

HIV Sentinel Surveillance 2014-15

State Surveillance Report



Assam State AIDS Control Society

Khanapara, Guwahati-22

FOREWORD

HIV Sentinel Surveillance (HSS) is the backbone of understanding the level and trend of HIV in the country. Initiated in 1998 under the leadership of NACO with technical support from WHO and NIHF, Assam SACS's Strategic Information Management Unit (SIMU) implemented the 14th round of HIV sentinel Surveillance in 2014-15.

Surveillance is information for action and dissemination of information to all stakeholders is one of the key objectives of Surveillance. This report, published by the SIMU division of Assam SACS summarizes the information on HIV Prevalence among the ANC attendees who acts as a proxy for the HIV Prevalence in the general population in 2014-15. The focus is on providing facts on the level and trends of the HIV epidemic at the state and district level. Hopefully it will serve the purpose of various stakeholders including health departments, Non-Governmental Organizations, educational institutions, etc to understand the HIV epidemic in the state.

Publication of this report would not be possible without the contributions of the sample collection sites and state reference laboratories that implemented the HSS 2014-15. We congratulate all site-in charges, nurses/counselors and laboratory technicians involved in HSS 2014-15 for their dedication towards the activity. We are grateful to Regional Institute of Medical Sciences (RIMS), Imphal and the State Surveillance team for their continued support and guidance during the implementation of the HSS activities. We also thank the Monitoring & Evaluation division of NACO for their guidance in implementing the HSS activities.



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ACRONYMS

ANC	Antenatal Clinic
ASACS	Assam State AIDS Control Society
DAPCU	District AIDS Prevention and Control Unit
DBS	Dried Blood Spot
EQAS	External Quality Assurance Scheme
FSW	Female Sex Worker
HIV	Human Immuno-deficiency Virus
HRG	High Risk Group
HSS	HIV Sentinel Surveillance
ICMR	Indian Council of Medical Research
IDU	Injecting Drug Users
LDT	Long Distance Truckers
MSM	Men who have Sex with Men
NACO	National AIDS Control Organization
NACP	National AIDS Control Programme
NIHFW	National Institute of Health and Family Welfare
NIMS	National Institute of Medical Statistics
OBG	Obstetrics and Gynecology
RI	Regional Institute
RIMS	Regional Institute of Medical Sciences
SMM	Single Male Migrant
STD	Sexually Transmitted Disease
TI	Targeted Intervention

Executive Summary

1. HIV Sentinel Surveillance (HSS) is a vital component of the second generation surveillance system to monitor the levels and trends of HIV epidemic among different population groups in the country. Data from HSS is also used for estimation of HIV burden in the country. It is implemented with the support of two national institutes and six regional public health institutes of India. The methodology adopted is consecutive sampling with unlinked anonymous testing.
2. HIV Sentinel Surveillance 2014-15 was conducted in Assam in 27 ANC sites. For High Risk Group (HRG) populations, a nationwide Integrated Biological and Behavioral Surveillance (IBBS) was carried out during 2013-14 as a strategic shift to strengthen surveillance system among these populations.
3. The overall HIV prevalence among the ANC attendees, considered a proxy for prevalence among the general population was 0.18% in Assam during 2014-15, an increase from 0.16% during HSS 2012-13. The highest HIV prevalence was recorded in Cachar (1.25%) and Sonitpur (1.25%) followed by Tinsukia (0.75%) and Karbi-Anglong (0.50%). Analysis of consistent sites shows a gradual rising trend in HIV prevalence among ANC clinic attendees in Assam during 2006-2015.
4. Thus, HSS 2014-15 shows that the HIV epidemic is showing a rising trend among the ANC attendees in Assam although at a very low level. Pockets of high HIV prevalence and greater vulnerability continue to exist in general population particularly in the Barak Valley region of South Assam and will require focused attention.

INTRODUCTION:

HIV Sentinel Surveillance is one of the key components of the second generation surveillance system in India to track the HIV epidemic in the country with objective of understanding the levels and trends of HIV epidemic among different population groups as well as to identify the spread of the epidemic to new pockets.

HIV Sentinel Surveillance (HSS) is the core focus of India's National AIDS Control Programme (NACP) and response strategy. Since the detection of first HIV case at Chennai in 1986, the initial focus of Government of India was on sero-surveillance. The Surveillance system in India was built 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. Since 1998, the National AIDS Control Organization in collaboration with National Institute of Health and Family welfare and the National Institute of Medical statistics has been conducting rounds of HIV Sentinel Surveillance at designated sites all over the country. Over the years, the number of sites has increased from 176 in 1998 to 1359 in 2010-11. The number of surveillance sites among ANC attendees from 476 sites in 2003 to 776 sites in HSS 2014-15.

The population groups and sentinel sites are chosen on the basis of the dynamics of HIV transmission. Those with high risk behavior includes patients with sexually transmitted infections (STIs) attending the STD clinics, Female sex workers, Men having sex with men, Injecting drug users. The general population or those with low risk is represented by pregnant women attending the antenatal clinics.

Under the leadership of National AIDS Control Organization with State AIDS Control Society as the local agency, HSS was initiated in Assam in 1998 at 4 sites including 2 ANC and 2 STD sites. Over the years there has been a gradual increase in the number sites covering almost all the districts in the state.

OBJECTIVES OF HIV SENTINEL SURVEILLANCE:

1. To monitor trend in prevalence of HIV infection over time
2. To monitor the distribution and spread of HIV prevalence in different population subgroups and in different geographical areas

3. To identify emerging pockets of HIV epidemic in the country.

IMPORTANT APPLICATIONS OF HIV SENTINEL SURVEILLANCE DATA:

1. To estimate and project burden of HIV at state and national levels
2. To support programme prioritization and resource allocation
3. To assist evaluation of programme impact
4. Advocacy.

EXPANSION OF SURVEILLANCE SYSTEM IN ASSAM:

Over the years, the surveillance network has expanded from 4 in 1998 to 48 Sites in 2010-11 when almost all districts are covered under surveillance system. Surveillance among ANC attendees was conducted in 27 sites during HSS 2014-15. (Table 1).

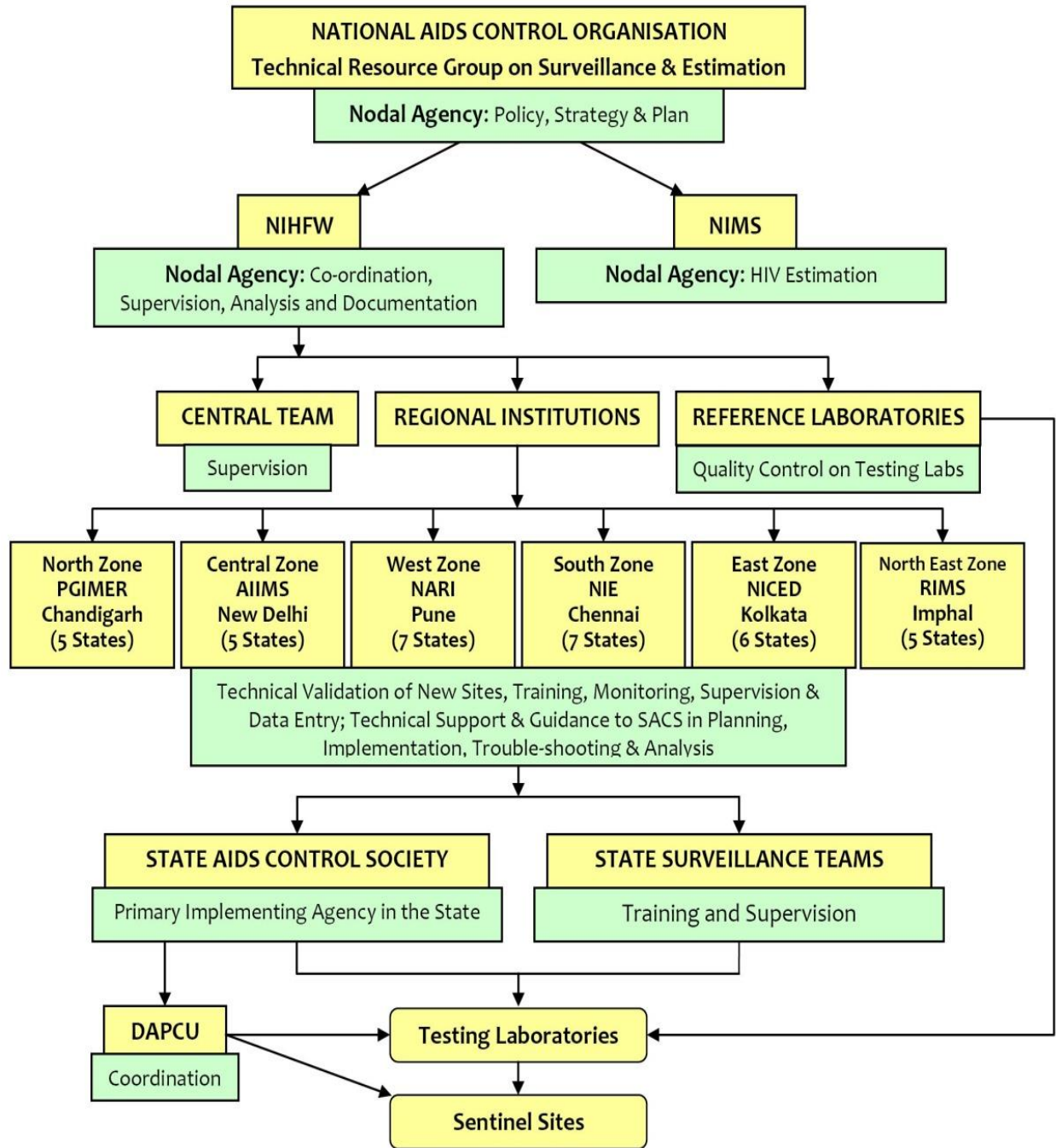
Table 1: Expansion of Surveillance sites in Assam

Site Type	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008-09	2010-11	2012-13	2014-15
ANC	2	2	2	3	4	7	5	4	15	16	16	20	25	27
STD	2	2	2	2	5	6	5	5	9	9	9	9	1	-
FSW	-	-	-	-	-	-	2	4	11	10	9	15	-	-
IDU	-	-	-	-	-	1	1	2	2	2	2	2	-	-
MSM	-	-	-	-	-	-	-	-	1	1	1	2	-	-
Total	4	4	4	5	9	14	13	15	38	38	37	48	26	27

IMPLEMENTATION STRUCTURE:

HIV Sentinel Surveillance has a robust structure for planning, implementation and supervision at national, regional and state levels. The structure and key functions of each agency involved in HSS are shown in figure 1.

Figure 1: Implementation structure of HIV Sentinel Surveillance



New initiatives during HSS 2014-15

- **SMS-Based daily reporting**

As per the directive of NACO, SMS-based daily reporting was done from all the Sentinel sites of Assam. The reporting included number of samples collected in the sentinel site which was sent from a registered mobile number to the central server. Access to this web based application facilitated the identification of poor performing sites and accordingly necessary corrective action was taken by ASACS.

- **Bi-lingual data forms**

The data forms for the collection of surveillance data was translated in Assamese for the convenience of the site personnel.

METHODOLOGY:

This section highlights the methodology adopted under the HSS 2014-15 round, including selection of sentinel population, sites, the sampling process, methods of HIV testing, data collection and analysis.

Sentinel Population:

Under HSS 2014-15, information on HIV prevalence was collected from the general population. Blood specimen was taken consensually from the sample of ANC attendees (as proxy for the general population) and screened for HIV. Information on certain demographic characteristics and limited data on risk behavior was also collected.

HIV Sentinel Surveillance Sites:

The number of HSS sites under the 2014-15 round was 27. The sites for the 2014-15 round were identified according to a list of selection criteria. The factors taken into account included whether the sites provide information on the selected 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, etc.

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 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 90% confidence interval will mean that if the survey was conducted 100 times, the prevalence in 90 surveys out of the 100 would fall within the specified margin of error. For HSS 2014-15, 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 was calculated. There was no STD site during HSS 2014-15 but the following information on STD sample size has been retained for the interest of the readers. As the focus was on ensuring adequate representation of women in the sample collected at STD sites, the sample of 250 at the STD sites was completed from two sources. A total of 150 samples were collected from the STD clinic, while 100 were from the gynecology clinic.

The eligibility criteria for HSS included an age range of 15-49 years to facilitate comparability across sites. Also, sampling was restricted to the first visit of the client during the surveillance period.

The duration of sampling extended from 1st January, 2015 to 31st March, 2015.

Sampling scheme:

The scheme followed for all sites was consecutive sampling. According to this method, all individuals who visits the clinic and who meets the inclusion criteria were included in the survey until the required sample size was obtained or the survey period was over.

Method for blood sample collection:

In HSS, HIV testing is done on a portion of blood specimen collected for routine diagnostic purposes (such as syphilis, Hb) after removing all personal identifiers. This testing strategy is known as Unlinked Anonymous testing. The method for blood sample collection varies according to the HSS site.

At ANC sites, whole venous blood was collected from the sample population from which serum was separated and split into two parts. One part, preserved with the individual identifiers, was tested for routine diagnostic purposes while 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 rapid tests to determine whether the sample was positive or negative. For the HRG (TI) sites, DBS method for blood sample collection was done. Under the DBS method, blood specimens are collected by applying a few drops of blood drawn by lancet from 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.

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. The key elements of the methodology of HSS are summarized in table 2.

Table 2: Methodology of HIV Sentinel Surveillance¹

	High risk groups: IDU/MSM/FSW/TG	Bridge population: STD/SMM/LDT	General Population: Pregnant women attending ANC clinics
Sentinel site	Targeted interventions (TI) Projects	STD clinic, TI Projects	Antenatal clinic
Sample Size	250	250	400

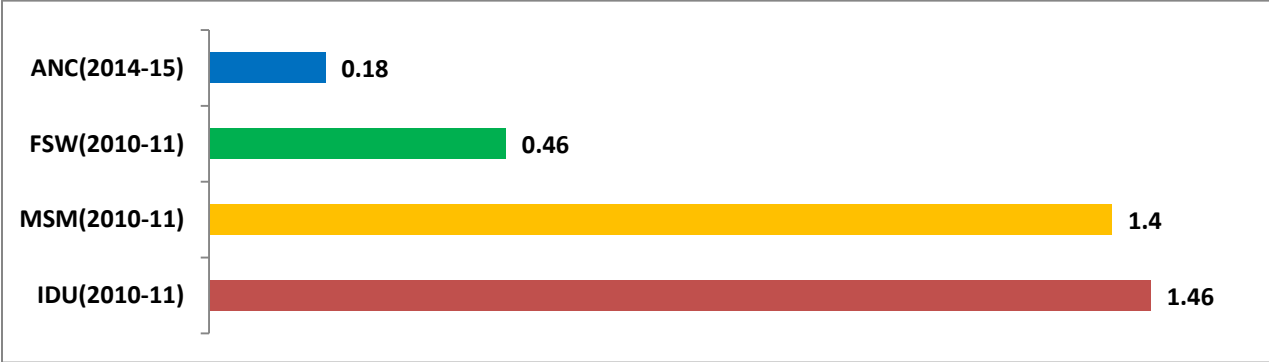
Duration	3 months	3 months	3 months
Frequency	Once in 2 years	Once in 2 years	Once in 2 years
Sampling method	Consecutive/random	Consecutive	Consecutive
Age-Group	15-49 years	15-49 years	15-49 years
Testing Strategy	Unlinked anonymous with informed consent	Unlinked anonymous at STD, With informed consent at TI sites	Unlinked Anonymous
Blood specimen	Dried blood spot	Serum at STD, DBS at TI sites	Serum
Testing Protocol	Two Test Protocol	Two Test Protocol	Two Test Protocol
¹ The table highlights the methodology for all population groups and has been kept for the interest of the reader. However, HSS 2012-13 was conducted in ANC & STD sites only.			

Results:

Overview of HIV levels and trends at state level

Figure 2. Depicts the overall HIV prevalence at state level among ANC clinic attendees from HSS 2014-15 and high risk groups from the HSS 2010-11. The HIV prevalence observed among ANC clinic attendees, considered as a proxy for HIV prevalence in the general population, during 2014-15 was 0.18%.

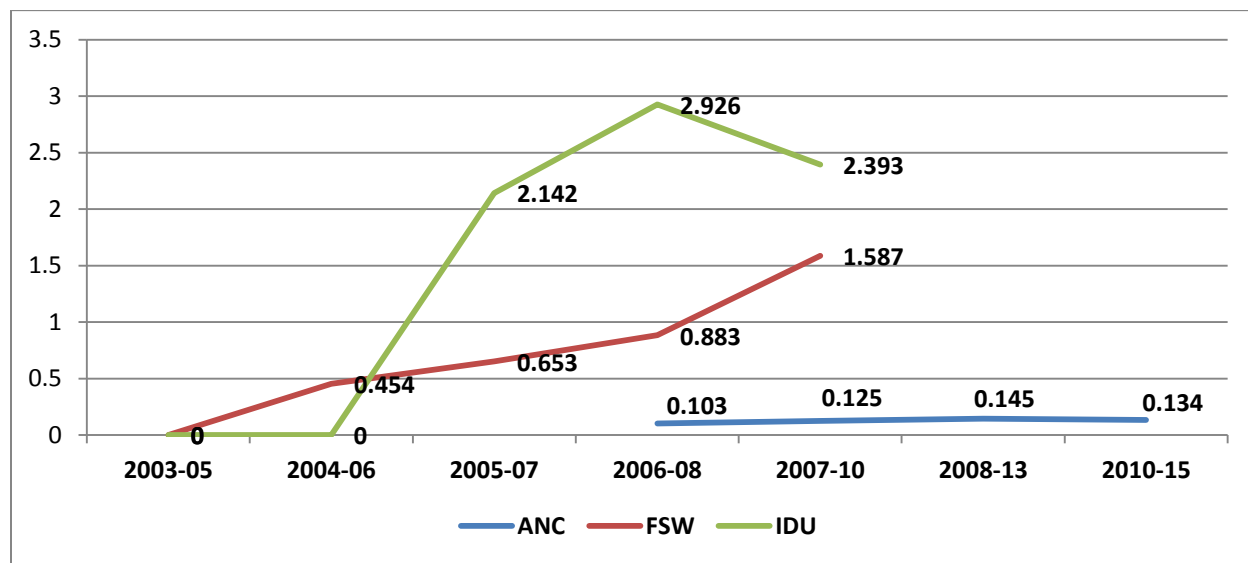
Figure 2: HIV Prevalence (%) among ANC clients (2014-15) & other population groups (2010-11), Assam



Trends in HIV prevalence among different population groups was derived using three year moving averages of HIV prevalence at consistent sites from 2006 to 2015 for ANC and from 2003 to 2011 for HRGs. In Assam, a somewhat stable trend in HIV prevalence was noted among ANC population till 2015 and among IDU population till 2011. Among the FSWs, an increasing trend is observed in Assam. As there were no consistent sites for MSM in the state, trend analysis among them couldn't be done. [Figure 3]

The ANC trend analysis in this report is done from 2006 as there was a scale up of ANC sentinel sites in 2006 and since then most of them are consistent sites. For HRG population, Integrated Biological and Behavioral Surveillance (IBBS) were implemented during 2013-14 and that data will be analyzed and disseminated as a separate report.

Figure 3: HIV Prevalence trend across different population groups, Assam ¹



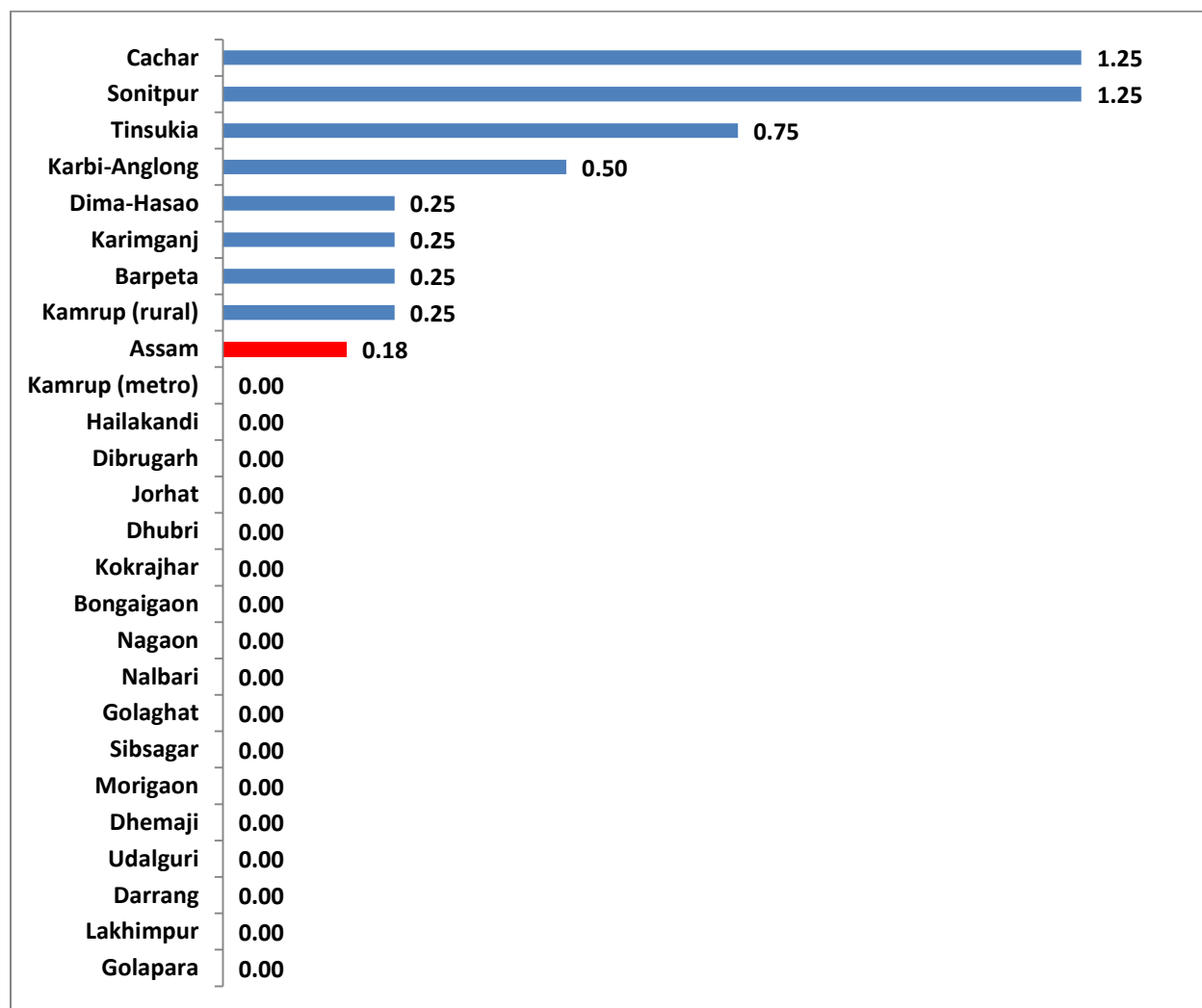
¹3-year moving averages based on consistent sites: ANC-12 sites, FSW-2 sites & IDU-2 sites.

HIV levels among ANC attendees at the district level

Figure.4 shows the district wise HIV Prevalence among the ANC attendees. It is noted that Cachar and Sonitpur districts in the state have HIV Prevalence of > 1%. Tinsukia district recorded a HIV Prevalence of 0.75% while Karbi-Anglong district recorded a Prevalence of

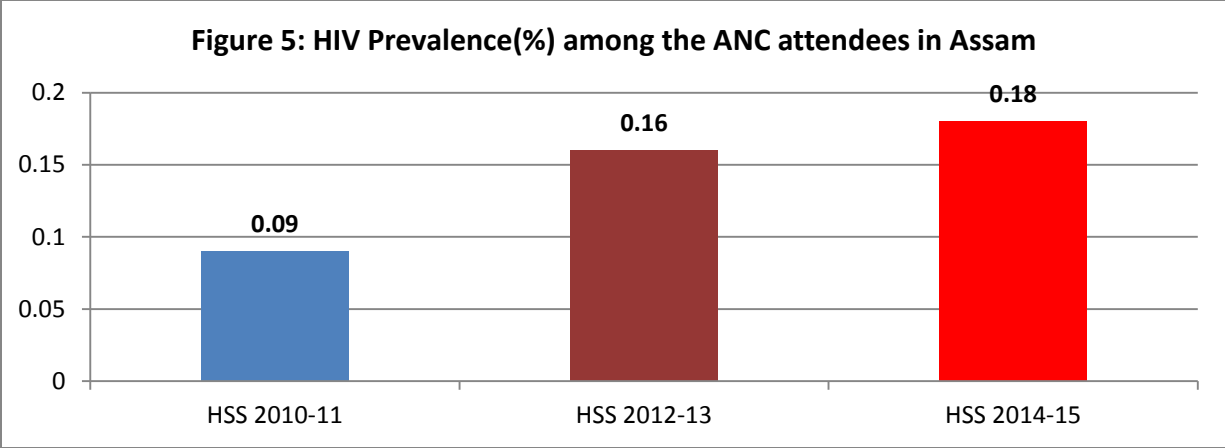
0.50%. Dima-Hasao, Karimganj, Barpeta and Kamrup (rural) recorded a HIV Prevalence of 0.25% each.

Figure 4: HIV Prevalence (%) at ANC sites, Assam and districts, 2014-15

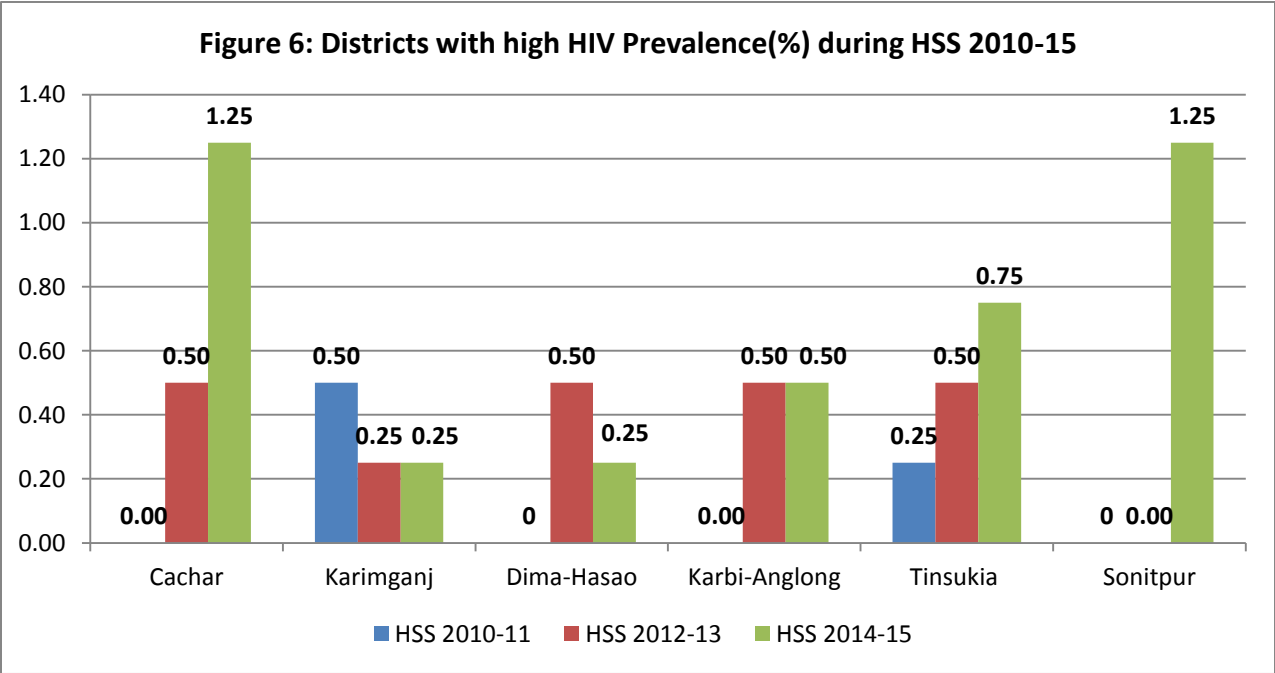


District-wise comparison HIV prevalence among ANC attendees in recent HSS rounds

Analysis of the State HIV Prevalence among ANC attendees during the last three rounds shows an increasing trend. [Figure 5]



Further analysis of the sites contributing to the HIV Prevalence (%) shows that six districts namely Cachar, Karbi-Anglong, Karimganj, Tinsukia, Dima-Hasao and Sonitpur have consistently recorded higher positivity during the last three rounds. Among them, three districts (Cachar, Dima-Hasao and Sonitpur) are new sites where HSS has been initiated in the last three rounds. It may be noted that among these six districts four districts are located in South Assam which shows a geographic focus. [Figure 6]



Socio-demographic characteristics of the ANC attendees:

Table 3 describes the socio-demographic characteristics of the ANC attendees at the HSS sites during HSS 2014-15. Almost half (44.7%) of the ANC attendees were in the 20-24 years age group. Majority (80.1%) were from the rural areas. 44.5% of the ANC attendees were educated till 10th standard and 22.3% had education till graduation. More than half (52.3%) of the ANC attendees had come for ANC checkup of their first pregnancy while 35.3% were in their second pregnancy. Majority (80.1%) of the ANC attendees were brought/referred for ANC check up by ASHA/ANMs.

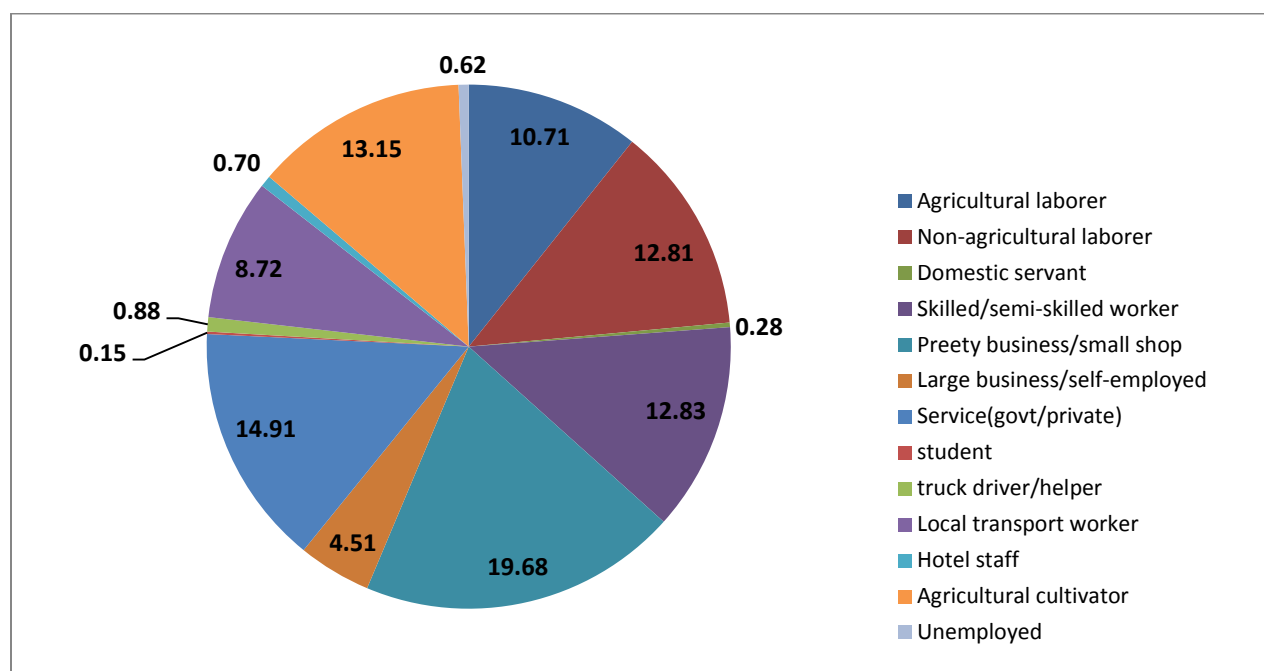
Table 3: Socio-demographic characteristics of ANC attendees, HSS 2014-15

Variable	Frequency	Percentage
Age group (n=10793)		
15-19	1241	11.5
20-24	4828	44.7
25-29	3238	30.0
30-49	1486	13.8
Residence (n=10762)		
Urban	2133	19.8
Rural	8629	80.1
Education (n=10783)		
Illiterate	1406	13.0
Literate and till 5 th standard	1926	17.8
6 th to 10 th standard	4807	44.5
11 th to Graduation	2408	22.3
Post-graduation	236	2.1
Order of Pregnancy (n=10787)		
First	5650	52.3
Second	3809	35.3
Third	1026	9.5
Fourth and more	302	2.7

Source of Referral of the pregnant women (n=10759)		
Self-referral	973	9.0
Family/relatives/ friends	1084	10.0
NGO	22	0.2
Private(doctor/nurse)	60	0.5
Govt(including ASHA/ANM)	8620	80.1

19.68% of the spouses of ANC attendees were pretty business/small shop owners. Other common occupations of the spouses are Service (14.91%), Agricultural Cultivator (13.15%), Skilled/semi-skilled worker (12.83%) and Non-agricultural laborer (12.81%). [Figure 8]

Figure 8: Occupation (%) of the spouses of ANC attendees, HSS 2014-15



Analysis of the migration status of the spouse in the last three rounds shows an increase in the proportion of migrant spouse from 3.26% in 2010-11 to 3.59% in 2014-15. [Table 4]

Table 4: Migration status of spouse of ANC attendees in the last three rounds of HSS.

Migration status	2010-11 (n=7864)		2012-13 (n=9949)		2014-15 (n=10749)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Yes	257	3.26	529	5.31	386	3.59
No	7606	96.71	9417	94.65	10358	96.36
Not applicable*	1	0.01	3	0.03	5	0.05

*For widow/ unmarried pregnant women

Differentials for HIV Prevalence among the ANC attendees:

Table 5 depicts the HIV positivity among ANC attendees by age group. Higher HIV positivity is noted in the 20-24 years age group in urban areas while HIV Positivity is higher in 15-19 years age group in rural areas. HIV Positivity is higher in 30-49 years age group due to the small denominator.

Table 5: HIV Prevalence among ANC attendees by age group, 2014-15

Age group	Urban			Rural		
	Number tested	Number Positive	HIV % positive	Number tested	Number Positive	HIV % positive
15-19	156	0	0.00	1079	4	0.37
20-24	772	2	0.25	4037	5	0.12
25-29	724	0	0.00	2510	4	0.15
30-49	481	1	0.20	1003	3	0.29

In HSS 2014-15, HIV positivity showed a decreasing trend with increasing Literacy in both rural and urban areas. [Table 6]

Table 6: HIV Prevalence among ANC attendees by Education, 2014-15

Education	Urban			Rural		
	Number tested	Number Positive	HIV % positive	Number tested	Number Positive	HIV % positive
Illiterate	198	0	0.00	1206	4	0.33
Literate till 5 th Standard	279	1	0.35	1644	1	0.06
6 th -10 th Standard	807	2	0.24	3985	11	0.27
11 th -Graduation	694	0	0.00	1703	0	0.00
Post-graduation	155	0	0.00	81	0	0.00

In both Urban and Rural areas, higher HIV positivity was noted among the ANC attendees in their first order of Pregnancy. [Table:7]

Table 7: HIV Prevalence among ANC attendees by Gravida, 2014-15

Order of Pregnancy	Urban			Rural		
	Number tested	Number Positive	HIV % positive	Number tested	Number Positive	HIV % positive
First	1143	2	0.17	4491	9	0.20
Second	747	1	0.13	3052	6	0.19
Third	180	0	0.00	843	1	0.11
Fourth or more	62	0	0.00	239	0	0.00

From table 8 it is seen that in urban areas, HIV positivity was higher among spouses of ANC attendees who works as skilled/semi-skilled worker (0.35%) and Pretty business/ small shop owner (0.20%).In rural areas, HIV positivity is higher among spouses working as skilled/semiskilled worker (0.45%) and Service-Pvt. /Govt(0.32%).

Table 8: HIV Prevalence among ANC attendees by spouse occupation, 2014-15

Spouse Occupation	Urban			Rural		
	Number tested	Number Positive	HIV % positive	Number tested	Number Positive	HIV % positive
Agricultural laborer	40	0	0.00	1110	0	0.00
Non-agricultural laborer	164	0	0.00	1215	2	0.16
Domestic servant	5	0	0.00	25	1	4.00
Skilled/semi-skilled worker	283	1	0.35	1098	5	0.45
Petty business/small shop	487	1	0.20	1630	3	0.18
Large business/self-employed	185	0	0.00	300	0	0.00
Service (Govt/Pvt.)	672	1	0.14	932	3	0.32
Student	2	0	0.00	14	0	0.00
Truck driver/helper	22	0	0.00	73	1	1.36
Local transport worker (auto/taxi driver, rickshaw puller,etc	205	0	0.00	732	1	0.13
Hotel staff	31	0	0.00	45	0	0.00
Agricultural cultivator/landholder	22	0	0.00	1392	0	0.00
Unemployed	15	0	0.00	52	0	0.00
Not applicable (for never married/widow)	0	0	0.00	5	0	0.00

During HSS 2014-15, HIV positivity was higher among ANC attendees whose spouse were non-migrants in both urban (migrants Vs Non-migrants; 0.00 Vs 0.14%) and rural (migrants Vs Non-migrants; 0.00% Vs 0.19%). This is a reverse trend compared to HSS 2012-13.

Table 9: HIV Prevalence among ANC attendees by migration status of spouse, 2014-15

Migration status of spouse	Urban			Rural		
	Number tested	Number Positive	HIV % positive	Number tested	Number Positive	HIV % positive
Yes	83	0	0.00	303	0	0.00
No	2042	3	0.14	8285	16	0.19
Not Applicable*	0	0	0.00	5	0	0.00
*Widow/unmarried women						

CONCLUSION:

India has the largest and one of the best HIV surveillance systems in the world. HIV sentinel surveillance provides insights on the levels and trends of HIV among different population groups covering almost all the districts in the country. Data from HIV sentinel surveillance is also used for HIV estimations and it also helps in formulating policy decision.

Findings from HSS 2014-15 show that the level of the HIV epidemic in Assam among different population groups is still low. However, a somewhat rising trend is noted among the general population (represented by ANC attendees) and among female sex workers. Analysis of the differentials of HIV prevalence from HSS 2014-15 shows higher HIV positivity among Spouses of ANC attendees working as Skilled/Semi-skilled workers, Service holders (Pvt. /Govt.), etc. It is also noted that the HIV prevalence is higher among ANC attendees with non-migrants' spouses which is a reversed trend compared to HSS 2012-13.

The above scenario indicates the need to strengthen the prevention interventions in the state among the bridge populations as mentioned above without losing the focus on the high risk groups. Further, the strategies and approaches should be customized to the patterns of vulnerabilities in the state. Surveillance data helps the programme in identifying these vulnerabilities, thereby guiding appropriate programme response to contain the HIV epidemic. Therefore, the findings of the HSS 2014-15 will be used for effective programme planning at the state and district level.

ANNEX 1: Distribution of HIV Sentinel sites, district-wise and typology-wise (2014-15)*

District	ANC	STD	FSW	MSM	IDU	Total
Baksa	1	-	-	-	-	0
Barpeta	1	-	-	-	-	1
Bongaigaon	1	-	-	-	-	1
Cachar	1	-	-	-	-	1
Chirang	0	-	-	-	-	0
Darrang	1	-	-	-	-	1
Dhemaji	1	-	-	-	-	1
Dhubri	1	-	-	-	-	1
Dibrugarh	1	-	-	-	-	1
Goalpara	1	-	-	-	-	1
Golaghat	1	-	-	-	-	1
Hailakandi	1	-	-	-	-	1
Jorhat	1	-	-	-	-	1
Kamrup (metro)	2	-	-	-	-	1
Kamrup (rural)	1	-	-	-	-	1
Karbi-Anglong	1	-	-	-	-	1
Karimganj	1	-	-	-	-	1
Kokrajhar	1	1	-	-	-	2
Lakhimpur	1	-	-	-	-	1
Morigaon	1	-	-	-	-	1
Nagaon	1	-	-	-	-	1
Nalbari	1	-	-	-	-	1
Dima-Hasao	1	-	-	-	-	1
Sibsagar	1	-	-	-	-	1
Sonitpur	1	-	-	-	-	1
Tinsukia	1	-	-	-	-	1
Udalguri	1	-	-	-	-	1
ASSAM	27 [#]	1	-	-	-	26

*HSS 2014-15 was conducted only in ANC sites as HRG surveillance is being done as IBBS.

New ANC sentinel sites added in 2014-15 are Pratiksha Hospital (Kamrup –M) and Tamulpur PHC (Baksa)

ANNEX 2: HIV Prevalence among ANC clinic attendees, district-wise (2003-15)

District	2003	2004	2005	2006	2007	2008-09	2010-11	2012-13	2014-15
Baksa	-	-	-	-	-	-	-	-	0.00
Barpeta	-	-	-	-	-	-	-	0.00	0.25
Bongaigaon	-	-	-	-	-	0.25	0.50	0.00	0.00
Cachar	-	-	-	-	-	-	0.00	0.50	1.25
Chirang	-	-	-	-	-	-	-	-	-
Darrang	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00
Dhemaji	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00
Dhubri	-	-	-	-	-	-	-	0.00	0.00
Dibrugarh	-	-	-	-	-	-	0.00	0.25	0.00
Goalpara	-	-	-	-	0.00	-	0.00	0.00	0.00
Golaghat	-	-	-	-	-	-	0.00	0.00	0.00
Hailakandi	-	-	-	0.36	-	0.00	0.00	0.50	0.00
Jorhat	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.25	0.00
Kamrup (metro)	-	-	-	0.00	-	0.25	0.00	0.75	0.00
Kamrup (rural)	-	-	-	-	-	-	0.00	0.00	0.25
Karbi-Anglong	-	-	-	-	-	0.00	0.00	0.50	0.50
Karimganj	-	-	-	0.00	0.00	0.25	0.50	0.25	0.25
Kokrajhar	-	-	-	-	-	-	-	0.00	0.00
Lakhimpur	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
Morigaon	-	-	-	0.00	0.26	0.25	0.00	0.00	0.00
Nagaon	0.00	0.62	0.00	0.25	0.00	0.00	0.25	0.00	0.00
Nalbari	-	-	-	0.00	0.00	0.00	0.25	0.00	0.00
Dima-Hasao	-	-	-	-	-	-	-	0.50	0.25
Sibsagar	-	-	-	0.00	0.25	0.00	0.00	0.00	0.00
Sonitpur	-	-	-	-	-	-	-	0.00	1.25
Tinsukia	-	-	-	-	-	0.25	0.25	0.50	0.75
Udalguri	-	-	-	-	0.00	0.00	0.00	0.00	0.00
Note: 1. Based on valid sites (75% target achieved), 2. All figures in percentages									

ANNEX 3: HIV Prevalence among FSW, district-wise (2003-11)

District	2003	2004	2005	2006	2007	2008-09	2010-11
Baksa	-	-	-	-	-	-	0.00
Barpeta	-	-	0.88	-	0.89	0.00	0.83
Bongaigaon	-	-	-	0.00	0.40	0.00	0.00
Cachar	-	0.00	-	-	0.40	0.82	0.00
Chirang	-	-	-	-	-	-	-
Darrang	-	-	-	0.40	0.39	-	1.20
Dhemaji	-	-	-	-	-	-	-
Dhubri	-	-	-	-	-	5.15	0.80
Dibrugarh	-	-	-	0.00	1.96	1.69	0.00
Goalpara	-	-	0.00	-	0.38	0.45	0.00
Golaghat	-	-	-	-	-	-	0.40
Hailakandi	-	-	-	-	-	-	-
Jorhat	-	-	-	-	-	0.00	0.00
Kamrup (metro)	-	-	-	0.95	0.00	-	2.80
Kamrup (rural)	-	-	-	-	-	-	-
Karbi-Anglong	-	-	-	-	-	-	-
Karimganj	-	-	-	-	-	-	-
Kokrajhar	-	-	-	-	-	-	-
Lakhimpur	-	-	-	-	-	-	0.00
Morigaon	-	-	-	-	-	0.00	0.00
Nagaon	-	-	-	-	-	-	-
Nalbari	-	-	0.00	-	0.00	-	-
Dima-Hasao	-	-	-	-	-	-	-
Sibsagar	-	-	-	-	-	0.00	0.80
Sonitpur	-	-	-	-	-	0.00	0.00
Tinsukia	-	-	-	0.43	-	-	-
Udalguri	-	-	-	-	-	-	-

Note: 1. Based on valid sites (75% target achieved), 2. All figures in percentages

ANNEX 4: HIV Prevalence among IDU, district-wise (2003-11)

District	2003	2004	2005	2006	2007	2008-09	2010-11
Baksa	-	-	-	-	-	-	-
Barpeta	-	-	-	-	-	-	-
Bongaigaon	-	-	-	-	-	-	-
Cachar	-	-	-	-	-	-	-
Chirang	-	-	-	-	-	-	-
Darrang	-	-	-	-	-	-	-
Dhemaji	-	-	-	-	-	-	-
Dhubri	-	-	-	-	-	-	-
Dibrugarh	-	-	-	-	-	-	-
Goalpara	-	-	-	-	-	-	-
Golaghat	-	-	-	-	-	-	-
Hailakandi	-	-	-	-	-	-	-
Jorhat	-	-	-	-	-	-	-
Kamrup (metro)	-	-	-	-	1.90	3.20	2.00
Kamrup (rural)	-	-	-	-	-	-	-
Karbi-Anglong	-	-	-	-	2.38	4.09	0.87
Karimganj	-	-	-	-	-	-	-
Kokrajhar	-	-	-	-	-	-	-
Lakhimpur	-	-	-	-	-	-	-
Morigaon	-	-	-	-	-	-	-
Nagaon	-	-	-	-	-	-	-
Nalbari	-	-	-	-	-	-	-
Dima-Hasao	-	-	-	-	-	-	-
Sibsagar	-	-	-	-	-	-	-
Sonitpur	-	-	-	4.00	-	-	-
Tinsukia	-	-	-	-	-	-	-
Udalguri	-	-	-	-	-	-	-

Note: 1. Based on valid sites (75% target achieved), 2. All figures in percentages

ANNEX 5: HIV Prevalence among MSM, district-wise (2003-11)

District	2003	2004	2005	2006	2007	2008-09	2010-11
Baksa	-	-	-	-	-	-	-
Barpeta	-	-	-	-	-	-	-
Bongaigaon	-	-	-	-	-	-	-
Cachar	-	-	-	-	-	-	-
Chirang	-	-	-	-	-	-	-
Darrang	-	-	-	-	-	-	-
Dhemaji	-	-	-	-	-	-	-
Dhubri	-	-	-	-	-	-	-
Dibrugarh	-	-	-	-	-	-	-
Goalpara	-	-	-	-	-	-	-
Golaghat	-	-	-	-	-	-	-
Hailakandi	-	-	-	-	-	-	-
Jorhat	-	-	-	-	-	-	-
Kamrup (metro)	-	-	-	0.78	2.78	0.41	2.02
Kamrup (rural)	-	-	-	-	-	-	-
Karbi-Anglong	-	-	-	-	-	-	-
Karimganj	-	-	-	-	-	-	-
Kokrajhar	-	-	-	-	-	-	-
Lakhimpur	-	-	-	-	-	-	-
Morigaon	-	-	-	-	-	-	-
Nagaon	-	-	-	-	-	-	-
Nalbari	-	-	-	-	-	-	0.79
Dima-Hasao	-	-	-	-	-	-	-
Sibsagar	-	-	-	-	-	-	-
Sonitpur	-	-	-	-	-	-	-
Tinsukia	-	-	-	-	-	-	-
Udalguri	-	-	-	-	-	-	-

Note: 1. Based on valid sites (75% target achieved), 2. All figures in percentages

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