
|---------------------------------------|--|------------------|------|------|-------|-------|------|------|
| Populations with high-risk behaviours |  |                  |      |      |       |       |      |      |
| District                              | Site name  | Population group | Year |      |       |       |      |      |
|                                       |  |                  | 2003 | 2004 | 2005  | 2006  | 2007 | 2008 |
| Araria                                | Forbesganj   | FSW              | n/a  | n/a  | n/a   | 0.80  | 0.80 | 0    |
| Begusarai                             | Begusarai  | FSW              | n/a  | n/a  | n/a   | 0.00  | 0.00 | 2.8  |
| Gaya                                  | Gaya Chowk Bazar   | FSW              | n/a  | n/a  | n/a   | 0.00  | 2.99 | 1.2  |
| Katihar                               | Katihar Cooley Para  | FSW              | n/a  | n/a  | n/a   | 5.20  | 9.64 | 10   |
| Kishanganj                            | Bishanpur, Kishanganj (New 07)   | FSW              | n/a  | n/a  | n/a   | n/a   | 0.95 | 3.2  |
| Madhubani                             | Madhubani  | FSW              | n/a  | n/a  | n/a   | 0.40  | 2.40 | 0    |
| Munger                                | Munger Sharwan Bazar   | FSW              | n/a  | 0.40 | 0.40  | 0.40  | 6.40 | 2.41 |
| Muzaffarpur                           | Muzaffarpur Chaturbhaj Asthan/Muzaffarpur Shri Krishana Medical College Hospital | FSW              | 4.80 | 0.00 | 0.80  | 0.00  | 0.40 | 2    |
| Pashchim Champaran                    | Betiah Naznin Chowk  | FSW              | n/a  | n/a  | 0.00  | 1.00  | 3.60 | 2.4  |
| Purnia                                | Gulab Bagh, Purnia   | FSW              | n/a  | n/a  | 27.27 | 15.56 | 5.16 | 6    |
| Rohtas                                | Sasaram Beda   | FSW              | n/a  | n/a  | n/a   | 1.20  | 6.40 | 5.6  |
| Bhagalpur                             | Bhagalpur (New 08)   | FSW              | n/a  | n/a  | n/a   | n/a   | n/a  | 1.2  |
| Bhojpur                               | Ara (New 08)   | FSW              | n/a  | n/a  | n/a   | n/a   | n/a  | 6.8  |
| Nalanda                               | Biharsharif (New 08)   | FSW              | n/a  | n/a  | n/a   | n/a   | n/a  | 0    |
| Saran                                 | Chhapra (New 08)   | FSW              | n/a  | n/a  | n/a   | n/a   | n/a  | 0    |
| Kaimur (Bhabua)                       | Bhabhua  | IDU              | n/a  | n/a  | n/a   | 0.40  | 0.80 | 10.4 |
| Patna                                 | Patna  | IDU              | n/a  | n/a  | n/a   | 0.00  | 0.67 | 0.41 |
| Patna                                 | Patna  | MSM              | 1.60 | 1.60 | 0.40  | 0.40  | 0.00 | 1.64 |
| Saran                                 | Chhapra  | MSM              | n/a  | n/a  | n/a   | 0.00  | 0.00 | n/a  |
| Banka                                 | Banka Sadar Hospital   | STI              | n/a  | n/a  | n/a   | 0.40  | 0.00 | 0    |
| Bhagalpur                             | Bhagalpur Jawhar Lal Nehru Medical College Hospital                              | STI              | 0.40 | 0.40 | 0.00  | 0.00  | 0.00 | 1.61 |
| Bhojpur                               | Ara Sadar Hospital   | STI              | 0.00 | 0.00 | 0.40  | 0.50  | 0.80 | 0.8  |
| Buxar                                 | Buxar Sadar Hospital   | STI              | n/a  | n/a  | n/a   | 0.40  | 0.00 | 0    |



| Bihar              |  |     |      |      |      |      |       |      |
|--------------------|--|-----|------|------|------|------|-------|------|
| Darbhanga          | Laheriasarai Darbanga Medical College Hospital     | STI | 0.40 | 2.00 | 0.40 | 0.00 | 0.00  | 0.4  |
| Gaya               | Gaya Anurag Narain Magadh Medical College Hospital | STI | 0.40 | 2.80 | 0.00 | 0.40 | 0.85  | 0    |
| Gopalganj          | Gopalganj Sadar Hospital                           | STI | n/a  | n/a  | n/a  | 1.60 | 0.00  | 0.4  |
| Jamui              | Jamui Sadar Hospital                               | STI | n/a  | n/a  | n/a  | 2.00 | 0.67  | 0.4  |
| Jehanabad          | Jehanabad Sadar Hospital                           | STI | n/a  | n/a  | n/a  | 1.20 | 1.1.8 | 0.4  |
| Kaimur (Bhabua)    | Bhabhua Sadar Hospital                             | STI | n/a  | n/a  | n/a  | 0.00 | 0.65  | 0    |
| Katihar            | Katihar Sadar Hospital                             | STI | 9.20 | 2.40 | 0.00 | 2.50 | 0.00  | 0.4  |
| Khagaria           | Khagaria Sadar Hospital                            | STI | n/a  | n/a  | n/a  | 0.00 | 0.00  | n/a  |
| Kishanganj         | Sadar Hospital, Kishanganj                         | STI | n/a  | n/a  | 0.00 | 0.00 | 3.20  | 1.2  |
| Madhubani          | Madhubani Sadar Hospital                           | STI | n/a  | n/a  | n/a  | 0.00 | 0.80  | 5.2  |
| Muzaffarpur        | Muzaffarpur Sri Krishna Medical College Hospital   | STI | 0.00 | 0.40 | 0.00 | 0.40 | 0.00  | 2.02 |
| Nalanda            | Biharsharif Sadar Hospital                         | STI | n/a  | n/a  | n/a  | 1.33 | 0.47  | 0    |
| Pashchim Champaran | Betiah MJK Hospital                                | STI | n/a  | n/a  | n/a  | 1.20 | 1.20  | 3.2  |
| Patna              | Patna Patna Medical College Hospital               | STI | 1.60 | 0.40 | 0.80 | 3.20 | 2.00  | 1.2  |
| Purba Champaran    | Raxaul Duncan Hospital                             | STI | 7.20 | 2.13 | 3.07 | 1.60 | 2.67  | n/a  |
| Purnia             | Purnia Sadar Hospital                              | STI | n/a  | n/a  | n/a  | 0.40 | 0.00  | 2.42 |
| Saran              | Chhapra Sadar Hospital                             | STI | n/a  | n/a  | n/a  | 0.00 | 0.00  | 0    |
| Sitamarhi          | Sitamarhi Sadar Hospital                           | STI | n/a  | n/a  | n/a  | 2.01 | 4.00  | 5.6  |
| Siwan              | Siwan Sadar Hospital                               | STI | n/a  | n/a  | n/a  | 4.76 | 1.10  | 1.6  |
| Supaul             | Supaul Sadar Hospital                              | STI | n/a  | n/a  | n/a  | 0.40 | 0.00  | 0.4  |

TABLE SS 6a

Chandigarh (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 400           | 0.25 (-0.16–0.66)       |                        |  |
| Urban women                               | 400           | 0.25 (-0.16–0.66)       |                        |  |
| Rural women                               |               |                         |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| ANC attendees |                            |                  |      |      |      |      |      |      |
|---------------|----------------------------|------------------|------|------|------|------|------|------|
| District      | Site name                  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Chandigarh    | CHC, PGIMER                | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Chandigarh    | Sector 16 General Hospital | ANC              | 0.50 | 0.50 | 0.00 | 0.25 | 0.25 | 0.25 |
| Chandigarh    | CHC-II, PGIMER             | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 6b**

**Chandigarh (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 485           | 2.89 (1.64–4.14)        | Total number of sentinel sites 7<br>0 sites (≥75% sample size) had prevalence ≥5%<br>1 site (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 701           | 0.57 (0.10–1.04)        |  |
| Injecting drug users  | 250           | 14.40 (10.75–18.05)     |  |
| Men who have sex with men                                   | 250           | 3.20 (1.37–5.03)        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Populations with high-risk behaviours |                            |                  |      |      |      |       |      |      |
|---------------------------------------|----------------------------|------------------|------|------|------|-------|------|------|
| District                              | Site name                  | Population group | 2003 | 2004 | 2005 | 2006  | 2007 | 2008 |
| Chandigarh                            | Chandigarh slums-I         | FSW              | 0.00 | 0.40 | 0.00 | 1.60  | 0.80 | 0    |
| Chandigarh                            | Chandigarh slums-II        | FSW              | 1.20 | 0.80 | 1.20 | 0.00  | 0.00 | 0.4  |
| Chandigarh                            | Chandigarh slums-III       | FSW              | n/a  | 1.20 | 0.80 | 0.40  | 0.40 | 1.49 |
| Chandigarh                            | Chandigarh slums           | IDU              | n/a  | 4.80 | 9.20 | 17.60 | 8.64 | 14.4 |
| Chandigarh                            | Chandigarh slums           | MSM              | n/a  | 1.36 | 1.60 | 4.80  | 3.60 | 3.2  |
| Chandigarh                            | Sector 16 General Hospital | STI              | 0.00 | 2.00 | 0.40 | 0.80  | 0.40 | 2    |
| Chandigarh                            | PGIMER                     | STI              | 1.62 | 1.60 | 1.60 | 2.60  | 0.45 | 3.83 |

**TABLE SS 7a**

**Chhattisgarh (2008 summary)**

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08  |  |       |                |           |      |           |      |           |      |           |      |
|---|----------------|-------------------------|---|--|-------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
| Group                                     | Number tested  | HIV % positive (90% CI) |   |  |       |                |           |      |           |      |           |      |           |      |
| All women                                 | 7126           | 0.41 (0.28–0.53)        | <table border="1"> <caption>Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.43</td> </tr> <tr> <td>2004-2006</td> <td>0.21</td> </tr> <tr> <td>2005-2007</td> <td>0.30</td> </tr> <tr> <td>2006-2008</td> <td>0.44</td> </tr> </tbody> </table> |  | Years | HIV % Positive | 2003-2005 | 0.43 | 2004-2006 | 0.21 | 2005-2007 | 0.30 | 2006-2008 | 0.44 |
| Years                                     | HIV % Positive |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2003-2005                                 | 0.43           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2004-2006                                 | 0.21           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2005-2007                                 | 0.30           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2006-2008                                 | 0.44           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| Urban women                               | 7126           | 0.41(0.28–0.53)         |   |  |       |                |           |      |           |      |           |      |           |      |
| Rural women                               |                |                         |   |  |       |                |           |      |           |      |           |      |           |      |

\* HIV prevalence is given for valid sites (≥75% sample size).



| ANC attendees |                                |                  |        |             |      |      |      |      |
|---------------|--------------------------------|------------------|--------|-------------|------|------|------|------|
| District      | Site name                      | Population group | 2003   | 2004        | 2005 | 2006 | 2007 | 2008 |
|               |                                |                  | Baster | Jagdapur DH | ANC  | 1.26 | 0.00 | 0.00 |
| Bilaspur      | Medical College, Bilaspur      | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.50 | 0    |
| Bilaspur      | Bilaspur                       | ANC (R)          | 1.25   | n/a         | n/a  | n/a  | n/a  | n/a  |
| Bilaspur      | Bilaspur DH                    | ANC              | 0.00   | 0.00        | 0.25 | 0.00 | 0.50 | 0    |
| Bilaspur      | CIMS (New 08)                  | ANC              | n/a    | n/a         | n/a  | n/a  | n/a  | 0    |
| Bilaspur      | SEC Railway Hospital, Bilaspur | ANC              | n/a    | n/a         | n/a  | 0.25 | 0.00 | n/a  |
| Dantewada     | Dantewada DH                   | ANC              | 0.40   | n/a         | 0.75 | 0.75 | 0.25 | 0.75 |
| Dantewada     | CHC, Geedam                    | ANC              | n/a    | n/a         | n/a  | 0.00 | n/a  | n/a  |
| Damtari       | Damtari DH                     | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.00 | 0.25 |
| Durg          | Bhilai Steel Plant Sail        | ANC              | n/a    | n/a         | n/a  | 1.15 | n/a  | 0    |
| Jangir-Champa | Jangir DH                      | ANC              | n/a    | n/a         | n/a  | 0.00 | 1.00 | 0.25 |
| Jashpur       | Jashpur DH                     | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.00 | 0    |
| Kanker        | Kanker DH                      | ANC              | n/a    | n/a         | n/a  | 0.25 | 0.75 | 0.25 |
| Kawardha      | Kawardha DH                    | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.00 | 0.25 |
| Korba         | SECL Gevra                     | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.00 | n/a  |
| Korba         | Korba DH                       | ANC              | n/a    | n/a         | n/a  | n/a  | n/a  | 0.25 |
| Koriya        | Koriya DH                      | ANC              | n/a    | n/a         | n/a  | 0.55 | 0.00 | 1.26 |
| Mahasamund    | Mahasamund DH                  | ANC              | n/a    | n/a         | n/a  | 0.75 | 0.00 | 0.25 |
| Raigarh       | kharsia                        | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.25 | 0    |
| Raigarh       | Raigarh DH                     | ANC              | 2.25   | 0.00        | 0.28 | 0.50 | 0.00 | 1.26 |
| Raigarh       | Raigarh                        | ANC (R)          | 0.00   | n/a         | n/a  | n/a  | n/a  | n/a  |
| Raipur        | Raipur DH                      | ANC              | n/a    | n/a         | n/a  | 0.00 | 0.50 | 1.25 |
| Rajnandgaon   | Rajnandgaon DH                 | ANC              | 0.75   | 0.00        | 0.25 | 0.75 | 0.25 | 0.26 |
| Rajnanga      | Rajnanga                       | ANC (R)          | 0.00   | n/a         | n/a  | n/a  | n/a  | n/a  |
| Surguja       | Surguja DH                     | ANC              | n/a    | n/a         | n/a  | n/a  | n/a  | 0    |

**TABLE SS 7b**  
**Chhattisgarh (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 988           | 2.13 (1.37–2.88)        | Total number of sentinel sites 4<br>1 site ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| Chattishgarh                         |   |                  |      |      |      |      |      |      |
|--------------------------------------|---|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviors |   |                  |      |      |      |      |      |      |
| District                             | Site name                                 | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bilaspur                             | Bilaspur DH/Bilaspur Chhattisgarh Rangers | FSW              | n/a  | n/a  | n/a  | 1.20 | 3.45 | n/a  |
| Bilaspur                             | Mungeli Bilaspur                          | FSW              | n/a  | n/a  | n/a  | 2.09 | 0.00 | n/a  |
| Durg                                 | Bhilai NGO                                | FSW              | n/a  | n/a  | n/a  | 2.14 | n/a  | n/a  |
| Raipur                               | Urla Industrial Area, Raipur              | FSW              | n/a  | n/a  | n/a  | 1.00 | n/a  | n/a  |
| Dantewada                            | NMDC Bachel                               | STI              | n/a  | n/a  | n/a  | 2.76 | 3.33 | n/a  |
| Durg                                 | Durg DH                                   | STI              | 3.60 | 4.00 | 3.50 | 2.85 | 6.40 | 0    |
| Korba                                | Korba DH                                  | STI              | 0.80 | 1.20 | 2.00 | 2.40 | 5.18 | 1.6  |
| Korba                                | NTPC                                      | STI              | n/a  | n/a  | n/a  | 3.79 | n/a  | n/a  |
| Raipur                               | Raipur Pandit JNM Medical College         | STI              | 2.00 | 3.20 | 3.00 | 1.65 | 1.20 | n/a  |
| Raipur                               | RaipurDH                                  | STI              | n/a  | n/a  | n/a  | n/a  | n/a  | 6.56 |
| Sarguja                              | Sarguja DH, Ambikapur                     | STI              | n/a  | n/a  | n/a  | 2.40 | 0.00 | 0.4  |

**TABLE SS 8a**

**Dadra Nagar Haveli (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         |
|---|---------------|-------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |
| All women                                 | 400           | 0.0 (0.0–0.0)           |
| Urban women                               | 400           | 0.0 (0.0–0.0)           |
| Rural women                               |               |                         |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| 2007 summary—ANC attendees |  |                  |      |      |      |      |      |      |
|----------------------------|--|------------------|------|------|------|------|------|------|
| District                   | Site name                                    | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Dadra and Nagar Haveli     | Silvasa Civil Hospital/<br>VB Civil Hospital | ANC              | 0.25 | 0.00 | 0.25 | 0.00 | 0.50 | 0    |
|                            | Khanvel                                      | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 8b**

**Dadra and Nagar Haveli**

| Populations with high-risk behaviours |                          |                  |      |      |      |      |      |      |
|---------------------------------------|--------------------------|------------------|------|------|------|------|------|------|
| District                              | Site name                | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Dadra and Nagar Haveli                | Areas of TI for migrants | MRG              | n/a  | n/a  | 0.00 | n/a  | n/a  | n/a  |



**TABLE SS 9a**  
**Daman and Diu (2008 summary)**

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08  |       |                |           |      |           |      |           |      |           |      |
|---|----------------|-------------------------|---|-------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
| Group                                     | Number tested  | HIV % positive (90% CI) | <table border="1"> <caption>Data for HIV Prevalence Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.33</td> </tr> <tr> <td>2004-2006</td> <td>0.26</td> </tr> <tr> <td>2005-2007</td> <td>0.17</td> </tr> <tr> <td>2006-2008</td> <td>0.00</td> </tr> </tbody> </table> | Years | HIV % Positive | 2003-2005 | 0.33 | 2004-2006 | 0.26 | 2005-2007 | 0.17 | 2006-2008 | 0.00 |
| Years                                     | HIV % Positive |                         |   |       |                |           |      |           |      |           |      |           |      |
| 2003-2005                                 | 0.33           |                         |   |       |                |           |      |           |      |           |      |           |      |
| 2004-2006                                 | 0.26           |                         |   |       |                |           |      |           |      |           |      |           |      |
| 2005-2007                                 | 0.17           |                         |   |       |                |           |      |           |      |           |      |           |      |
| 2006-2008                                 | 0.00           |                         |   |       |                |           |      |           |      |           |      |           |      |
| All women                                 | 800            | 0.38 (0.02–0.73)        |   |       |                |           |      |           |      |           |      |           |      |
| Urban women                               | 800            | 0.38 (0.02–0.73)        |   |       |                |           |      |           |      |           |      |           |      |
| Rural women                               |                |                         |   |       |                |           |      |           |      |           |      |           |      |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

**TABLE SS-9 b**

| Daman and Diu |                      |                  |      |      |      |      |      |      |
|---------------|----------------------|------------------|------|------|------|------|------|------|
| ANC attendees |                      |                  |      |      |      |      |      |      |
| District      | Site name            | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Daman         | Daman Civil Hospital | ANC              | 0.25 | 0.50 | 0.25 | 0    | 0.25 | 0    |
| Diu           | Diu Civil Hospital   | ANC              | 0.46 | 0.25 | 0.00 | 0    | 0.00 | 0.75 |
| Diu           | Kachigam             | ANC (R)          | 0.41 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Diu           | Vanakbar             | ANC (R)          | 0    | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 10a**

**Delhi (2008 summary)**

| *HIV prevalence in antenatal attendees |                |                         | Trends in ANC, 2003–08  |       |                |           |     |           |     |           |     |           |     |
|--|----------------|-------------------------|---|-------|----------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| Group                                  | Number tested  | HIV % positive (90% CI) | <table border="1"> <caption>Data for HIV Prevalence Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.3</td> </tr> <tr> <td>2004-2006</td> <td>0.3</td> </tr> <tr> <td>2005-2007</td> <td>0.2</td> </tr> <tr> <td>2006-2008</td> <td>0.2</td> </tr> </tbody> </table> | Years | HIV % Positive | 2003-2005 | 0.3 | 2004-2006 | 0.3 | 2005-2007 | 0.2 | 2006-2008 | 0.2 |
| Years                                  | HIV % Positive |                         |   |       |                |           |     |           |     |           |     |           |     |
| 2003-2005                              | 0.3            |                         |   |       |                |           |     |           |     |           |     |           |     |
| 2004-2006                              | 0.3            |                         |   |       |                |           |     |           |     |           |     |           |     |
| 2005-2007                              | 0.2            |                         |   |       |                |           |     |           |     |           |     |           |     |
| 2006-2008                              | 0.2            |                         |   |       |                |           |     |           |     |           |     |           |     |
| All women                              | 1997           | 0.20 (0.04–0.36)        |   |       |                |           |     |           |     |           |     |           |     |
| Urban women                            | 1997           | 0.20 (0.04–0.36)        |   |       |                |           |     |           |     |           |     |           |     |
| Rural women                            |                |                         |   |       |                |           |     |           |     |           |     |           |     |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).





| ANC attendees   |  |                         |  |      |      |      |      |
|---|--|-------------------------|--|------|------|------|------|
| District  | Site name  | Population group        | 2003   | 2004 | 2005 | 2006 | 2007 |
| New Delhi   | LHMC   | ANC                     | n/a  | n/a  | n/a  | 0.00 | 0.25 |
| North   | Delhi Kasturba Hospital                            | ANC                     | 0.25   | 0.50 | 0.25 | 0.00 | 0.25 |
| North East  | GTB Hospital                                       | ANC                     | 0.00   | 0.00 | 0.25 | 0.00 | 0.00 |
| North West  | New Delhi Sanjay Gandhi Memorial Hospital, Mongolp | ANC                     | 0.25   | 0.25 | 0.75 | 0.25 | 0.50 |
| South   | Safdarjung Hospital                                | ANC                     | 0.00   | 0.50 | 0.00 | 0.25 | 0.00 |
| Delhi (2008 summary)  |  |                         |  |      |      |      |      |
| *HIV prevalence among populations with high-risk behaviours   |  |                         |  |      |      |      |      |
| Group   | Number tested                                      | HIV % positive (90% CI) | Remarks  |      |      |      |      |
| All STI patients  | 924  | 2.92 (2.01–3.83)        | Total number of sentinel sites 17                |      |      |      |      |
| Female sex workers  | 1244   | 2.17 (1.49–2.85)        | 6 sites (≥ 75% sample size) had prevalence ≥ 5%  |      |      |      |      |
| Injecting drug users  | 500  | 18.60 (15.74–21.46)     | 3 sites (≥ 75% sample size) had prevalence ≥ 10% |      |      |      |      |
| Men who have sex with men                                     | 745  | 7.92 (6.29–9.55)        |  |      |      |      |      |
| * HIV prevalence is given for valid sites (≥75% sample size). |  |                         |  |      |      |      |      |

**TABLE SS 10b**

| Delhi                                 |                        |                  |       |       |       |       |       |      |
|---------------------------------------|------------------------|------------------|-------|-------|-------|-------|-------|------|
| Populations with high-risk behaviours |                        |                  |       |       |       |       |       |      |
| District                              | Site name              | Population group | 2003  | 2004  | 2005  | 2006  | 2007  | 2008 |
| North                                 | IMDT                   | FSW              | n/a   | n/a   | n/a   | 7.33  | 9.96  | 5.69 |
| North                                 | Shakti Vahini          | FSW              | n/a   | 8.00  | 8.43  | 14.00 | n/a   | n/a  |
| North East                            | Jagriti Yuva Manch     | FSW              | n/a   | n/a   | 1.60  | 1.60  | 1.60  | 0.8  |
| North West                            | GDS Society            | FSW              | n/a   | n/a   | n/a   | 1.20  | 0.40  | 2.4  |
| South West                            | ALAMB                  | FSW              | n/a   | n/a   | n/a   | 0.40  | 0.00  | 1.61 |
| West                                  | MRYDO                  | FSW              | 1.61  | 1.20  | 1.20  | 0.80  | 0.80  | 0.4  |
| South West                            | SPYM                   | IDU              | n/a   | n/a   | n/a   | 1.20  | 0.39  | 6.8  |
| South West                            | New Delhi DDU Hospital | IDU              | 14.40 | n/a   | n/a   | n/a   | n/a   | n/a  |
| North                                 | Sharan                 | IVDU             | n/a   | 17.60 | 22.80 | 18.80 | 20.00 | 30.4 |
| North East                            | SAHARA                 | MSM              | 27.42 | 6.67  | 39.60 | 32.80 | 30.00 | n/a  |



|            |                     |     |      |      |       |      |      |      |
|------------|---------------------|-----|------|------|-------|------|------|------|
| North West | ARADHYA             | MSM | n/a  | n/a  | n/a   | 2.00 | 3.20 | 7.29 |
| West       | Akansha Samiti      | MSM | n/a  | n/a  | 1.20  | 2.00 | 2.00 | n/a  |
| Central    | BARD (New 08)       | MSM | n/a  | n/a  | n/a   | n/a  | n/a  | 7.6  |
| West       | Mitr (New 08)       | MSM | n/a  | n/a  | n/a   | n/a  | n/a  | 8.87 |
| Central    | LNJP Hospital       | STI | 7.20 | 9.20 | 9.20  | 8.80 | 5.60 | 3.14 |
| East       | ESI Hospital        | STI | 7.77 | 8.46 | 9.09  | 2.00 | 1.79 | 2.99 |
| North East | GTB Hospital        | STI | 5.85 | 7.50 | 10.00 | 6.40 | 5.31 | n/a  |
| South      | Safdarjung Hospital | STI | 2.40 | 4.80 | 3.20  | 2.00 | 5.20 | 1.6  |
| West       | DDU                 | STI | n/a  | n/a  | n/a   | 1.20 | 3.27 | 4    |

**TABLE SS 11a**  
**Goa (2008 summary)**

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08   |       |                |           |     |           |     |           |     |           |     |
|---|----------------|-------------------------|--|-------|----------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| Group                                     | Number tested  | HIV % positive (90% CI) |  |       |                |           |     |           |     |           |     |           |     |
| All women                                 | 1180           | 0.68 (0.29–1.07)        | <table border="1"> <caption>Data for Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.4</td> </tr> <tr> <td>2004-2006</td> <td>0.6</td> </tr> <tr> <td>2005-2007</td> <td>0.3</td> </tr> <tr> <td>2006-2008</td> <td>0.4</td> </tr> </tbody> </table> | Years | HIV % Positive | 2003-2005 | 0.4 | 2004-2006 | 0.6 | 2005-2007 | 0.3 | 2006-2008 | 0.4 |
| Years                                     | HIV % Positive |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2003-2005                                 | 0.4            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2004-2006                                 | 0.6            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2005-2007                                 | 0.3            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2006-2008                                 | 0.4            |                         |  |       |                |           |     |           |     |           |     |           |     |
| Urban women                               | 1180           | 0.68 (0.29–1.07)        |  |       |                |           |     |           |     |           |     |           |     |
| Rural women                               |                |                         |  |       |                |           |     |           |     |           |     |           |     |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC Attendees |                                   |                  |      |      |      |      |      |      |
|---------------|-----------------------------------|------------------|------|------|------|------|------|------|
| District      | Site name                         | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| North Goa     | Mapusa Asilo Hospital             | ANC              | 0.25 | 1.00 | 0.00 | 0.75 | 0.25 | 0.25 |
| North Goa     | Ponda Community Health Centre     | ANC              | 0.75 | 1.25 | 0.00 | 0.25 | 0.00 | 0.51 |
| North Goa     | Curchore                          | ANC(R)           | 1.12 | n/a  | n/a  | n/a  | n/a  | n/a  |
| North Goa     | Valpoi/P                          | ANC(R)           | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| South Goa     | Hospicio Hospital, Margao (New08) | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 1.29 |

**TABLE SS-11 b**  
**Goa (2008 Summary)**

| *HIV Prevalence of populations with high-risk behaviors |               |                           |  |
|---|---------------|---------------------------|--|
| Group   | Number Tested | HIV % Positive & 90% C.I. | Remarks  |
| All STD patients  | 494           | 4.45 (2.93 , 5.98)        | Total number sentinel sites 4<br>4 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers                                      | 250           | 6.40 (3.85 , 8.95)        |  |
| Injecting drug users                                    |               |                           |  |
| Men who have sex with men                               | 250           | 6.40 (3.85 , 8.95)        |  |

\* HIV Prevalence is given for valid sites ( $\geq 75\%$  sample size)



| Goa                                   |   |                  |       |       |       |      |      |      |
|---------------------------------------|---|------------------|-------|-------|-------|------|------|------|
| Populations with high-risk behaviours |   |                  |       |       |       |      |      |      |
| District                              | Site name   | Population group | 2003  | 2004  | 2005  | 2006 | 2007 | 2008 |
| South Goa                             | Desterro Eves Mahila Mandal, Vasco da Gama (New 08) | FSW              | n/a   | n/a   | n/a   | n/a  | n/a  | 6.4  |
| Baina                                 | Vasco D' Gama                                       | FSW              | 30.15 | n/a   | n/a   | n/a  | n/a  | n/a  |
| South Goa                             | Vasco The Humsafar Trust                            | MSM              | n/a   | 1.68  | 4.9   | 4.8  | 7.93 | 6.4  |
| North Goa                             | Bambolim Goa Medical College                        | STI              | n/a   | 12.04 | 16.45 | 8.85 | 8    | 6.05 |
| Panaji                                | Hospicio Hospital                                   | STI              | 15.18 | n/a   | n/a   | n/a  | n/a  | n/a  |
| South Goa                             | Margao Hospicio Hospital                            | STI              | 14.29 | 19.51 | 11.05 | 8.4  | 3.2  | 2.85 |
| South Goa                             | Margao  |                  | 9.09  | n/a   | n/a   | n/a  | n/a  | n/a  |

**TABLE SS 12a**  
**Gujarat (2008 summary)**

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08   |       |                |           |     |           |     |           |     |           |     |
|---|----------------|-------------------------|--|-------|----------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| Group                                     | Number tested  | HIV % positive (90% CI) |  |       |                |           |     |           |     |           |     |           |     |
| All women                                 | 9046           | 0.39 (0.28–0.49)        | <table border="1"> <caption>Data for Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.3</td> </tr> <tr> <td>2004-2006</td> <td>0.4</td> </tr> <tr> <td>2005-2007</td> <td>0.5</td> </tr> <tr> <td>2006-2008</td> <td>0.5</td> </tr> </tbody> </table> | Years | HIV % positive | 2003-2005 | 0.3 | 2004-2006 | 0.4 | 2005-2007 | 0.5 | 2006-2008 | 0.5 |
| Years                                     | HIV % positive |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2003-2005                                 | 0.3            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2004-2006                                 | 0.4            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2005-2007                                 | 0.5            |                         |  |       |                |           |     |           |     |           |     |           |     |
| 2006-2008                                 | 0.5            |                         |  |       |                |           |     |           |     |           |     |           |     |
| Urban women                               | 9046           | 0.39 (0.28–0.49)        |  |       |                |           |     |           |     |           |     |           |     |
| Rural women                               |                |                         |  |       |                |           |     |           |     |           |     |           |     |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                                |                  |      |      |      |      |      |      |
|---------------|--------------------------------|------------------|------|------|------|------|------|------|
| District      | Site name                      | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Ahmedabad     | VS Hospital, Ahmedabad         | ANC              | 0.75 | 0.25 | 0.00 | 0.00 | 0.00 | 0.25 |
| Amreli        | Civil Hospital, Amreli         | ANC              | n/a  | n/a  | n/a  | 0.00 | 1.00 | 0.52 |
| Anand         | Krishna Hospital, Karamsad     | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.25 | n/a  |
| Anand         | Civil Hospital, Petlad         | ANC              |      |      |      |      |      | 0.25 |
| Banas Kantha  | Civil Hospital, Palanpur       | ANC              | n/a  | n/a  | n/a  | 1.00 | 0.00 | 0    |
| Bharuch       | Civil Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.75 | 0.00 | 0    |
| Bhavnagar     | Sir T Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.75 | 0.00 | 0    |
| Dohad         | Government Hospital            | ANC              | n/a  | n/a  | n/a  | 1.38 | 0.75 | 1.5  |
| Gandhinagar   | Civil Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.00 | 0.75 |
| Jamnagar      | Civil Hospital, Jam Khambhalia | ANC              | n/a  | n/a  | n/a  | 0.50 | 1.00 | 0    |
| Junagadh      | Junagadh DH                    | ANC              | 0.25 | 0.00 | 0.25 | 0.50 | 0.25 | 0.25 |
| Kachchh       | Bhuj DH                        | ANC              | 0.50 | 0.25 | 0.00 | 0.50 | 0.00 | 0    |



| ANC attendees |  |         |      |      |      |      |      |      |
|---------------|--|---------|------|------|------|------|------|------|
| Kheda         | Civil Hospital, Nadiad   | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.50 | 0    |
| Mahesana      | Mahesana DH  | ANC     | 1.00 | 0.25 | 1.00 | 1.00 | 0.00 | 1.5  |
| Narmada       | Ref. Hospital, Raipjpla  | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0.25 |
| Navsari       | General Hospital   | ANC     | n/a  | n/a  | n/a  | 1.00 | 0.75 | 0.5  |
| Panch Mahals  | Civil Hospital, Godhara  | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Patan         | General Hospital   | ANC     | n/a  | n/a  | n/a  | 0.50 | 0.25 | 0    |
| Porbandar     | MGG Hospital   | ANC     | n/a  | n/a  | n/a  | 0.00 | 1.25 | 0.5  |
| Rajkot        | Civil Hospital, Rajkot   | ANC     | 0.00 | 0.00 | 0.00 | 0.75 | 0.50 | 0.5  |
| Sabar Kantha  | Himmatnagar DH   | ANC     | 0.25 | 0.00 | 0.25 | 0.75 | 0.25 | 0.25 |
| Surat         | New Civil Hospital, Surat / Municipal Institute of Medical Education and Research (SMIMER) | ANC     | 1.00 | 0.75 | 1.25 | 1.25 | 1.50 | 0.76 |
| Surendranagar | C.J. General Hospital, Surendranagar   | ANC     | n/a  | n/a  | n/a  | 1.75 | 0.25 |      |
| The Dangs     | Civil Hospital, Ahwa   | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.27 |
| Vadodara      | Jamnabai Hospital, Vadodara  | ANC     | 0.00 | 0.00 | 0.25 | 0.25 | 0.50 | n/a  |
| Valsad        | CHC Bhilad, Vapi   | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.50 | 0.76 |
| Valsad        | Anjar  | ANC (R) | 0.50 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Dabhoi   | ANC (R) | 0.75 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Devgadhb   | ANC (R) | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Government Hospital, Visnagar, Ahmedabad   | ANC (R) | 0.50 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Government Hospital, Dakor, Kheda, Ahmedabad   | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Keshod   | ANC (R) | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Morbi  | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Valsad        | Sangodh  | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |

#### Gujarat (2008 summary)

| *HIV prevalence among populations with high-risk behaviours |               |                         | Remarks  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) |  |
| All STI patients  | 1444          | 7.62 (6.47–8.77)        | Total number of sentinel sites 25<br>7 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>3 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers  | 1494          | 3.75 (2.94–4.56)        |  |
| Male Migrants   | 500           | 1.80 (0.82–2.78)        |  |
| Men who have sex with men                                   | 1732          | 5.37 (4.48–6.26)        |  |
|   |               |                         |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



TABLE SS 12b

| Gujarat                               |  |                  |      |      |       |      |      |       |
|---------------------------------------|--|------------------|------|------|-------|------|------|-------|
| Populations with high-risk behaviours |  |                  |      |      |       |      |      |       |
| District                              | Site name  | Population group | 2003 | 2004 | 2005  | 2006 | 2007 | 2008  |
| Rajkot                                | Life Line Health, Rajkot                             | FSW              | n/a  | n/a  | 4.4   | 2.8  | 2.8  | 2     |
| Surat                                 | Paras PSM PSH, Surat                                 | FSW              | n/a  | n/a  | 13.2  | 8    | 7.2  | 4.4   |
| Vadodara                              | Vikas Jyot Trust, Vadodara                           | FSW              | n/a  | 9.20 | 6.8   | 8.4  | 9.6  | 7.2   |
| Rajkot                                | Lakshaya Trust, Rajkot                               | MSM              | n/a  | n/a  | 12.4  | 14   | 15.6 | 6.4   |
| Surat                                 | Lakshaya Trust, Surat                                | MSM              | n/a  | n/a  | 15.6  | 12.8 | 7.6  | 10    |
| Vadodara                              | Lakshaya Trust, Vadodara                             | MSM              | n/a  | n/a  | 4     | 6.8  | 2    | 3.35  |
| Ahmedabad                             | Chuwai Gram Trust, Ahmedabad (New 08)                | MSM              | n/a  | n/a  | n/a   | n/a  | n/a  | 3.6   |
| Bhavnagar                             | Sardar Patel Snatak Mitra Mandal, Bhavnagar (New 08) | MSM              | n/a  | n/a  | n/a   | n/a  | n/a  | 5.62  |
| Jamnagar                              | Shree Sarvoday Mahila Udyog Mandal (New 08)          | MSM              | n/a  | n/a  | n/a   | n/a  | n/a  | 5.6   |
| Mahesana                              | Young Citizen of India Charitable Trust (New 08)     | MSM              | n/a  | n/a  | n/a   | n/a  | n/a  | 2.87  |
| Ahmedabad                             | Civil Hospital, Ahmedabad                            | STI              | 5.76 | 4.80 | 4.8   | 18   | 15.6 | 22    |
| Banas Kantha                          | General Hospital Palanpur/Banaskantha District       | STI              | 0.81 | 0.80 | 0.4   | 2    | 0.95 | n/a   |
| Bhavnagar                             | Sir T Hospital, Bhavnagar                            | STI              | 6.73 | 5.00 | 4.69  | 7.34 | 6.9  | 5.94  |
| Jamnagar                              | GG Hospital, Jamnagar                                | STI              | 4.4  | 3.60 | 1.6   | 1.2  | 2.4  | 0     |
| Junagadh                              | Civil Hospital, Junagadh                             | STI              | n/a  | n/a  | n/a   | 1.2  | 2.4  | 3.2   |
| Navsari                               | General Hospital                                     | STI              | n/a  | n/a  | n/a   | 4    | 2    | 1.2   |
| Panch Mahals                          | Godhara DH   | STI              | 2.4  | 2.40 | 1.2   | 0.4  | 4.9  | n/a   |
| Surat                                 | New Civil Hospital, Surat                            | STI              | 6.28 | 8.11 | 11.79 | 8.8  | 8    | 13.22 |
| Surendranagar                         | C.U. Shah Medical College, Surendranagar             | STI              | 2.31 | 2.40 | 0     | 3.27 | 1.8  | n/a   |
| Vadodara                              | SSG Hospital, Vadodara                               | STI              | 4.55 | 3.60 | 2.4   | 3.35 | 2.21 | n/a   |
| Surat                                 | Sanjivni Hospital, Surat (New 08)                    | MRG              | n/a  | n/a  | n/a   | n/a  | n/a  | 1.2   |
| Surat                                 | Surat Diamond Association, Surat (New 08)            | MRG              | n/a  | n/a  | n/a   | n/a  | n/a  | 2.4   |

TABLE SS 13a  
Haryana (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 4799          | 0.15 (0.06–0.24)        |                        |
| Urban women                               | 4799          | 0.15 (0.06–0.24)        |                        |
| Rural women                               |               |                         |                        |



\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                         |                  |      |      |      |      |      |      |
|---------------|-------------------------|------------------|------|------|------|------|------|------|
| District      | Site name               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bhiwani       | CHC Tosham              | ANC              | n/a  | n/a  | n/a  | 1.10 | 0.25 | 0    |
| Faridabad     | Palwal General Hospital | ANC              | 0.50 | 0.00 | 0.00 | 0.00 | 0.50 | 0.5  |
| Fatehabad     | GH Fatehabad            | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Gurgaon       | CHC Nuh, Mewat (New)    | ANC              | n/a  | n/a  | n/a  | 0.31 | 0.00 | 0    |
| Hissar        | Hissar General Hospital | ANC              | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 | 0    |
| Hissar        | CHC, Mangali            | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jhajjar       | GH Jhajjar              | ANC              | n/a  | n/a  | n/a  | 0.26 | 0.00 | 0.25 |
| Jind          | CHC, Julana             | ANC (R)          | 0.67 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jind          | Jind General Hospital   | ANC              | 0.26 | 0.00 | 0.50 | 0.25 | 3.00 | 0.5  |
| Kaithal       | GH Kaithal              | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Karnal        | Karnal General Hospital | ANC              | 0.25 | 0.00 | 0.25 | 0.00 | 0.25 | 0    |
| Karnal        | CHC, Nilokheri          | ANC (R)          | 0.41 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Kurukshetra   | LNJP Hospital           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Panchkula     | CHC Raipurani           | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.50 | 0    |
| Panipat       | GH Panipat              | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |

TABLE 55

13b

Haryana  
(2008  
summary)

| *HIV prevalence of populations with high-risk behaviours |               |                         |   |
|--|---------------|-------------------------|---|
| Group  | Number tested | HIV % positive (90% CI) | Remarks   |
| All STI patients   | 2195          | 0.87 (0.54–1.19)        | Total number of sentinel sites 18<br>1 site ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers                                       | 1742          | 1.55 (1.06–2.04)        |   |
| Injecting drug users                                     | 249           | 2.01 (0.55–3.47)        |   |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| Haryana                                       |                      |                  |      |      |      |      |      |      |
|---|----------------------|------------------|------|------|------|------|------|------|
| Summary—Populations with high-risk behaviours |                      |                  |      |      |      |      |      |      |
| District                                      | Site name            | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Ambala/Panchkula                              | Ambala (NGO)         | FSW              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.2  |
| Gurgaon                                       | Gurgaon (NGO)        | FSW              | n/a  | n/a  | n/a  | 0.37 | 1.16 | 6    |
| Hissar  | Hissar (NGO)         | FSW              | n/a  | n/a  | n/a  | 1.98 | 0.00 | 0    |
| Jind  | Jind (NGO)           | FSW              | n/a  | n/a  | n/a  | 0.40 | 1.60 | 1.2  |
| Rewari  | Rewari (NGO)         | FSW              | n/a  | n/a  | n/a  | 0.41 | 0.00 | 0.41 |
| Rohtak  | Rohtak (NGO)         | FSW              | n/a  | n/a  | n/a  | 4.76 | 2.38 | 2    |
| Yamunanagar                                   | FSW site Yamunanagar | FSW              | n/a  | n/a  | 2.00 | 0.00 | 0.00 | 0    |



| Haryana     |                                 |     |      |      |      |      |      |      |
|-------------|---------------------------------|-----|------|------|------|------|------|------|
| Faridabad   | Faridabad (NGO)                 | IDU | n/a  | n/a  | n/a  | 0.00 | 0.80 | 2.01 |
| Panchkula   | Panchkula (NGO)                 | MSM | n/a  | n/a  | n/a  | 0.00 | 5.39 | 2.81 |
| Ambala      | Ambala General Hospital         | STI | 0.00 | 0.00 | 0.99 | 0.00 | 0.00 | 0.8  |
| Bhiwani     | Bhiwani General Hospital        | STI | 2.37 | 2.08 | 1.60 | 3.21 | 0.40 | 1.6  |
| Faridabad   | BK Hospital                     | STI | n/a  | n/a  | n/a  | 0.41 | 0.00 | 2    |
| Gurgaon     | Gurgaon General Hospital        | STI | 0.40 | 4.88 | 1.71 | 0.41 | 0.80 | 0.8  |
| Panchkula   | GH Panchkula                    | STI | n/a  | n/a  | n/a  | 1.20 | 0.00 | 0    |
| Rohtak      | Rohtak Medical College Hospital | STI | 2.06 | 0.00 | 1.30 | 3.01 | 1.49 | 0.85 |
| Sirsa       | Sirsa General Hospital          | STI | 1.20 | 0.93 | 0.83 | 0.40 | 0.00 | 0.8  |
| Sonipat     | GH Sonipat                      | STI | n/a  | n/a  | n/a  | 2.00 | 0.00 | 0.4  |
| Yamunanagar | GH Yamunanagar                  | STI | n/a  | n/a  | n/a  | 0.81 | 0.75 | 0.47 |

**TABLE SS 14a**  
Himachal Pradesh (2008 summary)

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08   |       |                |           |      |           |      |           |      |           |      |
|---|----------------|-------------------------|--|-------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
| Group                                     | Number tested  | HIV % positive (90% CI) | <table border="1"> <caption>Data for HIV prevalence trends in ANC (2003-08)</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.30</td> </tr> <tr> <td>2004-2006</td> <td>0.22</td> </tr> <tr> <td>2005-2007</td> <td>0.13</td> </tr> <tr> <td>2006-2008</td> <td>0.20</td> </tr> </tbody> </table> | Years | HIV % Positive | 2003-2005 | 0.30 | 2004-2006 | 0.22 | 2005-2007 | 0.13 | 2006-2008 | 0.20 |
| Years                                     | HIV % Positive |                         |  |       |                |           |      |           |      |           |      |           |      |
| 2003-2005                                 | 0.30           |                         |  |       |                |           |      |           |      |           |      |           |      |
| 2004-2006                                 | 0.22           |                         |  |       |                |           |      |           |      |           |      |           |      |
| 2005-2007                                 | 0.13           |                         |  |       |                |           |      |           |      |           |      |           |      |
| 2006-2008                                 | 0.20           |                         |  |       |                |           |      |           |      |           |      |           |      |
| All women                                 | 3135           | 0.51 (0.30–0.72)        |  |       |                |           |      |           |      |           |      |           |      |
| Urban women                               | 3135           | 0.51 (0.30–0.72)        |  |       |                |           |      |           |      |           |      |           |      |
| Rural women                               |                |                         |  |       |                |           |      |           |      |           |      |           |      |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees    |                            |                  |      |      |      |      |      |      |
|------------------|----------------------------|------------------|------|------|------|------|------|------|
| District         | Site name                  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Hamirpur         | CHC Barsar                 | ANC (R)          | 0.00 | n/a  | n/a  | 0.00 | 0.50 | n/a  |
| Hamirpur         | Hamirpur Zonal Hospital    | ANC              | 1.00 | 0.50 | 0.75 | 0.00 | 0.00 | 0.75 |
| Hamirpur         | Nadaun CHC (New 08)        | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 1.25 |
| Kangra           | Dharamshala Zonal Hospital | ANC              | 0.77 | 0.00 | 0.25 | 0.25 | 0.00 | 0.75 |
| Kangra           | Palampur/Jawalamukhi       | ANC (R)          | 0.25 | n/a  | n/a  | n/a  |      | n/a  |
| Kinnar           | Nichar/Sangala/Pooh        | ANC (R)          | 0.00 | n/a  | n/a  | n/a  |      | n/a  |
| Kinnaur          | Kinnaur Zonal Hospital     | ANC              | 0.00 | 0.00 | 0.00 | 0.00 |      | 0    |
| Lahaul and Spiti | Kelong Zonal Hospital      | ANC              | 0.00 | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Lahaul and Spiti | Udaipur Kaza               | ANC (R)          | 0.00 | n/a  | n/a  | 0.00 |      | n/a  |
| Mandi            | Mandi Zonal Hospital       | ANC              | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.25 |
| Mandi            | Karsog/Jnagar              | ANC (R)          | 0.26 | n/a  | n/a  | n/a  |      | n/a  |
| Mandi            |                            | ANC (R)          | n/a  | n/a  | n/a  | n/a  |      | n/a  |





| ANC attendees |                            |         |      |      |      |      |      |      |
|---------------|----------------------------|---------|------|------|------|------|------|------|
| Rekongpeo     | Regional Hospital (New 07) | ANC     | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |
| Shimla        | Rampur                     | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.25 | n/a  |
| Shimla        | Rampur MGIMS               | ANC     |      |      |      |      |      | 0.5  |
| Solan         | Solan Zonal Hospital       | ANC     | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.25 |
| Solan         | Arki/Nalagrah              | ANC (R) | 0.50 | n/a  | n/a  | n/a  |      | n/a  |
| Una           | Una Zonal Hospital         | ANC     | 0.00 | 0.75 | 0.25 | 0.00 | 0.26 | 0.25 |
| Una           | Haroli/Daulatpur Chowk     | ANC (R) | 0.25 | n/a  | n/a  | n/a  |      | n/a  |

**TABLE SS 14b**  
**Himachal Pradesh (2008**  
**summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 1250          | 0.08 (-0.05–0.21)       | Total number of sentinel sites 12<br>0 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 731           | 0.41 (0.02–0.80)        |  |
| Truckers  | 242           | 0.41 (-0.27–1.09)       |  |
| Men who have sex with men                                   | 250           | 0.80 (-0.13–1.73)       |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Himachal Pradesh                      |   |                  |      |      |      |      |      |      |
|---------------------------------------|---|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |   |                  |      |      |      |      |      |      |
| District                              | Site name                               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Kullu                                 | SAVE, Lyall Tribals, H&BC, Sudhar Sabha | FSW              | n/a  | n/a  | n/a  | 0.00 | 0.53 | 0    |
| Shimla                                | Shimla                                  | FSW              | 0.00 | 0.80 | 0.00 | 1.20 | 2.00 | 0.8  |
| Sirmaur                               | Paonta (SERDHA, CARE, SWATI)            | FSW              | n/a  | n/a  | n/a  | 0.80 | 0.00 | n/a  |
| Sirmaur                               | Paonta CARE—NGO (New 08)                | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.4  |
| Solan/ Parwanoo                       | Parwanoo (SNS NGO) (New 07)             | MRG              | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |
| Kangra                                | Friends Club, Damtal                    | MSM              | n/a  | n/a  | n/a  | 0.44 | n/a  | n/a  |
| Sirmaur/Paonta                        | Paonta (SARDHA NGO) (New 07) (08)       | MSM              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0.8  |
| Bilaspur                              | ACC Hospital Barmana                    | STI              | n/a  | n/a  | n/a  | 1.89 | n/a  | n/a  |
| Bilaspur                              | Bilaspur Zonal Hospital                 | STI              | 0.40 | 2.40 | 0.00 | 2.80 | 0.40 | 0    |
| Chamba                                | Chamba Zonal Hospital                   | STI              | 0.00 | 0.00 | 0.40 | 0.40 | 0.40 | 0    |
| Kullu                                 | Kullu Zonal Hospital                    | STI              | 1.38 | 0.00 | 0.57 | 0.00 | 0.00 | 0    |
| Shimla                                | Shimla Zonal Hospital                   | STI              | 0.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.4  |
| Sirmaur                               | Nahan Zonal Hospital                    | STI              | 0.40 | 1.20 | 0.40 | 0.80 | 0.00 | 0    |



|                   |                                  |          |     |     |     |     |      |      |
|-------------------|----------------------------------|----------|-----|-----|-----|-----|------|------|
| Bilaspur/Baramana | Baramana (HPVHA NGO)<br>(New 07) | Truckers | n/a | n/a | n/a | n/a | 0.40 | 0.41 |
|-------------------|----------------------------------|----------|-----|-----|-----|-----|------|------|

**TABLE SS 15a**  
**Jammu and Kashmir (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 5589          | 0.0 (0.0–0.0)           |                        |
| Urban women                               | 5589          | 0.0 (0.0–0.0)           |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |  |                  |      |      |      |      |      |      |
|---------------|--|------------------|------|------|------|------|------|------|
| District      | Site name                                    | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Anantnag      | Anantnag DH                                  | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Badgam        | Budgam DH                                    | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Baramula      | Baramulla DH                                 | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Doda          | Doda DH                                      | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Jammu         | 166 Military Hospital-                       | ANC              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Jammu         | CHC, RS Pma/Bisna                            | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jammu         | Jammu General Hospital / SMGS Hospital Jammu | ANC              | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0    |
| Kargil        | Kargil DH                                    | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Kathua        | Kathua DH                                    | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.50 | 0    |
| Kupwara       | Kupwara DH                                   | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Leh (Ladakh)  | Leh DH                                       | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0    |
| Pulwama       | Pulwama DH                                   | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Poonch        | Poonch DH                                    | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Rajauri       | Rajouri DH                                   | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Srinagar      | CHC, Ganderbal Harvan                        | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Srinagar      | CHC, Ganderbal Harvan                        | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Srinagar      | Srinagar Lal Ded Hospital                    | ANC              | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0    |
| Udhampur      | Udhampur DH                                  | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |



**TABLE SS 15b**

**Jammu and Kashmir (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) | Remarks   |
| All STI patients  | 1497          | 0.20 (0.01–0.39)        | Total number of sentinel sites 9<br>0 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Injecting drug users  | 233           | 0.0 (0.0–0.0)           |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Jammu and Kashmir                     |  |                  |      |      |      |      |      |      |
|---------------------------------------|--|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |  |                  |      |      |      |      |      |      |
| District                              | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Jammu                                 | TI site (HSS, RES—NGOs), Kathua                            | FSW              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Srinagar                              | FPAI (NGO) (New 09)  | IVDU             | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Jammu                                 | TI site (HSS, RES—NGOs), Jammu                             | IVDU             | 0.00 | 0.00 | 0.00 | 2.50 | n/a  | n/a  |
| Baramula                              | Baramulla DH   | STI              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.4  |
| Jammu                                 | 166 Military Hospital                                      | STI              | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Jammu                                 | Jammu Gandhi Nagar Hospital                                | STI              | 5.20 | 0.00 | 0.00 | 0.00 | 0.40 | 0    |
| Kathua                                | Kathua DH  | STI              | n/a  | n/a  | n/a  | 2.94 | 1.20 | 0.4  |
| Rajauri                               | Rajouri- DH  | STI              | n/a  | n/a  | n/a  | 0.58 | 0.80 | 0    |
| Srinagar                              | Srinagar Shere Kashmir Institute / SMHS Hospital, Srinagar | STI              | 0.00 | 0.27 | 0.00 | 0.00 | 0.00 | 0.4  |
| Udhampur                              | Udhampur DH  | STI              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |

**TABLE SS 16a**

**Jharkhand (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 5845          | 0.38 (0.24–0.51)        |                        |
| Urban women                               | 5845          | 0.38 (0.24–0.51)        |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites (≥75% sample size).



| ANC attendees   |   |                  |      |      |       |      |      |      |
|-----------------|---|------------------|------|------|-------|------|------|------|
| District        | Site name                                     | Population group | 2003 | 2004 | 2005  | 2006 | 2007 | 2008 |
| Bokaro          | Bokaro General Hospital                       | ANC              | n/a  | n/a  | n/a   | 0.28 | 0.00 | 0    |
| Deogarh         | SDH, Madhupur                                 | ANC(R)           | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Deoghar         | Deoghar Sadar Hospital                        | ANC              | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0    |
| Dhanbad         | B.C.C.L. Dhanbad                              | ANC              | n/a  | n/a  | n/a   | 0.88 | 0.00 | 0    |
| Dhanbad         | Patliputra Medical College Hospital, Dhanbad  | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.25 | 0.25 |
| Garhwa          | Garhwa Sadar Hospital                         | ANC              | 0.62 | 0.00 | 0.00  | 0.00 | 0.00 | 0    |
| Garhwa          | RH, Nagaruntari                               | ANC (R)          | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Godda           | Sadar Hospital, Godda                         | ANC              | n/a  | n/a  | n/a   | 0.25 | 0.25 | 2.25 |
| Gumla           | Sadar Hospital, Gumla                         | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.00 | 0    |
| Gumla           | Sadar Hospital, Simdega Tehsil (New)          | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.00 | 0    |
| JSR             | RH, Polka                                     | ANC (R)          | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Kodarma         | Holy Family Hospital, Kodarma                 | ANC              | 0.00 | 0.00 | 0.63* | 0.00 | 0.00 | 0.75 |
| Kodarma         | RH, Domchand                                  | ANC (R)          | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Lohardaga       | Sadar Hospital, Lohardaga                     | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.00 | 0.25 |
| Purbi Singhbhum | Mercy Hospital, Jamshedpur                    | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.50 | 1    |
| Purbi Singhbhum | Tata Main Hospital                            | ANC              | n/a  | n/a  | n/a   | 0.00 | 0.00 | 0.25 |
| Purbi Singhbhum | E. Singhbhum Sadar Hospital                   | ANC              | 0.00 | 0.00 | 0.00  | 0.25 | 0.51 | 1    |
| Ranchi          | C.C.L. Hospital, Ranchi                       | ANC              | n/a  | n/a  | n/a   | 0.00 | n/a  | n/a  |
| Ranchi          | RH, Bundu                                     | ANC (R)          | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Ranchi          | Ranchi Rajendra Institute of Medical Sciences | ANC              | 0.25 | 0.25 | 0.25  | 0.25 | 0.00 | 0.25 |
| Sahebganj       | RH, Raj Mahal                                 | ANC (R)          | 0.00 | n/a  | n/a   | n/a  | n/a  | n/a  |
| Sahibganj       | Sahibganj Sadar Hospital                      | ANC              | 0.00 | 0.00 | 0.25  | 0.50 | 0.00 | 0    |

\*Sample size is <75%.

**TABLE SS 16b**

**Jharkhand (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         | Remarks  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) |  |
| All STI patients  | 2727          | 0.99 (0.68–1.30)        | Total number of sentinel sites 25<br>0 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 2708          | 1.00 (0.68–1.31)        |  |
| Injecting drug users  | 250           | 1.60 (0.29–2.91)        |  |
| Men who have sex with men                                   | 250           | 2.00 (0.54–3.46)        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).



| Jharkhand                             |  |                  |      |      |      |      |      |      |
|---------------------------------------|--|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |  |                  |      |      |      |      |      |      |
| District                              | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bokaro                                | RUPAYANI   | FSW              | n/a  | n/a  | n/a  | 0.87 | 1.95 | n/a  |
| Dhanbad                               | Helping Hand Foundation, Dhanbad                           | FSW              | n/a  | n/a  | n/a  | 0.40 | 0.00 | n/a  |
| Pakur                                 | SKVSS (New 07)   | FSW              | n/a  | n/a  | n/a  | n/a  | 1.58 | 2    |
| Purbi Singhbhum                       | Samarpan, Behragoda  | FSW              | n/a  | n/a  | n/a  | 1.20 | 0.00 | 2    |
| Purbi Singhbhum                       | TSFIF and Samarpan   | FSW              | n/a  | 0.00 | 0.00 | 1.20 | n/a  | n/a  |
| Ranchi                                | Krishi Gram Vikas Kendra                                   | FSW              | n/a  | n/a  | n/a  | 0.40 | 0.80 | 0.4  |
| Ranchi                                | Birsa Seva Sansthan and KGVK, Ranchi                       | FSW              | n/a  | 0.00 | 1.20 | 0.00 | 1.20 | n/a  |
| Sahibganj                             | Gram Praudyogik Vikas Sansthan                             | FSW              | n/a  | n/a  | 1.20 | 2.00 | n/a  | n/a  |
| Chatra                                | Integrated Development through Effective Approach (New 08) | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.4  |
| Deoghar                               | Lok Prerana, Deoghar (New 08)                              | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.86 |
| Dumka                                 | Jan Jagriti Kendra (New 08)                                | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 2    |
| Giridih                               | Rural Area Development Society (New 08)                    | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Hazaribag                             | Jan Jagran Kendra (Bishnugarh) (New 08)                    | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 1.66 |
| Lohardaga                             | Society for Integrated Development (New 08)                | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 1.25 |
| Palamau                               | Maa Durga Vikas Samiti, Palamau (New 08)                   | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Sahibganj                             | Bharatiya ManavVikas Seva Sansthan, Sahibganj (New 08)     | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.4  |
| Purbi Singhbhum                       | Tata Steel Family Initiative Foundation                    | IDU              | n/a  | n/a  | n/a  | 0.40 | n/a  | 1.6  |
| Bokaro                                | Mahila Janswasthya Shishu Kalyan Kendra                    | MSM              |      |      |      |      |      | 2    |
| Bokaro                                | Bokaro General Hospital, Bokaro                            | STI              | n/a  | n/a  | n/a  | 0.80 | 0.00 | 0    |
| Deoghar                               | Sadar Hospital, Deoghar                                    | STI              | n/a  | n/a  | n/a  | 0.00 | 1.60 | 0.4  |
| Dhanbad                               | Dhanbad Patliputra Medical College and Hospital            | STI              | 0.00 | 0.00 | 0.00 | 0.40 | 0.40 | 1.66 |
| Dumka                                 | Sadar Hospital, Dumka                                      | STI              | n/a  | n/a  | n/a  | 0.40 | 0.00 | 0    |
| Giridih                               | Sadar Hospital, Giridih                                    | STI              | n/a  | n/a  | n/a  | 1.78 | 0.40 | 4.4  |
| Hazaribag                             | Hazaribagh Sadar Hospital                                  | STI              | n/a  | n/a  | 0.00 | 1.00 | 0.79 | 0.4  |
| Palamau                               | Palamau Sadar Hospital                                     | STI              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.4  |
| Pashchimi Singhbhum                   | Sadar Hospital, Chaibasa                                   | STI              | n/a  | n/a  | n/a  | 3.13 | 0.40 | 0.8  |



| Jharkhand       |  |     |      |      |      |      |             |      |
|-----------------|--|-----|------|------|------|------|-------------|------|
| Purbi Singhbhum | M.G. Memorial Medical College Hospital, Jamshedpur | STI | n/a  | n/a  | n/a  | 0.40 | 1.2048<br>2 | 1.22 |
| Ranchi          | Sadar Hospital, Ranchi                             | STI | n/a  | n/a  | n/a  | 0.00 | 0.00        | 0.41 |
| Ranchi          | Ranchi Rajendra Institute of Medical Sciences      | STI | 0.40 | 0.40 | 0.00 | 1.20 | 0.00        | 1.2  |

**TABLE SS 17a**  
**Karnataka (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 23 192        | 0.89 (0.79–0.99)        |                        |  |
| Urban women                               | 11 596        | 1.08 (0.92–1.24)        |                        |  |
| Rural women                               | 11 596        | 0.70 (0.57–0.83)        |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| Karnataka       |                               |                  |      |      |      |      |      |      |
|-----------------|-------------------------------|------------------|------|------|------|------|------|------|
| ANC attendees   |                               |                  |      |      |      |      |      |      |
| District        | Site name                     | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bagalkot        | Bagalkot DH                   | ANC              | 2.00 | 2.75 | 3.25 | 2.00 | 0.25 | 1.75 |
| Bagalkot        | G.H. Jamkhandi                | ANC (R)          | 3.50 | 2.50 | 2.50 | 2.25 | 1.00 | 2.5  |
| Bangalore       | Bangalore Vani Vilas Hospital | ANC              | 1.00 | 1.25 | 1.00 | 1.50 | 2.00 | 1.5  |
| Bangalore       | G.H.K R Puram                 | ANC (R)          | 1.50 | 0.00 | 0.00 | 1.25 | 0.50 | 0    |
| Bangalore Rural | General Hospital, Kanakapura  | ANC (R)          | 2.75 | 2.25 | 0.25 | 0.00 | 0.00 | n/a  |
| Bangalore Rural | General Hospital, Channapatna | ANC              | 1.00 | 2.75 | 1.50 | 1.00 | 0.25 | 0.5  |
| Belgaum         | Belgaum DH                    | ANC              | 3.75 | 3.75 | 3.50 | 3.00 | 1.75 | 1.75 |
| Belgaum         | G.H. Gokak                    | ANC(R)           | 5.13 | 4.75 | 3.75 | 3.25 | 2.25 | 1.25 |
| Bellary         | VMIS Hospital, Bellary        | ANC              | 1.50 | 1.00 | 0.75 | 1.00 | 0.00 | 1.75 |
| Bellary         | G.H. Hospet                   | ANC (R)          | 1.75 | 1.25 | 1.00 | 1.75 | 0.75 | 0.5  |
| Bidar           | Bidar DH                      | ANC              | 1.25 | 0.75 | 0.50 | 1.00 | 1.00 | 0.25 |
| Bidar           | G.H. Hummabad                 | ANC (R)          | 1.54 | 1.00 | 1.25 | 0.75 | 1.25 | 0    |
| Bijapur         | Bijapur DH                    | ANC              | 2.50 | 2.00 | 4.25 | 1.75 | 1.50 | 1.0  |
| Bijapur         | G.H. Indi                     | ANC (R)          | 0.75 | 0.75 | 0.00 | 0.73 | 0.50 | 3    |
| Chamrajnagar    | Chamarajnagar DH              | ANC              | 0.50 | 0.75 | 1.75 | 2.50 | 2.00 | 1.01 |
| Chamrajnagar    | G.H. Kollegal                 | ANC (R)          | 0.51 | 1.25 | 1.50 | 0.25 | 0.00 | 0    |
| Chikmagalur     | Chikmagalur DH                | ANC              | 0.25 | 0.50 | 1.25 | 2.25 | 3.50 | 1.25 |
| Chikmagalur     | G.H. Mudigere                 | ANC (R)          | 0.75 | 1.50 | 0.50 | 0.75 | 1.25 | 0.25 |
| Chitradurga     | Chitradurga DH                | ANC              | 0.50 | 0.75 | 0.75 | 0.50 | 0.50 | 1.0  |
| Chitradurga     | G.H. Challekere               | ANC (R)          | 0.25 | 0.75 | 0.50 | 0.00 | 0.00 | 0    |



| Karnataka        |   |         |      |      |      |      |      |      |
|------------------|---|---------|------|------|------|------|------|------|
| Dakshina Kannada | Mangalore Women and Children Hospital/ Mangalore Kasturba Medical College | ANC     | 1.25 | 2.50 | 0.25 | 0.25 | 0.25 | 1.25 |
| Dakshina Kannada | G.H. Bantwal  | ANC (R) | 0.50 | 0.25 | 0.50 | 1.25 | 0.00 | 0.25 |
| Davangere        | Devangere DH  | ANC     | 1.00 | 1.00 | 1.75 | 2.00 | 0.50 | 1.25 |
| Davangere        | G.H. Channagiri   | ANC (R) | 0.75 | 3.25 | 1.00 | 0.75 | 1.00 | 2.75 |
| Dharwad          | Hubli KIMS  | ANC     | 3.00 | 1.75 | 6.25 | 1.00 | 0.50 | 0.75 |
| Dharwad          | G.H. Navalgund  | ANC (R) | 3.00 | 4.00 | 7.25 | 0.75 | 0.25 | 0.5  |
| Gadag            | Gadag DH  | ANC     | 1.50 | 1.50 | 1.50 | 0.75 | 0.25 | 0.75 |
| Gadag            | G.H. Laxmeswara   | ANC (R) | 0.25 | 0.75 | 0.75 | 1.00 | 0.75 | 0.25 |
| Gulbarga         | Gulbarga DH   | ANC     | 1.25 | 2.00 | 2.00 | 1.75 | 5.00 | 2.25 |
| Gulbarga         | G.H. Sedum  | ANC (R) | 2.00 | 2.50 | 3.25 | 0.00 | 0.50 | 0.25 |
| Hassan           | Hassan DH   | ANC     | 0.50 | 0.75 | 1.75 | 4.00 | 2.50 | 1    |
| Hassan           | G.H. Sakaleshpur  | ANC (R) | 1.00 | 1.25 | 1.00 | 0.75 | 0.00 | 0.75 |
| Haveri           | Haveri DH   | ANC     | 1.03 | 0.75 | 0.25 | 0.25 | 0.25 | 1    |
| Haveri           | G.H. Ranibennur   | ANC (R) | 1.75 | 0.50 | 0.50 | 1.00 | 0.25 | 0.25 |
| Kodagu           | Madikeri DH   | ANC     | 0.25 | 0.25 | 1.00 | 0.50 | 0.25 | 2.3  |
| Kodagu           | G.H. Siddapur   | ANC (R) | 0.25 | 1.25 | 0.50 | 0.50 | 1.25 | 3    |
| Kolar            | Kolar DH  | ANC     | 1.25 | 1.25 | 1.00 | 1.50 | 0.25 | 1.0  |
| Kolar            | G.H. Chikkaballapura  | ANC (R) | 0.75 | 0.25 | 0.50 | 0.00 | 0.50 | 0.75 |
| Kolar            | Kolar KGF Hospital (New 08)   | ANC (R) | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Kolar            | General Hospital, Gowri Bidnur (New 08)                                   | ANC (R) | n/a  | n/a  | n/a  | n/a  | n/a  | 1.75 |
| Koppal           | Koppal DH   | ANC     | 2.75 | 1.75 | 2.25 | 1.50 | 1.50 | 0    |
| Koppal           | G.H. Gangavathi   | ANC (R) | 5.51 | 4.25 | 3.50 | 1.75 | 1.00 | 0    |
| Mandya           | Mandya DH   | ANC     | 1.25 | 1.25 | 1.25 | 0.25 | 2.25 | 0.25 |
| Mandya           | G.H. Malavalli  | ANC (R) | 1.00 | 1.00 | 0.75 | 0.25 | 0.25 | 0    |
| Mysore           | Mysore Cheluvamba Hospital / K.R. Hospital, Mysore                        | ANC     | 0.75 | 3.75 | 2.00 | 1.00 | 1.25 | 1.25 |
| Mysore           | G.H. Hunsur   | ANC (R) | 0.25 | 1.00 | 0.25 | 1.00 | 0.50 | 0.5  |
| Raichur          | Raichur DH  | ANC     | 1.50 | 1.25 | 0.75 | 1.25 | 1.00 | 0.5  |
| Raichur          | G.H. SinDhanur  | ANC (R) | 1.75 | 1.00 | 2.50 | 1.50 | 0.00 | 0.5  |
| Shimoga          | Shimoga DH  | ANC     | 0.25 | 0.50 | 1.25 | 1.00 | 0.00 | 1.75 |
| Shimoga          | G.H. Sagar  | ANC (R) | 1.25 | 0.50 | 0.50 | 0.00 | 0.75 | 0.25 |
| Tumkur           | Tumkur DH   | ANC     | 1.25 | 1.25 | 0.75 | 0.50 | 2.25 | 1.75 |
| Tumkur           | General Hospital, Tiptur  | ANC (R) | 2.50 | 1.75 | 1.25 | 1.00 | 0.00 | 0.5  |
| Udupi            | Udupi DH  | ANC     | 1.25 | 1.50 | 0.50 | 1.50 | 0.00 | 1    |
| Udupi            | G.H. Kundapur   | ANC (R) | 0.50 | 0.50 | 0.75 | 0.00 | 0.25 | 0.25 |
| Uttara Kannada   | Karwar DH   | ANC     | 1.75 | 1.25 | 0.00 | 1.50 | 1.00 | 0    |
| Uttara Kannada   | G.H. Dandeli  | ANC (R) | 0.25 | 1.50 | 1.50 | 1.20 | 0.00 | 0.25 |





**TABLE SS 17b**

**Karnataka (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |               | Remarks  |
|---|---------------|-------------------------|---------------|--|
| Group   | Number tested | HIV % positive (90% CI) |               |  |
| All STI patients  | 882           | 10.66                   | (8.95–12.37)  | Total number of sentinel sites 17<br>6 sites (≥75% sample size) had prevalence ≥5%<br>8 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 1437          | 14.20                   | (12.68–15.71) |  |
| Injecting drug users  | 249           | 2.01                    | (0.55–3.47)   |  |
| Men who have sex with men                                   | 750           | 12.67                   | (10.67–14.66) |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Populations with high-risk behaviours |   |                  |       |       |        |       |       |      |
|---------------------------------------|---|------------------|-------|-------|--------|-------|-------|------|
| District                              | Site name                                   | Population group | 2003  | 2004  | 2005   | 2006  | 2007  | 2008 |
| Bangalore                             | Society for People's Action for Development | FSW              | n/a   | n/a   | n/a    | 12.40 | 6.00  | n/a  |
| Bangalore                             | Bhoruka Charitable Trust                    | FSW              | n/a   | n/a   | n/a    | 9.60  | 7.60  | n/a  |
| Bangalore                             | Swathi Mahila Sangha (New 07)               | FSW              | n/a   | n/a   | n/a    | n/a   | 2.40  | n/a  |
| Bangalore                             | Bangalore KIMS                              | FSW              | n/a   | n/a   | 20.80  | 5.60  | n/a   | n/a  |
| Bangalore                             | Samraksha, Bangalore                        | FSW              | 14.40 | 21.60 | 37.93* | n/a   | n/a   | n/a  |
| Dakshina Kannada                      | Mangalore KMC Attawar                       | FSW              | n/a   | n/a   | 10.9*  | 6.64  | 5.20  | 3.7  |
| Belgaum                               | BIRDS, NGO, Belgaum (New 08)                | FSW              | n/a   | n/a   | n/a    | n/a   | n/a   | 16.4 |
| Bagalkot                              | Mudhol (New 08)                             | FSW              | n/a   | n/a   | n/a    | n/a   | n/a   | 34.1 |
| Bangalore                             | Avalahalli (New 08)                         | FSW              | n/a   | n/a   | n/a    | n/a   | n/a   | 18.4 |
| Bangalore                             | APMC (New 08)                               | FSW              | n/a   | n/a   | n/a    | n/a   | n/a   | 7.6  |
| Bangalore                             | Sheshadripuram (New 08)                     | FSW              | n/a   | n/a   | n/a    | n/a   | n/a   | 4.6  |
| Bangalore                             | Serenity, NGO                               | IDU              | n/a   | n/a   | n/a    | 3.60  | 2.00  | 2.01 |
| Bangalore                             | Bangalore NIMHANS                           | IDU              | 2.80  | 0.00  | n/a    | n/a   | n/a   | n/a  |
| Bangalore                             | Jagruthi, NGO / Sangama, NGO                | MSM              | 10.80 | 10.00 | 11.61  | 19.20 | n/a   | n/a  |
| Bangalore                             | Sangama, NGO (New 07)                       | MSM              | n/a   | n/a   | n/a    | n/a   | 17.60 | 16.4 |
| Belgaum                               | BIRDS, NGO, Belgaum (New 08)                | MSM              | n/a   | n/a   | n/a    | n/a   | n/a   | 6.3  |
| Dharwad                               | Hubli                                       | MSM              | n/a   | n/a   | n/a    | n/a   | n/a   | 15.2 |
| Bangalore                             | Bangalore Victoria Hospital                 | STI              | 10.40 | 12.00 | 13.20  | 5.60  | 1.60  | 16.7 |
| Belgaum                               | Belgaum DH                                  | STI              | 27.20 | 29.60 | 23.60  | 3.60  | 10.80 | 14.8 |
| Bellary                               | Bellary VIMS Hospital                       | STI              | 10.00 | 11.20 | 4.40   | 16.40 | 13.29 | 8.3  |
| Dakshina Kannada                      | Mangalore Kasturba Medical College          | STI              | 3.20  | 4.00  | 4.00   | 3.60  | 3.04  | 5.9  |
| Dharwad                               | Hubli KIMS                                  | STI              | 16.00 | 15.20 | 30.40  | 13.60 | 8.40  | n/a  |
| Gulbarga                              | Gulbarga DH                                 | STI              | 17.20 | 24.40 | 20.40  | 7.57  | 5.20  | 5.6  |
| Mysore                                | Mysore KR Hospital                          | STI              | 9.33  | 12.00 | 13.60  | 14.00 | 10.00 | 0.0  |
| Davangere                             | Davangere District T.B. Centre              | TB               | n/a   | 12.50 | 11.27* | n/a   | n/a   | n/a  |

\*Sample size is <75%.



| <b>TABLE SS 18a</b><br><b>Kerala (2008 summary)</b> |                |                         | Trends in ANC, 2003–08   |  |       |                |           |     |           |     |           |     |           |     |
|---|----------------|-------------------------|--|--|-------|----------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| *HIV prevalence among antenatal attendees           |                |                         | <table border="1"> <caption>Data for HIV prevalence among ANC attendees (2003-2008)</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.3</td> </tr> <tr> <td>2004-2006</td> <td>0.3</td> </tr> <tr> <td>2005-2007</td> <td>0.3</td> </tr> <tr> <td>2006-2008</td> <td>0.3</td> </tr> </tbody> </table> |  | Years | HIV % Positive | 2003-2005 | 0.3 | 2004-2006 | 0.3 | 2005-2007 | 0.3 | 2006-2008 | 0.3 |
| Years   | HIV % Positive |                         |  |  |       |                |           |     |           |     |           |     |           |     |
| 2003-2005   | 0.3            |                         |  |  |       |                |           |     |           |     |           |     |           |     |
| 2004-2006   | 0.3            |                         |  |  |       |                |           |     |           |     |           |     |           |     |
| 2005-2007   | 0.3            |                         |  |  |       |                |           |     |           |     |           |     |           |     |
| 2006-2008   | 0.3            |                         |  |  |       |                |           |     |           |     |           |     |           |     |
| Group   | Number tested  | HIV % positive (90% CI) |  |  |       |                |           |     |           |     |           |     |           |     |
| All women   | 2399           | 0.21 (0.06–0.36)        |  |  |       |                |           |     |           |     |           |     |           |     |
| Urban women   | 2399           | 0.21 (0.06–0.36)        |  |  |       |                |           |     |           |     |           |     |           |     |
| Rural women   | 11 596         | 0.70 (0.57–0.83)        |  |  |       |                |           |     |           |     |           |     |           |     |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| <b>ANC attendees</b> |   |                  |      |      |      |      |      |      |
|----------------------|---|------------------|------|------|------|------|------|------|
| District             | Site name                                 | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Idukki               | Thodupuzha Taluk Hospital                 | ANC              | 0.00 | 0.26 | 0.78 | 0.25 | 0.00 | 0    |
| Kannur               | Kannur DH                                 | ANC              | 0.00 | 0.25 | 0.00 | 0.00 | 0.25 | 0.25 |
| Kasaragode           | THQ Hospital, Kasargode                   | ANC              | n/a  | n/a  | n/a  | 0.00 | 1.25 | 0.25 |
| Kottayam             | Kottayam Medical College Hospital         | ANC              | 0.00 | 0.40 | 0.00 | 0.50 | 0.50 | 0.5  |
| Salem                | Kodungal                                  | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Salem                | Thalipar                                  | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Thiruvananthapuram   | W&C Hospital, Thycaud, Thiruvananthapuram | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0.25 |
| Thrissur             | Thrissur Medical College Hospital         | ANC              | 0.50 | 0.75 | 0.50 | 0.50 | 0.50 | 0    |
| Thrissur             | Kajirapa                                  | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 18b**  
**Kerala (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         | Remarks   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) |   |
| All STI patients  | 470           | 0.85 (0.15–1.55)        | Total number of sentinel sites 17<br>1 site ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers  | 1481          | 0.74 (0.38–1.11)        |   |
| Injecting drug users  | 749           | 5.34 (3.99–6.69)        |   |
| Truckers  | 250           | 0.80 (-0.13–1.73)       |   |
| Men who have sex with men                                   | 1242          | 0.72 (0.33–1.12)        |   |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| Kerala                                |                                    |                  |      |      |      |       |       |      |
|---------------------------------------|------------------------------------|------------------|------|------|------|-------|-------|------|
| Populations with high-risk behaviours |                                    |                  |      |      |      |       |       |      |
| District                              | Site name                          | Population group | 2003 | 2004 | 2005 | 2006  | 2007  | 2008 |
| Alappuzha                             | JKS PSH, Alappuzha                 | FSW              | n/a  | n/a  | n/a  | 0.00  | 0.00  | 0.4  |
| Ernakulam                             | Ernakulam                          | FSW              | 0.00 | n/a  | n/a  | n/a   | n/a   | n/a  |
| Idukki                                | AVS PSH, Idukki                    | FSW              | n/a  | n/a  | n/a  | 0.80  | 0.80  | 0    |
| Kozhikode                             | Kozhikode                          | FSW              | 4.60 | n/a  | n/a  | n/a   | n/a   | n/a  |
| Palakkad                              | LIONS PSH (New 07)                 | FSW              | n/a  | n/a  | n/a  | n/a   | 2.80  | 3.83 |
| Pathanamthitta                        | NRDS, Pathanamthitta               | FSW              | n/a  | n/a  | n/a  | 0.00  | 0.00  | 0    |
| Thrissur                              | BON PSH, Thrissur                  | FSW              | n/a  | n/a  | n/a  | 0.80  | 1.60  | 0.4  |
| Trivandrum                            | Trivandrum                         | FSW              | 0.00 | n/a  | n/a  | n/a   | n/a   | n/a  |
| Wayanad                               | HILDA, Wayanad                     | FSW              | n/a  | n/a  | n/a  | 0.00  | 0.00  | 0    |
| Ernakulam                             | CAPS, Ernakulam                    | IDU              | n/a  | n/a  | n/a  | 25.00 | 12.68 | 8.4  |
| Thiruvananthapuram                    | FPAI, Thiruvananthapuram           | IDU              | n/a  | n/a  | n/a  | 4.12  | 5.20  | 4.82 |
| Kozhikode                             | Kozhikode                          | IDU              | n/a  | 2.58 | 5.19 | 1.91  | 6.40  | 2.8  |
| Ernakulam                             | Ernakulam                          | MSM              | n/a  | n/a  | 3.20 | 0.40  | 1.20  | 0    |
| Kasaragode                            | IAD, Kasargode                     | MSM              | n/a  | n/a  | n/a  | 0.40  | 1.20  | 0.8  |
| Kollam                                | KRDA, Kollam                       | MSM              | n/a  | n/a  | n/a  | 0.82  | 1.20  | 0.4  |
| Kannur                                | Jeevana Samskriti, Kannur          | MSM              | n/a  | n/a  | n/a  | 1.60  | 1.20  | 2.42 |
| Malappuram                            | Kudumbasree PSH, Malappuram        | MSM              | n/a  | n/a  | n/a  | 0.00  | 0.00  | 0    |
| Kozhikode                             | Kozhikode                          | MSM              | n/a  | 0.89 | n/a  | n/a   | n/a   | n/a  |
| Allappuzha                            | Allappuzha Medical College         | STI              | 0.66 | 1.95 | 2.82 | 1.23  | 0.42  | n/a  |
| Ernakulam                             | Ernakulam General Hospital         | STI              | 2.06 | 6.33 | 4.52 | 1.50  | 2.40  | 0.8  |
| Kozhikode                             | Kozhikode Medical College          | STI              | 1.71 | 1.85 | 0.00 | 0.00  | 0.00  | n/a  |
| Thiruvananthapuram                    | Trivandrum Medical College         | STI              | 5.80 | 3.61 | 2.82 | 1.26  | 1.60  | 0.9  |
| Kottayam                              | Medical College Hospital, Kottayam | STI              | n/a  | n/a  | n/a  | 0.93  | 1.62  | n/a  |
| Palakkad                              | LIONS PSH, Palakkad                | TRK              | n/a  | n/a  | n/a  | 2.40  | 3.60  | 0.8  |



TABLE SS 19

| Lakshadweep                           |                             |                  |             |                          |      |      |      |      |
|---------------------------------------|-----------------------------|------------------|-------------|--------------------------|------|------|------|------|
| ANC attendees                         |                             |                  |             |                          |      |      |      |      |
| District                              | Site name                   | Population group | 2003        | 2004                     | 2005 | 2006 | 2007 | 2008 |
|                                       |                             |                  | Lakshadweep | Kavaratti IG Hospital    | ANC  | 0.00 | 0.00 | 0.00 |
| Lakshadweep                           | Minicoy Government Hospital | ANC              | 0.00        | 0.00                     | 0.00 | 0.00 | 0.00 | n/a  |
| Populations with high-risk behaviours |                             |                  |             |                          |      |      |      |      |
| District                              | Site name                   | Population group | 2003        | 2004                     | 2005 | 2006 | 2007 | 2008 |
|                                       |                             |                  | Lakshadweep | Kavaratti Civil Hospital | STI  | 0.00 | 0.00 | 0.00 |

TABLE SS 20a

## Madhya Pradesh (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |      |
|---|---------------|-------------------------|------------------------|------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |      |
| All women                                 | 14 379        | 0.26 (0.19–0.33)        | 0.39                   | 0.35 |
| Urban women                               | 14 379        | 0.26 (0.19–0.33)        | 0.28                   | 0.23 |
| Rural women                               |               |                         |                        |      |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                      |                  |      |      |      |      |      |      |
|---------------|----------------------|------------------|------|------|------|------|------|------|
| District      | Site name            | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Balaghat      | Balaghat DH          | ANC              | n/a  | n/a  | n/a  | 1.25 | 0.50 | 0    |
| Barwani       | Badwani DH           | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Barwani       | Badwani DH           | ANC              | 0.00 | 0.50 | 0.00 | 0.00 | 0.50 | 0.25 |
| Betul         | Betual DH            | ANC (R)          | 1.08 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Betul         | Betual DH            | ANC              | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.25 |
| Bhind         | Bhind Civil Hospital | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Bhind         | Bhind Civil Hospital | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| Bhopal        | Bhopal DH            | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Chhindwara    | Chhindwara DH        | ANC (R)          | 0.52 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Chhindwara    | Chhindwara DH        | ANC              | 0.85 | 0.25 | 0.25 | 0.50 | 0.00 | 0    |
| Damoh         | Damoh DH             | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Datia         | Datia DH             | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Dewas         | Dewas DH             | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Dewas         | Dewas DH             | ANC              | 0.00 | 0.25 | 0.25 | 2.00 | 0.25 | 0.25 |



| ANC attendees        |                                    |         |      |      |      |      |      |      |
|----------------------|------------------------------------|---------|------|------|------|------|------|------|
| Dhar                 | Dhar DH                            | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| East Nimar/Burhanpur | Burhanpur DH (New)                 | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0.75 |
| East Nimar/Khandwa   | Khandwa DH (New)                   | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Guna                 | Guna DH                            | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Guna/Ashoknagar      | Ashok Nagar DH                     | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1    |
| Harda                | Harda DH                           | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Harda                | Harda DH                           | ANC     | 0.00 | 0.25 | 0.75 | 1.50 | 0.25 | 0    |
| Indore               | Indore DH                          | ANC     | n/a  | n/a  | n/a  | 0.50 | 0.00 | 1    |
| Jabalpur             | MC Jabalpur                        | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Katni                | Katni DH                           | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Katni                | Katni DH                           | ANC     | 1.75 | 0.00 | 0.25 | 0.00 | 0.25 | 0    |
| Mandla               | Mandla DH                          | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.25 | 0.25 |
| Mandsaur             | Mandsaur DH                        | ANC (R) | 1.75 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Mandsaur             | Mandsaur DH                        | ANC     | 3.25 | 1.00 | 0.75 | 0.00 | 0.25 | 0.75 |
| Narsimhapur          | Narsimhapur DH                     | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Panna                | Panna DH                           | ANC     | n/a  | n/a  | n/a  | 1.25 | 0.00 | 0    |
| Raisen/Bareilly      | CHC BARELY                         | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.31 | 0    |
| Rajgarh              | CHC Bioara                         | ANC     | n/a  | n/a  | n/a  | 0.00 | 1.24 | 0    |
| Ratlam               | Ratlam DH                          | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Ratlam               | Ratlam DH                          | ANC     | 0.49 | 0.00 | 0.00 | 0.50 | 0.00 | 0    |
| Rewa                 | Rewa S.S. Medical College Hospital | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Rewa                 | Rewa S.S. Medical College Hospital | ANC     | 0.00 | 1.00 | 0.00 | 0.50 | 0.00 | 0    |
| Sagar                | Sagar DH                           | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Sagar                | Sagar DH                           | ANC     | 0.25 | 0.50 | 0.75 | 0.00 | 0.00 | 0    |
| Sehore               | Sehore DH                          | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.5  |
| Seoni                | Seoni DH                           | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.00 | 1.25 |
| Shahdol              | Shahdol DH                         | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Shahdol              | Shahdol DH                         | ANC     | 0.00 | 0.50 | 0.25 | 0.00 | 0.00 | 0    |
| Sheopur              | Sheopur DH                         | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Shivpuri             | Shivpuri DH                        | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Shivpuri             | Shivpuri DH                        | ANC     | 0.25 | 0.50 | 0.25 | 0.00 | 0.00 | 0    |
| Sidhi                | Sidhi DH                           | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Tikamgarh            | Tikamgarh DH                       | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Vidisha              | Vidisha DH                         | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| West Nimar/Khargone  | Khargone DH (New)                  | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.25 | 1.5  |



**TABLE SS 20b**

**Madhya Pradesh (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 2732          | 1.50 (1.12–1.88)        | Total number of sentinel sites 18<br>2 sites (≥75% sample size) had prevalence ≥5%<br>2 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 750           | 2.53 (1.59–3.48)        |  |
| Injecting drug users  | 250           | 39.60 (34.51–44.69)     |  |
| Men who have sex with men                                   | 250           | 11.60 (8.27–14.93)      |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Madhya Pradesh                        |  |                  |      |      |      |      |      |      |
|---------------------------------------|--|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |  |                  |      |      |      |      |      |      |
| District                              | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Bhopal                                | Gandhi Bhawan Trust (New 08)                     | IVDU             | n/a  | n/a  | n/a  | n/a  | n/a  | 39.6 |
| Bhopal                                | FSW site, Bhopal                                 | FSW              | n/a  | n/a  | 0.40 | n/a  | n/a  | n/a  |
| Chhatarpur                            | Chhatarpur                                       | FSW              | n/a  | n/a  | n/a  | 0.40 | 0.40 | 3.6  |
| Mandsaur                              | FSW site, Mandsaur                               | FSW              | n/a  | n/a  | 5.73 | n/a  | n/a  | n/a  |
| Morena                                | FSW site, Morena                                 | FSW              | n/a  | n/a  | 0.51 | n/a  | n/a  | n/a  |
| Raisen                                | Raisen   | FSW              | n/a  | n/a  | n/a  | 2.80 | 1.20 | 2    |
| Sagar                                 | Sagar  | FSW              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 2    |
| Bhopal                                | Rajeev Smruti Gas Pedit Punarwas Kendra (New 08) | MSM              | n/a  | n/a  | n/a  | n/a  | n/a  | 11.6 |
| Bhopal                                | Bhopal Gandhi Medical College and Hospital       | STI              | 3.25 | 3.40 | 0.00 | 5.56 | 0.58 | n/a  |
| Chhatarpur                            | Chattarpur DH                                    | STI              | 1.80 | 0.00 | 0.44 | 0.80 | 0.00 | 0.4  |
| Gwalior                               | Gwalior Gajra Raja Medical College Hospital      | STI              | 2.99 | 0.00 | 0.49 | 0.80 | 1.20 | 0.8  |
| Hoshangabad                           | Hoshangabad Civil Hospital                       | STI              | 1.20 | 2.80 | 1.60 | 0.00 | 0.00 | 1.61 |
| Indore                                | Indore MY Hospital                               | STI              | 8.80 | 4.20 | 5.20 | 6.00 | 5.20 | 6.75 |
| Jabalpur                              | Jabalpur Victoria Hospital                       | STI              | 1.83 | 1.60 | 0.00 | 0.00 | 0.00 | 1.2  |
| Jhabua                                | Jhabua DH  | STI              | n/a  | n/a  | n/a  | 0.00 | 1.72 | n/a  |
| Morena                                | Morena DH  | STI              | 0.63 | 0.00 | 0.00 | 0.47 | 1.46 | 0.4  |
| Neemuch                               | Neemuch DH                                       | STI              | n/a  | n/a  | n/a  | 0.00 | 2.00 | 0.4  |
| Satna                                 | Satna Civil Hospital                             | STI              | 1.82 | 1.60 | 4.00 | 3.60 | 0.74 | 3.61 |
| Seoni                                 | Seoni DH   | STI              | 0.80 | 2.00 | 3.60 | 0.00 | 1.20 | 1.6  |
| Shajapur                              | Shajapur DH                                      | STI              | n/a  | n/a  | n/a  | 1.21 | 0.40 | 0    |
| Ujjain                                | Ujjain DH  | STI              | 0.40 | 2.00 | 0.00 | 0.40 | 0.00 | 0    |



**TABLE SS 21a**  
**Maharashtra (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 27 940        | 0.60 (0.52–0.67)        |                        |
| Urban women                               | 15 201        | 0.76 (0.64–0.84)        |                        |
| Rural women                               | 12 739        | 0.41 (0.32–0.50)        |                        |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                                       |                  |      |      |      |      |      |      |
|---------------|---------------------------------------|------------------|------|------|------|------|------|------|
| District      | Site name                             | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Ahmadnagar    | Ahmadnagar Civil Hospital             | ANC              | 2.25 | 1.50 | 2.50 | 1.25 | 1.25 | 0.76 |
| Ahmadnagar    | CHC, Pathradi                         | ANC (R)          | 1.00 | 0.25 | 0.75 | 0.25 | 0.75 | 0.26 |
| Akola         | Akola Women Hospital                  | ANC              | 0.75 | 0.25 | 0.00 | 1.00 | 0.00 | 0.77 |
| Akola         | CHC, Murtizapur                       | ANC (R)          | 0.36 | 0.00 | 0.00 | 0.25 | 1.25 | 0.25 |
| Amravati      | Amravati Civil Hospital               | ANC              | 0.75 | 0.75 | 1.00 | 0.50 | 1.00 | 0    |
| Amravati      | CHC, Achalpur                         | ANC (R)          | 0.25 | 0.25 | 0.25 | 0.00 | 0.25 | 0.26 |
| Aurangabad    | Aurangabad Government Medical College | ANC              | 0.25 | 0.25 | 0.00 | 1.25 | 0.50 | 0.29 |
| Aurangabad    | CHC, Sillod                           | ANC (R)          | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.27 |
| Bhandara      | Bhandara Civil Hospital               | ANC              | 1.25 | 0.50 | 1.25 | 0.25 | 1.00 | 0.75 |
| Bhandara      | CHC, Tumsar                           | ANC (R)          | 0.75 | 0.75 | 1.00 | 0.50 | 0.50 | 0    |
| Beed          | Beed Civil Hospital                   | ANC              | 2.25 | 0.25 | 1.25 | 0.50 | 0.75 | 0.75 |
| Beed          | CHC, Parali                           | ANC (R)          | 0.75 | 0.75 | 0.50 | 1.00 | 0.50 | 0.5  |
| Buldhana      | Buldhana Civil Hospital               | ANC              | 0.25 | 0.25 | 0.50 | 1.00 | 0.25 | 1.32 |
| Buldhana      | CHC, Khamgav                          | ANC (R)          | 0.25 | 0.00 | 0.25 | 0.75 | 0.25 | 0.29 |
| Chandrapur    | Chandrapur Civil Hospital             | ANC              | 2.75 | 3    | 3.5  | 3.5  | 2.00 | 1.79 |
| Chandrapur    | CHC, Mul                              | ANC (R)          | 0.25 | 0.75 | 1.75 | 0.00 | 0.25 | 1.03 |
| Dhule         | Government Medical College            | ANC              | 1.50 | 0.50 | 0.75 | 1.00 | 1.50 | 0.75 |
| Dhule         | CHC, Shirpur                          | ANC (R)          | 0.51 | 1.00 | 0.50 | 1.25 | 0.75 | 0.5  |
| Gadchiroli    | Gadchiroli Civil Hospital             | ANC              | 0.50 | 1.00 | 0.50 | 0.50 | 0.00 | 0    |
| Gadchiroli    | CHC, Armori                           | ANC (R)          | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0    |
| Gondiya       | Gondiya Civil Hospital                | ANC              | 0.75 | 0.25 | 0.50 | 0.75 | 0.25 | 0.25 |
| Gondiya       | CHC, Deori                            | ANC (R)          | 1.00 | 0.25 | 0.25 | 0.50 | 0.50 | 0.26 |
| Hingoli       | Hingoli Civil Hospital                | ANC              | 0.25 | 1.50 | 1.00 | 1.25 | 0.50 | 0.25 |
| Hingoli       | CHC, Vasmat                           | ANC (R)          | 0.51 | 1.00 | 1.75 | 2.00 | 0.00 | 0.26 |
| Jalgaon       | Jalgaon Civil Hospital                | ANC              | 1.75 | 1.75 | 1.75 | 1.75 | 2.00 | 0.79 |
| Jalgaon       | CHC, Edlabad                          | ANC (R)          | 1.25 | 1.25 | 1.75 | 1.25 | 1.50 | 0    |
| Jalna         | Jalna Civil Hospital                  | ANC              | 0.25 | 1.00 | 1.25 | 0.75 | 0.50 | 0.77 |
| Jalna         | CHC, Ambad                            | ANC (R)          | n/a  | 0.50 | 0.50 | 1.50 | 0.75 | 0    |





| ANC attendees       |  |         |      |      |      |      |      |      |
|---------------------|--|---------|------|------|------|------|------|------|
| Kolhapur            | Kolhapur Government Medical College                                  | ANC     | 2.50 | 2.00 | 2.75 | 2.25 | 1.50 | 0.75 |
| Kolhapur            | CHC, Gargoti   | ANC (R) | 0.50 | 1.25 | 1.00 | 0.50 | 1.25 | 0    |
| Latur               | Latur Women Hospital   | ANC     | 2.01 | 2.25 | 1.50 | 1.50 | 1.25 | 1.01 |
| Latur               | CHC, Murud   | ANC (R) | 1.00 | 0.25 | 0.50 | 0.25 | 0.25 | 0.75 |
| Mumbai              | Mumbai Cama Hospital   | ANC     | 2.26 | 1.25 | 1.25 | 2.25 | 1.75 | 1.75 |
| Mumbai (Suburban) * | Ashwini/Parekh Maternity and Surgical Hospital                       | ANC     | n/a  | n/a  | n/a  | 0    | 1.27 | n/a  |
| Mumbai (Suburban) * | Mumbai Bhagwati Hospital   | ANC     | 1    | 1.75 | 2    | 1.75 | 2.00 | 1.75 |
| Mumbai (Suburban) * | Govandi Shatabdi Hospital  | ANC     | 1.25 | 1    | 0.25 | 1    | 1.75 | 1.25 |
| Mumbai (Suburban) * | Kurla KB Bhabha Hospital   | ANC     | 0.75 | 0.75 | 0.75 | 1.25 | 1.00 | 0.25 |
| Mumbai (Suburban) * | Mumbai M.W. Desai Hospital   | ANC     | 1.5  | 0.5  | 0.75 | 0.5  | 0.50 | 0    |
| Mumbai (Suburban) * | Rajawadi Peripheral Hospital   | ANC     | 1.25 | 1.25 | 1.75 | 0.5  | 1.25 | 1.25 |
| Nagpur              | Nagpur IGMC  | ANC     | 2.75 | 1.25 | 1.50 | 0.50 | 1.25 | 0.77 |
| Nagpur              | CHC, Umred   | ANC (R) | 0.75 | 1.25 | 0.25 | 1.25 | 1.00 | 0    |
| Nanded              | Nanded Government Medical College                                    | ANC     | 1.25 | 1.25 | 1.00 | 0.75 | 0.50 | 1.38 |
| Nanded              | CHC, Khandhar  | ANC (R) | 0.00 | 0.50 | 0.25 | 0.25 | 0.25 | 0    |
| Nandurbar           | Nandurbar Civil Hospital   | ANC     | 2.25 | 0.25 | 1.00 | 0.75 | 0.75 | 0.25 |
| Nandurbar           | CHC, Navapur   | ANC (R) | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0    |
| Nashik              | Nashik Government Hospital   | ANC     | 1.25 | 2.25 | 2.25 | 0.75 | 0.50 | 0    |
| Nashik              | CHC, Kalwan  | ANC (R) | 0.50 | 0.50 | 1.25 | 0.50 | 0.25 | 0.75 |
| Osmanabad           | Osmanabad Civil Hospital   | ANC     | 0.75 | 1.75 | 1.50 | 1.50 | 0.50 | 1.1  |
| Osmanabad           | CHC, Omerga  | ANC (R) | 0.75 | 1.00 | 1.25 | 1.50 | 0.00 | 0.52 |
| Parbhani            | Parbhani Civil Hospital  | ANC     | 1.25 | 0.50 | 0.50 | 0.25 | 1.25 | 0.79 |
| Parbhani            | CHC, Selu  | ANC (R) | 1.50 | 1.00 | 0.50 | 1.50 | 1.00 | 0.26 |
| Pune                | Pune BJ Medical College / Pune Chest General Hospital, Aundh (Urban) | ANC     | 2.50 | 3.25 | 3.25 | 0.50 | 0.50 | 0.51 |
| Pune                | CHC, Narayangaon   | ANC (R) | 0.25 | 1.50 | 0.50 | 0.50 | 0.00 | 0    |
| Raigarh             | Raigarh Civil Hospital   | ANC     | 0.50 | 1.00 | 0.75 | 0.50 | 0.25 | 0.26 |
| Raigarh             | CHC, Mangaon   | ANC (R) | 0.25 | 0.25 | 1.00 | 1.25 | 0.25 | 0.26 |
| Ratnagiri           | Ratnagiri Government Hospital  | ANC     | 1.50 | 0.75 | 1.00 | 0.50 | 0.50 | 0.52 |
| Ratnagiri           | CHC, Dapoli  | ANC (R) | 0.50 | 0.75 | 1.00 | 0.00 | 0.00 | 0.27 |
| Sangli              | Sangli Government Hospital   | ANC     | 4.00 | 2.50 | 3.25 | 3.00 | 3.25 | 1.81 |
| Sangli              | CHC, Islampur  | ANC (R) | 4.00 | 3.75 | 2.25 | 1.00 | 1.25 | 1.09 |
| Satara              | Satara Government Hospital   | ANC     | 3.00 | 2.00 | 2.25 | 2.00 | 2.25 | 0.27 |
| Satara              | CHC, Karad   | ANC (R) | 2.50 | 1.25 | 1.50 | 1.00 | 1.00 | 0    |
| Sindhudurg          | Sindhudurg Civil Hospital  | ANC     | 0.25 | 0.50 | 0.00 | 0.25 | 0.00 | 0    |
| Sindhudurg          | CHC, Sawantwadi  | ANC (R) | 0.00 | 0.00 | 0.50 | 0.00 | 0.25 | 0.25 |



| ANC attendees |                                     |         |      |      |      |      |      |      |
|---------------|-------------------------------------|---------|------|------|------|------|------|------|
| Solapur       | Solapur Government Medical College  | ANC     | 2.00 | 2.00 | 2.75 | 0.50 | 1.50 | 0.75 |
| Solapur       | CHC, Akluj                          | ANC (R) | 0.50 | 0.25 | 0.75 | 1.50 | 0.50 | 2.55 |
| Thane         | Thane Civil Hospital                | ANC     | 4.25 | 1.50 | 2.00 | 0.75 | 1.75 | 1.02 |
| Thane         | CHC, Shahapur                       | ANC (R) | 1.50 | 0.75 | 0.75 | 1.00 | 0.00 | 0.26 |
| Wardha        | Wardha Civil Hospital               | ANC     | 0.25 | 1.25 | 0.00 | 0.50 | 0.00 | 0.77 |
| Wardha        | CHC, Pulgaon                        | ANC (R) | 0.50 | 0.50 | 0.75 | 0.00 | 0.50 | 1    |
| Washim        | Washim Civil Hospital               | ANC     | 0.00 | 0.25 | 0.75 | 0.25 | 0.50 | 0.5  |
| Washim        | CHC, Manglurpir                     | ANC (R) | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 |
| Yavatmal      | Yavatmal Government Medical College | ANC     | 2.25 | 1.50 | 1.25 | 1.50 | 1.00 | 1.55 |
| Yavatmal      | CHC, Pusad                          | ANC (R) | n/a  | 1.25 | 1.25 | 1.25 | 0.50 | 1.56 |

**TABLE SS 21b**  
**Maharashtra (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 1432          | 11.52 (10.13–12.91)     | Total number of sentinel sites 32<br>10 sites (≥75% sample size) had prevalence ≥5%<br>18 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 5000          | 10.82 (10.10–11.54)     |  |
| Injecting drug users  | 250           | 20.0 (15.84–24.16)      |  |
| Male migrants   | 500           | 3.0 (1.75–4.25)         |  |
| Eunuch/ transgenders  | 250           | 15.40 (12.55–20.25)     |  |
| Men who have sex with men                                   | 1000          | 11.90 (10.22–13.58)     |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Maharashtra                           |   |                  |       |       |       |       |       |       |
|---------------------------------------|---|------------------|-------|-------|-------|-------|-------|-------|
| Populations with high-risk behaviours |   |                  |       |       |       |       |       |       |
| District                              | Site name   | Population group | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  |
| Mumbai                                | Dai Welfare Society, SION Hospital                | EUN              | n/a   | n/a   | 43.9  | 29.6  | 42.21 | 16.4  |
| Ahmadnagar                            | Snehalaya Project                                 | FSW              | n/a   | n/a   | 16.40 | 26.80 | 8.80  | 14.80 |
| Akola                                 | Priyadarshini, Akola                              | FSW              | n/a   | n/a   |       | 5.20  | 14.80 | 6     |
| Chandrapur                            | Noble Shikshan Sanstha                            | FSW              | n/a   | n/a   | 22.00 | 20.80 | 12.80 | 8.4   |
| Jalgaon                               | Adhar Babu-uddeshiya Sanstha                      | FSW              | n/a   | n/a   | 21.60 | 11.20 | 6.40  | 1.6   |
| Kolhapur                              | Muslim Samaj Probodhan Va Shikshan Sanstha        | FSW              | n/a   | n/a   | 29.20 | 29.60 | 18.00 | 26    |
| Latur                                 | Shri Ganesh Bahuddeshiya Shikshan Prasarak, Mndal | FSW              | n/a   | n/a   | 14.80 | 8.80  | 6.40  | 4.8   |
| Mumbai                                | Gaurabai CHCU                                     | FSW              | 54.29 | 44.76 | 50.2  | 36.8  | 42.40 | 30    |
| Mumbai (Suburban) *                   | Aditi - Source of Inspiration (NGO)               | FSW              | n/a   | n/a   | n/a   | 12.8  | 11.24 | 4     |
| Mumbai (Suburban) *                   | Malvani Urban Health Centre                       | FSW              | n/a   | n/a   | 11.2  | 4     | 4.40  | 3.2   |



| Maharashtra         |  |            |       |       |       |       |       |       |
|---------------------|--|------------|-------|-------|-------|-------|-------|-------|
| Mumbai (Suburban) * | Vijay Krida Mandal (New 08)                        | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 4     |
| Nagpur              | Nagpur (New 08)                                    | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 17.2  |
| Nashik              | Late Dr G.M. Bhavsar Charitable Trust              | FSW        | n/a   | n/a   | 18.40 | 9.60  | 7.20  | 9.6   |
| Parbhani            | Setu Charitable Trust                              | FSW        | n/a   | n/a   | 15.60 | 10.40 | 8.80  | 4.4   |
| Pune                | Pune Saheli NGO                                    | FSW        | n/a   | 42.80 | 43.15 | 50.00 | 59.20 | 41.2  |
| Raigarh             | Lok Parishad                                       | FSW        | n/a   | n/a   | 16.40 | n/a   | n/a   | 2.8   |
| Thane               | Thane, Sathi (NGO)                                 | FSW        | n/a   | 38.80 | 25.20 | 28.40 | 32.40 | n/a   |
| Amravati            | Amrawati (New 08)                                  | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 4     |
| Beed                | Beed-Ambejogai (New 08)                            | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 11.6  |
| Aurangabad          | Aurangabad (New 08)                                | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 2     |
| Solapur             | Solapur (New 08)                                   | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 6.4   |
| Yavatmal            | Yavatmal (New 08)                                  | FSW        | n/a   | n/a   | n/a   | n/a   | n/a   | 14.4  |
| Mumbai (Suburban) * | Mumbai Mukti Sadan Foundation Project              | IDU        | n/a   | 29.2  | 12.8  | 20.4  | 24.40 | 20    |
| Mumbai (Suburban) * | SANKALP  | IDU        | 22.89 | n/a   | n/a   | n/a   | n/a   | n/a   |
| Thane               | Thane (New 08)                                     | MRG        |       |       |       |       |       | 5.2   |
| Mumbai (Suburban) * | RSP and Nirman (NGO)                               | MRG        | n/a   | n/a   | n/a   | 2.4   | 1.60  | 0.8   |
| Mumbai (Suburban) * | Mumbai HAMSAFAR Trust                              | MSM        | 18.8  | 9.60  | 6     | 7.6   | 8.40  | 9.2   |
| Pune                | Pune, Samabhavana (NGO)                            | MSM        | n/a   | 12.80 | 14.80 | 23.60 | 15.20 | 12.80 |
| Kolhapur            | Kolhapur (New 08)                                  | MSM        | n/a   | n/a   | n/a   | n/a   | n/a   | 16    |
| Latur               | MSM Latur-Udgir (New 08)                           | MSM        | n/a   | n/a   | n/a   | n/a   | n/a   | 9.6   |
| Akola               | Akola Government Hospital                          | STI        | 8.80  | 8.80  | 10.00 | 9.20  | 13.20 | 11.01 |
| Aurangabad          | Aurangabad Government Medical College and Hospital | STI        | 14.00 | 5.60  | 6.80  | 10.00 | 10.04 | n/a   |
| Chandrapur          | Chandrapur Government Hospital                     | STI        | 8.80  | 11.20 | 15.20 | 8.40  | 16.80 | 11.89 |
| Jalgaon             | Jalgaon Government Hospital                        | STI        | 7.60  | 10.40 | 7.20  | 10.80 | 8.00  | 7.05  |
| Latur               | Latur Government Hospital                          | STI        | 10.00 | 8.40  | 10.40 | 10.00 | 7.20  | n/a   |
| Mumbai              | Mumbai GT Hospital and St George                   | STI        | 37.5  | 23.75 | 32.51 | 21.2  | 34.64 | n/a   |
| Mumbai (Suburban) * | Dr R.N. Cooper Hospital                            | STI        | 7.79  | 9.27  | 9.68  | 6.58  | 4.35  | n/a   |
| Mumbai (Suburban) * | Mumbai MT Agarwal Hospital                         | STI        | 31,33 | 15.65 | 16    | 11.17 | 0.00  | n/a   |
| Nagpur              | Nagpur IGMC  | STI        | 22.00 | 18.80 | 20.40 | 20.40 | 13.60 | 13.11 |
| Pune                | Pune AF Medical College                            | STI        | 8.40  | 16.40 | 17.20 | n/a   | n/a   | n/a   |
| Pune                | Pune BJ Medical College (New 07)                   | STI        | n/a   | n/a   | n/a   | n/a   | 32.20 | n/a   |
| Sangli              | Sangli Government Medical College                  | STI        | 15.60 | 32.80 | 25.20 | 28.40 | 30.00 | 14.05 |
| Thane               | Thane Government Hospital                          | STI        | 14.40 | 4.00  | 8.00  | 6.00  | 7.20  | 11.69 |
| Nashik              | Nashik T.B. site                                   | TB         | n/a   | 5.75  | 4.25  | n/a   | n/a   | n/a   |
| Mumbai              | GTB-RDTB Clinic                                    | <b>TUB</b> | n/a   | 11    | n/a   | n/a   | 24.4  | n/a   |



**TABLE SS 22a**  
**Manipur (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |     |
|---|---------------|-------------------------|------------------------|-----|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |     |
| All women                                 | 5541          | 0.54 (0.38–0.70)        | 1.4                    | 1.5 |
| Urban women                               | 3969          | 0.76 (0.53–0.98)        | 1.3                    | 1.1 |
| Rural women                               | 1572          | 0.0 (0.0–0.0)           |                        |     |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

**ANC attendees**

| District      | Site name            | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------|----------------------|------------------|------|------|------|------|------|------|
| Bishnupur     | Bishnupur DH         | ANC              | 1.75 | 1.25 | 0.75 | 0.00 | 1.00 | 0.5  |
| Bishnupur     | PHC, Moirang         | ANC (R)          | 1.50 | 1.25 | 1.75 | 0.75 | 0.00 | 0    |
| Chandel       | Moreh CHC Hospital   | ANC              | 1.75 | 1.50 | 3.50 | 1.75 | 3.00 | 1    |
| Churachandpur | Churachandpur DH     | ANC              | 5.00 | 2.75 | 1.50 | 2.25 | 3.00 | 0.75 |
| Imphal East   | Imphal J.N. Hospital | ANC              | 1.00 | 2.50 | 1.00 | 0.75 | 1.00 | 0.5  |
| Imphal East   | Jiribam CHC          | ANC              | 0.00 | 0.25 | 0.25 | 1.25 | 1.00 | 1    |
| Imphal West   | Lamphelpat RIMS      | ANC              | 1.50 | 1.50 | 1.50 | 2.25 | 0.75 | 1    |
| Imphal West   | CHC, Wangoi          | ANC (R)          | 0.50 | 0.75 | 0.00 | 0.25 | 0.50 | 0    |
| Imphal West   | CHC, Khumbong        | ANC (R)          | 0.00 | 0.50 | 0.50 | 0.25 | 0.75 | 0    |
| Senapati      | Senapati DH          | ANC              | 0.75 | 0.50 | 1.00 | 1.75 | 0.00 | 0.25 |
| Tamenglong    | Tamenglong DH        | ANC              | 0.75 | 1.50 | 1.75 | 2.50 | 0.00 | 0.5  |
| Thoubal       | Thoubal DH           | ANC              | 1.00 | 4.00 | 0.75 | 1.25 | 0.75 | 0    |
| Thoubal       | CHC, Kakching        | ANC (R)          | 0.25 | 0.50 | 1.00 | 0.50 | 0.50 | 0    |
| Ukhrul        | Ukhrul DH            | ANC              | 3.00 | 4.50 | 3.00 | 4.00 | 6.00 | 2.17 |

**TABLE SS 22b**  
**Manipur (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |               |  |
|---|---------------|-------------------------|---------------|--|
| Group   | Number tested | HIV % positive (90% CI) |               | Remarks  |
| All STI patients  | 450           | 2.89                    | (1.59–4.19)   | Total number of sentinel sites 10<br>3 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>6 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers  | 745           | 10.87                   | (9.00–12.75)  |  |
| Injecting drug users  | 967           | 28.65                   | (26.25–31.04) |  |
| Men who have sex with men                                   | 244           | 17.21                   | (13.24–21.19) |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| Manipur                               |   |                  |       |       |       |       |       |       |
|---------------------------------------|---|------------------|-------|-------|-------|-------|-------|-------|
| Populations with high-risk behaviours |   |                  |       |       |       |       |       |       |
| District                              | Site name                                 | Population group | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  |
| Chandel                               | FSW, New Generation, Moreh                | FSW              | n/a   | n/a   | 4.00  | 10.40 | 12.00 | 5.69  |
| Churachandpur                         | FSW, PPO                                  | FSW              | n/a   | n/a   | 12.80 | 16.00 | 19.60 | 17.6  |
| Imphal West                           | FSW, MLSS                                 | FSW              | 12.80 | 12.40 | 13.20 | 8.40  | 7.60  | 9.24  |
| Bishnupur                             | Bishnupur DH DDAC                         | IDU              | 22.40 | 10.80 | 28.00 | 15.20 | 12.40 | 34.27 |
| Churachandpur                         | Churachandpur DDAC, SHALOM                | IDU              | 32.93 | 29.20 | 20.00 | 24.00 | 28.00 | 28.28 |
| Churachandpur                         | DDAC, LRRC                                | IDU              | n/a   | 29.20 | 33.60 | 17.20 | 18.00 | 34.04 |
| Imphal West                           | DDAC, Imphal                              | IDU              | 18.07 | 14.80 | 14.80 | 22.80 | 13.20 | 17.92 |
| Imphal West                           | Imphal SASO RIMS Road                     | MSM              | 29.20 | 14.00 | 15.60 | 10.40 | 16.40 | 17.21 |
| Churachandpur                         | Churachandpur DH                          | STI              | 18.40 | 8.40  | 15.60 | 6.80  | 4.00  | 0.8   |
| Imphal East                           | Imphal JN Hospital                        | STI              | 7.60  | 6.00  | 8.80  | 2.80  | 4.17  | 5.5   |
| Imphal West                           | Imphal District TB Hospital, Chingmeirong | TUB              | n/a   | 18.75 | n/a   | n/a   | n/a   | n/a   |

**TABLE SS 23a**  
**Meghalaya (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) | HIV%Positive           |  |
| All women                                 | 1969          | 0.05 (-0.03–0.13)       | 0.1                    |  |
| Urban women                               | 399           | 0.0 (0.0–0.0)           | 0.1                    |  |
| Rural women                               | 1570          | 0.06 (-0.04–0.17)       | 0.1                    |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees    |                              |                  |      |      |      |      |      |      |
|------------------|------------------------------|------------------|------|------|------|------|------|------|
| District         | Site name                    | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| East Garo Hills  | CHC, Resubelpara             | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.00 |
| East Garo Hills  | Wiilam Nagar CHC             | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.26 |
| East Khasi Hills | Shillong Ganesh Das Hospital | ANC              | 0.25 | 0.00 | 0.00 | 0.24 | 0.00 | 0    |
| Garo Hills       |                              | ANC              | 0.59 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Ri Bhoi          | Nongpoh CHC                  | ANC (R)          | n/a  | n/a  | n/a  | 0.29 | 0.00 | 0    |
| South Garo Hills | Bagmara CHC                  | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| West Garo Hills  | Phulbari CHC                 | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| West Khasi Hills | Nongstoin CHC                | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |



**TABLE SS 23b**

**Meghalaya (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 490           | 3.88 (2.44–5.31)        | Total number of sentinel sites 3<br>1 site (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |

\* HIV prevalence is given for valid sites (≥75 % sample size).

| Meghalaya                             |   |                  |      |      |      |      |      |      |
|---------------------------------------|---|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |   |                  |      |      |      |      |      |      |
| District                              | Site name                                   | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| East Khasi Hills                      | Shillong Civil Hospital                     | STI              | 0.40 | n/a  | n/a  | 3.10 | 3.96 | 7.82 |
| East Khasi Hills                      | Jowai Civil Hospital                        | STI              | 0.00 | 0.00 | 0.00 | 0.50 | 1.62 | n/a  |
| West Garo Hills                       | Ture Civil Hospital                         | STI              | n/a  | 0.00 | 0.00 | 0.00 | 1.20 | 0    |
| East Khasi Hills                      | Shillong Sanker Rehabilitation Nursing Home | IDU              | 0.00 | 0.00 | 0.00 | 3.33 | 4.17 | n/a  |

| TABLE SS 24a                              |               |                         | Trends in ANC, 2003–08 |  |  |  |
|---|---------------|-------------------------|------------------------|--|--|--|
| *HIV prevalence among antenatal attendees |               |                         |                        |  |  |  |
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |  |  |
| All women                                 | 3200          | 0.72 (0.47–0.96)        |                        |  |  |  |
| Urban women                               | 3200          | 0.72 (0.47–0.96)        |                        |  |  |  |
| Rural women                               |               |                         |                        |  |  |  |
|   |               |                         |                        |  |  |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| ANC attendees |   |                  |      |      |      |      |      |      |
|---------------|---|------------------|------|------|------|------|------|------|
| District      | Site name                               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Aizawl        | Aizawl MCH Clinic, Civil Hospital       | ANC              | 0.75 | 1.25 | 0.25 | 1.25 | 1.25 | 1    |
| Aizawl        | Presbyterian Hospital, Durtlang, Aizawl | ANC              | n/a  | n/a  | 1.00 | 0.75 | 2.25 | 2    |
| Champhai      | Champhai Civil Hospital                 | ANC              | 3.50 | 2.75 | 1.25 | 1.25 | 0.75 | 1.25 |
| Hnahthial     | CHC, Hnahthial                          | ANC (R)          | 0.97 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Khawzawl      | CHC, Khawzawl                           | ANC (R)          | 0.78 | n/a  | n/a  | n/a  | n/a  | n/a  |



| ANC attendees |                                  |     |      |      |      |      |      |      |
|---------------|----------------------------------|-----|------|------|------|------|------|------|
| Kolasib       | Kolasib Civil Hospital (New 07)  | ANC | n/a  | n/a  | n/a  | n/a  | 0.50 | 0.25 |
| Lunglei       | Lunglei CHC Hospital             | ANC | 2.00 | 0.50 | 0.75 | 0.50 | 0.75 | 0.5  |
| Mamit         | Mamit Civil Hospital (New 07)    | ANC | n/a  | n/a  | n/a  | n/a  | 0.81 | 0    |
| Saiha         | Saiha Civil Hospital (New 07)    | ANC | n/a  | n/a  | n/a  | n/a  | 0.25 | 0.25 |
| Serchhip      | Serchhip Civil Hospital (New 07) | ANC | n/a  | n/a  | n/a  | n/a  | 0.25 | 0.5  |

**TABLE SS 24b**  
**Mizoram (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |              |   |
|---|---------------|-------------------------|--------------|---|
| Group   | Number tested | HIV % positive (90% CI) |              | Remarks   |
| All STI patients  | 500           | 6.40                    | (4.60–8.20)  | Total number of sentinel sites 9<br>2 sites (≥75% sample size) had prevalence ≥5%<br>2 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 250           | 9.20                    | (6.19–12.21) |   |
| Injecting drug users  | 1249          | 5.04                    | (4.03–6.06)  |   |
| Male migrants   | 250           | 0.80                    | (-0.13–1.73) |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Mizoram                               |  |                  |      |       |      |      |       |       |
|---------------------------------------|--|------------------|------|-------|------|------|-------|-------|
| Populations with high-risk behaviours |  |                  |      |       |      |      |       |       |
| District                              | Site name  | Population group | 2003 | 2004  | 2005 | 2006 | 2007  | 2008  |
| Saiha                                 | Saiha Civil Hospital                                     | STI              | 1.60 | 0.80  | 2.00 | 0.80 | n/a   | n/a   |
| Aizawl                                | Aizawl Civil Hospital                                    | STI              | 6.00 | 1.20  | 4.00 | 6.80 | 6.80  | 10    |
| Aizawl                                | Samaritan, Aizawl  | STI              | n/a  | n/a   | n/a  | 1.60 | 9.60  | n/a   |
| Lunglei                               | Christian Hospital, Serkawn Lunglei (New 07)             | STI              | n/a  | n/a   | n/a  | n/a  | 1.94  | 2.8   |
| Aizawl                                | Aizawl, SHALOM   | IDU              | 8.80 | 6.80  | 8.40 | 9.60 | 16.06 | 13.25 |
| Champhai                              | TNT, Champhai / RTCT, Champhai                           | IDU              | n/a  | 6.80  |      | 4.80 | 14.40 | 8.4   |
| Kolasib                               | Drug de-addiction center.Sethawn / World Vision, Kolasib | IDU              | n/a  | n/a   | 3.20 | 3.20 | 4.40  | n/a   |
| Lunglei                               | WADA, Lunglei  | IDU              | n/a  | n/a   | 2.80 | 2.00 | 2.00  | 2     |
| Mamit                                 | Bethany, Mamit   | IDU              | n/a  | n/a   | n/a  | 1.20 | n/a   | n/a   |
| Kolasib                               | MHIP, Lawngtlai  | IDU              | n/a  | n/a   | n/a  | 1.20 | n/a   | n/a   |
| Serchhip                              | MHIP, Serchhip   | IDU              | n/a  | n/a   | n/a  | 1.20 | n/a   | n/a   |
| Saiha                                 | M.Ch.Py, Saiha   | IDU              | n/a  | n/a   | n/a  | 1.20 | 0.80  | 0     |
| Aizawl                                |  | IDU              | 4.00 | n/a   | n/a  | n/a  | n/a   | n/a   |
| Kolasib                               | Agape Moral Reformation Organization (New 08)            | IDU              | n/a  | n/a   | n/a  | n/a  | n/a   | 1.6   |
| Aizawl                                | Chan. Aizawl   | FSW              | n/a  | 13.69 | n/a  | n/a  | n/a   | n/a   |
| Aizawl                                | Volunteers for Community Mental Health                   | FSW              | n/a  | n/a   | n/a  | n/a  | n/a   | 9.2   |





| Mizoram |                            |     |     |     |       |       |      |     |
|---------|----------------------------|-----|-----|-----|-------|-------|------|-----|
|         | (New 08)                   |     |     |     |       |       |      |     |
| Kolasib | World Vision, Vairengte    | FSW | n/a | n/a | 14.00 | 10.40 | 7.20 | n/a |
| Aizawl  | Samaritan Society (New 08) | MRG | n/a | n/a | n/a   | n/a   | n/a  | 0.8 |

**TABLE SS 25a**  
**Nagaland (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 6803          | 1.12 (0.91–1.33)        |                        |  |
| Urban women                               | 4194          | 1.57 (1.26–1.89)        |                        |  |
| Rural women                               | 2609          | 0.38 (0.18–0.58)        |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                                |                  |       |      |      |      |      |      |
|---------------|--------------------------------|------------------|-------|------|------|------|------|------|
| District      | Site name                      | Population group | 2003  | 2004 | 2005 | 2006 | 2007 | 2008 |
| Dimapur       | Dimapur Civil Hospital         | ANC              | 1.00  | 0.79 | 1.50 | 2.25 | 2.00 | 2.03 |
| Dimapur       | CHC, Medziphema                | ANC (R)          | 0.79  | 1.20 | 0.87 | 0.36 | 0.00 | 0.26 |
| Kohima        | Civil Hospital, Peren (New)    | ANC              | n/a   | n/a  | n/a  | 2.25 | 0.50 | 1.03 |
| Kohima        | Kohima Naga Hospital           | ANC              | 1.75  | 1.75 | 1.75 | 1.25 | 0.75 | 2.26 |
| Kohima        | CHC, Tseminyu                  | ANC (R)          | 0.00  | 3.16 | 1.23 | 0.83 | 0.00 | 0    |
| Mokokchung    | Mokokchung Civil Hospital      | ANC              | 0.00  | 2.51 | 0.75 | 1.11 | 0.25 | 1.25 |
| Mokokchung    | CHC, Changtonya                | ANC (R)          | n/a   | 0.61 | 1.21 | 0.83 | 0.52 | 0.26 |
| Mon           | CHC, Aboi                      | ANC (R)          | 16.67 | 0.00 | n/a  | 1.37 | 0.25 | 0    |
| Mon           | Mon Civil Hospital             | ANC              | 1.25  | 1.11 | 2.29 | 0.00 | 0.51 | 0.75 |
| Phek          | Phek Civil Hospital            | ANC              | 2.13  | 0.00 | 1.86 | 0.26 | 1.25 | 1.51 |
| Phek          | CHC, Pfutsero                  | ANC (R)          | 7.09  | 0.38 | 0.00 | 0.00 | 1.05 | 0.79 |
| Tuensang      | Civil Hospital, Kiphire (New)  | ANC              | n/a   | n/a  | n/a  | 1.17 | 0.69 | 1.68 |
| Tuensang      | Civil Hospital, Longleng (New) | ANC              | n/a   | n/a  | n/a  | 0.00 | 0.00 | 0.29 |
| Tuensang      | Tuensang Civil Hospital        | ANC              | 4.25  | 3.64 | 4.73 | 5.00 | 5.60 | 3.89 |
| Tuensang      | CHC, Tuensang (Noklak)         | ANC (R)          | n/a   | 7.07 | 8.36 | 4.07 | 4.30 |      |
| Wokha         | Wokha Civil Hospital           | ANC              | 0.82  | 0.74 | 1.00 | 0.61 | 0.60 | 0.61 |
| Wokha         | CHC, Bhandhari                 | ANC (R)          | n/a   | 0.00 | 2.34 | 0.93 | 0.61 | 0.26 |
| Zunheboto     | Zunheboto Civil Hospital       | ANC              | 0.80  | 1.88 | 1.50 | 2.00 | 0.75 | 1.75 |
| Zunheboto     | CHC, Akuluto                   | ANC (R)          | n/a   | 0.00 | 0.00 | 0.00 | 0.50 | 1.23 |



**TABLE SS 25b**  
Nagaland (2008  
summary)

| *HIV prevalence of populations with high-risk behaviours |               |                         |  |
|--|---------------|-------------------------|--|
| Group  | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients   | 241           | 3.32 (1.42–5.22)        | Total number of sentinel sites 10              |
| Female sex workers                                       | 249           | 14.06 (10.43–17.68)     | 1 site (≥75% sample size) had prevalence ≥5%   |
| Injecting drug users                                     | 1385          | 3.83 (2.98–4.67)        | 3 sites (≥75% sample size) had prevalence ≥10% |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Nagaland                              |                                 |                  |       |      |       |       |      |       |
|---------------------------------------|---------------------------------|------------------|-------|------|-------|-------|------|-------|
| Populations with high-risk behaviours |                                 |                  |       |      |       |       |      |       |
| District                              | Site name                       | Population group | 2003  | 2004 | 2005  | 2006  | 2007 | 2008  |
| Dimapur                               | Akimbo Dimapur                  | FSW              | 4.40  | 4.44 | 10.80 | 16.40 | 8.91 | 14.06 |
| Dimapur                               | Dimapur Civil Hospital          | IDU              | 10.44 | 4.49 | 8.40  | 3.20  | 5.20 | 10.17 |
| Kohima                                | Kirpa Kohima                    | IDU              | n/a   | 4.00 | 4.00  | 6.00  | 2.00 | 5.6   |
| Kohima                                | Kohima Naga Hospital            | STI              | 0.98  | 1.72 | 3.48  | 0.00  | 3.42 | 3.32  |
| Mokokchung                            | Tuli, NEDHIV/ NEDHIV Mokokchung | IDU              | 2.69  | 2.93 | 4.80  | 1.42  | 1.17 | 3.17  |
| Mokokchung                            | Mokokchung TB Hospital          | TUB              | n/a   | 7.19 | n/a   | n/a   | n/a  | n/a   |
| Mon                                   | Mon Civil Hospital              | IDU              | 0.00  | 0.41 | 2.00  | 0.40  | 0.00 | n/a   |
| Phek                                  | Bethesda Phek                   | IDU              | n/a   | 1.00 | 0.89  | 1.08  | 1.71 | 0.89  |
| Tuensang                              | Tuensang Civil Hospital         | IDU              | 23.66 | 8.80 | 10.80 | 5.20  | 2.80 | 2     |
| Wokha                                 | Agape, Wokha                    | IDU              | 0.80  | 0.40 | 0.39  | 0.82  | 1.23 | 0.9   |
| Zunheboto                             | Civil Hospital, Zunheboto (New) | IDU              | n/a   | n/a  | n/a   | 0.85  | 0.89 | n/a   |

**TABLE SS 26a**  
Orissa (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 12 400        | 0.40 (0.30–0.49)        |                        |  |
| Urban women                               | 12 400        | 0.40 (0.30–0.49)        |                        |  |
| Rural women                               |               |                         |                        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).



| ANC attendees  |  |                  |      |      |      |      |      |      |
|----------------|--|------------------|------|------|------|------|------|------|
| District       | Site name  | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Anugul         | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 1.75 | 1.74 | 0.5  |
| Balangir       | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 1.25 | 0.00 | 0.5  |
| Balasore       | Dept of O&G, District Headquarter Hospital, Balasore (New 07)        | ANC              | n/a  | n/a  | n/a  | n/a  | 0.25 | 0.5  |
| Bargarh        | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.50 | 0.5  |
| Baudh          | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Bhadrak        | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 1.00 | 0.25 | 0    |
| Cuttack        | Cuttack SCB Medical College  | ANC              | 0.00 | 0.50 | 0.50 | 0.75 | 0.00 | 1    |
| Deogarh        | Dept of O&G, District Headquarter Hospital, Deogarh (New 07)         | ANC              | n/a  | n/a  | n/a  | n/a  | 1.00 | 0    |
| Denkanal       | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Gajapati       | Dept of O&G, District Headquarter Hospital, Gajapati (New 07)        | ANC              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0.25 |
| Ganjam         | Berhampur City Hospital  | ANC              | 0.00 | 1.50 | 2.25 | 3.25 | 0.25 | 1.25 |
| Ganjam         | Area Hospital, Aska, Ganjam/ Hinjilikatu Ganjam (composite) (New 07) | ANC (R)          | n/a  | n/a  | n/a  | n/a  | 0.50 | 0.75 |
| Jagatsinghapur | Jagatsinghpur District Headquarter Hospital                          | ANC              | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.25 |
| Jajapur        | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.50 | 0.25 |
| Jharsuguda     | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.5  |
| Kalahandi      | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Kandhamal      | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.75 |
| Kendrapara     | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.75 |
| Kendujhar      | Dept of O&G, District Headquarter Hospital                           | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.00 | 0    |
| Khorda         | Dept of O&G, Capital Hospital  | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Koraput        | Dept of O&G, District Headquarter Hospital, Koraput (New 07)         | ANC              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |



| ANC attendees |  |     |      |      |      |      |      |      |
|---------------|--|-----|------|------|------|------|------|------|
| Malkangiri    | Dept of O&G, District Headquarter Hospital, Malkangiri (New 07)  | ANC | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |
| Mayurbhanj    | Dept of O&G, District Headquarter Hospital                       | ANC | n/a  | n/a  | n/a  | 0.50 | 0.00 | 0.25 |
| Nawarangpur   | Dept of O&G, District Headquarter Hospital, Nawarangpur (New 07) | ANC | n/a  | n/a  | n/a  | n/a  | 0.25 | 0.5  |
| Nayagarh      | Dept of O&G, District Headquarter Hospital                       | ANC | n/a  | n/a  | n/a  | 0.75 | 0.25 | 0    |
| Nuapada       | Dept of O&G, District Headquarter Hospital, Nuapada (New 07)     | ANC | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |
| Puri          | Dept of O&G, District Headquarter Hospital                       | ANC | n/a  | n/a  | n/a  | 0.50 | 0.25 | 0.5  |
| Rayagada      | Dept of O&G, District Headquarter Hospital                       | ANC | n/a  | n/a  | n/a  | 0.50 | 0.25 | 0.25 |
| Sambalpur     | Burla VSS Medical College  | ANC | 0.00 | 0.50 | 0.00 | 0.50 | 0.75 | 0    |
| Sonapur       | Dept of O&G, District Headquarter Hospital                       | ANC | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.75 |
| Sundargarh    | Rourkela RG Hospital   | ANC | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.25 |

**TABLE SS 26b**  
**Orissa (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) | Remarks   |
| All STI patients  | 1464          | 1.64 (1.09–2.19)        | Total number of sentinel sites 21<br>6 sites (≥75% sample size) had prevalence ≥5%<br>1 site (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 1497          | 2.34 (1.70–2.98)        |   |
| Injecting drug users  | 725           | 6.62 (5.10–8.14)        |   |
| Male Migrants   | 250           | 3.20 (1.37–5.03)        |   |
| Men who have sex with men                                   | 969           | 3.92 (2.90–4.95)        |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Orissa  |                                       |                  |      |      |      |      |      |      |
|---|---------------------------------------|------------------|------|------|------|------|------|------|
| Summary—Populations with high-risk behaviours |                                       |                  |      |      |      |      |      |      |
| District                                      | Site name                             | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Puri  | PENCODE, Puri                         | Fisher-folk      | n/a  | n/a  | n/a  | 3.20 | n/a  | n/a  |
| Balasure                                      | Balasure (New 07)                     | FSW              | n/a  | n/a  | n/a  | n/a  | 4.00 | 4.8  |
| Jajpur  | TSRDS, Jajpur (New 07)                | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0.4  |
| Khorda  | Bhubaneshwar OPUS                     | FSW              | n/a  | 7.57 | 2.80 | 0.80 | 0.00 | 0.81 |
| Rayagada                                      | Rayagada USO                          | FSW              | n/a  | 2.79 | 2.40 | 1.20 | 0.00 | 2.81 |
| Sundergarh                                    | SGUP, Lahunipada, Sundergarh (New 07) | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |
| Bhadrak                                       | Fellowship, Tarini Bhawan (New 08)    | FSW              | n/a  | n/a  | n/a  | n/a  | n/a  | 5.2  |



| Orissa         |   |     |      |      |      |       |      |      |
|----------------|---|-----|------|------|------|-------|------|------|
| Jagatsinghapur | Institute of Rural Development and Management Studies (New 09)    | FSW | n/a  | n/a  | n/a  | n/a   | n/a  | 0    |
| Baragarh       | HDI, Baragarh (New 07)  | IDU | n/a  | n/a  | n/a  | n/a   | 5.60 | 5.33 |
| Khorda         | Lepra Society (NGO)   | IDU | n/a  | n/a  | n/a  | 10.40 | 9.60 | 13.6 |
| Puri           | AVA, Puri (New 07)  | IDU | n/a  | n/a  | n/a  | n/a   | 6.80 | n/a  |
| Cuttack        | Orissa Institute of Medical Research and Health Services (New 09) | IDU | n/a  | n/a  | n/a  | n/a   | n/a  | 0.8  |
| Balangir       | RYS (NGO), near old fire station,                                 | MRG | n/a  | n/a  | n/a  | 0.80  | n/a  | n/a  |
| Gajapati       | SWSS (NGO)  | MRG | n/a  | n/a  | n/a  | 0.40  | n/a  | n/a  |
| Ganjam         | ARUNA (NGO)   | MRG | n/a  | n/a  | n/a  | 5.60  | n/a  | n/a  |
| Malkangiri     | TSRD (NGO)  | MRG | n/a  | n/a  | n/a  | 0.00  | n/a  | n/a  |
| Anugul         | Society for Advancement of Rural Community (New 09)               | MRG | n/a  | n/a  | n/a  | n/a   | n/a  | 3.2  |
| Nabarangapur   | CGL (NGO)   | MRG | n/a  | n/a  | n/a  | 0.40  | n/a  | n/a  |
| Bolangir       | RYS, Bolangir (New 07)  | MSM | n/a  | n/a  | n/a  | n/a   | 6.37 | 5.78 |
| Anugul         | The Medics, Similipada, Angul (New 07)                            | MSM | n/a  | n/a  | n/a  | n/a   | 8.37 | 7.2  |
| Khordha        | Viswa Jeevan Seva Sangha (VJSS) (New 09)                          | MSM | n/a  | n/a  | n/a  | n/a   | n/a  | 2    |
| Sambalpur      | Arun Institute of rural affairs (AIRA) (New 08)                   | MSM | n/a  | n/a  | n/a  | n/a   | n/a  | 0.82 |
| Baleshwar      | Balasore DHH  | STI | 3.20 | 2.80 | 6.80 | 3.20  | 1.60 | 0    |
| Cuttack        | Cuttack SCB Medical College                                       | STI | 2.80 | 2.39 | 1.20 | 2.80  | 0.00 | 0.8  |
| Ganjam         | Berhampur MKCG Medical College                                    | STI | 6.85 | 3.98 | 5.20 | 3.60  | 1.62 | 6.7  |
| Khorda         | Bhubaneswar Capital Hospital                                      | STI | 0.40 | 6.40 | 5.20 | 2.00  | 3.61 | 0.41 |
| Koraput        | Koraput DHH   | STI | 2.40 | 5.20 | 4.00 | 3.20  | 1.60 | 1.62 |
| Puri           | Puri DHH  | STI | 1.60 | 1.60 | 2.40 | 1.20  | 0.81 | n/a  |
| Sambalpur      | Sambalpur DHH   | STI | 0.40 | 0.00 | 0.40 | 0.40  | 1.20 | 0.8  |
| Anugul         | The Medics (NGO), Similipada                                      | TRK | n/a  | n/a  | n/a  | 2.80  | n/a  | n/a  |
| Debagarh       | HDI, D31, BJB Nagar (NGO)   | TRK | n/a  | n/a  | n/a  | 3.60  | n/a  | n/a  |
| Kendrapara     | VAARAT  | TRK | n/a  | n/a  | n/a  | 1.60  | n/a  | n/a  |
| Kendujhar      | The Medics (NGO)  | TRK | n/a  | n/a  | n/a  | 3.60  | n/a  | n/a  |
| Mayurbhanj     | RRDC (NGO)  | TRK | n/a  | n/a  | n/a  | 1.20  | n/a  | n/a  |
| Nuapada        | Mahila Vikash (NGO)   | TRK | n/a  | n/a  | n/a  | 3.60  | n/a  | n/a  |



**TABLE SS 27a**  
**Pondicherry (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 800           | 0.25 (-0.04–0.54)       |                        |
| Urban women                               | 800           | 0.25 (-0.04–0.54)       |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

**ANC attendees**

| District    | Site name                      | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-------------|--------------------------------|------------------|------|------|------|------|------|------|
| Karaikal    | Karaikal General Hospital      | ANC              | 0.25 | 0.25 | 0.50 | 0.50 | 0.00 | 0.25 |
| Karaikal    | Karaikal                       | ANC              | 0.26 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Pondicherry | Pondicherry Maternity Hospital | ANC (R)          | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | n/a  |
| Pondicherry | Pondicherry Maternity Hospital | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.25 |
| Pondicherry |                                | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 27b**  
**Pondicherry (2008 summary)**

\*HIV prevalence among populations with high-risk behaviours

| Group                     | Number tested | HIV % positive (90% CI) | Remarks   |
|---------------------------|---------------|-------------------------|---|
| All STI patients          | 692           | 3.18 (2.08–4.28)        | Total number of sentinel sites 8<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$<br>0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |
| Female sex workers        | 740           | 2.57 (1.61–3.52)        |   |
| Men who have sex with men | 490           | 2.65 (1.46–3.85)        |   |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| Pondicherry                           |  |                  |      |       |      |      |      |      |
|---------------------------------------|--|------------------|------|-------|------|------|------|------|
| Populations with high-risk behaviours |  |                  |      |       |      |      |      |      |
| District                              | Site name                                      | Population group | 2003 | 2004  | 2005 | 2006 | 2007 | 2008 |
| Karaikal                              | Karaikal General Hospital                      | STI              | 2.40 | 2.40  | 0.49 | 2.40 | 2.80 | 2.43 |
| Pondicherry                           | GHP/SSTCP, Pondicherry                         | STI              | 2.40 | 4.80  | 5.20 | 4.80 | 4.40 | 2.82 |
| Pondicherry                           | Pondicherry JIPMER                             | STI              | 2.65 | 11.73 | 8.03 | 5.13 | 2.17 | 4.57 |
| Karaikal                              | Sahodaran (NGO), Karaikal                      | MSM              | n/a  | n/a   | n/a  | 2.61 | 0.00 | 3.6  |
| Pondicherry                           | SAHOTHARAN (NGO), Pondicherry                  | MSM              | n/a  | 5.22  | 5.60 | 2.40 | 3.60 | 1.67 |
| Karaikal                              | VBEDS (NGO), Shakad, karaikal                  | FSW              | n/a  | n/a   | n/a  | 1.20 | 0.00 | 3.75 |
| Pondicherry                           | SFDRT (NGO), 468 Anna Salai, Pondicherry       | FSW              | n/a  | 1.94  | 0.51 | 1.69 | 0.96 | 1.2  |
| Pondicherry                           | SFDRT (NGO), (CCC), Shivaji Nagar, Pondicherry | FSW              | n/a  | n/a   | 0.00 | 1.44 | 3.00 | 2.8  |

| TABLE SS 28a<br>Punjab (2008 summary)     |               |                         | Trends in ANC, 2003–08 |  |  |
|---|---------------|-------------------------|------------------------|--|--|
| *HIV prevalence among antenatal attendees |               |                         |                        |  |  |
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |  |
| All women                                 | 5189          | 0.31 (0.18–0.43)        |                        |  |  |
| Urban women                               | 3189          | 0.34 (0.17–0.52)        |                        |  |  |
| Rural women                               | 2000          | 0.25 (0.07–0.43)        |                        |  |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |   |                  |      |      |      |      |      |      |
|---------------|---|------------------|------|------|------|------|------|------|
| District      | Site name                               | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Amritsar      | CHC, Manawala                           | ANC (R)          | 0.30 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Amritsar      | CH, Tarantarn/Chabbal/Patti (New)       | ANC (R)          | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Amritsar      | Amritsar Medical College                | ANC              | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0    |
| Faridkot      | CHC, Sadiq                              | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Faridkot      | Faridkot Medical College                | ANC              | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.25 |
| Ferozpur      | Civil Hospital, Ferozpur/Abohar         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Hoshiarpur    | Hoshiarpur Civil Hospital               | ANC              | 0.50 | 0.25 | 0.75 | 0.75 | 0.00 | 0    |
| Hoshiarpur    | CHC, Tanda                              | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jalandhar     | CH, Jalandhar (New 07)                  | ANC              | n/a  | n/a  | n/a  | n/a  | 0.77 | 0.75 |
| Ludhiana      | Ludhiana Civil Hospital                 | ANC              | 0.00 | 1.00 | 0.00 | 0.25 | 0.25 | 1.02 |
| Ludhiana      | CHC, Sudhar                             | ANC (R)          | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Mansa         | Civil Hospital, Mansa/Sadugarh/Bauladha | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0.5  |





| ANC attendees   |  |         |     |     |     |      |      |      |
|-----------------|--|---------|-----|-----|-----|------|------|------|
| Moga            | Civil Hospital, Moga/Khothi/Thathibhai | ANC (R) | n/a | n/a | n/a | 0.75 | 0.00 | 0.75 |
| Muktsar         | CHC/CH, Muktsar/Malout                 | ANC (R) | n/a | n/a | n/a | 0.25 | 0.00 | 0    |
| Nawanshahr      | CHC/CH, Balachaur/Mazaffarpur/Sujjon   | ANC (R) | n/a | n/a | n/a | 0.00 | 0.00 | 0    |
| Sangrur         | CH, Sangrur/Malerkotla/Barnala         | ANC     | n/a | n/a | n/a | 0.00 | 0.00 | 0.75 |
| Sangrur/Barnala | Civil Hospital, Barnala (New 07)       | ANC     | n/a | n/a | n/a | n/a  | 0.25 | 0    |

### Punjab (2008 summary)

| *HIV prevalence among populations with high-risk behaviours |               |                         |                |   |
|---|---------------|-------------------------|----------------|---|
| Group   | Number tested | HIV % positive (90% CI) |                | Remarks   |
| All STI patients  | 747           | 1.07                    | (0.45–1.69)    | Total number of sentinel sites 18<br>1 site (≥75% sample size) had prevalence ≥5%<br>3 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 1749          | 1.03                    | (0.63–1.43)    |   |
| Injecting drug users  | 1000          | 27.60                   | (25.27– 29.93) |   |
| Men who have sex with men                                   | 750           | 3.20                    | (2.14– 4.26)   |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

TABLE SS 28b

| Punjab                                |   |                  |      |      |      |      |       |      |
|---------------------------------------|---|------------------|------|------|------|------|-------|------|
| Populations with high-risk behaviours |   |                  |      |      |      |      |       |      |
| District                              | Site name   | Population group | 2003 | 2004 | 2005 | 2006 | 2007  | 2008 |
| Rupnagar/Ropar                        | Ambuja Cement Ropar, NYDC Talwara, VVSS Batala (New 07) | Composite TI IDU | n/a  | n/a  | n/a  | n/a  | 10.12 | 35.2 |
| Jalandhar                             | Sharan (New 08 )  | IVDU             |      |      |      |      |       | 15.2 |
| Amritsar                              | Swami Vivekanand Medical Mission (New 07)               | Composite TI IDU | n/a  | n/a  | n/a  | n/a  | 30.40 | 56.4 |
| Rupnagar/Mohali                       | Family Planning Association of India (FPAI) (New 07)    | Composite TI IDU | n/a  | n/a  | n/a  | n/a  | 0.80  | 3.6  |
| Amritsar                              | All India Women's Conference (New 08)                   | FSW              |      |      |      |      |       | 1.2  |
| Patiala                               | Progressive Youth Forum                                 | FSW              | 0.00 | n/a  | n/a  | 0.80 | n/a   | n/a  |
| Jalandhar                             | Swach   | FSW              | n/a  | n/a  | n/a  | 2.40 | n/a   | n/a  |
| Rupnagar                              | FPAI ( SAS Nagar) (New)                                 | FSW              | n/a  | n/a  | n/a  | 1.60 | n/a   | n/a  |
| Amritsar                              | Swami Vivekanand Medical Mission                        | FSW              | n/a  | n/a  | n/a  | 1.60 | n/a   | n/a  |
| Fatehgarh Sahib                       | S.S. Mem Edu.Trust, Mandi, Gobind Garh                  | FSW              | n/a  | n/a  | n/a  | 0.40 | n/a   | n/a  |
| Rupnagar/Mohali                       | FPAI, Mohali (New 07)                                   | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00  | 0    |



|                    |  |     |      |      |      |       |      |     |
|--------------------|--|-----|------|------|------|-------|------|-----|
| Rupnagar/Ropar     | Ambuja Cement, Ropar (New 07)                      | FSW | n/a  | n/a  | n/a  | n/a   | 0.00 | 1.2 |
| Gurdaspur/Batala   | Vahoo Vahoo Sewak Sabha, Batala (New 07)           | FSW | n/a  | n/a  | n/a  | n/a   | 2.43 | 2   |
| Bathinda           | Ambuja Cement Bathinda (New 07)                    | FSW | n/a  | n/a  | n/a  | n/a   | 0.81 | 1.6 |
| Talwara/Hoshiarpur | NYDC, Talwara (New 07)                             | FSW | n/a  | n/a  | n/a  | n/a   | 0.00 | 0.4 |
| Ludhiana           | Guru Gobind Singh Study Circle, Ludhiana (New 08)  | FSW |      |      |      |       |      | 0.8 |
| Bathinda           | DEWS   | IDU | n/a  | n/a  | n/a  | 6.40  | n/a  | n/a |
| Ludhiana           | Swach  | IDU | n/a  | n/a  | n/a  | 21.20 | n/a  | n/a |
| Rupnagar           | Ambuja Cement, Ropar (New)                         | MSM | n/a  | n/a  | n/a  | 4.80  | 0.40 | 2   |
| Bathinda           | Ambuja Cement, Bathinda (New 07)                   | MSM | n/a  | n/a  | n/a  | n/a   | 2.05 | 2.4 |
| Gurdaspur          | VVSS and Sudeep Memorial Charitable Trust (New 08) | MSM |      |      |      |       |      | 5.2 |
| Amritsar           | Amritsar Government Medical College                | STI | 2.00 | 2.00 | 2.40 | 0.00  | 3.63 | 2   |
| Patiala            | Patiala Medical College                            | STI | 1.60 | 1.09 | 0.80 | 0.80  | 0.40 | 0.4 |
| Bathinda           | Bhatinda Civil Hospital                            | STI | 1.20 | 0.40 | 0.00 | 0.00  | 0.80 | 0.8 |
| Gurdaspur          | Vaho Vaho Sewak Sabha, Batala, Gurdaspur           | TRK | n/a  | n/a  | n/a  | 0.80  | n/a  | n/a |
| Kapurthala         | Yuvasatta Phagwara                                 | TRK | n/a  | n/a  | n/a  | 0.00  | n/a  | n/a |
| Rupnagar           | Ambuja Cement, Ropar (New)                         | TRK | n/a  | n/a  | n/a  | 2.40  | n/a  | n/a |

**TABLE SS 29a**  
**Rajasthan (2008 summary)**

| *HIV prevalence among antenatal attendees |                |                         | Trends in ANC, 2003–08  |  |       |                |           |      |           |      |           |      |           |      |
|---|----------------|-------------------------|---|--|-------|----------------|-----------|------|-----------|------|-----------|------|-----------|------|
| Group                                     | Number tested  | HIV % positive (90% CI) |   |  |       |                |           |      |           |      |           |      |           |      |
| All women                                 | 9995           | 0.17 (0.10–0.24)        | <table border="1"> <caption>Data for HIV Prevalence Trends in ANC, 2003–08</caption> <thead> <tr> <th>Years</th> <th>HIV % Positive</th> </tr> </thead> <tbody> <tr> <td>2003-2005</td> <td>0.39</td> </tr> <tr> <td>2004-2006</td> <td>0.35</td> </tr> <tr> <td>2005-2007</td> <td>0.28</td> </tr> <tr> <td>2006-2008</td> <td>0.23</td> </tr> </tbody> </table> |  | Years | HIV % Positive | 2003-2005 | 0.39 | 2004-2006 | 0.35 | 2005-2007 | 0.28 | 2006-2008 | 0.23 |
| Years                                     | HIV % Positive |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2003-2005                                 | 0.39           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2004-2006                                 | 0.35           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2005-2007                                 | 0.28           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| 2006-2008                                 | 0.23           |                         |   |  |       |                |           |      |           |      |           |      |           |      |
| Urban women                               | 9995           | 0.17 (0.10–0.24)        |   |  |       |                |           |      |           |      |           |      |           |      |
| Rural women                               |                |                         |   |  |       |                |           |      |           |      |           |      |           |      |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| ANC Attendees |  |                  |      |      |      |      |      |      |
|---------------|--|------------------|------|------|------|------|------|------|
| District      | Site name                                | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Ajmer         | Government Mahila Chikitsalay            | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Alwar         | Rajiv Gandhi Government General Hospital | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.50 | 0    |
| Banswara      | Mahatma Gandhi Hospital                  | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Baran         | Government Hospital                      | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Barmer        | General Hospital                         | ANC              | n/a  | n/a  | n/a  | 0.00 | 1.00 | 0.25 |
| Bharatpur     | Bharatpur DH (New 07)                    | ANC              | n/a  | n/a  | n/a  | n/a  | 0.25 | 0.25 |
| Bhilwara      | Bhilwara District MG Hospital            | ANC              | 0.25 | 0.00 | 0.25 | 0.25 | 0.51 | 0    |
| Bhilwara      | CHC, Jahajpur                            | ANC (R)          | 0.75 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Bundi         | P.B.S.S. General Hospital                | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Chittaurgarh  | General Hospital                         | ANC              | n/a  | n/a  | n/a  | 0.25 | 1.00 | 0.25 |
| Churu         | D.B. Government Hospital                 | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Dausa         | Government DH                            | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Dungarpur     | Dungarpur DH                             | ANC              | 0.00 | 0.66 | 0.00 | 0.00 | 0.26 | n/a  |
| Dungarpur     | CHC, Sagwara                             | ANC (R)          | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Ganganagar    | CHC, Anooparh                            | ANC (R)          | 0.44 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Ganganagar    | Sriganganagar DH                         | ANC              | 0.25 | 0.00 | 2.25 | 3.00 | 0.00 | 0.25 |
| Jaipur        | Jaipur Zanana Hospital                   | ANC              | 0.00 | 0.75 | 0.00 | 0.25 | 0.00 | 0.25 |
| Jaipur        | CHC, Chomu                               | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jaisalmer     | Sh. Jawahar Hospital                     | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Jalor         | Bhandari Sarvajanik Hospital             | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.25 | 1    |
| Jhalawar      | Jhalawar DH                              | ANC              | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0    |
| Jhalawar      | CHC, Khanpur                             | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jhunjhunun    | B.D.K. Government Hospital               | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Jodhpur       | Umaid Hospital, Jodhpur Medical College  | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.25 |
| Jodhpur       | Pipar City                               | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Karauli       | Government General Hospital              | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Kota          | Jay Ka lone Hospital                     | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.25 | 0    |
| Nagaur        | Government Hospital                      | ANC              | n/a  | n/a  | n/a  | 0.75 | 0.00 | 0.5  |
| Pali          | Government Vagad Hospital                | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.00 | 0.25 |
| Rajsamand     | General Hospital                         | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.86 | 0.5  |
| Sikar         | Shree Kalyan Government Hospital         | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Sirohi        | Government General Hospital              | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.50 | 0.25 |



**TABLE SS 29b**

**Rajasthan (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 3634          | 2.20 (1.80–2.60)        | Total number of sentinel sites 20<br>3 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 1000          | 3.20 (2.28–4.12)        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Rajasthan                             |   |                  |       |       |       |      |      |      |
|---------------------------------------|---|------------------|-------|-------|-------|------|------|------|
| Populations with high-risk behaviours |   |                  |       |       |       |      |      |      |
| District                              | Site name   | Population group | 2003  | 2004  | 2005  | 2006 | 2007 | 2008 |
| Ajmer                                 | Ajmer JLN Hospital                                      | FSW              | n/a   | n/a   | 4.00  | 1.60 | 2.80 | 7.2  |
| Alwar                                 | Alwar   | FSW              | 3.92  | 2.31  | 3.23  | 4.00 | 4.80 | n/a  |
| Banswara                              | Mahatma Gandhi Hospital                                 | FSW              | n/a   | n/a   | n/a   | 0.40 | n/a  | 1.2  |
| Bharatpur                             | Bharatpur DH  | FSW              | n/a   | n/a   | 4.69  | 0.00 | n/a  | n/a  |
| Dhaulpur                              | Dholpur   | FSW              | n/a   | n/a   | 3.28  | 1.20 | 4.80 | n/a  |
| Ganganagar                            | Maharshi Dayanand Vikas Samiti, Sri Ganganagar (New 08) | FSW              | n/a   | n/a   | n/a   | n/a  | n/a  | 0    |
| Nagaur                                | Government Hospital                                     | FSW              | n/a   | n/a   | n/a   | 0.80 | 1.75 | n/a  |
| Tonk                                  | Government Saadat Hospital                              | FSW              | n/a   | n/a   | n/a   | 7.60 | 4.80 | 4.4  |
| Churu                                 | DB Government Hospital                                  | MSM              | n/a   | n/a   | n/a   | 0.00 | n/a  | n/a  |
| Ajmer                                 | Ajmer JLN Medical College and Hospital                  | STI              | 6.08  | 10.46 | 11.11 | 7.20 | 2.00 | 8.8  |
| Alwar                                 | Alwar DH  | STI              | 0.40  | 1.24  | 8.64  | 2.80 | 1.20 | 0.5  |
| Barmer                                | Barmer DH   | STI              | 6.80  | 9.80  | 5.60  | 2.40 | 3.60 | 3.6  |
| Bikaner                               | Bikaner PBM Hospital                                    | STI              | 0.00  | 1.27  | 0.40  | 0.40 | 1.20 | 0    |
| Chittaurgarh                          | General Hospital  | STI              | n/a   | n/a   | n/a   | 1.60 | 4.42 | 4.4  |
| Ganganagar                            | Government Hospital                                     | STI              | n/a   | n/a   | n/a   | 1.20 | 0.00 | 0    |
| Hanumangarh                           | Mahatma Gandhi Memorial Hospital                        | STI              | n/a   | n/a   | n/a   | 0.40 | 0.00 | 0    |
| Jaipur                                | Jaipur SMS Medical College                              | STI              | 14.00 | 4.65  | 7.72  | 3.60 | 4.80 | 4.98 |
| Jhunjhunun                            | BDK Government Hospital                                 | STI              | n/a   | n/a   | n/a   | 1.60 | 0.40 | 0    |
| Karauli                               | Government General Hospital                             | STI              | n/a   | n/a   | n/a   | 2.00 | 3.20 | 0    |
| Kota                                  | Kota District MBS Hospital                              | STI              | 0.40  | 0.00  | 1.20  | 0.00 | 0.00 | 0.5  |
| Rajsamand                             | General Hospital  | STI              | n/a   | n/a   | n/a   | 1.60 | 2.00 | 1.61 |
| Sawai Madhopur                        | General Hospital  | STI              | n/a   | n/a   | n/a   | 0.40 | 0.80 | 0.8  |
| Sikar                                 | Shree Kalyan Government Hospital                        | STI              | n/a   | n/a   | n/a   | 1.20 | 2.40 | 4.8  |
| Udaipur                               | Udaipur Medical College and General Hospital            | STI              | 7.21  | 2.92  | 2.48  | 6.00 | 2.09 | 2.4  |



**TABLE SS 30a**  
**Sikkim (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 1130          | 0.0 (0.0–0.0)           |                        |  |
| Urban women                               | 1130          | 0.0 (0.0–0.0)           |                        |  |
| Rural women                               |               |                         |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees |                               |                  |      |      |      |      |      |      |
|---------------|-------------------------------|------------------|------|------|------|------|------|------|
| District      | Site name                     | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| East          | Gangtok STNM Hospital         | ANC              | 0.25 | 0.00 | 0.25 | 0.00 | 0.25 | 0    |
| East          | Pakyong Primary Health Centre | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| North         | Antenatal clinic, Mangan      | ANC              | n/a  | n/a  | n/a  | 0.37 | 0.00 | 0    |
| Pakyong       | CHC, DH                       | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Simgtam       | CHC, DH                       | ANC (R)          | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |

**TABLE SS 30b**  
**Sikkim (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) | Remarks   |
| All STI patients  |               |                         | Total number of sentinel sites 4                              |
| Female sex workers  | 227           | 0.44 (-0.28–1.16)       | 0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 5\%$  |
| Injecting drug users  | 228           | 2.19 (0.60–3.79)        | 0 sites ( $\geq 75\%$ sample size) had prevalence $\geq 10\%$ |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| Sikkim                                |                       |                  |      |      |      |      |      |      |
|---------------------------------------|-----------------------|------------------|------|------|------|------|------|------|
| Populations with high-risk behaviours |                       |                  |      |      |      |      |      |      |
| District                              | Site name             | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| East                                  | Gangtok (New 07)      | FSW              | n/a  | n/a  | n/a  | n/a  | 0.00 | 0.44 |
| East                                  | Gangtok STNM Hospital | STI              | 0.00 | 0.00 | 0.86 | 0.00 | 0.00 | n/a  |
| East                                  | Gangtok, East Sikkim  | IDU              | n/a  | n/a  | 0.48 | 0.40 | 0.00 | 2.19 |
| South                                 | Hope Centre, Namchi   | IDU              | n/a  | n/a  | n/a  | 0.00 | 1.12 | n/a  |



**TABLE SS 31a**  
**Tamil Nadu (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08   |
|---|---------------|-------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) | <p>The graph shows a steady decline in HIV prevalence among antenatal attendees (ANC) in Tamil Nadu from 2003-2005 to 2006-2008. The prevalence starts at 0.8 in 2003-2005, drops to 0.7 in 2004-2006, 0.6 in 2005-2007, and reaches 0.5 in 2006-2008.</p> |
| All women                                 | 25 199        | 0.35 (0.29–0.41)        |  |
| Urban women                               | 13 599        | 0.51 (0.41–0.61)        |  |
| Rural women                               | 11 600        | 0.16 (0.10–0.23)        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees              |   |                  |          |          |      |      |      |      |
|----------------------------|---|------------------|----------|----------|------|------|------|------|
| District                   | Site name                                       | Population group | 2003     | 2004     | 2005 | 2006 | 2007 | 2008 |
|                            |   |                  | Ariyalur | Ariyalur | ANC  | 1.25 | n/a  | n/a  |
| Chennai                    | Chennai Institute of Obstetrics and Gynaecology | ANC              | 0.00     | 0.00     | 0.50 | 0.25 | 1.00 | 0.25 |
| Chennai                    | St Isabels Hospital                             | ANC              | n/a      | 0.25     | 0.00 | 0.00 | 0.00 | 0    |
| Coimbatore                 | Government Medical College Hospital             | ANC              | 0.75     | 0.50     | 0.75 | 1.00 | 0.75 | 1    |
| Coimbatore                 | Sheila Hospital                                 | ANC              | n/a      | 0.75     | n/a  | 0.00 | 0.00 | 0    |
| Coimbatore                 | Sheila Hospital                                 | ANC (R)          | n/a      | n/a      | 0.25 | n/a  | n/a  | n/a  |
| Coimbatore                 | GH, Pollachi                                    | ANC (R)          | 0.50     | 0.75     | 0.00 | 0.75 | 0.00 | 0    |
| Cuddalore                  | Government District Headquarter Hospital        | ANC              | 0.25     | 0.50     | 0.25 | 0.00 | 0.00 | 0.25 |
| Cuddalore                  | GH, Panruti                                     | ANC (R)          | 1.00     | 1.00     | 1.00 | 0.00 | 0.50 | 0    |
| Dharmapuri                 | Government District Headquarter Hospital        | ANC              | n/a      | 1.25     | 0.75 | 0.50 | 0.00 | 0.25 |
| Dharmapuri                 | FRU, Harur                                      | ANC (R)          |          | 0.50     | 0.25 | 0.25 | 0.75 | 0.25 |
| Dharmapuri                 | ANC FRU, Hosur (Krishnagiri)                    | ANC (R)          | 1.25     | 0.58     | 0.50 | 1.25 | 1.75 | 0    |
| Dharmapuri/<br>Krishnagiri | ANC, Krishnagiri                                | ANC              | 1.50     | 1.00     | 1.00 | 1.00 | 0.50 | 0    |
| Dindigul                   | Government District Headquarter Hospital        | ANC              | 1.25     | 0.75     | 0.25 | 0.25 | 0.75 | 0.25 |
| Dindigul                   | GH, Palani                                      | ANC (R)          | 0.25     | 0.75     | 0.75 | 0.50 | 0.00 | 0.25 |
| Erode                      | Government District Headquarter                 | ANC              | 0.00     | 0.50     | 1.00 | 0.75 | 0.25 | 1    |



| ANC attendees |   |         |      |      |      |      |      |      |
|---------------|---|---------|------|------|------|------|------|------|
|               | Hospital  |         |      |      |      |      |      |      |
| Erode         | GH, Gobichettipalayam                                 | ANC (R) | 0.25 | 0.50 | 0.25 | 0.75 | 0.50 | 0    |
| Kancheepuram  | Government District Headquarter Hospital              | ANC     | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.5  |
| Kancheepuram  | GH, Maduranthagam                                     | ANC (R) | 0.25 | 0.75 | 0.00 | 0.00 | 0.00 | 0    |
| Kanyakumari   | Government Medical College Hospital, Nagercoil        | ANC     | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0    |
| Kanyakumari   | Jeyasekaran Hospital, Nagercoil                       | ANC     | n/a  | 0.00 | 0.00 | 0.00 | 0.00 | 0    |
| Kanniyakumari | Government Hospital, Padmanabapuram                   | ANC (R) | n/a  | 0.50 | 0.00 | 0.25 | 0.50 | 0    |
| Karur         | Government District Headquarter Hospital              | ANC     | 1.00 | 2.75 | 2.00 | 1.25 | 0.50 | 1    |
| Karur         | GH, Kulithali   | ANC (R) | 0.50 | 3.25 | 0.25 | 0.50 | 0.25 | 1    |
| Madurai       | Government Madurai Medical College Rajaji Hospital    | ANC     | 0.75 | 0.25 | 1.50 | 0.25 | 0.00 | 0.25 |
| Madurai       | GH, Melur   | ANC (R) | 1.26 | 3.70 | 1.00 | 0.25 | 0.00 | 0.75 |
| Nagapattinam  | Arthur Hospital                                       | ANC     | n/a  | n/a  | n/a  | 0.25 | n/a  |      |
| Nagapattinam  | Arthur Hospital                                       | ANC (R) | n/a  | n/a  | 0.00 | n/a  | n/a  | 0    |
| Nagapattinam  | Government District Headquarter Hospital              | ANC     | 0.25 | 0.50 | 0.00 | 0.00 | 0.00 | 0    |
| Nagapattinam  | Government Hospital, Mayiladuthurai                   | ANC (R) | n/a  | 0.50 | 0.00 | 0.50 | 0.25 | 0    |
| Namakkal      | Government District Headquarter Hospital              | ANC     | 5.76 | 2.50 | 3.50 | 3.00 | 3.25 | 1    |
| Namakkal      | GH, Tiruchengode                                      | ANC (R) | 0.50 | 0.75 | 0.00 | 0.50 | 0.75 | 0.25 |
| Perambalur    | Government District Headquarter Hospital              | ANC     | 0.50 | 1.25 | 1.50 | 1.00 | 1.00 | 1    |
| Perambalur    | GH, Ariyalur  | ANC (R) | 1.28 | 1.00 | 0.00 | 0.50 | 0.75 | 0    |
| Pudukkottai   | Government District Headquarter Hospital, Pudukkottai | ANC     | 2.00 | 0.75 | 0.75 | 1.00 | 1.25 | 0.75 |
| Pudukkottai   | GH, Aranthangi  | ANC (R) | 0.00 | 0.50 | 0.50 | 0.50 | 0.00 | 0    |





| ANC attendees   |   |         |      |      |      |      |      |      |
|-----------------|---|---------|------|------|------|------|------|------|
| Ramanathapuram  | Government District Headquarter Hospital                | ANC     | 0.50 | 0.75 | 0.00 | 0.25 | 1.00 | 3.25 |
| Ramanathapuram  | GH, Paramakudi  | ANC (R) | 0.50 | 0.50 | 1.00 | 0.00 | 1.00 | 0    |
| Salem           | Government Mohan Kumarmangalam Medical College Hospital | ANC     | 0.25 | 2.00 | 0.75 | 3.00 | 4.25 | 1    |
| Salem           | GH, Attur   | ANC (R) | 0.50 | 1.25 | 0.50 | 1.50 | 0.25 | 0    |
| Sivaganga       | Government District Headquarter Hospital                | ANC     | 0.25 | 0.75 | 0.50 | 0.50 | 0.25 | 0.5  |
| Sivaganga       | Government Hospital, Karaikudi                          | ANC (R) | n/a  | 1.75 | 0.00 | 0.50 | 1.00 | 1    |
| Thanjavur       | Government District Headquarter Hospital, Kumbakonam    | ANC     | 3.25 | 0.75 | 0.00 | 0.00 | 0.00 | 0    |
| Thanjavur       | GH, Pattukkottai  | ANC (R) | 0.50 | 0.50 | 0.00 | 0.75 | 0.25 | 0    |
| The Nilgiris    | Government District Headquarter Hospital, Ooty          | ANC     | 0.25 | 0.50 | 1.00 | 0.50 | 0.25 | 0.75 |
| The Nilgiris    | GH, Coonoor   | ANC (R) | 0.25 | 0.75 | 0.50 | 0.25 | 0.25 | 0    |
| Theni           | Government District Headquarter Hospital, Periyakulam   | ANC     | 1.00 | 1.50 | 0.50 | 1.75 | 0.50 | 0.5  |
| Theni           | GH, Cumbum  | ANC (R) | 1.50 | 1.25 | 0.75 | 0.50 | 2.00 | 0    |
| Thiruvallur     | Government District Headquarter Hospital                | ANC     | 0.50 | 0.50 | 0.50 | 1.25 | 0.00 | 0.25 |
| Thiruvallur     | GH, Thiruthani  | ANC (R) | 0.50 | 1.00 | 0.50 | 0.25 | 0.50 | 1    |
| Thiruvarur      | Government District Headquarter Hospital                | ANC     | 0.50 | 0.25 | 0.00 | 0.00 | 0.00 | 0.5  |
| Thiruvarur      | Government Hospital, Mannargudi                         | ANC (R) | n/a  | 0.00 | 0.50 | 0.00 | 0.00 | 0    |
| Thoothukkudi    | Government Medical College Hospital                     | ANC     | 0.77 | 0.50 | 0.00 | 0.25 | 0.25 | 0.75 |
| Thoothukkudi    | GH, Kovilpatti  | ANC (R) | 0.75 | 1.00 | 0.25 | 0.25 | 0.50 | 0    |
| Tiruchirappalli | CSI Hospital  | ANC     | n/a  | 0.50 | n/a  | 0.25 | 0.00 | 0    |
| Tiruchirappalli | CSI Hospital  | ANC (R) | n/a  | n/a  | 0.25 | n/a  | n/a  |      |
| Tiruchirappalli | Government Medical College                              | ANC     | 1.50 | 1.25 | 1.50 | 2.50 | 2.25 | 1    |



| ANC attendees   |  |         |      |      |      |      |      |      |
|-----------------|--|---------|------|------|------|------|------|------|
|                 | Hospital                                 |         |      |      |      |      |      |      |
| Tiruchirappalli | GH, Manapparai                           | ANC (R) | 0.75 | 0.50 | 0.50 | 1.25 | 0.25 | 0.25 |
| Tirunelveli     | Government Medical College Hospital      | ANC     | 2.25 | 0.25 | 0.75 | 0.25 | 0.00 | 0    |
| Tirunelveli     | GH, Ambasamudram                         | ANC (R) | 0.25 | 0.25 | 0.25 | 0.25 | 0.00 | 0    |
| Tiruvannamalai  | Government District Headquarter Hospital | ANC     | 1.25 | 1.50 | 1.25 | 0.50 | 2.00 | 0.25 |
| Tiruvannamalai  |  | ANC     | n/a  | 0.00 | n/a  | n/a  | n/a  |      |
| Tiruvannamalai  | Government Hospital, Vandawasi           | ANC (R) | n/a  | 1.25 | 0.50 | 0.25 | 0.00 | 0    |
| Vellore         | Vellore Government Hospital              | ANC     | 1.25 | 0.75 | 0.25 | 0.00 | 1.00 | 0.75 |
| Vellore         | GH, Vaniambadi                           | ANC (R) | 0.51 | 0.50 | 1.50 | 0.25 | 0.75 | 0    |
| Viluppuram      | District Headquarter Hospital            | ANC     | 1.00 | 0.50 | 0.50 | 0.25 | 0.25 | 0    |
| Viluppuram      | District Hospital, Kallakurichi          | ANC (R) | 1.00 | 0.25 | 0.50 | 0.25 | 0.50 | 0    |
| Virudhunagar    | Government District Headquarter Hospital | ANC     | 0.00 | 0.25 | 1.00 | 0.00 | 1.00 | 0.25 |
| Virudhunagar    | GH, Rajapalayam                          | ANC (R) | 0.00 | 0.25 | 0.00 | 0.25 | 0.25 | 0    |

**TABLE SS 31b**  
**Tamil Nadu (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  |               |                         | Total number of sentinel sites 47              |
| Female sex workers  | 5134          | 4.93 (4.43–5.42)        | 14 sites (≥75% sample size) had prevalence ≥5% |
| Injecting drug users  | 250           | 3.60 (1.66–5.54)        | 7 sites (≥75% sample size) had prevalence ≥10% |
| Men who have sex with men                                   | 2435          | 4.85 (4.13–5.56)        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).



| Tamil Nadu                            |  |                          |      |      |       |       |       |       |
|---------------------------------------|--|--------------------------|------|------|-------|-------|-------|-------|
| Populations with high-risk behaviours |  |                          |      |      |       |       |       |       |
| District                              | Site name  | Popula-<br>tion<br>group | 2003 | 2004 | 2005  | 2006  | 2007  | 2008  |
| Chennai                               | Madras Christian Council of Social Services Project            | FSW                      | 8.80 | 4.00 | 5.60  | 3.60  | 3.20  | n/a   |
| Dharmapuri                            | Arcod CSW Project  | FSW                      | n/a  | n/a  | 8.80  | 14.00 | 7.20  | n/a   |
| Dharmapuri                            | Rural Interdisciplinary Development Society, RIDS TAI (New 08) | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 6.22  |
| Kanyakumari                           | CSR FSW, Kanyakumari   | FSW                      | n/a  | n/a  | 2.00  | 0.40  | 0.40  | 0.81  |
| Madurai                               | Merry Trust CSW Project  | FSW                      | n/a  | n/a  | 3.60  | 5.60  | 10.00 | 8     |
| Salem                                 | PSI CSW Project  | FSW                      | n/a  | n/a  | 12.80 | 12.00 | 6.00  | n/a   |
| Theni                                 | Green Medic Trust CSW Project                                  | FSW                      | n/a  | n/a  | 4.80  | 2.00  | 1.60  | 7.63  |
| Thiruvallur                           | MSDS CSW Project   | FSW                      | n/a  | n/a  | 6.40  | 1.60  | 0.40  | n/a   |
| Thiruvarur                            | Bharathi CSW Project   | FSW                      | n/a  | n/a  | 4.00  | 0.80  | n/a   | n/a   |
| Tiruchirappalli                       | Anbalayam CSW Project  | FSW                      | n/a  | n/a  | 8.40  | 5.60  | 13.20 | 7.6   |
| Tirunelveli                           | CAST CSW Project   | FSW                      | n/a  | n/a  | 2.80  | 0.80  | 4.00  | 2.02  |
| Dindigul                              | Dindigul Women TAI Vizhudugal Trust (New 08)                   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 7.29  |
| Erode                                 | Centre for Action and Rural Education, CARE TAI (New 08)       | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 12.15 |
| Kanyakumari                           | CSR FSW, Kanyakumari   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 0.81  |
| Karur                                 | Gramium (New 08)   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 6.8   |
| Madurai                               | Merry Trust CSW Project  | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 8     |
| Perambalur                            | Andimuthu Chinnappillai Charitable Trust (New 08)              | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 2     |
| Pudukkottai                           | Gramodaya (New 08)   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 1.26  |
| Ramanathapuram                        | Association for Integrated Rural Development (New 08)          | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 0     |
| Salem                                 | Village Reconstruction and Development Project (New 08)        | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 13.25 |
| Sivaganga                             | ANGEL (New 08)   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 0.44  |
| Thanjavur                             | Margret Social Development Society(MSDS_TAI) (New 08)          | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 6.4   |
| The Nilgiris                          | Saras Trust, Ooty (New 08)                                     | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 0.43  |
| Thiruvallur                           | Deepam Education Society for Health, DESH?TAI (New 08)         | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 4.8   |
| Thiruvarur                            | Sheilas Unit for Health and Social Affairs (New 08)            | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 3.6   |
| Thoothukkudi                          | Empower (New 08)   | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 4.13  |
| Viluppuram                            | Association for Rural Mass India (New 08)                      | FSW                      | n/a  | n/a  | n/a   | n/a   | n/a   | 7.23  |
| Virudhunagar                          | Annai Orphanage FSW  | FSW                      | n/a  | n/a  | 1.20  | 4.40  | 0.80  | 0.41  |



| Tamil Nadu      |   |     |        |       |       |       |       |      |
|-----------------|---|-----|--------|-------|-------|-------|-------|------|
| Chennai         | IVDU Project, TTK Hospital, Chennai                           | IDU | 63.81  | 39.92 | 33.20 | 31.60 | 27.20 | n/a  |
| Madurai         | IDU Project (NGO)—Pache Trust                                 | IDU | n/a    | n/a   | 2.80  | 16.80 | 6.40  | 3.6  |
| Chennai         | MSM Project, ICWO, Chennai                                    | MSM | 6.80   | 6.80  | 4.40  | 4.40  | 7.60  | 3.61 |
| Viluppuram      | MSM Project ARM   | MSM | 1.60   | 6.80  | 8.00  | 6.80  | 5.60  | 2.82 |
| Kanniyakumari   | Centre for Social Reconstruction (New 08)                     | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 0.85 |
| Karur           | Gramium (New 08)  | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 2.81 |
| Ramanathapuram  | Rural Education and Economic Development Association (New 08) | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 2.01 |
| Sivaganga       | Rural Education and Economic Development Association (New 08) | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 1.62 |
| Thiruvallur     | Community Health Education Society, CHES?TAI (New 08)         | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 22   |
| Thoothukkudi    | Tuticorin District HIV +ve People Welfare Society (New 08)    | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 3.66 |
| Tirunelveli     | Pache Trust (New 08)  | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 3.78 |
| Virudhunagar    | Virucham Mahalir Munnetra Kalangiyam (New 08)                 | MSM | n/a    | n/a   | n/a   | n/a   | n/a   | 4.89 |
| Chennai         | Government Stanley Medical College Hospital                   | STI | 7.26   | 8.00  | 4.80  | 12.40 | 7.60  | n/a  |
| Coimbatore      | Government Medical College Hospital                           | STI | 9.64   | 8.40  | 17.11 | 8.00  | 17.20 | n/a  |
| Kancheepuram    | Chengalpat Government Hospital                                | STI | 5.20   | 6.00  | 3.60  | 4.00  | 1.60  | n/a  |
| Karur           | Government District Headquarter Hospital                      | STI | 8.40   | 13.20 | 23.20 | 9.20  | 8.00  | n/a  |
| Madurai         | Government Madurai Medical College Rajaji Hospital            | STI | 20.80  | 30.40 | 30.00 | 24.80 | 38.40 | n/a  |
| Ramanathapuram  | Government District Headquarter Hospital                      | STI | 5.91   | 5.20  | 7.60  | 2.80  | 2.80  | n/a  |
| Salem           | Government Mohan Kumarmangalam Medical College Hospital       | STI | 11.60  | 8.40  | 5.60  | 4.80  | 9.60  | n/a  |
| Thanjavur       | Government Medical College Hospital                           | STI | 14.40. | 14.80 | 12.00 | 10.80 | 19.20 | n/a  |
| Tiruchirappalli | Government Medical College Hospital                           | STI | 21.60  | 20.40 | 5.20  | 7.60  | 8.00  | n/a  |
| Tirunchalli     |   | STI | 33.60  | n/a   | n/a   | n/a   | n/a   | n/a  |
| Tirunelveli     | Government Medical College Hospital                           | STI | n/a    | 14.00 | 17.20 | 19.60 | 14.00 | n/a  |
| Vellore         | Government Medical College Hospital                           | STI | 6.00   | 4.00  | 9.20  | 6.00  | 6.80  | n/a  |
| Tiruvannamalai  | Tiruvannamalai Hospital                                       | TB  | n/a    | 6.90  | 6.29  | n/a   | n/a   | n/a  |



**TABLE SS 32a**

**Tripura (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         |
|---|---------------|-------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |
| All women                                 | 800           | 0.0 (0.0–0.0)           |
| Urban women                               | 800           | 0.0 (0.0–0.0)           |
| Rural women                               |               |                         |

\* HIV prevalence is given for valid sites (≥75% sample size).

| ANC attendees |                       |                  |      |      |      |      |      |      |
|---------------|-----------------------|------------------|------|------|------|------|------|------|
| District      | Site name             | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| West Tripura  | Agartala IGM Hospital | ANC              | 0.00 | 0.25 | n/a  | 0.00 | 0.00 | 0    |
| West Tripura  | AGMC and GBP Hospital | ANC              | n/a  | n/a  | 0.00 | 0.97 | 0.50 | 0    |

**TABLE SS 32b**

**Tripura (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         | Remarks   |
|---|---------------|-------------------------|---|
| Group   | Number tested | HIV % positive (90% CI) |   |
| All STI patients  | 1743          | 1.09 (0.68–1.50)        | Total number of sentinel sites 8<br>0 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Injecting drug users  | 239           | 0.42 (-0.27–1.11)       |   |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Tripura                               |                                     |                  |      |      |       |      |      |      |
|---------------------------------------|-------------------------------------|------------------|------|------|-------|------|------|------|
| Populations with high-risk behaviours |                                     |                  |      |      |       |      |      |      |
| District                              | Site name                           | Population group | 2003 | 2004 | 2005  | 2006 | 2007 | 2008 |
| North Tripura                         | Kumarghat Rural Hospital            | IDU              | n/a  | n/a  | 10.92 | 0.00 | 0.00 | 0.42 |
| Dhalai                                | BSM Hospital, Kamalpur              | STI              | n/a  | n/a  | n/a   | 0.45 | 0.00 | 0.82 |
| North Tripura                         | Dharmanagar Sub-divisional Hospital | STI              | n/a  | n/a  | n/a   | 0.81 | 0.40 | 1.6  |
| North Tripura                         | Kailashahar RGM Hospital            | STI              | 0.00 | 0.00 | 0.80  | 0.00 | 0.40 | 1.21 |
| South Tripura                         | Belonia Sub-divisional Hospital     | STI              | n/a  | n/a  | n/a   | 0.46 | 0.00 | 0    |
| South Tripura                         | Udaipur TSD Hospital                | STI              | n/a  | 0.00 | 2.80  | 0.00 | 0.00 | 1.2  |
| West Tripura                          | AGMC and GBP Hospital               | STI              | 5.60 | 2.02 | 0.00  | 3.11 | 1.60 | 2    |
| West Tripura                          | Khowai Sub-divisional Hospital      | STI              | n/a  | n/a  | n/a   | 0.00 | 0.40 | 0.8  |



**TABLE SS 33a**

**Uttar Pradesh (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 20 659        | 0.18 (0.13–0.23)        |                        |  |
| Urban women                               | 16 916        | 0.15 (0.10–0.20)        |                        |  |
| Rural women                               | 3743          | 0.29 (0.15–0.44)        |                        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| ANC attendees         |                                  |                  |      |      |      |      |      |      |
|-----------------------|----------------------------------|------------------|------|------|------|------|------|------|
| District              | Site name                        | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Aligarh               | Aligarh Mahila Hospital          | ANC              | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0    |
| Aligarh               | MH                               | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Allahabad             | CHC, Handia                      | ANC (R)          | n/a  | n/a  | n/a  | 1.50 | 0.50 | 0.53 |
| Ambedkar Nagar        | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Auraiya               | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.36 | 0.00 | 0.5  |
| Baghpat               | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.33 | 0.00 | 0    |
| Bahraich              | CHC, Nanpara                     | ANC (R)          | 0.00 | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Bahraich              | Bahraich Mahila Hospital         | ANC              | 0.00 | 0.50 | 0.37 | 0.75 | 0.75 | 0    |
| Ballia                | CHC, Sikandarpur                 | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | n/a  | n/a  |
| Ballia                | CHC, IMS                         | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Ballia                | Balia Mahila Hospital            | ANC              | 0.00 | 0.53 | 0.00 | 0.00 | 0.25 | 0.27 |
| Banda                 | Banda Mahila Hospital            | ANC              | 0.00 | 1.75 | 0.00 | 0.00 | 0.00 | 0.75 |
| Barabanki             | CHC, Haidergarh                  | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 2.63 | n/a  |
| Barabanki             | CHC, KGMU, Fatehpur              | ANC (R)          | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Barabanki             | Barabanki Mahila Hospital        | ANC              | 0.00 | 0.75 | 0.00 | 0.50 | 0.00 | 0    |
| Bareilly              | Clara Swain Hospital             | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Bijnor                | Nazibabad/Najibabad CHC Hospital | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Bijnor                | Bijnore Mahila Hospital          | ANC              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0    |
| Budaun                | CHC, Ujhani                      | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Bulandshahr           | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Chandauli             | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.78 | 0.00 | n/a  |
| Chitrakoot            | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.45 |
| Deoria                | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 1.25 | 0.00 | 0    |
| Etah                  | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Etawah                | Etawah Mahila Hospital           | ANC              | 0.00 | 1.25 | 0.25 | 0.00 | 0.00 | 0.25 |
| Faizabad              | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.50 | 0.25 | 0    |
| Fatehpur              | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Firozabad             | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Gautam Buddha Nagar * | District Mahila Hospital         | ANC              | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Gonda                 | CHC, Mankapur                    | ANC (R)          | n/a  | n/a  | n/a  | 0.95 | 0.30 | n/a  |



| ANC attendees       |   |         |      |      |      |      |      |      |
|---------------------|---|---------|------|------|------|------|------|------|
| Gorakhpur           | CHC, Pipriach                           | ANC (R) | 2.90 | n/a  | n/a  | 0.00 | 0.00 | 0.3  |
| Gorakhpur           | Gorakhpur Mahila Hospital               | ANC     | 0.00 | 0.75 | 0.00 | 0.25 | 0.00 | 0    |
| Hardoi              | CHC, Sandila                            | ANC (R) | n/a  | n/a  | n/a  | 0.00 | n/a  | 0    |
| Hathras             | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.5  |
| J.P.Nagar           | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Jalaun              | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Jaunpur             | CHC, Madiyaon                           | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Jaunpur             | CHC, IMS                                | ANC (R) | 4.26 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Jaunpur             | Jaunpur Mahila Hospital                 | ANC     | 0.25 | 0.25 | 0.00 | 0.25 | 0.25 | 0    |
| Jyotiba Phule Nagar | District Mahila Hospital                | ANC     |      |      |      |      |      | 0    |
| Kannauj             | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.31 | 0    |
| Kanpur Dehat        | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Kanpur Nagar        | Kanpur Medical College                  | ANC     | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.5  |
| Kaushambi           | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 3.39 | 2.04 | 0    |
| Lalitpur            | Lalitpur Mahila Hospital                | ANC     | 1.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0    |
| Lalitpur            | CHC, MLBMC, Jhansi                      | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Lucknow             | CHC, Mohanlalganj                       | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.00 | 1.02 |
| Lucknow             | CHC, DH, Chinhaat                       | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Lucknow             | Lucknow Queens Mary Hospital            | ANC     | 0.00 | 0.50 | 0.25 | 0.50 | 0.25 | 0    |
| Mahoba              | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Mainpuri            | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Mathura             | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.75 | 0.00 | 0    |
| Mathura             | Ramkrishna Mission Hospital, Vrindavan  | ANC     | n/a  | n/a  | n/a  | 0.50 | 0.25 | 0    |
| Mau                 | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 1.46 | 0.86 | 0.5  |
| Meerut              | Meerut Mahila Hospital                  | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.5  |
| Mirzapur            | Mirzapur Mahila Hospital                | ANC     | 0.75 | 0.00 | 0.25 | 0.00 | 0.00 | 0    |
| Mirzapur            | CHC, IMS                                | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Moradabad           | Vivekanand Hospital and Research Centre | ANC     | n/a  | n/a  | n/a  | 0.00 | 1.00 | n/a  |
| Muzaffarnagar       | CHC, Shamli                             | ANC (R) |      |      |      |      | 0.00 | n/a  |
| Nazibabad           | Nazibabad                               | ANC     | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Pilibhit            | Pilibhit Mahila Hospital                | ANC     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 |
| Pilibhit            | CHC, KGMU, Purnapur                     | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Pratapgarh          | CHC, Kunda                              | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 1.95 | n/a  |
| Pratapgarh          | CHC Patti                               | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.75 |
| Pratapgarh          | CHC, KNMH                               | ANC (R) | 0.00 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Pratapgarh          | Pratapgarh Mahila Hospital              | ANC     | 0.50 | 0.00 | 0.50 | 0.00 | 0.00 | 0.25 |
| Rae Bareli          | CHC, Bachrawa                           | ANC (R) | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0.25 |
| Rae Bareli          | Rae Bareli                              | ANC     | n/a  | n/a  | 0.00 | 0.25 | 2.50 | 0    |
| Rampur              | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Saharanpur          | Saharanpur Mahila Hospital              | ANC     | 0.50 | 0.25 | 0.50 | 0.00 | 0.25 | 0.25 |
| Sant Kabir Nagar    | District Mahila Hospital                | ANC     | n/a  | n/a  | n/a  | 0.00 | 0.00 | n/a  |





| ANC attendees  |                          |         |     |     |     |      |      |     |
|----------------|--------------------------|---------|-----|-----|-----|------|------|-----|
| Shahjahanpur   | District Mahila Hospital | ANC     | n/a | n/a | n/a | 0.00 | 0.00 | 0   |
| Siddharthnagar | Sidharth                 | ANC     | n/a | n/a | n/a | n/a  | n/a  | n/a |
| Sitapur        | District Mahila Hospital | ANC     | n/a | n/a | n/a | 0.00 | 0.00 | 0   |
| Sonbhadra      | DH                       | ANC (R) | n/a | n/a | n/a | 0.00 | 0.49 | n/a |
| Sonbhadra      | CHC, Robertgang          | ANC (R) | n/a | n/a | n/a | n/a  | n/a  | 0   |

**TABLE SS 33b**  
**Uttar Pradesh (2008 summary)**

| *HIV prevalence among populations with high-risk behaviours |               |                         |  |
|---|---------------|-------------------------|--|
| Group   | Number tested | HIV % positive (90% CI) | Remarks  |
| All STI patients  | 6179          | 0.81 (0.62–1.00)        | Total number of sentinel sites 32<br>0 sites (≥75% sample size) had prevalence ≥5%<br>0 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers  | 726           | 0.83 (0.27–1.38)        |  |
| Injecting drug users  | 489           | 2.45 (1.30–3.60)        |  |
| Men who have sex with men                                   | 246           | 4.07 (1.99–6.14)        |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| Uttar Pradesh                         |   |                  |       |       |      |      |      |      |
|---------------------------------------|---|------------------|-------|-------|------|------|------|------|
| Populations with high-risk behaviours |   |                  |       |       |      |      |      |      |
| District                              | Site name   | Population group | 2003  | 2004  | 2005 | 2006 | 2007 | 2008 |
| Aligarh                               | Sarvhara Kalyan Samiti                                      | FSW              | n/a   | n/a   | n/a  | 0    | n/a  | n/a  |
| Allahabad                             | SKS, Allahabad  | FSW              | 11.96 | 20.00 | 10.8 | 1.6  | 1.60 | 1.63 |
| Bahraich                              | Krishi Evam Gramodyog Vikas Sansthan                        | FSW              | n/a   | n/a   | n/a  | 2.75 | 0.00 | n/a  |
| Basti                                 | Basti Global Science Academi, Malaviya Road                 | FSW              | n/a   | 2.42  | 2.00 | 4.00 | 2.00 | 0    |
| Kanpur Nagar                          | Pragati Sewa Sansthan                                       | FSW              | n/a   | n/a   | 0.40 | 0.00 | 0.00 | 0.82 |
| Kheri                                 | Chitranshu Samaj Kalyan Parishad, Lakhimpur (New)           | FSW              | n/a   | n/a   | n/a  | 0.40 | 0.40 | n/a  |
| Maharajganj                           | Shri Bharadwaj Gramodyog Seva Sansthan                      | FSW              | n/a   | n/a   | n/a  | 3.60 | 0.00 | n/a  |
| Varanasi                              | Sarvjan Kalyan Samiti, Varanasi                             | FSW              | 1     | 0.00  | 0.80 | 0.00 | n/a  | n/a  |
| Kanpur Nagar                          | Hazrat Chauhani Charitable Society                          | IDU              | n/a   | n/a   | n/a  | 4.63 | 3.81 | 2.07 |
| Varanasi                              | Manav Seva Sansthan Evam Mahila Bal Vikas Sansthan (New 07) | IDU              | n/a   | n/a   | n/a  | n/a  | 0.00 | 2.82 |
| Lucknow                               | Bharosa (New 07)  | MSM              | n/a   | n/a   | n/a  | n/a  | 0.40 | 4.06 |
| Agra                                  | Agra DH   | STI              | 2.00  | 0.40  | 0.40 | 0.40 | 1.60 | 0.8  |
| Allahabad                             | Allahabad DH  | STI              | 0.40  | 2.00  | 0.00 | 0.00 | 0.00 | 0    |
| Azamgarh                              | Azamgarh DH   | STI              | 0.81  | 1.60  | 2.69 | 1.20 | 0.80 | 0.42 |
| Balrampur                             | DH  | STI              | n/a   | n/a   | n/a  | 1.63 | 0.00 | 0.81 |



| Uttar Pradesh  |                            |     |      |      |      |      |      |      |
|----------------|----------------------------|-----|------|------|------|------|------|------|
| Bareilly       | Bareilly DH                | STI | 0.00 | 0.00 | 0.00 | 0.80 | 0.52 | 1.21 |
| Basti          | Basti DH                   | STI | 0.80 | 1.20 | 2.80 | 4.40 | 0.00 | 0    |
| Budaun         | DH                         | STI | n/a  | n/a  | n/a  | 0.00 | 0.40 | n/a  |
| Farrukhabad    | Farrukhabad DH             | STI | 0.90 | 0.81 | 0.00 | 1.20 | 0.00 | 0    |
| Ghaziabad      | Ghaziabad DH               | STI | 0.00 | 0.80 | 0.40 | 0.40 | 0.40 | 0.41 |
| Ghazipur       | DH                         | STI | n/a  | n/a  | n/a  | 0.00 | 0.44 | 2.02 |
| Gonda          | Gonda DH                   | STI | 7.50 | 1.60 | 0.00 | 0.44 | 0.00 | 0.45 |
| Gorakhpur      | Gorakhpur DH               | STI | 1.60 | 0.40 | 0.80 | 0.40 | 0.80 | 1.2  |
| Hamirpur       | Hamirpur DH                | STI | 0.00 | 0.00 | 0.00 | 0.80 | 0.40 | 0.8  |
| Hardoi         | DH                         | STI | n/a  | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Jhansi         | Jhansi DH                  | STI | 0.00 | 1.60 | 0.40 | 0.40 | 2.80 | 0.8  |
| Kheri          | Lakhimpur DH (New)         | STI | n/a  | n/a  | n/a  | 0.93 | 0.80 | 1.2  |
| Kushinagar     | DH                         | STI | n/a  | n/a  | n/a  | 4.63 | 0.68 | n/a  |
| Lucknow        | Lucknow Balrampur Hospital | STI | 0.40 | 0.80 | 0.80 | 0.40 | 2.03 | 0    |
| Maharajganj    | DH                         | STI | n/a  | n/a  | n/a  | 1.60 | 0.00 | 0    |
| Mirzapur       | Mirzapur DH                | STI | 0.55 | 0.00 | 0.00 | 1.68 | 0.40 | n/a  |
| Moradabad      | Moradabad DH               | STI | 0.40 | 0.00 | 0.50 | 2.40 | 3.23 | 4.4  |
| Muzaffarnagar  | Muzaffarnagar DH           | STI | 0.00 | 0.00 | 1.20 | 0.40 | 0.81 | 0.4  |
| Shrawasti      | DH                         | STI | n/a  | n/a  | n/a  | 1.60 | 1.20 | 1.6  |
| Siddharthnagar | DH                         | STI | n/a  | n/a  | n/a  | 1.20 | 0.40 | 0    |
| Sonbhadra      | DH                         | STI | n/a  | n/a  | n/a  | 0.00 | 0.80 | 3.29 |
| Sultanpur      | Sultanpur DH               | STI | 1.20 | 2.80 | 2.00 | 0.40 | 0.40 | 0    |
| Unnao          | DH                         | STI | n/a  | n/a  | n/a  | 0.40 | 1.20 | 0.41 |
| Varanasi       | Varanasi DH                | STI | 4.80 | 0.40 | 1.20 | 0.80 | 1.21 | 0    |

**TABLE SS 34a**  
**Uttarakhand (2008 summary)**

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |
|---|---------------|-------------------------|------------------------|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |
| All women                                 | 3576          | 0.22 (0.09–0.35)        |                        |
| Urban women                               | 3576          | 0.22 (0.09–0.35)        |                        |
| Rural women                               |               |                         |                        |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



| ANC attendees       |  |                  |      |      |      |      |      |      |
|---------------------|--|------------------|------|------|------|------|------|------|
| District            | Site name                                      | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Champawat           | CHC, Lohaghat Champawat                        | ANC              | n/a  | n/a  | n/a  | 0.25 | 0.00 | 0.25 |
| Dehradun            | Combine Hospital, Rishikesh                    | ANC              | n/a  | n/a  | n/a  | 0    | 0.00 | 0    |
| Garhwal/Pauri       | Combine Hospital, Kotdwar                      | ANC              | n/a  | n/a  | n/a  | 0    | 0.00 | 0    |
| Haldwani            | CHC, Ramnagar/BD Pandey                        | ANC (R)          | 0.3  | n/a  | n/a  | n/a  | n/a  | n/a  |
| Haridwar            | Combine Hospital, Roorkee                      | ANC              | n/a  | n/a  | n/a  | 0    | 0.00 | 0.25 |
| Haridwar            | Haridwar Mahila Hospital                       | ANC              | 0    | 0    | 0    | 0.25 | 0.00 | 0    |
| Haridwar            | CHC, Roorkee                                   | ANC (R)          | 0    | n/a  | n/a  | n/a  | n/a  | n/a  |
| Nainital            | Combine Hospital, Ramnagar                     | ANC              | n/a  | n/a  | n/a  | 0    | 0.00 | 0    |
| Nainital            | Haldwani Mahila Hospital                       | ANC              | 0    | 0    | 0    | 0    | 0.00 | 0    |
| Pithoragarh         | Pithoragarh Mahila Hospital                    | ANC              | 0    | 0    | 0    | 0    | 0.00 | 0.75 |
| Pithoragarh         | CHC, Didihat                                   | ANC (R)          | 0    | n/a  | n/a  | n/a  | n/a  | n/a  |
| Udham Singh Nagar * | District (Female) Hospital, Rudrapur, US Nagar | ANC              | n/a  | n/a  | n/a  | 0.5  | 0.50 | 0.75 |

#### Uttarakhand (2008 summary)

| *HIV prevalence among populations with high-risk behaviours |               |                         |
|---|---------------|-------------------------|
| Group   | Number tested | HIV % positive (90% CI) |
| All STI patients  | 1468          | 0.41 (0.13–0.68)        |
| Injecting drug users  |               |                         |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).



TABLE SS 34b

| Uttaranchal                                   |                    |                  |      |      |      |      |      |      |
|---|--------------------|------------------|------|------|------|------|------|------|
| Summary—Populations with high-risk behaviours |                    |                  |      |      |      |      |      |      |
| District                                      | Site name          | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Almora  | Almora DH          | STI              | 0.4  | 0    | 0    | 0    | 0.00 | n/a  |
| Chamoli                                       | Chamoli DH (male)  | STI              | n/a  | n/a  | n/a  | 0    | 0.00 | 0.4  |
| Dehradun                                      | Dehradun DH        | STI              | 0    | 1.2  | 2    | 0.8  | 0.40 | 0.8  |
| Garhwal                                       | Pauri DH (male)    | STI              | n/a  | n/a  | n/a  | 0    | 0.00 | 0.8  |
| Nainital                                      | Nainital DH (male) | STI              | n/a  | n/a  | n/a  | 0    | 0.00 | 0.4  |
| Tehri Garhwal                                 | Tehri Garhwal DH   | STI              | 0    | 0    | 0    | 0.4  | 0.00 | 0    |
| Uttarkashi                                    | Uttarkashi DH      | STI              | 0    | 0.74 | 0    | 0    | 0.00 | 0    |

TABLE SS 35a

## West Bengal (2008 summary)

| *HIV prevalence among antenatal attendees |               |                         | Trends in ANC, 2003–08 |  |
|---|---------------|-------------------------|------------------------|--|
| Group                                     | Number tested | HIV % positive (90% CI) |                        |  |
| All women                                 | 8196          | 0.21 (0.12–0.29)        |                        |  |
| Urban women                               | 3476          | 0.20 (0.08–0.33)        |                        |  |
| Rural women                               | 4720          | 0.21 (0.10–0.32)        |                        |  |

\* HIV prevalence is given for valid sites ( $\geq 75\%$  sample size).

| ANC attendees    |  |                  |      |      |      |      |      |      |
|------------------|--|------------------|------|------|------|------|------|------|
| District         | Site name                                    | Population group | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Burdwan          | Durgapur SD Hospital                         | ANC              | 0.50 | 1.00 | 1.25 | 0.25 | 0.75 | 0    |
| Bankura          | Bishnupur Sub-divisional Hospital (New 08)   | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Birbhum          | Suri DH                                      | ANC (R)          | n/a  | n/a  | n/a  | 0.00 | n/a  | 0    |
| Burdwan          | CHC, Panagarh                                | ANC (R)          | 0.58 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Burdwan          | CHC, Mankar                                  |                  | 1.23 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Dakshin Dinajpur | Gangarampur Sub-divisional Hospital (New 08) | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.26 |
| Darjeeling       | Kalimpong SDH (New 07)                       | ANC              | n/a  | n/a  | n/a  | n/a  | 2.00 | 0    |
| Darjeeling       | CHC, SDH, Siliguri                           | ANC (R)          | 0.25 | n/a  | n/a  | 0.00 | 0.50 | 0.75 |
| Darjeeling       | CHC, Kurseong                                | ANC (R)          | 0.28 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Darjeeling       | Darjeeling DH                                | ANC              | n/a  | 0.50 | 0.84 | n/a  | n/a  | n/a  |
| Howrah           | Uluberia Sub-divisional Hospital (New 08)    | ANC              | n/a  | n/a  | n/a  | n/a  | n/a  | 0.5  |
| Hooghly          | Khanakul Rural Hospital (New 08)             | ANC (R)          | n/a  | n/a  | n/a  | n/a  | n/a  | 0.25 |



| ANC attendees     |   |         |      |      |      |      |      |      |
|-------------------|---|---------|------|------|------|------|------|------|
| Jalpaiguri        | Alipur Duar Sub-divisional Hospital(New 08) | ANC     | n/a  | n/a  | n/a  | n/a  | n/a  | 0.25 |
| Cooch Behar       | Mathabhanga SDH                             | ANC (R) |      | n/a  | n/a  | 0.00 | 0.25 | 0.55 |
| Cooch Behar       | Cooch Behar MJN Hospital                    | ANC     | n/a  | 0.00 | 0.26 | n/a  | n/a  | n/a  |
| Kolkata           | Abinash Dutta Maternity Home                | ANC     | n/a  | 1.25 | 2.25 | 1.76 | 1.50 | 0    |
| Kolkata           | BSGH  | ANC     | 0.75 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Kolkata           | Bidya Sagar SDH (New 07)                    | ANC (R) | n/a  | n/a  | n/a  | n/a  | 0.00 | 0    |
| Malda             | Malda                                       | ANC     | 0.00 | 0.00 | 0.25 | n/a  | n/a  | n/a  |
| Malda             | CHC, Manikchak Milki                        | ANC (R) | 0.66 | n/a  | n/a  | 0.00 | 0.00 | 0.5  |
| Medinipur         | CHC, Mahishadal Basulia                     | ANC (R) | 0.56 | n/a  | n/a  | 0.00 | 0.00 | n/a  |
| Midnapore         | Contai Sub-divisional Hospital              | ANC (R) | n/a  | n/a  | n/a  | 0.00 | n/a  | 0    |
| Midnapore         | Kharagpur SDH (New 08)                      | ANC     | n/a  | n/a  | n/a  | n/a  | n/a  | 0.5  |
| Midnapore         | Midnapore Tamluk DH                         | ANC     | 0.75 | 0.00 | 0.00 | n/a  | n/a  | n/a  |
| Murshidabad       | Jangipur Sub-divisional Hospital (New 08)   | ANC (R) | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| Nadia             | Nabadwip State General Hospital (New 08)    | ANC     | n/a  | n/a  | n/a  | n/a  | n/a  | 0    |
| North 24 Parganas | CHC, Madhyamgram                            | ANC (R) | 0.25 | n/a  | n/a  | 0.25 | 0.00 | 0.51 |
| Purba Medinipur   | Egra SDH (New 07)                           | ANC (R) | n/a  | n/a  | n/a  | n/a  | 0.00 | n/a  |
| Purulia           | CHC, Raghunathpur                           | ANC (R) | 0.75 | n/a  | n/a  | 0.25 | 0.00 | 0    |
| Purulia           | Purulia DH                                  | ANC     | 0.00 | 0.50 | 1.50 | n/a  | n/a  | n/a  |
| Kolkata           | RGKMCH                                      | ANC     | 0.50 | n/a  | n/a  | n/a  | n/a  | n/a  |
| Siliguri          | Siliguri DH                                 | ANC     | 0.25 | n/a  | n/a  | n/a  | n/a  | n/a  |
| South 24 Parganas | Bijaygarh State Hospital                    | ANC     | n/a  | 0.65 | 2.25 | 0.00 | n/a  | n/a  |
| South 24 Parganas | CHC, Baruipur                               | ANC (R) | 0.25 | n/a  | n/a  | 0.00 | 0.00 | 0    |
| Uttar Dinajpur    | CHC, Kaliaganj                              | ANC (R) | 0.50 | n/a  | n/a  | 2.25 | 0.00 | 0    |
| Uttar Dinajpur    | Uttar Dinajpur Raiganj Hospital             | ANC     | 0.74 | 0.00 | 0.49 | n/a  | n/a  | n/a  |



**TABLE SS 35b**

**West Bengal (2008 summary)**

| *HIV prevalence of populations with high-risk behaviours |               |                         |             |  |
|--|---------------|-------------------------|-------------|--|
| Group  | Number tested | HIV % positive (90% CI) |             | Remarks  |
| All STI patients   | 2092          | 3.20                    | (2.57–3.84) | Total number of sentinel sites 34<br>7 sites (≥75% sample size) had prevalence ≥5%<br>2 sites (≥75% sample size) had prevalence ≥10% |
| Female sex workers                                       | 2665          | 4.13                    | (3.49–4.76) |  |
| Injecting drug users                                     | 937           | 5.55                    | (4.32–6.78) |  |
| Male migrants  | 242           | 2.48                    | (0.84–4.12) |  |
| Truckers   | 996           | 1.91                    | (1.19–2.62) |  |
| Men who have sex with men                                | 997           | 5.02                    | (3.88–6.15) |  |

\* HIV prevalence is given for valid sites (≥75% sample size).

| West Bengal                           |   |                  |      |      |       |       |       |      |
|---------------------------------------|---|------------------|------|------|-------|-------|-------|------|
| Populations with high-risk behaviours |   |                  |      |      |       |       |       |      |
| District                              | Site name                                 | Population group | 2003 | 2004 | 2005  | 2006  | 2007  | 2008 |
| Burdwan                               | Durgapur TI project                       | FSW              | 8.00 | 4.40 | 6.80  | 8.00  | 6.00  | 3.25 |
| Darjiling                             | DMSC Khalpara                             | FSW              | n/a  | n/a  | n/a   | 7.56  | 8.00  | 0.8  |
| Jalpaiguri                            | Jalpaiguri                                | FSW              | 9.20 | 5.60 | 6.00  | 8.93  | 5.20  | 0    |
| Kolkata                               | Kolkata SHIP                              | FSW              | 9.60 | 3.60 | 10.40 | 7.60  | 5.20  | 8.84 |
| Kolkata                               | DMSC Kolkata                              | FSW              | 5.67 | 2.00 | 2.33  | n/a   | n/a   | n/a  |
| Midnapore                             | Haldia TI project                         | FSW              | 2.00 | 9.60 | 8.00  | 8.80  | 5.20  | 6.8  |
| Murshidabad                           | Behrampur TI project                      | FSW              | 6.05 | 2.00 | 2.54  | 2.00  | 1.20  | 1.2  |
| North 24 Parganas                     | SBMS TI , Basirhat                        | FSW              | n/a  | n/a  | n/a   | 3.23  | 4.84  | 9.83 |
| South 24 Parganas                     | Diamond Harbour TI project                | FSW              | 4.40 | 1.60 | 8.00  | 3.20  | 5.20  | 1.6  |
| Uttar Dinajpur                        | DMSC Islampur/Panjipara (New 07)          | FSW              | n/a  | n/a  | n/a   | n/a   | 12.40 | 7.41 |
| Burdwan                               | DISHA Janakalyan Kendra, Asansol (New 08) | FSW              | n/a  | n/a  | n/a   | n/a   | n/a   | 3    |
| Birbhum                               | Suri, EICS (New 08)                       | FSW              | n/a  | n/a  | n/a   | n/a   | n/a   | 2.87 |
| Darjeeling                            | Indian Red Cross, Kurseong                | IDU              | n/a  | n/a  | 10.00 | 3.20  | 8.00  | 3.24 |
| Howrah                                | SKBS TI                                   | IDU              | n/a  | n/a  |       | 4.00  | 10.00 | n/a  |
| Kolkata                               | Kolkata NGO TI                            | IDU              | n/a  | 5.48 | n/a   | n/a   | n/a   | n/a  |
| Kolkata                               | SCIR, Kolkata                             | IDU              | 2.61 | 2.22 | 2.80  | 5.20  | 6.80  | n/a  |
| Darjeeling                            | SCIR, Siliguri                            | IDU              | n/a  | n/a  | 16.00 | 10.00 | 11.60 | n/a  |
| Murshidabad                           | SCIR, Lalgola                             | IDU              | n/a  | n/a  | 0.81  | 0.80  | 2.40  | 2.09 |
| Darjeeling                            | SCIR, Jhankar More (New 08)               | IDU              | n/a  | n/a  | n/a   | n/a   | n/a   | 10   |
| Kolkata                               | SCIR, Park Circus (New 08)                | IDU              | n/a  | n/a  | n/a   | n/a   | n/a   | 7.36 |
| Kolkata                               | HDRI, Kolkata (New 07)                    | MRG              | n/a  | n/a  | n/a   | n/a   | 9.27  | 2.48 |
| Darjeeling                            | Manas Bangla, Siliguri                    | MSM              | n/a  | n/a  | n/a   | 4.80  | 4.80  | 3.63 |
| Hooghly                               | Manas Bangla, Hooghly (New 07)            | MSM              | n/a  | n/a  | n/a   | n/a   | 5.65  | 4    |
| Kolkata                               | Manas Bangla                              | MSM              | n/a  | 1.33 | 0.54  | 8.40  | 6.40  | n/a  |
| Burdwan                               | Manas Bangla (New 08)                     | MSM              | n/a  | n/a  | n/a   | n/a   | n/a   | 3.2  |



## West Bengal

|                   |                                      |     |      |       |      |      |      |       |
|-------------------|--------------------------------------|-----|------|-------|------|------|------|-------|
| Kolkata           | Manas Bangla Kasba (New 08)          | MSM | n/a  | n/a   | n/a  | n/a  | n/a  | 9.24  |
| Bankura           | Bankura Medical College              | STI | 1.60 | 0.00  | 1.51 | 0.40 | 0.00 | 0.49  |
| Burdwan           | Burdwan Medical College              | STI | 0.43 | 0.82  | 2.04 | 0.40 | 0.40 | 7.66  |
| Dakshin Dinajpur  | Balurghat Sadar Hospital             | STI | 1.26 | 0.41  | 2.27 | 1.20 | 0.80 | 1.63  |
| Darjeeling        | Darjeeling DH                        | STI | n/a  | n/a   | n/a  | 2.17 | n/a  |       |
| Hooghly           | Hooghly DH                           | STI | n/a  |       | 3.40 | 3.20 | 2.40 | 1.71  |
| Jalpaiguri        | Jalpaiguri DH                        | STI | n/a  | 0.00  | 0.00 | 0.80 | 2.00 | n/a   |
| Kolkata           | Howrah DH                            | STI | n/a  | 0.94  | 3.02 | 1.79 | 0.00 | n/a   |
| Kolkata           | Kolkata Medical College and Hospital | STI | 9.60 | 19.74 | 4.80 | 3.60 | 4.95 | 11.17 |
| Midnapore         | Mednipur Medical College             | STI | n/a  | 2.46  | 1.00 | 0.81 | 1.20 | 1.61  |
| Midnapore         | Haldia SD Hospital                   | STI | 1.61 | n/a   | 1.60 | n/a  | n/a  | n/a   |
| Murshidabad       | Behrampur/Berhampore DH              | STI | 4.00 | 1.65  | 4.80 | 4.80 | 5.20 | 4.9   |
| Nadia             | Krishnagar Sadar Hospital            | STI | n/a  | 0.82  | 0.93 | 0.80 | 0.00 | 0.86  |
| South 24 Parganas | MR Bangura Hospital                  | STI | 4.00 | 1.20  | 3.24 | 0.40 | 0.80 | 0     |
| Burdwan           | SSSS TI                              | TRK | n/a  | n/a   | n/a  | 2.40 | 3.21 | 2.81  |
| Dakshin Dinajpur  | NMMS TI Hilli                        | TRK | n/a  | n/a   | n/a  | 2.40 | 1.20 | 2.42  |
| Jalpaiguri        | GUP TI                               | TRK | n/a  | n/a   | n/a  | 2.02 | 3.20 | 0.8   |
| Kolkata           | BPWT TI, KPT                         | TRK | n/a  | n/a   | n/a  | 4.40 | 2.80 | n/a   |
| Midnapore         | HVP TI, Haldia, Purba Medinipur      | TRK | n/a  | n/a   | n/a  | 2.40 | 3.20 | 1.61  |





### Random sampling method

- Terminology—master list, line list, random list and PE-wise list
- Preparatory work at RI and SACS
  - Obtain validated, updated line list from the TI division/TSU of SACS
  - Exclude the ineligible HRI by age
  - Select 325 names randomly, using random numbers
  - Provide the random list to SACS
  - SACS should, in turn, provide the first 250 names from the random list to the TI

### Random sampling method at site

- Obtain random list of 250 names from SACS
- Prepare PE-wise lists
- Organize PE meeting (instructions)
- Emphasize on PE talking points
- Fix different dates for different PEs
- PE to make attempts to contact the listed HRI (at least 3 attempts should be made)
- PE to communicate exactly in accordance with the PE talking points
- PE to accompany the selected HRI to the DIC on a fixed date

### Scenarios when the PE attempts to contact the HRI

- HRI is contacted and comes to the DIC along with the PE: Follow the steps mentioned in consecutive sampling, starting with enrolment in HSS register
- HRI is contacted and agrees to come to the DIC on his own
  - Comes to the DIC within one month: Follow the steps mentioned in consecutive sampling, starting with enrolment in HSS register
  - Does not come to the DIC within one month: Document in HSS register
- HRI is contacted but refuses to come to the DIC for participation in HSS: Enquire into the reason for refusal
- HRI could not be contacted even after 3 attempts: Document in HSS register
- Document the outcome of the PE attempts in the HSS register when he comes to the DIC on the date fixed



## Checklist

Annexure IVA  
(Part A)

## CHECKLIST FOR MONITORING OF SENTINEL SITES

| PART A  |   |  |  |                                |
|---|---|--|--|--------------------------------|
| I. General information                              |   |  |  |                                |
| 1.  | Names and designations of coordinators<br>a)<br>b)            |  |  |                                |
| 2.  | Date of supervisory visit                                     |  |  |                                |
| 3.  | State   | City   | Institute  |                                |
| 4.  | Type of sentinel site   | ANC /STI/IVDU/MSM/FSW/Any other—specify        |  |                                |
| 5.  | Location of site  | Urban / Rural                                  |  |                                |
| 6.  | Days of service   | Daily/Once a week /Twice a week /Thrice a week |  |                                |
| 7.  | Since when functioning as sentinel site                       | Year   |  |                                |
| II. Personnel involved in HIV sentinel surveillance |   |  |  |                                |
| S.No.   | Name  | Designation                                    | Experience   | Trained for HSS 2007<br>Yes/No |
| 1.  |   |  |  |                                |
| 2.  |   |  |  |                                |
| 3.  |   |  |  |                                |
| 4.  |   |  |  |                                |
| III. Facilities at the clinic site                  |   |  |  |                                |
| 1. General infrastructure                           |   |  |  |                                |
| a.  | Reception and waiting space                                   |  | Adequate/Inadequate                                  |                                |
| b.  | Separate examination room                                     |  | Yes/No   |                                |
| c.  | If no, then curtained-off area for examination of patients    |  | Yes/No   |                                |
| d.  | Privacy maintained  |  | Yes/No   |                                |
| e.  | Examination table   |  | Yes/No   |                                |
| f.  | Adequate light  |  | Yes/No   |                                |
| g.  | Electric supply   |  | Regular / Irregular                                  |                                |
| h.  | Stand-by generator  |  | Yes/No<br>Functioning / Not functioning              |                                |
| i.  | IEC material  |  | Available /Not available<br>Displayed /Not displayed |                                |
| j.  | Blood collection facilities available in the clinic site      |  | Yes/No   |                                |
| k.  | If no, then how far is the laboratory from the sentinel site? |  | Nearby/Far away                                      |                                |



| 2. | Facilities for blood collection, separation and storage at collection centre            |   |
|----|---|---|
| l. | Individual request formats for report   | Available/ Not available                          |
| m. | Number of formats   | Adequate/Inadequate                               |
| n. | Personal protective devices (aprons/ gloves) in adequate number                         | Yes/No  |
| o. | Disposable needles and syringes   | Available/Not available                           |
| p. | Number of needles and syringes available: ANC (500), STI, FSW, MSM, IDU, etc. (300)     | Yes/No  |
| q. | Needle destroyer used   | Yes/No  |
| r. | If no, why? State reasons.  |   |
| s. | Disinfectants (1% sodium hypochlorite solution/bleach) available for decontamination    | Yes/No  |
| t. | Sterile, plastic screw-capped 10-ml blood collection tubes available in adequate number | Yes/No  |
| u. | Sterile, plastic screw-capped 2-ml storage vials available in adequate number           | Yes/No  |
| v. | Plastic/glass Pasteur pipettes/micropipettes with plastic tips available                | Yes/No  |
| w. | Centrifuge machine  | Present / Absent<br>Functioning / Not functioning |
| x. | Centrifuge tubes of 15 ml capacity available  | Yes/No  |
| y. | Refrigerator  | Present / Absent<br>Functioning / Not Functioning |



**Annexure IVA  
(Part B)**

**CHECKLIST FOR MONITORING OF SENTINEL SITES**

| <b>PART B</b>                |   |   |
|------------------------------|---|---|
| <b>IV.</b>                   | <b>Practices followed at clinic sites</b>   |   |
| 1.                           | Selection of new attendees based on inclusion criteria  | Yes/No  |
| 2.                           | Daily attendance at clinic of STI/ANC /IDU/MSM/FSW attendees (each counted once during surveillance)        | (Specify number).   |
| 3.                           | Total attendees since start of HSS activity   | (Specify number).   |
| 4.                           | Blood sample taken from all consecutive attendees. If no, why? Give reasons.                                | Yes/No  |
| 5.                           | Formats filled up for all first-time attendees during September 1 to November 30. If no, why? Give reasons. | Yes/No  |
| 6.                           | Who is fills up the forms?  | Trained /Untrained  |
| 7.                           | Whether properly filled. If no, give reasons.   | Yes/No  |
| 8.                           | Blood collected at  | Clinic site /Hospital laboratory/Testing centre                           |
| 9.                           | Amount of blood collected—5 ml  | Yes/No  |
| 10.                          | Blood collected by  | Laboratory technician /Nurse  |
| 11.                          | Time taken between collection of blood and serum separation   | 3 hours/6 hours/18 hours/ >18 hours                                       |
| 12.                          | Storage of serum sample   | Refrigerator/Deep freezer   |
| 13.                          | Labelling/coding of serum samples done  | Yes/No  |
| 14.                          | Frequency of dispatch   | Daily/ Once a week/ Twice a week / Whenever convenient/ Other (specify)   |
| 15.                          | Mode of dispatch  | Vaccine carrier/ Other / without cold chain                               |
| 16.                          | Method of decontamination used  | Bleach solution/ 1% hypo consumables chlorite solution/ 2% cidex solution |
| 17.                          | Needle destroyer used. If no, why?  | Yes/No  |
| 18.                          | Method of final disposal of used syringes and needles   | Burnt/ Buried/ Incinerated/ Others  |
| 19                           | a) Proper records maintained at clinic site. If no, why? Give reasons.                                      | Yes/No  |
|                              | b) Reports. Confidentiality of reports maintained   | Yes/No  |
| 20.                          | Support system  | Adequate / Inadequate   |
| Suggestions for improvement: |   |   |

Name (Member of supervisory team)

Signature



Annexure IVB  
(Part A)

CHECKLIST FOR MONITORING AT HIV TESTING CENTRE

| PART A     |  |  |                    |   |                                     |                 |
|------------|--|--|--------------------|---|-------------------------------------|-----------------|
| <b>I</b>   | <b>General information</b>               |  |                    |   |                                     |                 |
|            | 1.                                       | Name of centre   |                    |   |                                     |                 |
|            | 2.                                       | Number and name of sentinel sites attached to the centre |                    |   |                                     |                 |
| <b>II</b>  | <b>Personnel involved in HIV testing</b> |  |                    |   |                                     |                 |
|            | <b>S.No.</b>                             | <b>Name</b>  | <b>Designation</b> | <b>Experience</b>                       | <b>Training status for HSS 2007</b> |                 |
|            | a.                                       |  |                    |   |                                     |                 |
|            | b.                                       |  |                    |   |                                     |                 |
|            | c.                                       |  |                    |   |                                     |                 |
|            | d.                                       |  |                    |   |                                     |                 |
|            | e.                                       |  |                    |   |                                     |                 |
| <b>III</b> | <b>Facilities at the testing site</b>    |  |                    |   |                                     |                 |
|            | <b>1.</b>                                | <b>General infrastructure</b>                            |                    |   |                                     |                 |
|            | a.                                       | Reception and waiting space                              |                    |   | Adequate/ Inadequate                |                 |
|            | b.                                       | Collection area  |                    |   | Yes/No                              |                 |
|            | c.                                       | Testing area   |                    |   | Yes/No                              |                 |
|            | d.                                       | Area for washing and disposal                            |                    |   | Yes/No                              |                 |
|            | e.                                       | Illumination sufficient                                  |                    |   | Yes/No                              |                 |
|            | f.                                       | Adequate water supply                                    |                    |   | Yes/No                              |                 |
|            | g.                                       | Alternate arrangement for electricity                    |                    |   | Yes/No                              |                 |
|            | <b>2.</b>                                | <b>HIV and syphilis serologic testing</b>                |                    |   |                                     |                 |
|            | <b>A</b>                                 | <b>Equipments</b>  |                    |   |                                     |                 |
|            |  |  | Available          | Not available                           | Functioning                         | Non functioning |
|            | a.                                       | Micropipettes  |                    |   |                                     |                 |
|            | b.                                       | Sterilizers  |                    |   |                                     |                 |
|            | c.                                       | Refrigerator   |                    |   |                                     |                 |
|            | d.                                       | Centrifuge   |                    |   |                                     |                 |
|            | e.                                       | Deep freezer (-20 °C)                                    |                    |   |                                     |                 |
|            | f.                                       | ELISA reader and washer                                  |                    |   |                                     |                 |
|            | g.                                       | VDRL rotator   |                    |   |                                     |                 |
|            | h.                                       | Microscope   |                    |   |                                     |                 |
|            | i.                                       | Timer  |                    |   |                                     |                 |
|            | <b>B</b>                                 | <b>Consumables</b>                                       |                    |   |                                     |                 |
|            | a.                                       | Disposable syringes and needles                          |                    | Adequate / Inadequate                   |                                     |                 |
|            | b.                                       | Disinfectants available—name and concentration           |                    | Adequate / Inadequate / Used / Not used |                                     |                 |
|            | c.                                       | Masks  |                    | Adequate/Inadequate / Used / Not used   |                                     |                 |
|            | d.                                       | Gloves   |                    | Adequate/ Inadequate / Used / Not used  |                                     |                 |
|            | e.                                       | Aprons (plastic)   |                    | Adequate/ Inadequate/ Used/ Not used    |                                     |                 |
|            | f.                                       | Screw-capped plastic vials for collection and storage    |                    | Adequate /Inadequate / Used / Not used  |                                     |                 |



|  |           |                                   |                                       |               |                     |                    |
|--|-----------|-----------------------------------|---------------------------------------|---------------|---------------------|--------------------|
|  | g.        | Disposable plastic tips           | Adequate/Inadequate / Used / Not used |               |                     |                    |
|  | h.        | Pasteur pipettes                  | Adequate/Inadequate / Used / Not used |               |                     |                    |
|  | i.        | Glass slides for syphilis testing | Adequate/Inadequate                   |               |                     |                    |
|  | j.        | Wax                               | Adequate/Inadequate                   |               |                     |                    |
|  | k.        | Ring template                     | Adequate /Inadequate                  |               |                     |                    |
|  | l.        |                                   |                                       |               |                     |                    |
|  | <b>C</b>  | <b>Kits</b>                       |                                       |               |                     |                    |
|  | <b>a.</b> | <b>HIV kits</b>                   | <b>Name of kit</b>                    | <b>Source</b> | <b>Batch number</b> | <b>Expiry date</b> |
|  | i)        | ELISA                             |                                       |               |                     |                    |
|  | ii)       | RAPID                             |                                       |               |                     |                    |
|  | b.        | VDRL antigen                      |                                       |               |                     |                    |
|  | c.        | Storage of kits                   | Satisfactory/ Not satisfactory        |               |                     |                    |
|  | d.        | Kits sufficient                   |                                       |               |                     |                    |
|  | i)        | HIV ELISA                         | Yes/ No                               |               |                     |                    |
|  | ii)       | HIV Rapid                         | Yes/ No                               |               |                     |                    |
|  | iii)      | VDRL                              | Yes/ No                               |               |                     |                    |



**Annexure IVB  
(Part B)**

**CHECKLIST FOR MONITORING AT HIV TESTING CENTRE**

| <b>PART B</b> |   |  |
|---------------|---|--|
| <b>IV</b>     | <b>Practices followed at laboratory</b>             |  |
| <b>A.</b>     | <b>HIV testing methodology</b>                      |  |
| a.            | Standard procedure followed (2ER)                   | Yes/ No                                  |
| b.            | ELISA/ Rapid test                                   | Test 1/ Test 2                           |
| c.            | Quality control—control in house                    | Yes/ No                                  |
| d.            | Reading of results by microbiologist                | Yes/ No                                  |
| e.            | Ext. Quality assurance guidelines followed          | Yes/ No                                  |
| f.            | Panel sera received (from reference laboratory)     | Yes/ No                                  |
| <b>B.</b>     | <b>Syphilis serology testing methodology</b>        |  |
| a.            | Whether VDRL/RPR used                               | Specify                                  |
| b.            | Standard procedure followed                         | Yes/No                                   |
| c.            | Whether 2 VDRL/RPR done                             | Yes/No                                   |
| d.            | Qualitative or quantitative test done               | Specify                                  |
| e.            | Quantitative test done on how many sera             | Specify number                           |
| <b>C.</b>     | <b>Universal precautions followed</b>               |  |
| a.            | Handling sharps                                     | Proper/ Improper                         |
| b.            | Handling spillage of blood                          | Proper/ Improper                         |
| c.            | Washing of hands                                    | Proper/ Improper                         |
| d.            | Pipette technique                                   | Proper/ Improper                         |
| e.            | Decontamination before disposal                     | Yes/No                                   |
| f.            | Final waste disposal                                | Burning/Incineration/Deep burial         |
| <b>V</b>      | <b>Details of HSS</b>                               |  |
| a.            | Samples received                                    | Daily/ Once a week/ Any other (specify)  |
| b.            | Cold chain maintained during transport              | Yes/No                                   |
| c.            | Nature of sample                                    | Serum/Whole blood                        |
| d.            | Quantity of serum                                   | Adequate/Inadequate                      |
| e.            | Condition of sample on day of visit                 | Haemolyzed/ Contaminated                 |
| f.            | Number of unsatisfactory samples, and total samples |  |
| g.            | Unsatisfactory samples discarded                    | Yes/No                                   |
| h.            | Mode of storage of sera                             | Refrigerator/Deep freezer                |
| i.            | Duration of storage before testing                  | Immediate/1 week/2 weeks/1 month/ other  |
| j.            | Tests done  | Daily/ Twice a week/ Any other (specify) |
| <b>VI</b>     | <b>Record maintenance</b>                           | Maintained/ Not maintained               |
| <b>VII</b>    | <b>Problems faced</b>                               |  |
| <b>VIII</b>   | <b>Suggestions for improvement</b>                  |  |

Name (Member of supervisory team)

Signature





## Proforma

**HSS 2008: DATA FORM FOR PATIENTS ATTENDING STI/ GYNAECOLOGICAL CLINICS***(Circle appropriate options, complete where options are not available.)*

Date: \_\_\_/\_\_\_/\_\_\_ State: \_\_\_\_\_ District: \_\_\_\_\_

1. Name of sentinel site: \_\_\_\_\_

2.1 Sentinel site code: \_\_\_\_\_

2.2 Sub-site number: 0, 1, 2, 3, 4, 5

*(Circle the allotted sub-site number. Circle 0 if the site is not a part of a composite site.)*

3.1 Sample number: \_\_\_\_\_

3.2 Sentinel site type: 1. STI clinic 2. Gynaecological clinic

4.1 Age (in completed years): \_\_\_\_\_

4.2 Sex: 1. Male 2. Female

5. Marital status: 1. Never married 2. Married 3. Divorced/Separated/Widowed

6. Education: 1. Illiterate 2. Literate and till 5th standard

3. Till 12th standard 4. Till graduation 5. Graduate and above

7. Source of referral to STI clinic

1. Self-referral 2. ICTC/ VCTC 3. NGO

4. Private doctors 5. ART centre 6. Other OPDs

7. Referred by spouse with STI

8. Current place of residence of the respondent

1. Urban (municipal 2. Rural

corporation/council/cantonment)

9. Duration of stay at current place of residence \_\_\_\_\_ years \_\_\_\_\_ months

10. Current occupation of the respondent

1. Agricultural labourer 2. Non-agricultural labourer 3. Domestic servant

4. Skilled/ Semi-skilled worker 5. Petty business/ Small shop 6. Large business/Self-employed

7. Service (Government/Private) 8. Student 9. Truck driver/helper

10. Local transport worker (auto/ 11. Hotel staff 12. Agricultural cultivator/

taxi driver, handcart puller, landholder

rickshaw puller, etc.)

13. Unemployed 14. Housewife

11. Current occupation of the spouse

1. Agricultural labourer 2. Non-agricultural labourer 3. Domestic servant

4. Skilled/ Semi-skilled worker 5. Petty business/ Small shop 6. Large business/Self-employed

7. Service (Government/Private) 8. Student 9. Truck driver/helper

10. Local transport worker (auto/ 11. Hotel staff 12. Agricultural cultivator/

taxi driver, handcart puller, landholder

rickshaw puller, etc.)

13. Unemployed 14. Housewife

99. Not applicable (for never married/ Widows/ Widowers)



**12. Syndromic diagnosis of STI**

- Ano-genital ulcer 1
- Urethral discharge/ Cervical discharge 2
- Genital ulcer and urethral discharge/ Cervical discharge 3
- Ano-genital warts 4

*(This question has to be asked **ONLY FOR FEMALE RESPONDENTS**. For male respondents, circle '99'.)*

**13. Does husband reside alone in another place/town away from wife for work for longer than 6 months?**

- 1. Yes
- 2. No
- 99. Not applicable (for never married/ Widows/ Male respondents)

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(Person completing the form)*

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(In-charge of the surveillance site)*



**HSS 2008: DATA FORM FOR ANTENATAL CLINIC ATTENDEES**  
(Circle appropriate options, complete where options are not available.)

To be completed at the testing laboratory      State: \_\_\_\_\_      District: \_\_\_\_\_  
Date: \_\_\_/\_\_\_/\_\_\_  
\_\_\_/\_\_\_/\_\_\_

**1. Name of sentinel site:** \_\_\_\_\_  
**2.1 Sentinel site code:** \_\_\_\_\_      **2.2 Sub-site number: 0, 1, 2, 3, 4, 5** (Circle the allotted sub-site number. Circle 0 if the site is not a part of a composite site.)

**3. Sample number:** \_\_\_\_\_  
**4. Age in completed years:** \_\_\_\_\_

**5. Education**

- |                    |                                   |                       |
|--------------------|-----------------------------------|-----------------------|
| 1. Illiterate      | 2. Literate and till 5th standard | 3. Till 12th standard |
| 4. Till graduation | 5. Graduate and above             |                       |

**6. Order of current pregnancy**

- |          |           |          |           |                        |
|----------|-----------|----------|-----------|------------------------|
| 1. First | 2. Second | 3. Third | 4. Fourth | 5. Greater than fourth |
|----------|-----------|----------|-----------|------------------------|

**7. Source of referral to ANC clinic**

- |  |   |                           |
|--|---|---------------------------|
| 1. Self-referral                         | 2. Family/Relatives/ Neighbours Friends                   | 3. NGO/ Out-reach workers |
| 4. Private doctor/ Private health centre | 5. Government doctor/ ANM/ ASHA/ Government health centre | 6. ICTC/ ART centre       |

**8. Current place of residence**

- |   |          |
|---|----------|
| 1. Urban (municipal corporation/Council/Cantonment) | 2. Rural |
|---|----------|

**9. Duration of stay at current place of residence:** \_\_\_\_\_ years \_\_\_\_\_ months

**10. Current occupation of the respondent**

- |  |                               |   |
|--|-------------------------------|---|
| 1. Agricultural labourer   | 2. Non-agricultural labourer  | 3. Domestic servant                     |
| 4. Skilled/ Semi-skilled worker  | 5. Petty business/ Small shop | 6. Large business/Self-employed         |
| 7. Service (Government/Private)  | 8. Student                    | 9. Truck driver/helper                  |
| 10. Local transport worker (auto/ taxi driver, handcart puller, rickshaw puller, etc.) | 11. Hotel staff               | 12. Agricultural cultivator/ landholder |
| 14. Housewife  |                               |   |

**11. Current occupation of the spouse**

- |  |                               |   |
|--|-------------------------------|---|
| 1. Agricultural labourer   | 2. Non-agricultural labourer  | 3. Domestic servant                     |
| 4. Skilled/ Semi-skilled worker  | 5. Petty business/ Small shop | 6. Large business/Self-employed         |
| 7. Service (Government/Private)  | 8. Student                    | 9. Truck driver/helper                  |
| 10. Local transport worker (auto/ taxi driver, handcart puller, rickshaw puller, etc.) | 11. Hotel staff               | 12. Agricultural cultivator/ landholder |
| 13. Unemployed   |                               |   |

**12. Does spouse reside alone in another place/ town away from wife for work for longer than 6 months?**

- |        |       |  |
|--------|-------|--|
| 1. Yes | 2. No | 99. Not applicable (for never married/ widows) |
|        |       | 99. Not applicable (for never married/ widows) |

**Signature** \_\_\_\_\_  
**Name** \_\_\_\_\_  
(Person completing the form)

**Signature** \_\_\_\_\_  
**Name** \_\_\_\_\_  
(In-charge of the sentinel site)



### HSS 2008: DATA FORM FOR INJECTING DRUG USERS

(Circle appropriate options, complete where options are not available.)

Date: \_\_ \_\_ / \_\_ \_\_ / \_\_ \_\_ State: \_\_\_\_\_ District: \_\_\_\_\_

1. Name of sentinel site: \_\_\_\_\_

2.1 Sentinel site code: \_\_\_\_\_ 2.2 Sub-site Number: 0, 1, 2, 3, 4, 5  
(Circle the allotted sub-site number. Circle 0 if the site is not a composite site.)

3. Sample number: \_\_\_\_\_

4. Age (in completed years): \_\_\_\_\_ 5. Gender: 1. Male 2. Female

6. Marital status: 1. Never married 2. Married 3. Divorced/separated/widowed

#### 7. Education

1. Illiterate 2. Literate and till 5<sup>th</sup> standard 3. Till 12<sup>th</sup> standard  
4. Till graduation 5. Graduate and above

#### 8. Reason for coming to the service point

1. STI treatment 2. Other medical care 3. Other  
4. Needle exchange programme 5. Oral substitution therapy/  
De-addiction

#### 9. Current place of residence of the respondent

1. Urban (Municipal corporation/Council/Cantonment) 2. Rural

#### 10. Current occupation of the respondent

1. Agricultural labourer 2. Non-agricultural labourer 3. Domestic servant  
4. Skilled/ Semi-skilled worker 5. Petty business/ Small shop 6. Large business/Self-employed  
7. Service (Government/Private) 8. Student 9. Truck driver/helper  
10. Local transport worker (auto/taxi driver, handcart puller, rickshaw puller, etc.) 11. Hotel staff 12. Agricultural cultivator/ landholder  
13. Unemployed 14. Housewife

11. Is the respondent a shadow user\*? 1. Yes 2. No

\*Shadow users: IDUs who switch over to injectable drugs from oral or inhalational and have injected in the last six months

#### 12. Average frequency of injecting drugs

1. Once a week or less 2. Twice a week 3. Thrice a week 4. More than thrice a week

#### 13. Duration of injecting drug use

1. < 6 months 2. 6 months to 1 year 3. 1–3 years 4. 3–5 years  
5. >5 years

Signature \_\_\_\_\_

Name \_\_\_\_\_

(Person completing the form)

Signature \_\_\_\_\_

Name \_\_\_\_\_

(In-charge of the surveillance site)



**To be completed at testing centre**

**14. Laboratory results**

**a) Testing for HSS** *(Please circle the appropriate number.)*

**First test**                    1. Positive                    2. Negative

**Second test**                1. Positive                2. Negative                9. Not applicable (if first test is negative)

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(Person completing the form)*

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(In-charge of the testing centre)*



**HSS 2008: DATA FORM FOR MEN WHO HAVE SEX WITH MEN**  
*(Circle appropriate options, complete where options are not available.)*

Date: \_\_\_ / \_\_\_ / \_\_\_\_\_ State: \_\_\_\_\_ District: \_\_\_\_\_

1. Name of sentinel site: \_\_\_\_\_

2.1 Sentinel site code: \_\_\_\_\_

2.2 Sub-site number: **0, 1, 2, 3, 4, 5**  
*(Circle the allotted sub-site number. Circle 0 if the site is not a composite site.)*

3. Sample number: \_\_\_\_\_

4. Age (in completed years): \_\_\_\_\_

**5. Education**

- |                    |   |                                   |
|--------------------|---|-----------------------------------|
| 1. Illiterate      | 2. Literate and till 5 <sup>th</sup> standard | 3. Till 12 <sup>th</sup> standard |
| 4. Till graduation | 5. Graduate and above                         |                                   |

**6. Reason for coming to the service point**

- |                  |                       |          |
|------------------|-----------------------|----------|
| 1. STI treatment | 2. Other medical care | 3. Other |
|------------------|-----------------------|----------|

**7. Current place of residence of the respondent**

- |   |          |
|---|----------|
| 1. Urban (Municipal corporation /Council /Cantonment) | 2. Rural |
|---|----------|

8. Duration of stay at current place of residence: \_\_\_\_\_ years \_\_\_\_\_ months

**9. Current occupation of the respondent**

- |  |                               |   |
|--|-------------------------------|---|
| 1. Agricultural labourer   | 2. Non-agricultural labourer  | 3. Domestic servant                     |
| 4. Skilled/ Semi-skilled worker  | 5. Petty business/ Small shop | 6. Large business/Self-employed         |
| 7. Service<br>(Government/Private)   | 8. Student                    | 9. Truck driver/helper                  |
| 10. Local transport worker (auto/<br>taxi driver, handcart puller,<br>rickshaw puller, etc.) | 11. Hotel staff               | 12. Agricultural cultivator/ landholder |
| 13. Unemployed   |                               |   |

**10. Type of MSM**

- |          |           |                  |                |
|----------|-----------|------------------|----------------|
| 1. Kothi | 2. Panthi | 3. Double-decker | 4. No response |
|----------|-----------|------------------|----------------|

**11. Did the respondent have any sexual intercourse with any female partner in the last 6 months?**

- |        |       |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

**12. Has the respondent ever received money or payment in kind for sex?**

- |        |       |                |
|--------|-------|----------------|
| 1. Yes | 2. No | 3. No response |
|--------|-------|----------------|

**13. Has he ever injected a drug for pleasure without a prescription?**

- |        |       |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

Signature \_\_\_\_\_

Name \_\_\_\_\_

*(Person completing the form)*

Signature \_\_\_\_\_

Name \_\_\_\_\_

*(In-charge of the surveillance site)*



**To be completed at testing centre**

**14. Laboratory results**

**a) Testing for HSS** *(Please circle the appropriate number.)*

**First test**                      1. Positive                      2. Negative

**Second test**                      1. Positive                      2. Negative                      9. Not applicable (if first test is negative)

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(Person completing the form)*

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(In-charge of the testing centre)*





**HSS 2008: DATA FORM FOR FEMALE SEX WORKERS**

*(Circle appropriate options, complete where options are not available.)*

Date: \_\_ \_\_ / \_\_ \_\_ / \_\_ \_\_ \_\_      2. State: \_\_\_\_\_      3. District: \_\_\_\_\_

1. Name of sentinel site: \_\_\_\_\_

2.1 Sentinel site code: \_\_\_\_\_

2.2 Sub-site number:    0, 1, 2, 3, 4, 5

*(Circle the allotted sub-site number. Circle 0 if the site is not a composite site.)*

3. Sample number: \_\_\_\_\_

4. Age (in completed years): \_\_\_\_\_

**5. Education**

1. Illiterate                                      2. Literate and till 5<sup>th</sup> standard                      3. Till 12<sup>th</sup> standard

4. Till graduation                              5. Graduate and above

**6. Reason for coming to the service point**

1. STI treatment                              2. Other medical care                              3. Other

**7. Current place of residence**

1. Urban (Municipal corporation /Council                              2. Rural

/Cantonment)

8. Duration of stay at current place of residence: \_\_\_\_\_ years \_\_\_\_\_ months

**9. Type of sex work involved in (Multiple options are allowed.)**

1. Brothel-based                              2. Street-based

3. Home-based                              4. Others

**10. Duration of involvement in sex work**

1. < 6 months                              2. 6 months to 1 year                              3. 1–3 years

4. 3–5 years                              5. >5 years

**11. Any other source of income, apart from sex work?**

1. Yes                              2. No

If yes, specify \_\_\_\_\_

**12. Has she ever injected a drug for pleasure without a prescription?**

1. Yes                              2. No

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

*(Person completing the form)*

*(In-charge of the surveillance site)*



**To be completed at testing centre**

**13. Laboratory results**

**a) Testing for HSS** *(Please circle the appropriate number.)*

**First test**                      1. Positive              2. Negative

**Second test**                      1. Positive              2. Negative              9. Not applicable (if first test is negative)

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(Person completing the form)*

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(In-charge of the testing centre)*





**To be completed at testing centre**

**12. Laboratory results**

**a) Testing for HSS** *(Please circle the appropriate number.)*

**First test**                      1. Positive              2. Negative

**Second test**                      1. Positive              2. Negative              9. Not applicable (if first test is negative)

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(Person completing the form)*

**Signature** \_\_\_\_\_

**Name** \_\_\_\_\_

*(In-charge of the testing centre)*





**To be completed at testing centre**

**10. Laboratory results**

**a) Testing for HSS** *(Please circle the appropriate number.)*

**First test**                      1. Positive                      2. Negative

**Second test**                      1. Positive                      2. Negative                      9. Not applicable (if first test is negative)

**Signature** \_\_\_\_\_  
**Name** \_\_\_\_\_  
*(Person completing the form)*

**Signature** \_\_\_\_\_  
**Name** \_\_\_\_\_  
*(In-charge of the testing centre)*



**HSS 2008: DATA FORM FOR EUNUCHS/ TRANSGENDERS**  
(Circle appropriate options, complete where options are not available.)

Date: \_\_ \_\_/ \_\_ \_\_ / \_\_ \_\_ \_\_ \_\_ State: \_\_\_\_\_ District: \_\_\_\_\_

1. Name of sentinel site: \_\_\_\_\_

2.1 Sentinel site code: \_\_\_\_\_

2.2 Sub-site Number: 0, 1, 2, 3, 4, 5

(Circle the allotted sub-site number. Circle 0 if the site is not a composite site.)

3. Sample number: \_\_\_\_\_

4. Age (in completed years): \_\_\_\_\_

**5. Education**

- |                    |   |                                   |
|--------------------|---|-----------------------------------|
| 1. Illiterate      | 2. Literate and till 5 <sup>th</sup> standard | 3. Till 12 <sup>th</sup> standard |
| 4. Till graduation | 5. Graduate and above                         |                                   |

**6. Reason for coming to the service point**

- |                  |                       |          |
|------------------|-----------------------|----------|
| 1. STI treatment | 2. Other medical care | 3. Other |
|------------------|-----------------------|----------|

**7. Current place of residence of the respondent**

- |   |          |
|---|----------|
| 1. Urban (Municipal corporation/Council/Cantonment) | 2. Rural |
|---|----------|

8. Duration of stay at current place of residence: \_\_\_\_\_ years \_\_\_\_\_ months

**9. Current occupation of the respondent**

- |  |                               |   |
|--|-------------------------------|---|
| 1. Agricultural labourer   | 2. Non-agricultural labourer  | 3. Domestic servant                     |
| 4. Skilled/ Semi-skilled worker  | 5. Petty business/ Small shop | 6. Large business/Self-employed         |
| 7. Service (Government/Private)  | 8. Student                    | 9. Truck driver/helper                  |
| 10. Local transport worker (auto/ taxi driver, handcart puller, rickshaw puller, etc.) | 11. Hotel staff               | 12. Agricultural cultivator/ landholder |
| 13. Unemployed   |                               |   |

**10. Has the respondent ever received money or payment in kind for sex?**

- |        |       |                |
|--------|-------|----------------|
| 1. Yes | 2. No | 3. No response |
|--------|-------|----------------|

**11. Has the respondent ever injected a drug for pleasure without a prescription?**

- |        |       |
|--------|-------|
| 1. Yes | 2. No |
|--------|-------|

Signature \_\_\_\_\_

Name \_\_\_\_\_

(Person completing the form)

Signature \_\_\_\_\_

Name \_\_\_\_\_

(In-charge of the surveillance site)





## Annexure VI

## State-wise distribution of sentinel sites by type in 2008

| States                    | STI | ANC | ANC (R ) | FSW | IDU | MSM | TRK | MRG | EUN | Total |
|---------------------------|-----|-----|----------|-----|-----|-----|-----|-----|-----|-------|
| Andaman & Nicobar Islands | 1   | 4   |          |     |     |     |     |     |     | 5     |
| Andhra Pradesh            |     | 26  | 26       | 12  | 2   | 6   |     |     |     | 72    |
| Arunachal Pradesh         | 7   | 6   |          | 3   | 2   |     |     |     |     | 18    |
| Assam                     | 9   | 16  |          | 14  | 2   | 1   |     |     |     | 42    |
| Bihar                     | 24  | 23  |          | 15  | 2   | 1   |     |     |     | 65    |
| Chandigarh                | 2   | 1   |          | 3   | 1   | 1   |     |     |     | 8     |
| Chhattisgarh              | 4   | 18  |          |     |     |     |     |     |     | 22    |
| Daman & Diu               |     | 2   |          |     |     |     |     |     |     | 2     |
| Dadra & Nagar Haveli      |     | 1   |          |     |     |     |     |     |     | 1     |
| Delhi                     | 5   | 5   |          | 6   | 2   | 4   |     |     |     | 22    |
| Goa                       | 2   | 3   |          | 1   |     | 1   |     |     |     | 7     |
| Gujarat                   | 10  | 25  |          | 6   |     | 7   |     | 2   |     | 50    |
| Haryana                   | 9   | 12  |          | 7   | 1   | 1   |     |     |     | 30    |
| Himachal Pradesh          | 5   | 8   |          | 3   | 1   | 1   | 1   | 1   |     | 20    |
| Jammu & Kashmir           | 6   | 14  |          | 2   | 1   |     |     |     |     | 23    |
| Jharkhand                 | 11  | 15  |          | 12  | 1   | 1   |     |     |     | 40    |
| Karnataka                 | 7   | 29  | 29       | 6   | 1   | 3   |     |     |     | 75    |
| Kerala                    | 2   | 6   |          | 6   | 3   | 5   | 1   |     |     | 23    |
| Madhya Pradesh            | 13  | 36  |          | 3   | 1   | 1   |     |     |     | 54    |
| Maharashtra               | 9   | 33  | 33       | 16  |     | 3   |     | 2   | 1   | 98    |
| Mumbai                    | 1   | 6   | 0        | 4   | 1   | 1   |     |     |     | 12    |



|                      |     |     |     |     |    |    |   |   |   |      |
|----------------------|-----|-----|-----|-----|----|----|---|---|---|------|
| <b>Manipur</b>       | 2   | 10  | 4   | 3   | 4  | 1  |   |   |   | 24   |
| <b>Meghalaya</b>     | 3   | 1   | 6   |     |    |    |   |   |   | 10   |
| <b>Mizoram</b>       | 2   | 8   |     | 1   | 5  |    |   | 1 |   | 17   |
| <b>Nagaland</b>      | 1   | 11  | 8   | 1   | 8  |    |   |   |   | 29   |
| <b>Orissa</b>        | 7   | 31  |     | 6   | 3  | 4  |   | 1 |   | 52   |
| <b>Pondicherry</b>   | 3   | 2   |     | 3   |    | 2  |   |   |   | 10   |
| <b>Punjab</b>        | 3   | 8   | 5   | 7   | 5  | 3  |   |   |   | 31   |
| <b>Rajasthan</b>     | 15  | 26  |     | 5   |    |    |   |   |   | 46   |
| <b>Sikkim</b>        | 1   | 3   |     | 1   | 2  |    |   |   |   | 7    |
| <b>Tamil Nadu</b>    |     | 34  | 29  | 28  | 2  | 17 |   |   |   | 110  |
| <b>Tripura</b>       | 7   | 2   |     |     | 1  |    |   |   |   | 10   |
| <b>Uttar Pradesh</b> | 26  | 43  | 10  | 3   | 2  | 1  |   |   |   | 85   |
| <b>Uttaranchal</b>   | 6   | 9   |     |     |    |    |   |   |   | 15   |
| <b>West Bengal</b>   | 9   | 9   | 12  | 11  | 4  | 4  | 5 | 1 |   | 55   |
| <b>India</b>         | 212 | 486 | 162 | 188 | 57 | 69 | 7 | 8 | 1 | 1190 |





आरोग्यम् सुखसम्पदा  
NIHF

**National Institute of Health and Family Welfare  
Munirka, New Delhi-110067**



**National AIDS Control Organisation (NACO)  
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