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India's Voice against AIDS
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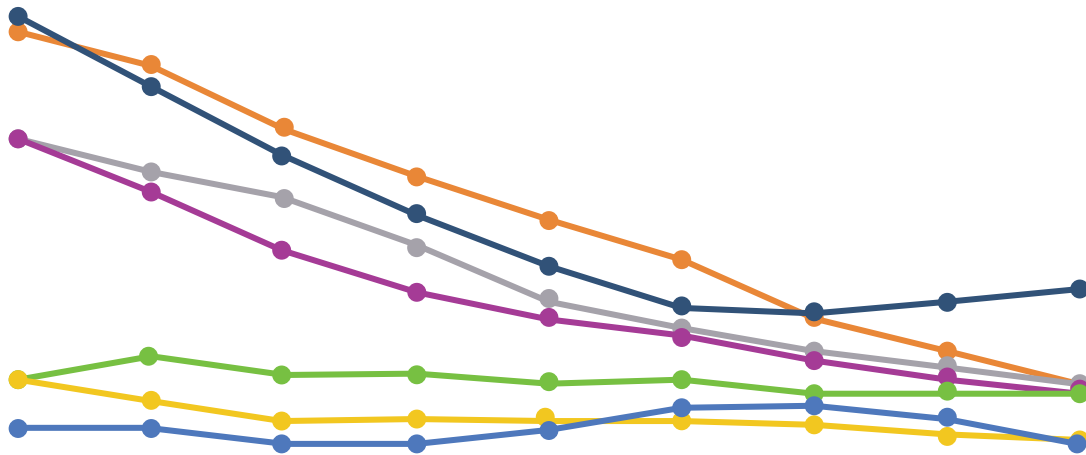
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Ministry of Health & Family Welfare
Government of India



HIV SENTINEL SURVEILLANCE 2019

ANTENATAL CLINIC ATTENDEES



TECHNICAL REPORT

National AIDS Control Organization and All India Institute of Medical Sciences
Ministry of Health & Family Welfare, Government of India

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HIV SENTINEL SURVEILLANCE 2019

ANTENATAL
CLINIC ATTENDEES



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FOREWORD

HIV Sentinel Surveillance (HSS) has been vital to monitor the level and trend of HIV/AIDS epidemic under the National AIDS Control Programme (NACP) in India. The annual HIV Sentinel Surveillance was formally launched in 1998 and then since 2008, it is being done biennially. In 2019, the 16th round of HIV Sentinel Surveillance among pregnant women was implemented.

Surveillance is 'Information for Action' and dissemination of evidences for public health action has always been inbuilt under NACP. This report from 2019 round of surveillance implemented among 'Antenatal Clinic Attendees' (Pregnant women) is in continuation of NACP tradition of timely analysis, interpretation and dissemination of evidences informing the current status of HIV/AIDS epidemic among pregnant women to policy makers, programme managers, academicians, community, civil society, developmental partners and all other stakeholders.

In its endeavours to augment the quality of the report, this report has provided the findings not only on the level and trend of the HIV/AIDS epidemic, but also has detailed the respondents profile together with its association with HIV infection. These correlates are important pointers to programme towards identifying attributes that may help the programme to further prioritize the population and locations augmenting the national AIDS response.

This report has once again corroborated the continued low HIV prevalence among pregnant women at 0.24% with a declining trend nationally; but with considerable degree of geographical heterogeneity at State and district level. There is strong declining trend in the erstwhile high prevalence southern States while the epidemic status in the north-eastern region continues to be challenging.

India is signatory to the 2016 Political Declaration on 'Ending AIDS as a public health threat by 2030'. As evident, while there are successes, challenges continue to exist. The epidemiological evidences to customize the response is overwhelming. I am confident that all stakeholders will take cognizance of epidemiological evidences presented in this report and use them to fine-tune their response to meet the local needs.

Sanjeeva Kumar



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आलोक सक्सेना
संयुक्त सचिव

Alok Saxena
Joint Secretary



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PREFACE

National AIDS Control Programme (NACP) implemented the 16th round of the HIV Sentinel Surveillance among pregnant women in 2019 at 833 sites across 642 districts in 35 States/UTs collecting a total of 331,757 valid data forms and biological specimens. The method continues to be consecutive sampling method following linked-anonymous testing strategy as in the previous round. This technical report presents the results from this 16th round of sentinel surveillance among pregnant women.

The implementation of one of the largest surveillance systems in the world, entirely funded through Government of India, is done through a robust institutional mechanism. The system engages seven government public health institutes including AIIMS (New Delhi), ICMR–NIMS (New Delhi), ICMR–NARI (Pune), ICMR–NIE (Chennai), ICMR–NICED (Kolkata), PGIMER (Chandigarh) and RIMS (Imphal) under the leadership of Dr Shobini Rajan (Assistant Director General, Strategic Information, National AIDS Control Organization, MoHFW, GoI). State AIDS Control Societies provide leadership to the implementation through the teamwork of members from State surveillance team, laboratories and sentinel surveillance sites adhering to the highest possible quality standards in a time-bound manner.

Findings from 2019 round of HSS corroborates with previous rounds and continues to show a low and declining trend nationally, albeit a geographically diverse epidemic sub-nationally. There were 46 surveillance sites across 11 States and 45 districts, which recorded a prevalence of 1% among pregnant women. Overall, 34 districts recorded a HIV prevalence of 1% or more among pregnant women.

This technical report is opportune as the country embarks towards planning for the next phase of NACP and it is expected to support shaping the country's response for the next five years. I am confident that all stakeholders will use this report for policy making, programme designing and progress monitoring towards achieving 'END OF AIDS' 2030.

Alok Saxena

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MESSAGE

HIV Sentinel Surveillance (HSS) was started in India to monitor the spread of disease in different population sub-groups in 1998 at total 176 sites which included 92 Antenatal Care Clinic (ANC) sites. The sixteenth round of HSS was conducted among pregnant women visiting ANC from January to March 2019. In this 16th round, we covered 833 ANC sites in the whole country. Most of the districts are now covered in this round of HSS.

This report is a result of collective efforts from many experts such as Dr DCS Reddy (Independent Technical Expert), Dr Arvind Pandey (Advisor, NIMS-ICMR New Delhi) and Dr Shashi Kant (Head of Department, CCM, AIIMS) who have been the pillars of HSS since its inception. The hard work and support of Dr Shobini Rajan (DDG SI, NACO) and Dr Pradeep Kumar (Programme Officer, Surveillance, NACO) has been vital to the successful completion of this round of HSS.

HSS in India has always been appreciated as one of the best in the world. This is due to the joint efforts of site personnel including the medical officer, counsellor and laboratory technician under the supervision of Regional Institutes and State AIDS Control Societies. One of the key strengths of HSS in India is the quality of supportive supervision provided during the surveillance period. I would like to thank the Central team members, State surveillance team members and various experts for ensuring the quality control during their supervisory visits.

I also acknowledge our international partners—WHO India, UNAIDS India and CDC India for their technical support and involvement in the planning and implementation of HSS.

This report will be useful for all the stakeholders involved in control of HIV epidemic.

Sanjay K. Rai



MESSAGE

The Indian HIV Sentinel Surveillance (HSS) is one of the largest in the world and aligned with all the latest WHO guidelines and recommendations. Continuation and adaptation of HIV surveillance are instrumental to have a deeper understanding of the HIV epidemic, its geographical spread, communities most affected, and to guide the National AIDS Control Programme (NACP) to meet the target of ending AIDS by 2030.

Since the beginning of the HIV epidemic in India, 16 successive rounds of sentinel surveillance have been conducted with increasing number of sites and groups to strengthen its representativeness. The populations vulnerable to HIV (high-risk groups), bridge populations and pregnant women—considered as a proxy for the general population—were covered during these rounds of surveillance.

The findings from the 2019 round of Antenatal Clinic (ANC), HSS corroborates the results of the previous rounds showing a low and declining trend in HIV prevalence at the National level, but continuing a geographically diverse trend in HIV prevalence at the State and district levels. A sustained declining trend among ANC clinic attendees at the National level and in many other States, including high prevalence States from southern and western region, is indicative of India's successful response under the NACP. However, there are several States in the north-eastern region as well as in eastern, central, northern and western regions where HIV continues to be a public health challenge.

Given the current focus of the Indian government in expanding services under the ambit of Universal Health Coverage (UHC), evidence is required to ensure that no one is left behind in terms of access to prevention, treatment and care services. HSS will continue to make an immense difference by guiding the NACP in meeting the target of ending AIDS as a public health threat by 2030.

WHO is fully committed to continue supporting NACO in adapting its programme response and to further strengthen its HIV surveillance system.



Dr Bekedam, Hendrik Jan



MESSAGE

I congratulate the Government of India: National AIDS Control Organization (NACO), Ministry of Health and Family Welfare, for making latest information on the HIV epidemic burden among pregnant women attending Antenatal Clinics (ANCs) across India available; via this Technical Report.

Generated under the 16th round of HIV Sentinel Surveillance (HSS) using sound methods, and implemented through a well instituted and robust National/Regional/State level structure; this latest information on HIV burden and trends among pregnant women—to be used in conjunction with other key epidemiological, behavioral, programme and other latest information being made available by NACO—will be very useful. It will help inform the National, State and district level AIDS programme strategies progressively going forward to improve the health of women and end new HIV infections among children.

Under NACO's leadership, the National AIDS Response in India, under its various programme phases, has kept a firm focus on evidence generation, availability, and use—while consistently striving towards having improved quality, more population and geographic specific evidence for HIV prevention, treatment, and care. This must be recognized as one of the key strengths of National AIDS Response Programme in India. The Joint United Nations Programme on HIV/AIDS (UNAIDS) is very pleased to have collaborated with the NACO under various evidence generation efforts—including HSS and HIV estimations—with All India Institute of Medical Sciences New Delhi, Indian Council of Medical Research (ICMR) Regional Institutes, ICMR-National Institute of Medical Statistics, Medical Colleges, State AIDS Control Societies, WHO and CDC.

2020 is a critical year in the entire AIDS response globally and nationally as it marks the end-line year for achieving aspirational global fast-track targets and key national targets listed in the National Strategic Plan 2017-24. The latest information made available this year will help in stocktaking and planning for future efforts, therefore, this Technical Report on HIV prevalence among pregnant women is very timely.

I recommend that all stakeholders involved in the AIDS response in India go through this Technical Report on HIV prevalence among pregnant women and use the data to guide their decision to target prevention, care and treatment interventions towards—where it matters the most—to reduce AIDS-related deaths among women living with HIV and end mother-to-child transmission of HIV in India.



Dr Bilali Camara
Medical Epidemiologist
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The 16th round of HIV Sentinel Surveillance among Antenatal Clinic (ANC) attendees was implemented in 2019 by National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. Various stakeholders joined their hands together and played their role for completion of this activity. NACO gratefully acknowledges contributions made by various stakeholders towards timely and successful implementation.

The Technical Resource Group (TRG) for HIV Surveillance and Estimation is chaired by Shri Sanjeeva Kumar, Special Secretary & DG (NACO & NTEP) and co-chaired by Dr Sanjay Mehendale (Former Addl. DG, ICMR). We place on record our sincere thanks to them for providing vision, insights and support towards continuous development of robust epidemic monitoring under national AIDS Control Programme.

Shri Alok Saxena (Joint Secretary, NACO) provided guidance and support and communicated with State AIDS Control Societies for timely implementation. The technical rigour for ANC HSS has been continuously ensured by Dr DCS Reddy (Former HoD, Department of PSM, IMS, BHU), Professor Arvind Pandey (Former Director, NIMS–ICMR, New Delhi) and Dr Shashi Kant (Professor and Head, Centre for Community Medicine, AIIMS, New Delhi) through their inputs. We most humbly express our gratitude for their continuous unwavering guidance to surveillance activities.

Dr Pradeep Kumar (NACO) worked with TRG members, National and Regional institutes and State AIDS Control Societies (SACS) from the launch of activities till final results. During the process, HIV surveillance team at AIIMS, New Delhi (Dr Sanjay Rai, Dr Shreya Jha, Dr Priyanka Kardam, Ms Bharti Gaur), ICMR–NARI, Pune (Dr Sheela Godbole, Dr Sayali Kalme), ICMR–NIE, Chennai (Dr A. Elangovan, Dr Santha Kumar Aridoss), ICMR–NICED, Kolkata (Dr M.K. Saha, Dr Subrata Biswas), PGIMER, Chandigarh (Dr P.V.M. Lakshmi, Ms Chandrakanta) and RIMS, Imphal (Dr T. Gambhir, Dr Manihar Singh) led the Regional trainings, guided State training, shared field experiences and took leadership for trouble shootings. Dr Arvind Kumar (NACO) coordinated field implementation. The Strategic information

team at SACS under the leadership of their Project Directors coordinated with all stakeholders for smooth implementation. Dr Bilali Camara (UNAIDS India), Ms Nalini Chandra (UNAIDS India), Dr Rajatshuvra Adhikari (WHO India) and Ms Deepika Joshi (CDC India) provided insights from global perspectives. Programmatic context and support were provided by Dr R.S. Gupta (Former DDG, NACO), Dr Naresh Goel (DDG, NACO), Dr Anoop Kumar Puri (DDG, NACO) and Dr Saiprasad P. Bhavsar (DD, NACO). We gratefully acknowledge the contribution of each stakeholder.

Last but not the least, the credit for successful implementation goes to our ANC HSS site personnel for timely completion of this activity while adhering to best possible quality standards. NACO sincerely thanks all the field personnel engaged in his activity for their contribution in implementing 16th round of ANC HSS.



Shobini Rajan

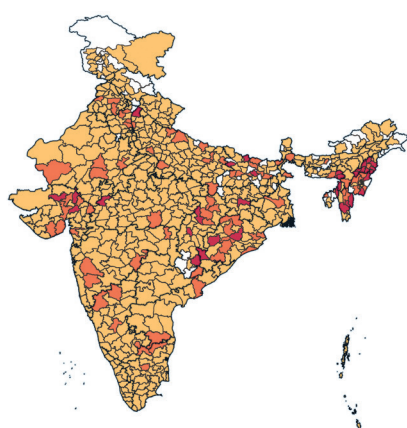
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ABBREVIATIONS

ANC	Ante Natal Clinic
ART	Antiretroviral Therapy
AIIMS	All India Institute of Medical Sciences
DAPCU	District AIDS Prevention and Control Unit
FSW	Female Sex Worker
HSS	HIV Sentinel Surveillance
HIV	Human Immunodeficiency Virus
HRG	High Risk Group
H/TG	Hijra/Transgender people
IDU	Injecting Drug Users
ICMR	Indian Council of Medical Research
LAT	Linked Anonymous Testing
MSM	Men who have Sex with Men
NACO	National AIDS Control Organization
NACP	National AIDS Control Programme
NFHS	National Family Health Survey
NIMS	National Institute of Medical Statistics
RI	Regional Institute
SACS	State AIDS Control Society
SIMS	Strategic Information Management System
SST	State Surveillance Team
TRG	Technical Resource Group
UNAIDS	Joint United Nations Programme on HIV/AIDS
UT	Union Territory
WHO	World Health Organization

EXECUTIVE SUMMARY



The overall HIV prevalence among ANC clinic attendees in 2019 continues to be **low at 0.24%** (95% CI: 0.22%–0.26%). State-wise, north-eastern States of **Nagaland** (1.63%), **Mizoram** (0.90%), **Tripura** (0.63%), **Manipur** (0.51%) and **Meghalaya** (0.44%) were **top five HIV prevalence States**

HIV Sentinel Surveillance (HSS) plays a crucial role in monitoring the level and trend of HIV epidemic across different population groups and locations in the country. Currently, HSS is implemented biennially to monitor the level and trend of HIV epidemic among eight groups comprising Antenatal Clinic (ANC) attendees (pregnant women), migrants, truckers, prison inmates, Female Sex Workers (FSWs), Men having Sex with other Men, (MSM) Hijra/Transgender people (H/TG) and Injecting Drug Users (IDUs). Pregnant women were one of the groups covered under 2019 round of sentinel surveillance under National AIDS Control Programme (NACP).

The 16th round of HSS among pregnant women in 2019 was implemented at 833 sites across 642 districts in 35 States/Union Territories (UTs) collecting a total of 331,757 complete data forms and biological specimens following consecutive sampling method and linked anonymous testing strategy as in the previous round. State of Uttar Pradesh had highest (84) number of ANC HSS sites followed by Maharashtra (76) and Tamil Nadu (71). UT of Dadra & Nagar Haveli had one ANC HSS site while Chandigarh and Daman & Diu had two sites each.

The overall HIV prevalence among ANC clinic attendees in 2019 continues to be low at 0.24% (95% CI: 0.22%–0.26%). State-wise, north-eastern States of Nagaland (1.63%), Mizoram (0.90%), Tripura (0.63%), Manipur (0.51%) and Meghalaya (0.44%) were top five HIV prevalence States. Gujarat (0.39%), Bihar (0.37%), Odisha (0.35%), Chhattisgarh (0.33%) and Andhra Pradesh (0.30%) were other major States with HIV prevalence higher than the national average. Telangana, West Bengal, Maharashtra, Karnataka, Tamil Nadu, Delhi, Uttar Pradesh and Haryana recorded HIV prevalence in the range of 0.16–0.23%.

Data from consistent sites was analysed to interpret HIV trends. HIV prevalence among ANC clinic attendees continues to be on the decline nationally as well as in most of other States including erstwhile high prevalence States of Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu and Telangana. In the north-eastern States, while a declining trend has been noted in Manipur, a rising trend in the recent past has been noted in Mizoram, Nagaland, Meghalaya and Tripura. Bihar, Gujarat, Himachal Pradesh and Uttar Pradesh were other States where a rising trend among pregnant women is being noted.

Overall, HIV prevalence appears to be higher among those who are either illiterate or are only primary literate. Pregnant women with spouses working as truck driver/helper or as local transport worker also have higher prevalence and so are pregnant women with unemployed spouse. HIV prevalence is also higher among pregnant women with migrant spouse vis-à-vis pregnant women with non-migrant spouse. National Family Health Survey-4 (NFHS-4) has indicated that women with no schooling or less than five years of schooling as well as those belonging to the lowest wealth index has the lowest level of knowledge about HIV/AIDS. These are important co-relates that may help the programme to further augment location and population specific strategies.

The overall sero-positivity of Syphilis at National level was recorded at 0.10% (95% CI: 0.08–0.11). Eight States recorded Syphilis sero-positivity above the national average. States of Meghalaya (0.86%) followed by Manipur (0.41%), Chhattisgarh (0.25%), Nagaland (0.24%), Madhya Pradesh (0.23%), Assam (0.18%), Tripura (0.17%) and Tamil Nadu (0.14%) had sero-positivity higher than the national average in 2019 round of ANC HSS.

Findings from 2019 round of ANC HSS corroborates with previous rounds showing a low and declining trend nationally but still having geographically diverse level and trend at State and district level. Sustained declining trend among ANC clients nationally and in many of the other States, including erstwhile high prevalence States from southern and western region, is indicative of India's successful response under NACP. However, there are States in the north-eastern region as well as in eastern, central, northern and western regions where HIV continues to be a public health challenge. The findings will be used as a compass by the policy makers and programme managers to assess country's progress towards achieving 'End of AIDS' as a public health threat by 2030.

The **overall sero-positivity of Syphilis** at National level was recorded at **0.10% (95% CI: 0.08–0.11)**.

1.1 Background

National AIDS Control Organization (NACO) (Ministry of Health & Family Welfare, Government of India) is the nodal organization for NACP in India. The programme provides a comprehensive package of prevention-detection-treatment services with robust strategic information management as a critical enabler across various population groups including those in the correctional institutions.

NACO has been implementing the HSS since 1998 to measure the rates of HIV infection and trends among seven population groups including pregnant women (ANC attendees), single male migrants, and long distance truck drivers, FSWs, MSMs, H/TG people and IDUs. This is one of the largest HSS systems across the globe providing evidences on the magnitude and directions of HIV epidemic in various population groups and thus informing on resource allocation as well as impact assessment.

In continuation, the 16th round of HIV HSS among ANC attendees was implemented during year 2019 with the following objectives:

01

To provide the latest status of level and trend of the HIV epidemic among pregnant women.

02

To provide evidence on geographical spread of the HIV infection and to identify emerging pockets.

03

To provide information for prioritization of Programme resources and evaluation of Programme impact.

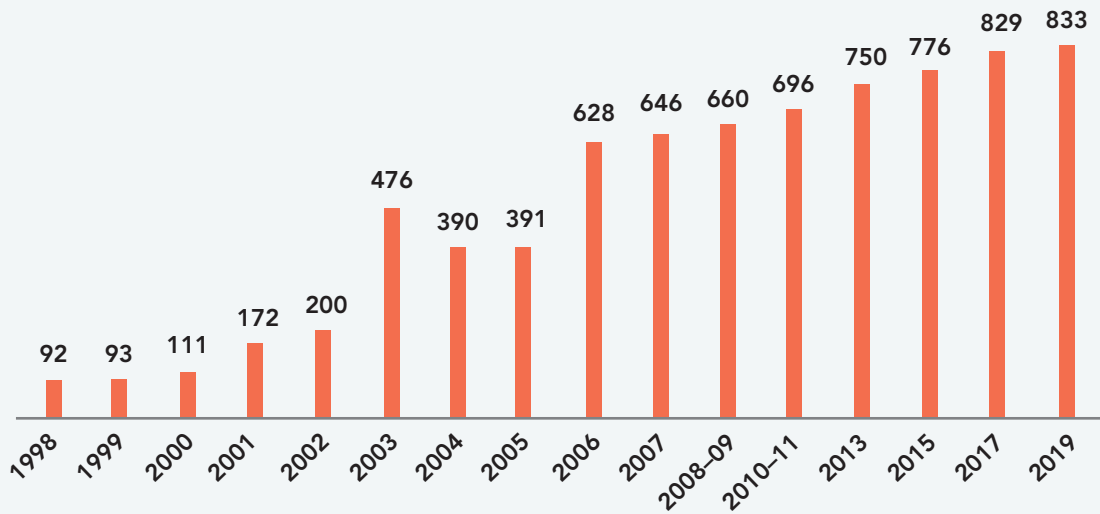
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To contribute into estimation and projection of HIV epidemic at National, State and district level.

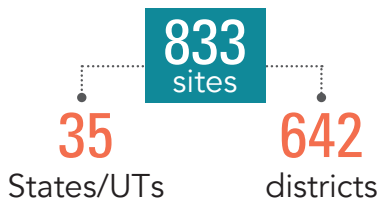
This technical report presents the findings from the 16th round of HSS among ANC clinic attendees (Figure 1.1). It was successfully implemented at 833 sites across 35 States/UTs and 642 districts (out of total of 727 districts¹). This is highest in the various rounds of HSS under NACP till now. More than 200 ANC HSS sites have been added under programme since 2006 round while more than 80 sites have been added since 2012–13 round.

¹GOI Web Directory, <http://goirectory.nic.in/district.php>, December 30, 2019.

Figure 1.1. Expansion of ANC HSS sites in India, 1998–2019

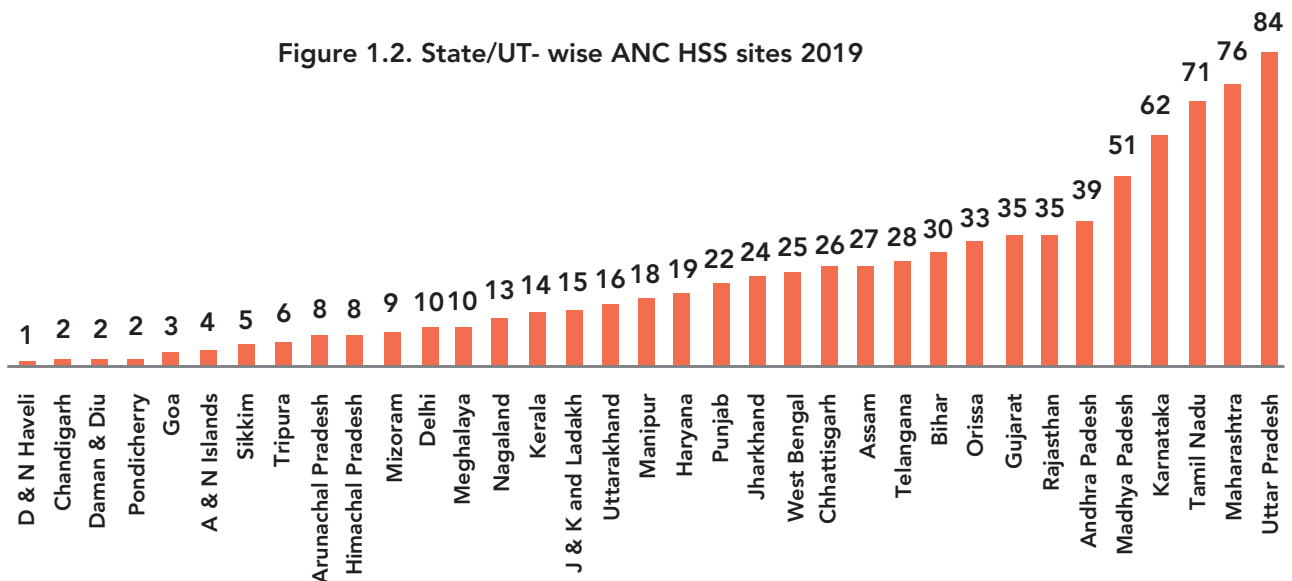


16th round of HSS among ANC clinic attendees successfully implemented at



Out of 833 ANC HSS sites, 216 sites were in the southern States/UT of Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu and Telangana. The central region comprising of Chhattisgarh, Madhya Pradesh and Uttar Pradesh had second highest number of surveillance sites (161). Uttar Pradesh had the highest number of surveillance sites across States/UTs during 2019 round of ANC HSS. States in eastern (Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha and West Bengal), northern (Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir and Ladakh, Punjab, Rajasthan and Uttarakhand) and western (Dadra & Nagar Haveli, Daman & Diu, Goa, Gujarat and Maharashtra) region had 116–127 sites. The north-eastern States (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura) had 96 ANC sites. UT of Dadra & Nagar Haveli had one ANC HSS site while Chandigarh and Daman & Diu had two sites each. Lakshadweep did not have an ANC HSS site. State/UT-wise distribution of surveillance sites is as below in figure 1.2.

Figure 1.2. State/UT- wise ANC HSS sites 2019



1.2 Implementation Structure

HIV epidemic monitoring has a robust structure for planning, implementation and monitoring at National, Regional and State levels since its inception. The structure and key functions of each organization/institute involved, which continued during 2019 round of HIV surveillance are described in figure 1.3.

National level

NACO is the nodal agency for guiding the epidemic monitoring under NACP. The Technical Resource Group (TRG) on Surveillance and Estimation, comprising experts from the fields of epidemiology, demography, surveillance, biostatistics, and laboratory services, advises NACO on the broad strategy for HIV Surveillance and Estimations. Two national institutes—All India Institute of Medical Sciences (AIIMS), New Delhi and Indian Council of Medical Research (ICMR)—National Institute of Medical Statistics (NIMS), New Delhi—support National level activity planning and coordination. In addition, the central team, which is coordinated by AIIMS, New Delhi comprises of independent experts who provide support in training and supervision. Organizations such as the World Health Organization (WHO) and the Joint United Nations Programme on HIV and AIDS (UNAIDS) provide technical assistance.

Regional level

Six public health institutes in India have been identified as Regional Institutes (RIs) for HSS to provide technical support to the State AIDS Control Societies (SACS) for all epidemic monitoring activities, including identification of new surveillance sites, training, monitoring and supervision, and improving the quality of the data collected and their analysis. Data entry is another function performed by RIs. Core team embedded within each RI include two epidemiologists/public health experts and one microbiologist, who are supported by one project coordinator, two research officers, one computer assistant/data manager, and between four and ten data entry operators, depending on the volume of data entry.

State level

SACS is the primary agency responsible for implementation of HIV surveillance activities. Every State has a surveillance team consisting of public health experts and microbiologists who support SACS in training, supervision, and monitoring of the personnel involved in sentinel surveillance. State Surveillance Teams (SSTs) are formed by RIs in consultation with SACS.

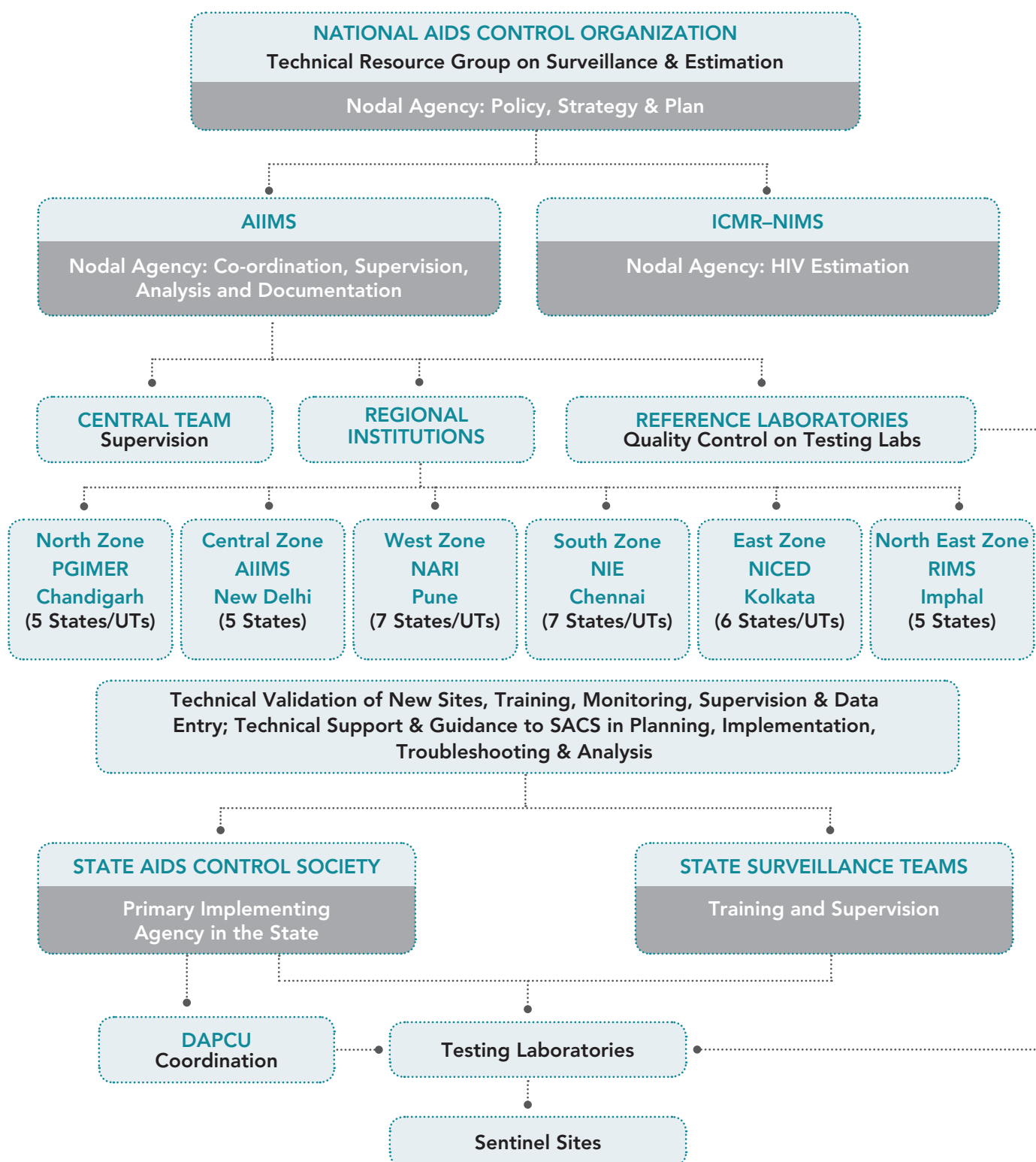
District level

In districts with functional District AIDS Prevention and Control Units (DAPCUs), the DAPCU staff is involved in the coordination of HSS activities at the sentinel sites and the associated testing labs.

Laboratory network

Laboratory support to HSS is provided by a network of testing and reference laboratories. The reference laboratories provide external quality assurance by repeat testing of all HIV-positive blood specimens and 5% of the HIV negative specimens collected during surveillance among prisoners.

Figure 1.3: Implementation structure of HIV epidemic monitoring under NACP



2

METHODOLOGY

The methodology for the 2019 round of HSS among ANC clinic attendees remained same as the earlier round. The complete methodology may be found in the HIV Sentinel Surveillance Operational Guidelines available on the website of NACO². Key elements of the HSS methodology have been presented in the section below.

2.1 Case Definition

Inclusion criteria

- i. Pregnant woman of age 15–49 years, and
- ii. Attending the ANC for the first time during the current round of surveillance.

Exclusion criteria

- i. Pregnant women not in the age group of 15–49 year, or
- ii. Any pregnant woman attending the ANC for the second or more time during the current round of surveillance.

The HSS among **pregnant women generally aims to achieve a sample size of 400** at each surveillance site **over a period of three months**

2.2 Sample Size and Sampling Duration

The HSS among pregnant women generally aims to achieve a sample size of 400 at each surveillance site over a period of three months³. The same has been followed during the current (2019) round also. However, the data collection period was extended at some sites, on case to case basis, after reviewing the reasons for any delay and feasibility of achieving the desired sample size within a reasonable extended period.

2.3 Sampling Methodology

Consecutive sampling method was adopted for recruiting ANC clinic attendees for HSS like the previous rounds. After the commencement

² <http://naco.gov.in/surveillance-epidemiology-0>

³ National Institute of Health & Family Welfare and National AIDS Control Organization (2011). Annual HIV Sentinel Surveillance: Country Report 2008–09.

of the surveillance, all individuals attending the sentinel site facility (ANC clinic), who were eligible for inclusion in surveillance as per the defined criteria, were recruited in the order they attended the clinic.

2.4 Blood Specimen Collection Methods and Testing Approach

During ANC HSS 2019, like the 2017 round, Linked Anonymous Testing (LAT) was followed where a portion of linked blood specimen collected for routine ANC services, was used for surveillance purposes. No personal identifiers were recorded either on surveillance serum specimen or data form; no informed consent was taken. However, the ANC clinic attendees were informed of the purposes of surveillance. While no personal identifier was obtained under HSS, provisions were made to allow linking of HSS test results to the ANC clinic records through codes to facilitate provision of care, support and treatment services to those in need.

HSS 2019 continued with the two-test protocol for HIV testing as adopted in the earlier rounds. The first test is of high sensitivity and the second one is of high specificity and confirmatory in nature. The second test was done only if the first test was found to be reactive. A sample was declared as positive only when both the test results were reactive. All the HIV positive samples and 5% of HIV negative samples were subjected to repeat testing at serum reference laboratories.

All the samples collected under HSS 2019 among ANC clinic attendees were also tested for Syphilis. For Syphilis also, the two-test protocol was followed—the first test was qualitative, and the second test was quantitative; the second test was done only when the first test was reactive. A sample was declared positive for Syphilis only when the titer during second test result was $\geq 1:8$. In Bihar, the HSS samples were not tested for Syphilis.

2.5 Data Management

Data collection was carried out through paper-based tools, i.e., using bilingual standardized individual data forms (Annexure 1). While data recording was done by counsellor/nurse/ANM, data forms were checked for completeness and accuracy in the field by the site in-charge daily before signing the data forms. These forms were also checked by the field supervisors during their field monitoring and supportive visits. The data forms were then transported to RIs periodically where they were first checked for completeness and accuracy and then entered in to the HSS module of Strategic Information Management Software (SIMS).

Laboratory results were shared separately by laboratories periodically in a standard format with RIs which entered them into SIMS. The SIMS did the linking of laboratory results with the data forms using the unique sample IDs assigned.

This section presents key findings from the 2019 round of sentinel surveillance among the ANC attendees. First, the respondents' profile has been presented followed by level and trend of HIV prevalence among the pregnant group. The Syphilis sero-positivity among the pregnant women at National and State/UT level has been presented subsequently. Finally, the associations between respondent's background characteristics and HIV prevalence has been presented.

3.1 Background Characteristics

Overall, a total of 331,757 complete data forms and biological specimens were received from 833 valid pregnant women HSS sites⁴ in 2019 round of surveillance (Table 3.1). The mean age of the pregnant women in ANC HSS 2019 was 24.3 years. Majority, around 80%, were in the age group of 20–29 years while 8% were 15–19 years old. A small proportion (3%) were 35 years or older (Figure 3.1). Most (88%) were literate (Figure 3.3). Around one-third (34%) had more than 10 years of education. Sixty five percent of pregnant women in HSS 2019 belonged to rural areas (Figure 3.2). Around 87% of pregnant women in HSS 2019 (Figure 3.4) were housewives while their spouses were engaged in wide spectrum of occupation including non-agricultural labourers, government/private service, skilled/semi-skilled workers and agricultural labourers which has been shown in figure 3.5. Seven percent had their spouse working as local transport workers while a small proportion (2%) had their spouse working as truck driver/helper. Six percent of respondents had a migrant spouse (Figure 3.6).

The mean age of the pregnant women in ANC HSS 2019 was highest (27.6 years) in Mizoram. Goa, Meghalaya, Kerala, Nagaland, Manipur, Sikkim and Jammu and Kashmir and Ladakh were other States/UTs where the mean age of pregnant women was 26 years or higher. In Andhra Pradesh and West Bengal, the mean age of pregnant women in ANC HSS 2019 was 22.9 years.

The mean age of the pregnant women in **ANC HSS 2019 was 24.3 years.** Majority, around **80%, were in age group of 20–29 years while 8% were 15–19 years old.**

⁴Valid sites are the sites from where minimum of 300 complete data forms and biological specimens were received.

In Puducherry and Kerala, the literacy among pregnant women was almost universal with more than 99% being literate. Tamil Nadu, Andaman & Nicobar Islands, Mizoram, Himachal Pradesh, Tripura, Sikkim, Maharashtra, Manipur, Uttarakhand, Daman & Diu, Nagaland, Chhattisgarh, West Bengal, Assam, Goa, Karnataka and Chandigarh were other States/UTs with 90% or more literacy among pregnant women in 2019 round of surveillance. In Bihar, around one fourth (23.8%) were illiterate followed by Uttar Pradesh (21.7%), Rajasthan (21.5%) and Jammu and Kashmir and Ladakh (21.2%). More than 90% of the pregnant women in Himachal Pradesh were from rural areas. Mizoram, Jammu and Kashmir and Ladakh, Assam and Meghalaya were other States/UTs where more than 80% of pregnant women in HSS 2019 belonged to rural areas. In Delhi, more than 95% of pregnant women belonged to urban areas followed by 83% in Chandigarh.

Similar to the National level, the spouses of pregnant women were engaged in a variety of occupation with government/private services, skilled/semi-skilled work and labour (agricultural/non-agricultural) being the predominant ones. In Assam, Delhi, Goa, Kerala, Puducherry and Sikkim, more than 10–15% of pregnant women had spouses working as local transport workers. In Uttarakhand, 12% of the pregnant women had spouses working as hotel staff.

In Bihar, more than 22% of pregnant women had spouses with migration history. Kerala, West Bengal, Uttar Pradesh, Jharkhand, Daman & Diu, Dadra & Nagar Haveli and Uttarakhand were other States where 10% or more of pregnant women had migrating spouses. In Telangana, Gujarat, Haryana, Chandigarh, Andhra Pradesh and Nagaland, less than 2% of the pregnant women had migrating spouses.

Figure 3.1: Age group of pregnant women in ANC HSS 2015, 2017 and 2019

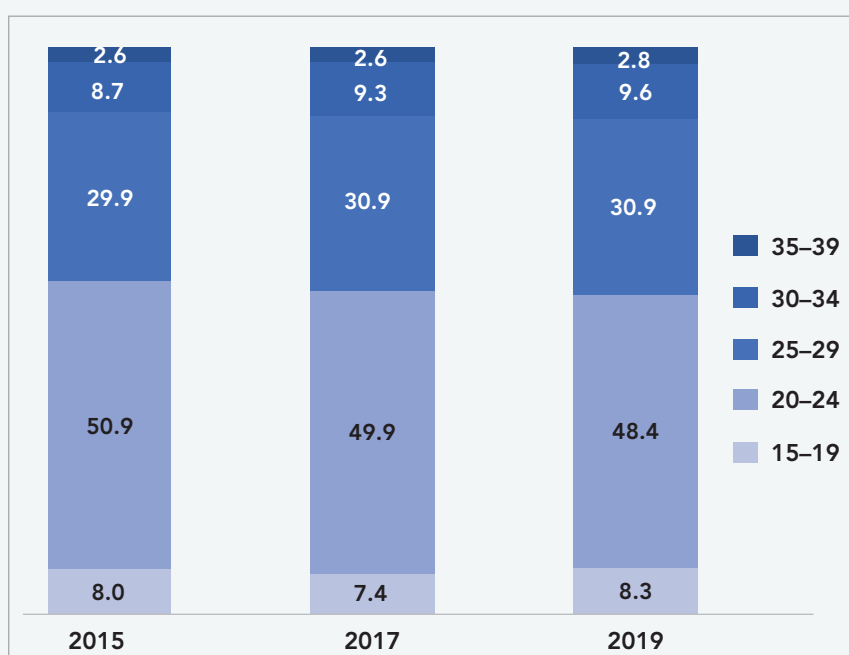


Figure 3.2: Residence status of pregnant women in ANC HSS 2015, 2017 and 2019

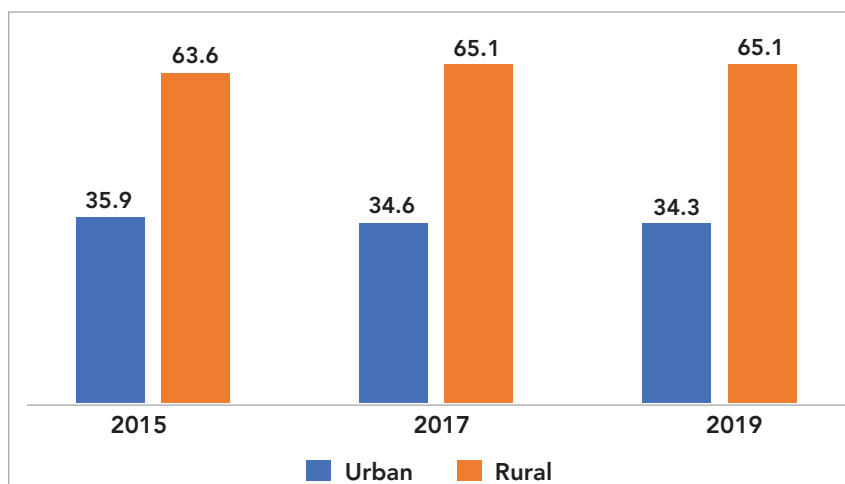


Figure 3.3: Education status of pregnant women in ANC HSS 2015, 2017 and 2019

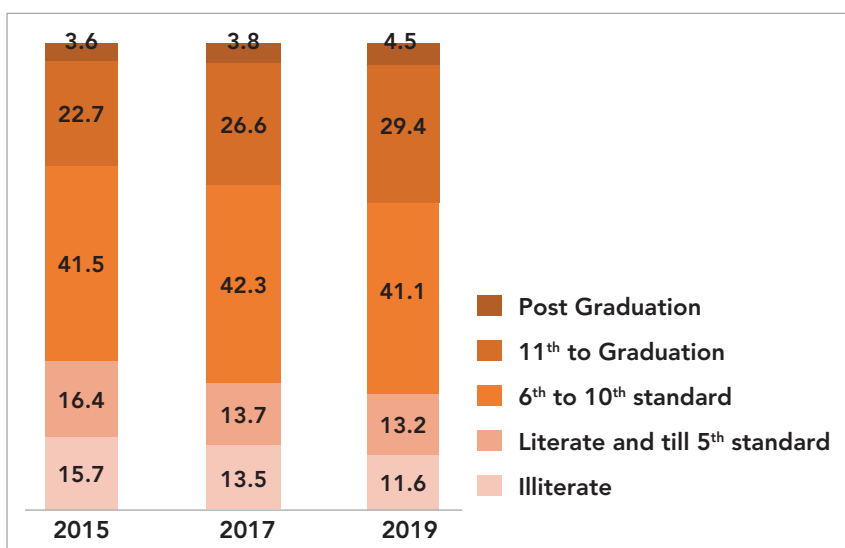


Figure 3.4: Occupation status of pregnant women in ANC HSS 2015, 2017 and 2019

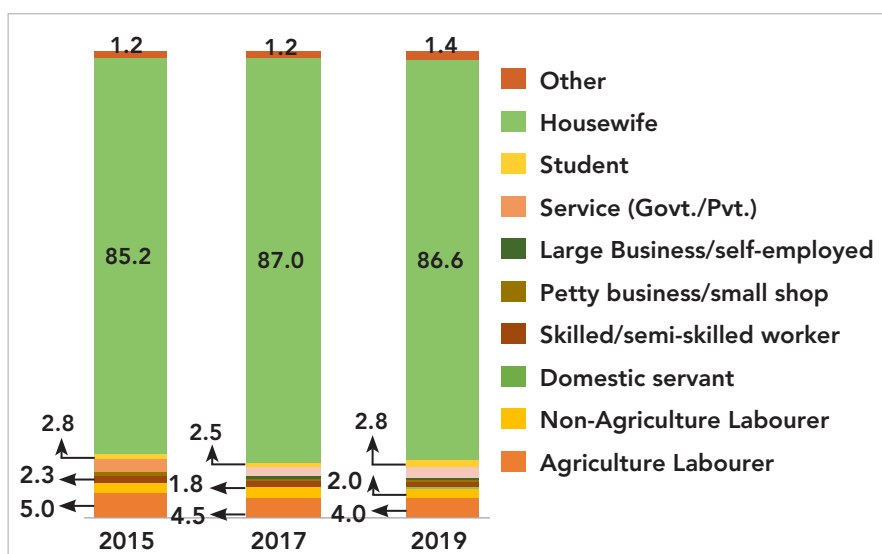


Figure 3.5: Occupation status of spouse of pregnant women in ANC HSS 2015, 2017 and 2019

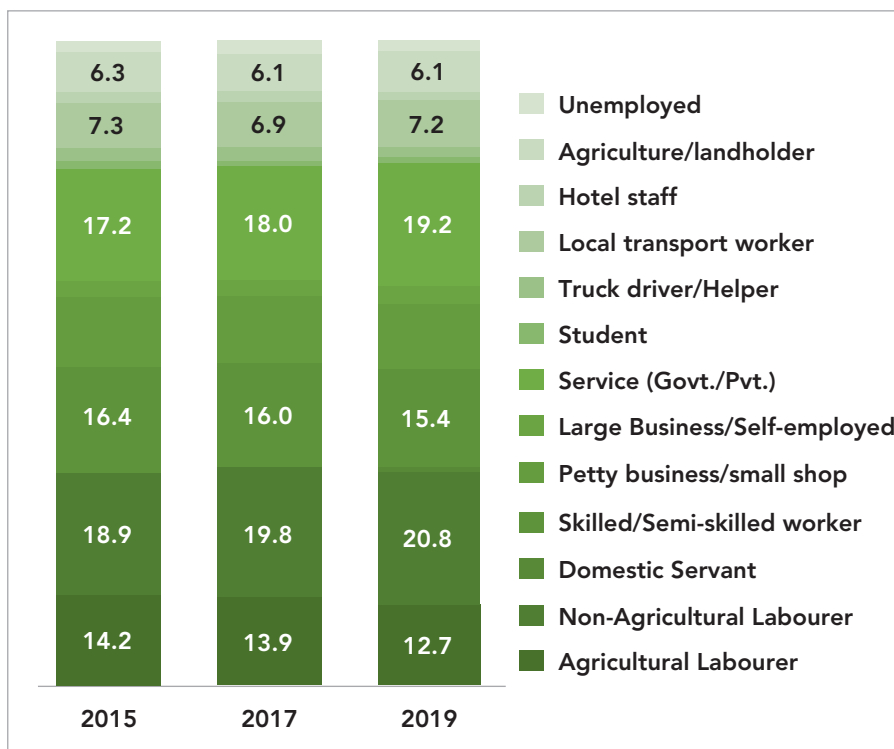


Figure 3.6: Pregnant women with a migrant spouse in ANC HSS 2015, 2017 and 2019

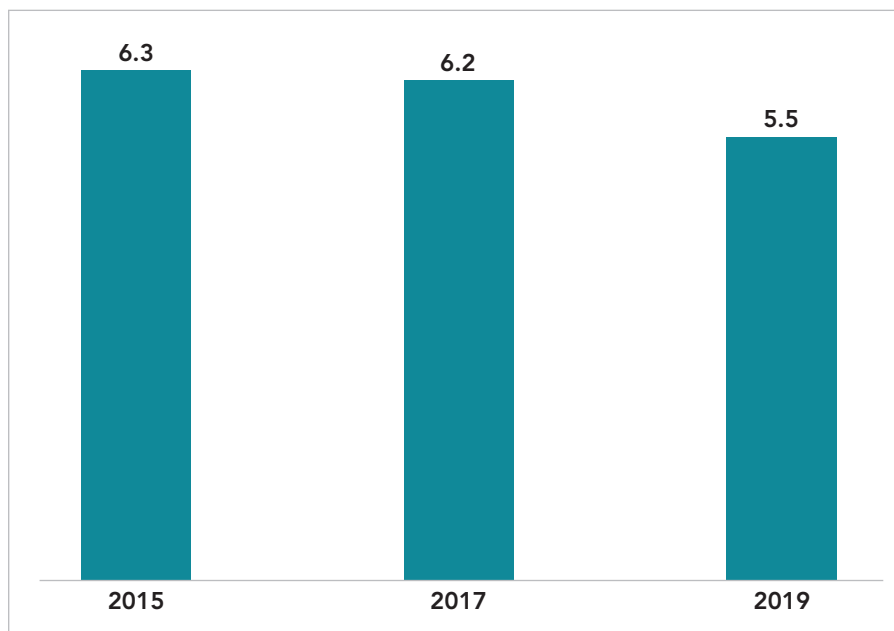


Table 3.1: Background characteristics of ANC clinic attendees, HSS 2019

State/UT	Sample Size	Age	Education	Residence	Spouse Occupation*										Spouse Migrates*
		Mean	Illiterate (%)	Rural (%)	Agricultural laborer (%)	Non-agricultural laborer (%)	Skilled/Semi-skilled worker (%)	Service (Govt./Pvt) (%)	Truck driver/Helper (%)	Local transport worker (%)	Hotel staff (%)	Agricultural cultivator (%)	Others (%)	Unemployed (%)	Yes (%)
A & N Islands	1550	25.8	2.6	67.6	1.8	11.1	13.4	48.7	0.5	8.1	0.8	6.1	8.9	0.7	3.2
Andhra Pradesh	15600	22.9	11.7	71.5	24.0	19.5	14.1	19.8	3.0	6.7	1.0	4.1	7.2	0.4	1.6
Arunachal Pradesh	3013	25.9	13.7	53.2	10.8	3.2	7.4	31.4	1.1	8.3	0.3	5.6	19.8	12.1	3.3
Assam	10800	24.2	8.7	84.9	11.9	11.5	18.4	13.2	0.7	10.9	0.4	8.5	24.2	0.3	6.4
Bihar	11829	23.6	23.8	79.3	11.1	21.5	21.8	13.1	1.6	6.4	0.9	3.5	19.2	0.7	22.4
Chandigarh	800	25.8	9.8	17.1	0.9	9.6	11.7	53.4	0.1	6.9	2.5	1.5	12.9	0.5	1.5
Chhattisgarh	10297	24.1	8.5	64.7	22.3	16.2	18.4	14.1	1.1	5.0	0.7	9.0	12.6	0.5	2.9
DNH	400	24.0	14.3	51.8	2.8	5.0	73.8	4.3	1.3	3.0	0.5	0.0	9.5	0.0	13.8
Daman & Diu	800	25.5	7.0	68.3	0.4	27.8	23.2	36.5	0.4	3.3	1.3	0.3	6.8	0.3	13.0
Delhi	3998	24.5	16.7	3.5	0.7	11.8	12.3	41.1	1.0	11.4	1.4	0.0	18.9	1.3	2.1
Goa	1200	26.0	8.9	72.7	1.8	15.2	15.9	33.4	2.3	10.1	3.8	0.4	16.4	0.8	5.9
Gujarat	13995	24.3	18.7	54.1	14.1	25.5	14.2	18.5	1.4	6.7	0.5	8.3	10.4	0.3	1.0
Haryana	7600	24.1	15.9	57.3	5.6	26.3	12.0	26.8	2.6	4.3	0.5	3.3	15.8	2.5	1.4
Him. Pradesh	3200	25.7	3.0	93.3	10.0	5.2	11.9	42.5	1.7	4.7	2.6	9.0	11.4	1.0	7.4
J & K and Ladakh	6000	27.4	21.2	84.2	10.7	17.6	16.0	21.3	0.7	7.5	0.7	2.0	22.0	1.4	4.1
Jharkhand	9556	23.4	12.0	63.5	9.7	20.0	16.9	16.7	2.0	6.9	1.2	6.2	19.2	1.0	11.3
Karnataka	24800	24.0	9.0	61.5	16.8	26.8	13.2	12.4	2.0	9.2	2.0	7.4	10.1	0.1	2.1
Kerala	5600	26.3	0.8	64.8	2.1	23.3	24.2	22.9	1.6	11.4	2.5	0.7	11.1	0.1	10.3
Mad. Pradesh	20400	23.7	13.2	57.8	17.8	24.8	13.0	15.0	1.1	4.4	0.6	8.6	13.9	0.9	2.8
Maharashtra	30376	23.7	5.9	52.8	15.2	19.5	13.7	21.4	1.5	7.8	1.1	7.7	12.0	0.2	2.0
Manipur	7124	26.9	6.5	78.0	14.8	8.7	16.9	18.4	2.4	8.5	0.1	8.1	14.1	7.9	5.1
Meghalaya	3830	26.1	13.1	85.2	9.1	45.4	6.6	11.7	1.3	5.8	0.2	3.5	13.0	3.3	2.1
Mizoram	3434	27.6	2.6	81.5	13.5	23.7	7.0	22.8	2.1	8.8	0.1	1.7	8.7	11.6	4.4
Nagaland	4910	26.5	7.6	54.1	9.9	8.0	6.6	26.3	1.0	5.9	0.0	11.4	16.4	14.2	1.8
Odisha	13200	24.5	10.2	73.9	9.8	16.1	15.0	16.2	1.7	6.9	1.5	13.7	18.5	0.4	5.0
Puducherry	800	24.9	0.5	71.4	4.9	17.6	23.1	28.5	2.3	12.5	2.8	2.5	5.6	0.3	7.5
Punjab	8800	25.0	12.9	60.5	9.8	32.4	17.3	18.7	1.5	3.9	.4	3.7	12.1	0.3	2.7
Rajasthan	13999	24.3	21.5	56.2	11.5	21.1	18.7	19.3	0.9	4.5	1.6	3.9	17.5	0.9	4.5
Sikkim	1998	27.3	4.3	64.1	5.1	3.9	4.5	36.6	1.1	14.5	2.3	12.1	15.9	4.0	3.4
Tamil Nadu	28400	24.3	1.9	68.8	8.2	21.7	21.3	21.3	3.8	10.0	2.9	2.8	7.8	0.1	5.1
Telangana	11200	23.2	12.5	73.4	17.4	15.0	11.0	20.6	3.4	9.0	0.7	13.5	9.1	0.3	0.5
Tripura	2400	23.4	3.7	77.5	9.7	19.9	19.4	13.9	3.8	9.3	0.4	1.1	21.3	1.2	2.8
Uttar Pradesh	33463	24.6	21.7	68.0	12.2	24.2	15.5	16.1	1.4	5.6	0.9	3.6	17.6	2.8	11.3
Uttarakhand	6395	24.9	6.6	56.6	3.0	8.4	8.7	40.0	0.8	6.9	12.1	0.9	18.4	0.6	14.5
West Bengal	9990	22.9	8.7	71.0	10.6	30.3	16.5	8.7	1.1	6.3	1.5	6.6	17.7	0.5	10.4
India	331757	24.3	11.6	65.1	12.7	20.8	15.4	19.2	1.8	7.2	1.4	6.1	14.0	1.4	5.5

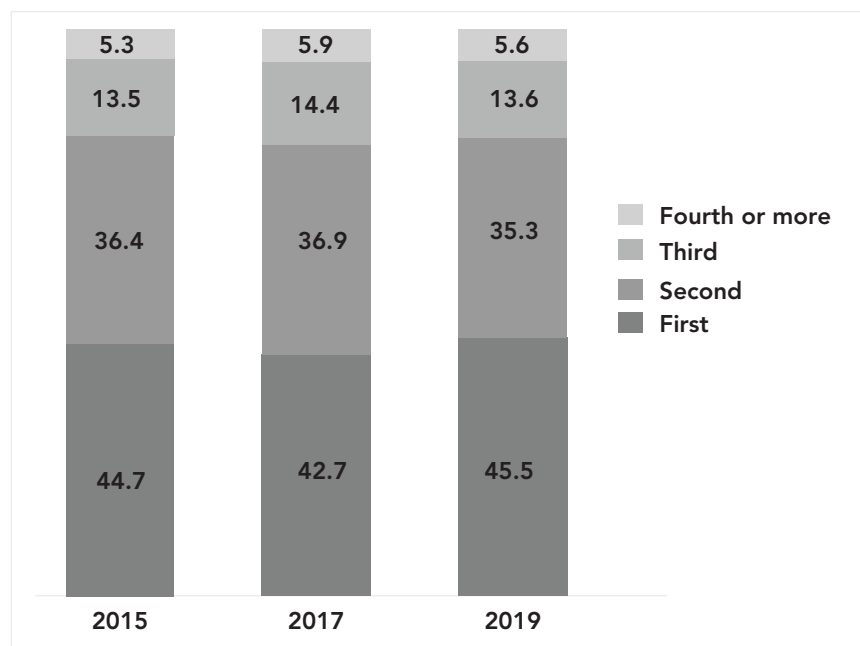
* May not add up to 100% due to missing responses

3.2 Current Pregnancy Characteristics

Nationally, slightly less than half (46%) of the pregnant women in ANC HSS 2019 were primigravida while another one third (35%) were secundigravida (Figure 3.7). Rest (19%) were pregnant for the third time or higher. Around one fourth (28%) were in their first trimester, 37% were in second trimester while 35% were in third trimester. Around 56% reported that they had already received ANC services during their current pregnancy. Around 40% came to the ANC facility either on their own or as referred by family/friends. Less than 2% were referred by a private hospital (Table 3.2).

In Meghalaya, slightly less than half (45%) of pregnant women in ANC HSS 2019 had a pregnancy order of three or higher followed by 38% in Mizoram and 31% in Manipur. Nagaland, Bihar, Uttar Pradesh, Haryana, Daman & Diu, Jammu and Kashmir and Ladakh were other States/UTs where one fourth or more pregnant women had a gravidity of 3 or more. In Tripura, Puducherry, Assam, West Bengal, Madhya Pradesh, Himachal Pradesh, Odisha and Jharkhand, 50–60% of pregnant women were primigravida.

Figure 3.7: Gravidity status of pregnant women in ANC HSS 2015, 2017 and 2019



In Chandigarh, almost two thirds (63%) of pregnant women were in their first trimester followed by Dadra & Nagar Haveli. Andaman & Nicobar Islands, Goa, Manipur, Kerala, Jammu and Kashmir and Ladakh, Himachal Pradesh, Tripura, Arunachal Pradesh and Sikkim were other States/UTs where 40–49% pregnant women were in their first trimester. In Puducherry and Tamil Nadu, 53–59% of pregnant women in ANC HSS 2019 were in their third trimester. Telangana, Karnataka, Andhra Pradesh and Maharashtra were other States where 39–43% of pregnant women were in their third trimester.

In Puducherry and Tamil Nadu, more than 90% of the pregnant women were already under ANC for their current pregnancy. Telangana, Mizoram, Karnataka, Andaman & Nicobar Islands, Andhra Pradesh, Daman & Diu, Himachal Pradesh, West Bengal and Kerala were other States with 70–86% of pregnant women who were already in ANC care at the time of ANC HSS 2019. In Bihar, Uttar Pradesh and Rajasthan, less than one fourth were already in ANC care while for the rest, it was their first visit for antenatal care during their current pregnancy. Uttarakhand, Nagaland, Haryana and Jharkhand were other States where around one third or less of the pregnant women were in ANC care.

Andaman & Nicobar Islands and Himachal Pradesh were States/UTs where more than 85% of pregnant women were referred at their current facility of care by a government hospital. Assam, Tripura, West Bengal, Tamil Nadu, Madhya Pradesh and Odisha were other States where 65–79% of pregnant women were referred by a government hospital. In Andhra Pradesh, Jharkhand and Nagaland, around 5% of pregnant women were referred at their current facility of care by a private hospital. Maharashtra, Bihar, Delhi, Mizoram, Daman & Diu, Dadra & Nagar Haveli, Gujarat and Odisha were other States/UTs where 3–4% of pregnant women were referred by private sector at their current facility for ANC care.

Andaman & Nicobar Islands and Himachal Pradesh were States/UTs where more than 85% of pregnant women were referred at their current facility of care by a government hospital.

Table 3.2: Pregnancy characteristics of ANC clinic attendees, HSS 2019

State/UT	Sample Size	Pregnancy order*			Pregnancy duration (Trimester)*			Already received antenatal care	Source of referral at current facility*			
		First	Second	Third or more	First	Second	Third		Self/ family/ friend	Govt hospitals (including, ASHA/ ANM)	Private hospital	Others
A & N Islands	1550	45.3	38.6	15.9	48.8	33.4	17.8	77.9	10.1	89.4	0.3	0.0
Andhra Pradesh	15600	46.1	40.6	13.2	20.1	39.9	39.9	76.8	43.9	49.0	5.2	1.8
Aru. Pradesh	3013	39.7	36.1	24.2	41.2	35.9	22.9	58.4	68.6	30.5	0.7	0.1
Assam	10800	52.0	36.9	11.0	33.2	41.1	25.6	66.4	21.1	78.5	0.3	0.0
Bihar	11829	39.4	33.6	26.8	23.9	44.7	31.1	20.2	39.1	56.9	3.7	0.0
Chandigarh	800	43.8	33.1	23.1	63.1	23.6	13.1	45.3	36.5	62.8	0.6	0.0
Chhattisgarh	10297	48.3	34.6	17.0	29.8	39.1	30.9	51.4	43.4	55.9	0.3	0.2
DNH	400	43.5	36.0	20.3	57.5	32.3	10.0	44.5	57.0	39.5	3.0	0.5
Daman & Diu	800	41.1	33.5	25.3	38.4	33.0	28.5	72.5	44.8	52.3	3.0	0.0
Delhi	3998	41.5	37.6	20.9	33.1	41.7	25.1	57.6	62.1	34.4	3.4	0.0
Goa	1200	41.1	39.3	19.6	46.4	33.2	20.4	43.2	83.2	14.9	1.9	0.0
Gujarat	13995	41.9	35.3	22.7	30.1	35.9	33.9	57.4	55.7	41.4	2.6	0.1
Haryana	7600	42.1	32.4	25.3	38.4	35.8	25.6	31.3	53.5	45.4	1.0	0.0
Him. Pradesh	3200	50.7	34.8	14.4	41.6	38.3	20.1	72.0	13.9	85.8	0.0	0.0
J & K and Ladakh	6000	40.5	34.4	25.2	42.3	34.9	22.8	50.3	36.2	61.9	1.7	0.1
Jharkhand	9556	49.5	32.3	18.1	35.0	36.2	28.7	27.5	33.2	61.2	5.1	0.1
Karnataka	24800	43.6	38.2	18.2	23.5	33.9	42.4	81.6	35.9	63.6	0.4	0.1
Kerala	5600	42.9	38.4	18.5	44.4	27.6	27.9	71.1	89.2	8.2	2.4	0.0
Mad. Pradesh	20400	51.5	33.4	15.0	22.8	39.7	37.4	42.9	33.5	66.2	0.2	0.0
Maharashtra	30376	45.7	35.6	18.6	24.3	36.5	39.2	68.5	42.1	53.7	3.9	0.3
Manipur	7124	35.3	33.6	30.9	45.1	32.9	21.5	55.9	49.8	48.4	0.5	1.0
Meghalaya	3830	30.7	24.5	44.7	32.9	42.1	24.9	44.6	83.9	15.7	0.4	0.0
Mizoram	3434	32.8	28.8	38.3	32.3	31.0	36.6	82.3	54.3	29.9	3.3	12.1
Nagaland	4910	40.7	31.2	27.8	34.6	34.7	30.1	32.6	48.4	45.5	4.8	0.7
Odisha	13200	50.0	35.3	14.6	39.7	27.0	58.2	32.9	64.5	2.5	0.1	0.1
Puduchery	800	57.6	30.8	11.6	34.5	59.3	92.9	94.4	5.6	0.0	0.0	0.0
Punjab	8800	47.8	36.3	15.8	34.1	32.5	46.7	39.1	59.5	1.0	0.0	0.0
Rajasthan	13999	45.6	32.9	21.5	42.1	27.2	24.1	52.6	45.5	1.6	0.0	0.0
Sikkim	1998	47.5	39.0	13.5	37.1	21.9	63.0	46.4	52.1	1.2	0.2	0.2
Tamil Nadu	28400	47.0	39.9	13.1	30.8	53.2	91.0	31.1	67.5	0.9	0.5	0.5
Telangana	11200	46.8	39.2	13.9	35.9	43.2	85.6	40.7	58.2	1.0	0.0	0.0
Tripura	2400	59.8	32.0	8.2	34.0	24.7	49.9	28.8	70.4	0.7	0.0	0.0
Uttar Pradesh	33463	43.3	30.4	26.1	39.2	37.3	22.0	39.2	59.9	0.6	0.0	0.0
Uttarakhand	6395	45.5	36.5	17.7	42.2	27.5	34.2	41.9	57.7	0.1	0.0	0.0
West Bengal	9990	51.6	36.2	12.1	48.0	23.0	71.2	30.9	67.6	1.2	0.1	0.1
India	331757	45.5	35.3	19.2	37.4	34.6	56.2	41.2	56.5	1.7	0.3	0.3

* May not add up to 100% because of missing responses

3.3 HIV Prevalence Level

The HIV prevalence observed among ANC clinic attendees, considered as proxy for HIV prevalence in general population, during 2019 was 0.24% (95%CI: 0.22–0.26). Figure 3.8 depicts the overall HIV prevalence at National level among ANC clinic attendees from HSS 2019. The prevalence among High Risk Groups (HRGs) & bridge populations from the HSS 2017 and among inmates at central jails from 2019 provide the latest HIV prevalence, as available, in various surveillance groups.

HIV prevalence trend among pregnant women using three year moving averages of HIV prevalence at consistent sites from 2003 to 2006 has been depicted in figure 3.9. Nationally, HIV prevalence trend among pregnant women continues to decline. The HIV prevalence trend among FSW, MSM and IDU till 2017 has also been shown in figure 3.9.

Overall 12 States/UTs have recorded HIV prevalence higher than the national average of HIV prevalence among pregnant women. State-wise, north-eastern States of Nagaland (1.63%), Mizoram (0.90%), Tripura (0.63%), Manipur (0.51%) and Meghalaya (0.44%) were the top five HIV prevalence States (Table 3.4). Gujarat (0.39%), Bihar (0.37%), Odisha (0.35%), Chhattisgarh (0.33%) and Andhra Pradesh (0.30%) were other major States with HIV prevalence higher than the national average. Telangana, West Bengal, Maharashtra, Karnataka, Tamil Nadu, Delhi, Uttar Pradesh and Haryana recorded HIV prevalence in the range of 0.16–0.23%. Arunachal Pradesh, Daman & Diu and Puducherry recorded zero positivity in 2019 (Figure 3.10).

Figure 3.8: HIV prevalence in different population group

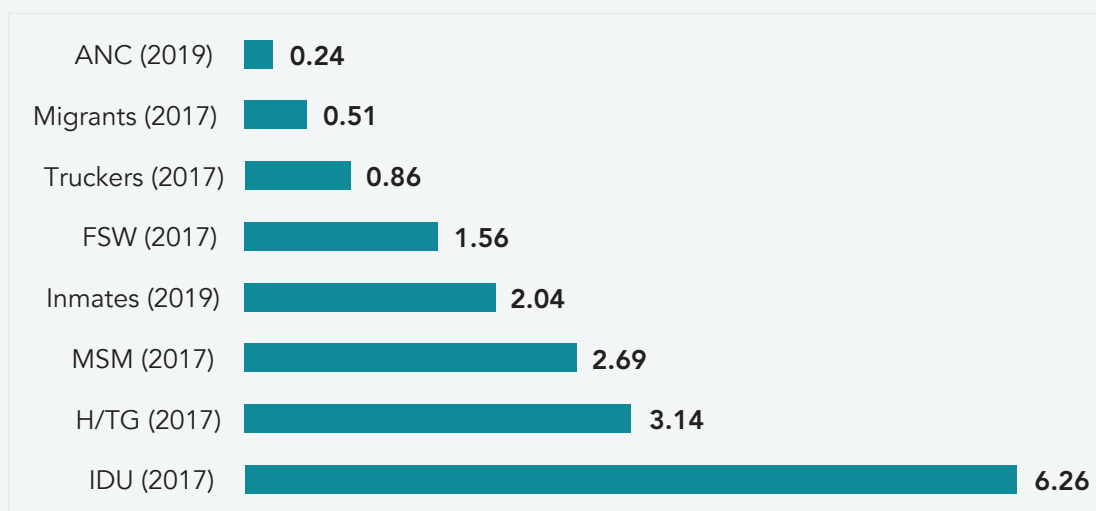
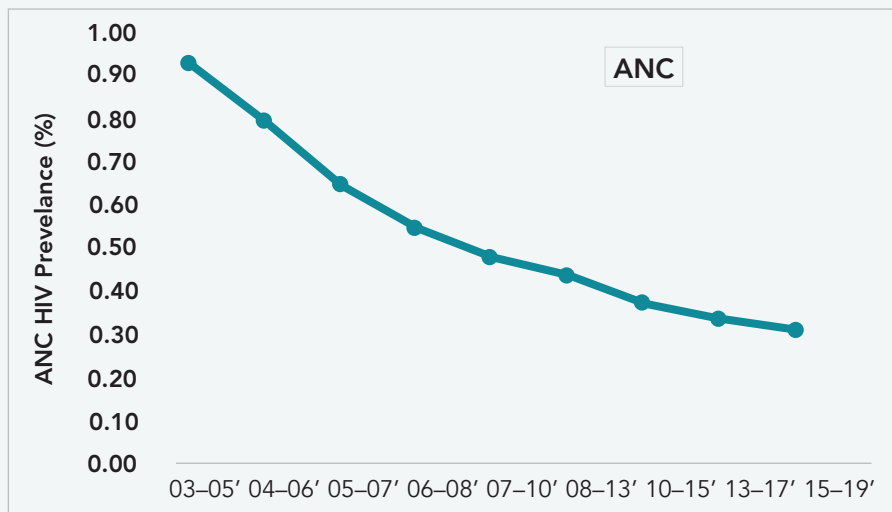


Figure 3.9: HIV prevalence trend across population groups, India, 2003–17⁵



There were 46 ANC sentinel sites, across 11 States and 45 districts, which recorded a prevalence of 1% or more among ANC attendees during the 16th round of HSS. Twenty-two of ANC sites with HIV prevalence of 1% or higher were from the North-eastern States of Assam (1), Manipur (3), Meghalaya (3), Mizoram (4), Nagaland (9) and Tripura (2). Tuensang in Nagaland is the only district with 2 sites recording a HIV prevalence of 1% or higher in 2019 round. Bihar and Gujarat each had 4 sites having HIV prevalence of 1% or higher while Chhattisgarh and Odisha each had 3 such sites. Andhra Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal each had 1–2 sites showing HIV prevalence of 1% or higher in 2019 round of surveillance (Table 3.3). There were also 134 sites across 124 districts in 23 States/UTs that showed HIV prevalence of 0.50–0.99% during HSS 2019.

Twenty-two of ANC sites with HIV prevalence of 1% or higher were from the North-eastern States of Assam (1), Manipur (3), Meghalaya (3), Mizoram (4), Nagaland (9) and Tripura (2).

⁵ 3-yr moving averages based on consistent sites (2002–2006 for ANC); ANC–561 sites;(2002–2007 for HRG); FSW–82 sites, MSM–25 sites, IDU–36 sites

Figure 3.9: HIV prevalence trend across population groups, India, 2003–17⁵

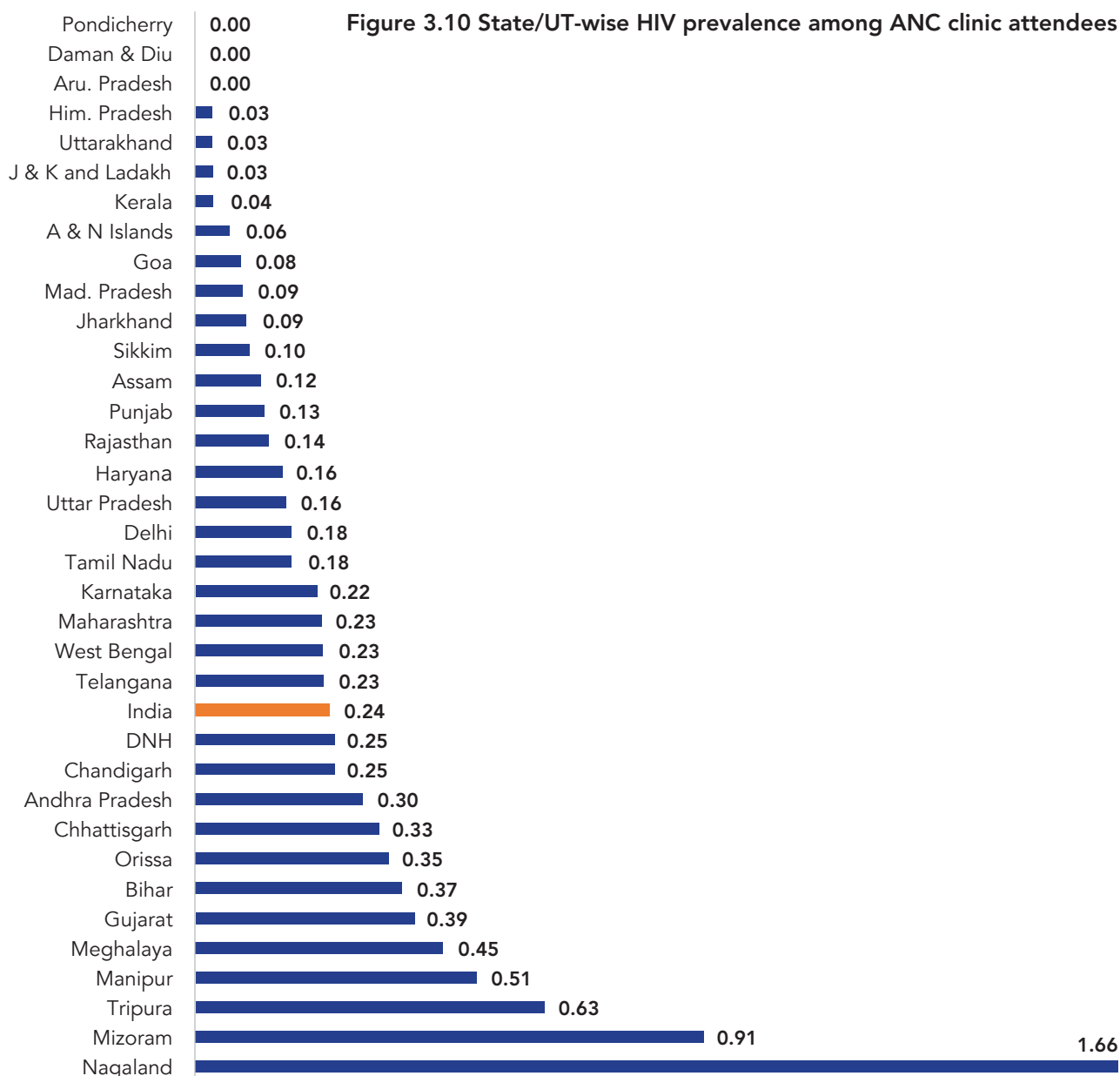
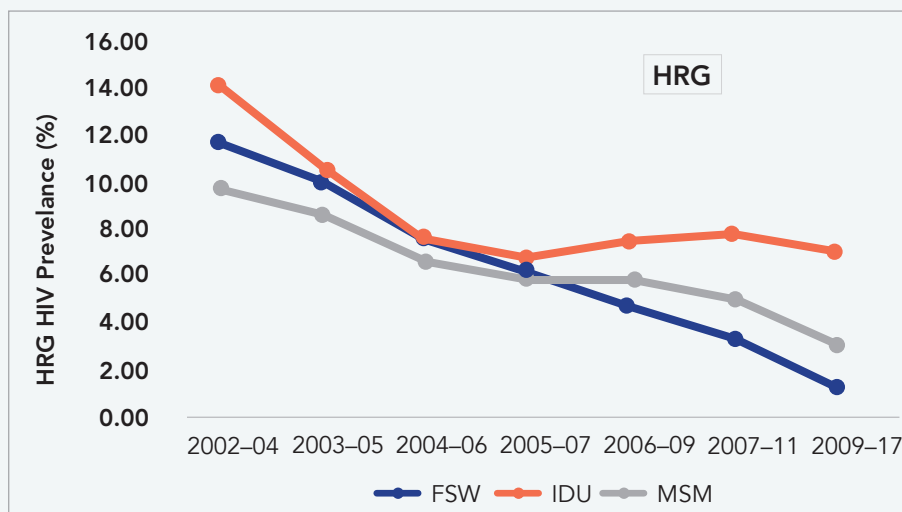


Table 3.3: State and districts having sites with 1% or higher HIV prevalence, ANC HSS 2019

State/UT	District
Andhra Pradesh	Chittoor
Assam	Karimganj
Bihar	Begusarai, Patna, Sitamarhi, Siwan
Chhattisgarh	Bastar, Bilaspur, Durg
Gujarat	Khedra, Mehsana, Patan, Sabar Kantha
Jharkhand	Ranchi
Madhya Pradesh	Ratlam
Maharashtra	Nanded, Pune
Manipur	Bishnupur, Chandel, Ukhrul
Meghalaya	East Jaintia Hills, East Khasi Hills, West Jaintia Hills
Mizoram	Aizawl, Champhai, Lunglei, Serchhip
Nagaland	Dimapur, Kiphrie, Kohima, Mokokchung, Peren, Phek Tuensang, Wokha
Odisha	Anugul, Balangir, Nabarangapur
Tamil Nadu	Namakkal, Vellore
Telangana	Hyderabad
Tripura	North Tripura, West Tripura
Uttar Pradesh	Saharanpur
West Bengal	Paschim Bardhaman

There had also been a decline in the number of sites showing a prevalence of 1% or more during year 2003–19 despite a continuous increase in number of surveillance sites across the country (Figure 3.11). In the year 2003, more than one third (34%) of ANC surveillance sites, out of a total of 416 valid sites, showed a prevalence of 1% or more. In the 2006 HSS round, of the total 566 valid ANC sites, 26% recorded a prevalence of 1% or more. In contrast, during the 16th round of ANC HSS (2019), only 46 (5.5%) of total 833 valid sites recorded a prevalence of 1% or more among pregnant women.

Figure 3.11: Year-wise distribution of valid sites in different HIV prevalence (%) categories among ANC clinic attendees, HSS 2003–19

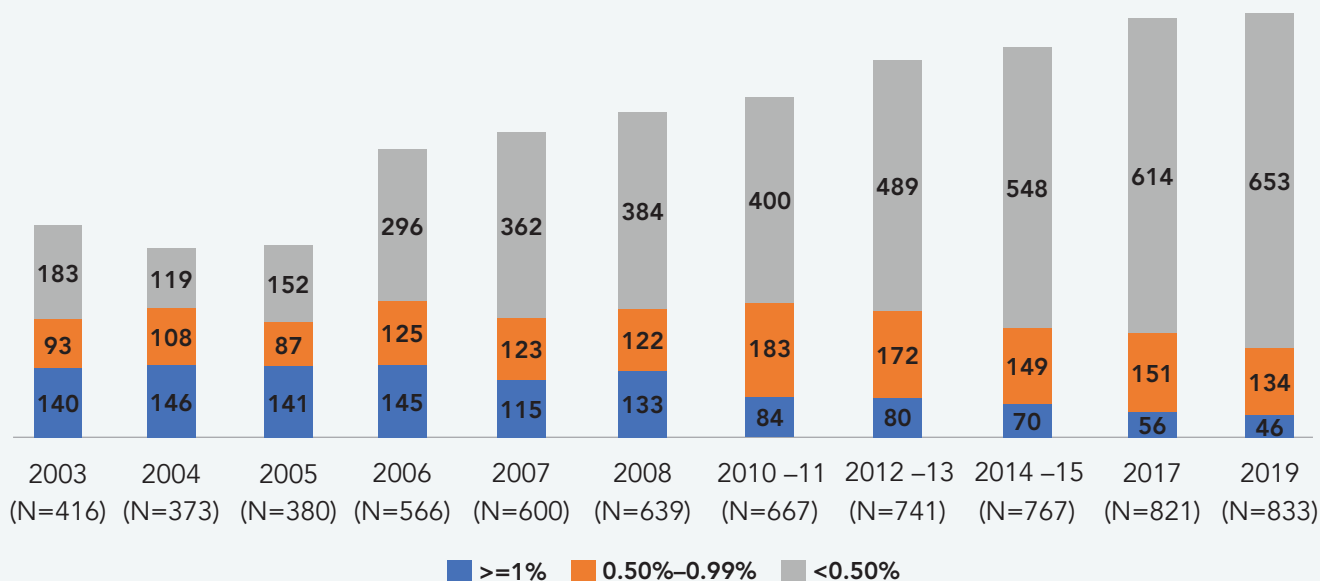


Figure 3.12 shows the map of India where districts are colour-coded into low (<0.5%), moderate (0.50–0.99%) and high (>1%) based on HIV prevalence recorded among ANC clinic attendees in HSS 2019. Overall, 34 districts in the country recorded a HIV prevalence of 1% or more among the pregnant women with 17 of them being from the north-eastern States of Assam (1), Manipur (2), Meghalaya (2), Mizoram (3), Nagaland (8) and Tripura (1).

Figure 3.12: District-wise HIV prevalence (%) categories among ANC clinic attendees, HSS 2019

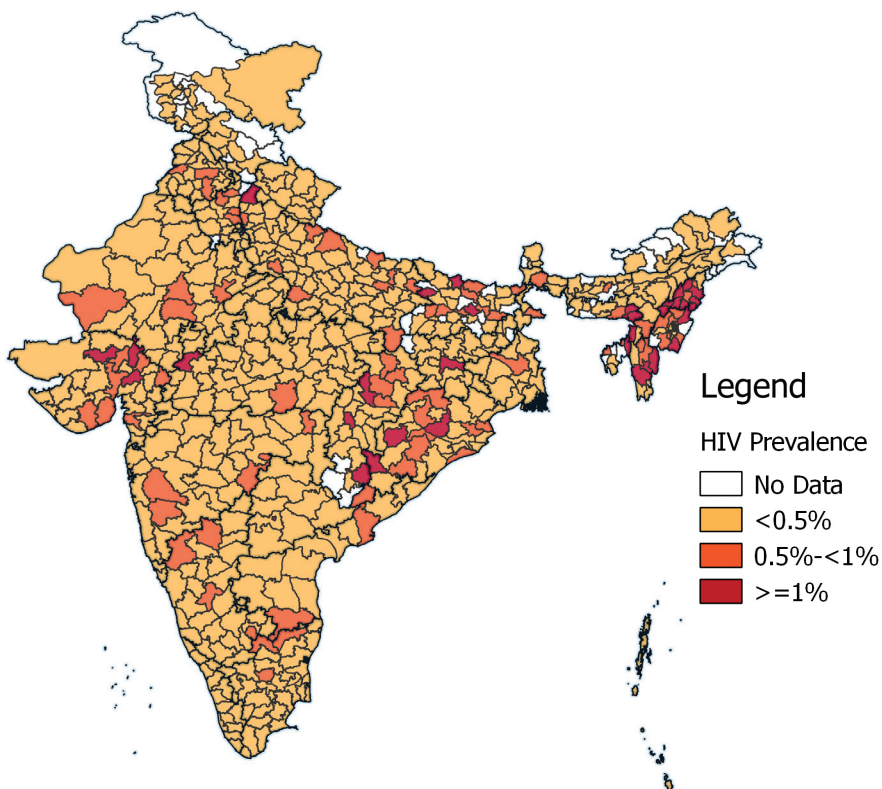


Table 3.4: State/UT-wise HIV prevalence among ANC clinic attendees over years

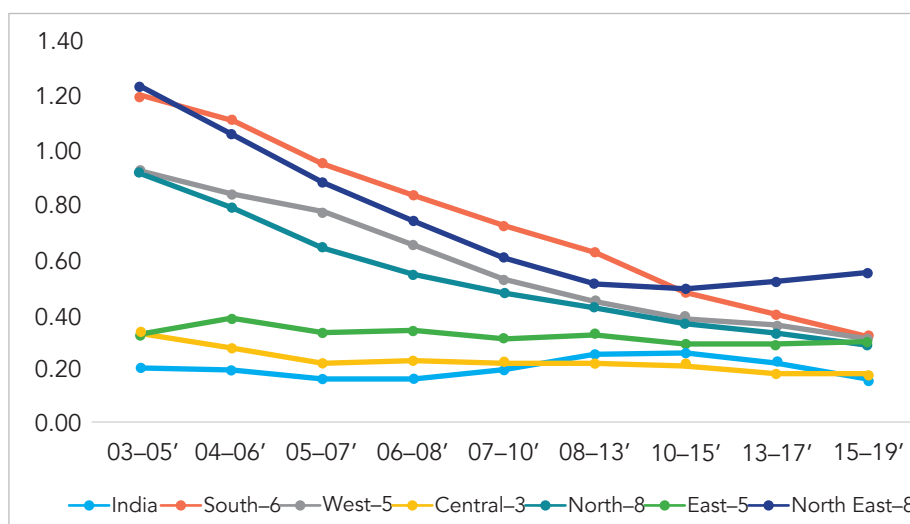
State/UT	2003	2004	2005	2006	2007	2008–09	2010–11	2012–13	2014–15	2017	2019
A & N Islands	0.45	0.00	0.00	0.17	0.25	0.06	0.13	0.00	0.06	0.06	0.06
Andhra Pradesh	1.45	1.70	1.67	1.41	1.07	1.22	0.76	0.59	0.35	0.41	0.30
Arunachal Pradesh	0.00	0.20	0.46	0.27	0.00	0.46	0.21	0.26	0.06	0.00	0.00
Assam	0.00	0.14	0.00	0.04	0.11	0.13	0.09	0.16	0.18	0.16	0.12
Bihar	0.11	0.22	0.38	0.36	0.34	0.30	0.17	0.33	0.37	0.38	0.37
Chandigarh	0.22	0.50	0.00	0.25	0.25	0.25	0.00	0.00	0.25	0.00	0.25
Chhattisgarh	0.76	0.00	0.32	0.31	0.29	0.41	0.43	0.51	0.41	0.35	0.33
DNH	0.13	0.00	0.25	0.00	0.50	0.00	0.00	0.00	0.00	0.50	0.25
Daman & Diu	0.27	0.38	0.13	0.00	0.13	0.38	0.13	0.13	0.25	0.00	0.00
Delhi	0.13	0.31	0.31	0.10	0.20	0.20	0.30	0.40	0.25	0.38	0.18
Goa	0.48	1.13	0.00	0.50	0.18	0.68	0.33	0.25	0.08	0.08	0.08
Gujarat	0.38	0.19	0.38	0.55	0.34	0.44	0.46	0.50	0.56	0.44	0.39
Haryana	0.27	0.00	0.19	0.17	0.16	0.15	0.19	0.17	0.25	0.14	0.16
Himachal Pradesh	0.25	0.25	0.22	0.06	0.13	0.51	0.04	0.04	0.00	0.09	0.03
J & K and Ladakh	0.00	0.08	0.00	0.04	0.05	0.00	0.06	0.07	0.05	0.02	0.03
Jharkhand	0.08	0.05	0.14	0.13	0.13	0.38	0.45	0.19	0.18	0.18	0.09
Karnataka	1.43	1.52	1.49	1.12	0.86	0.89	0.69	0.53	0.36	0.38	0.22
Kerala	0.09	0.42	0.32	0.21	0.46	0.21	0.13	0.03	0.05	0.05	0.04
Mad. Pradesh	0.42	0.38	0.27	0.26	0.25	0.26	0.32	0.14	0.13	0.11	0.09
Maharashtra	1.15	0.97	1.07	0.87	0.76	0.61	0.42	0.40	0.32	0.26	0.23
Manipur	1.34	1.66	1.30	1.39	1.31	0.54	0.78	0.64	0.60	0.47	0.51
Meghalaya	0.35	0.00	0.00	0.09	0.00	0.04	0.05	0.26	0.16	0.73	0.45
Mizoram	1.70	1.50	0.81	0.94	0.85	0.72	0.40	0.68	0.81	1.19	0.91
Nagaland	1.69	1.85	1.97	1.36	1.10	1.14	0.66	0.88	1.29	0.82	1.66
Odisha	0.00	0.50	0.60	0.55	0.23	0.73	0.43	0.31	0.24	0.28	0.35
Puducherry	0.13	0.25	0.25	0.25	0.00	0.25	0.13	0.00	0.13	0.00	0.00
Punjab	0.13	0.44	0.25	0.20	0.12	0.31	0.26	0.37	0.32	0.11	0.13
Rajasthan	0.15	0.23	0.50	0.29	0.19	0.19	0.38	0.32	0.32	0.29	0.14
Sikkim	0.21	0.00	0.25	0.10	0.09	0.00	0.09	0.19	0.13	0.05	0.10
Tamil Nadu	0.83	0.81	0.54	0.54	0.58	0.35	0.38	0.36	0.27	0.27	0.18
Telangana	–	–	–	–	–	–	–	–	0.39	0.28	0.23
Tripura	0.00	0.25	0.00	0.42	0.25	0.00	0.00	0.19	0.19	0.56	0.63
Uttar Pradesh	0.22	0.44	0.15	0.25	0.08	0.18	0.21	0.20	0.21	0.22	0.16
Uttarakhand	0.06	0.00	0.00	0.11	0.06	0.22	0.25	0.27	0.12	0.13	0.03
West Bengal	0.46	0.43	0.89	0.38	0.40	0.17	0.13	0.19	0.11	0.13	0.23
India	0.80	0.95	0.90	0.60	0.49	0.49	0.40	0.35	0.29	0.28	0.24

Note: – (1) Based on valid sites (75% of target achieved) (2) No HSS site in Lakshadweep (3) All figures in percentage

3.4 HIV Prevalence Trend

The National level trend of HIV prevalence among the ANC clinic attendees continues to be declining. The region-wise trends, like the National level one, is declining over time in the southern (Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu, Telangana) and western (Maharashtra, Daman & Diu, Dadra and Nagar Haveli, Goa, Gujarat) regions (Figure 3.13). While the HIV prevalence trend among ANC clinic attendees appears to be stable in the central (Chhattisgarh, Madhya Pradesh, Uttar Pradesh) and eastern (Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha, West Bengal) regions, the HIV prevalence trend among pregnant women appears to be rising in the recent past in the north-eastern (Arunachal Pradesh, Assam, Manipur, Nagaland, Mizoram, Meghalaya, Sikkim, Tripura) region.

Figure 3.13: Region-wise trends in ANC HIV Prevalence⁶



State-wise, the ANC prevalence has continued to decline in all the States of southern region. In the western region, while the HIV prevalence trend among pregnant women has been declining in Maharashtra and Goa, it has been rising at consistent sites in Gujarat. In the central region, HIV prevalence at consistent ANC sites has been declining in the Chhattisgarh and Odisha while rising in Uttar Pradesh. Among the northern States, the HIV prevalence trend in most of the States has been declining in recent past except for Himachal Pradesh and Haryana. Among the eastern States, the prevalence appears to be rising in Bihar. In the north-eastern region, HIV prevalence at consistent ANC HSS sites in Mizoram, Nagaland, Tripura and Meghalaya appears to be rising in recent past while Manipur and Arunachal Pradesh have shown distinct declining trend (Figures 3.14–3.19).

⁶ 3-yr moving averages based on consistent sites; India-561; South-6 (Andhra Pradesh, Karnataka, Kerala, Puducherry, Tamil Nadu, Telangana)-169, West-5 (Maharashtra, Daman & Diu, Dadra and Nagar Haveli, Goa, Gujarat)-100, Central-3 (Chhattisgarh, Madhya Pradesh, Uttar Pradesh)-89, North-8 (Chandigarh, Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir and Ladakh, Punjab, Rajasthan, Uttarakhand)-76, East-5 (Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha, West Bengal)-71, North East-8 (Arunachal Pradesh, Assam, Manipur, Nagaland, Mizoram, Meghalaya, Sikkim, Tripura)-56

Figure 3.14: State-wise (southern region) trends in ANC HIV prevalence based on consistent sites⁷

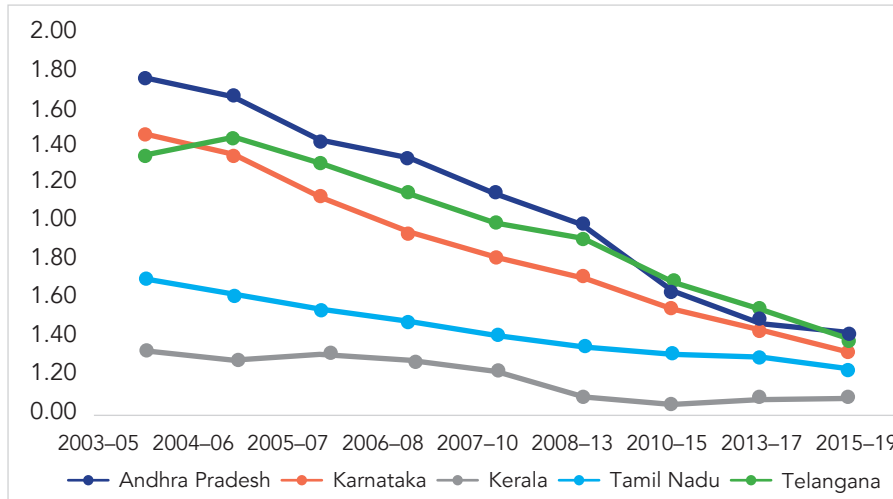


Figure 3.15: State-wise (western region) trends in ANC HIV prevalence based on consistent sites⁸

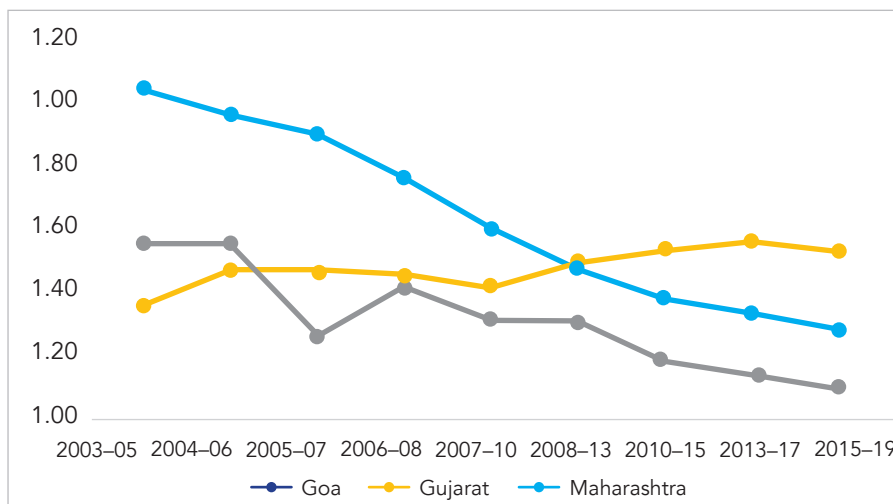
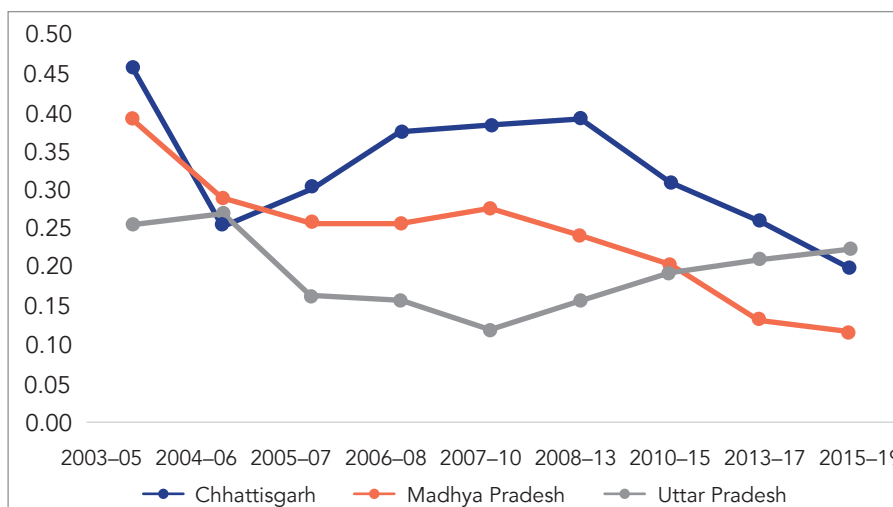


Figure 3.16: State-wise (central region) trends in ANC HIV prevalence based on consistent sites⁹



⁷ 3-yr moving averages based on consistent sites; Andhra Pradesh-26, Karnataka-54, Kerala-6, Tamil Nadu-63, Telangana-18

⁸ 3-yr moving averages based on consistent sites; Maharashtra-72, Goa-2, Gujarat-23

⁹ 3-yr moving averages based on consistent sites; Chhattisgarh-14, Madhya Pradesh-36, Uttar Pradesh-39

Figure 3.17: State-wise (northern region) trends in ANC HIV prevalence based on consistent sites¹⁰

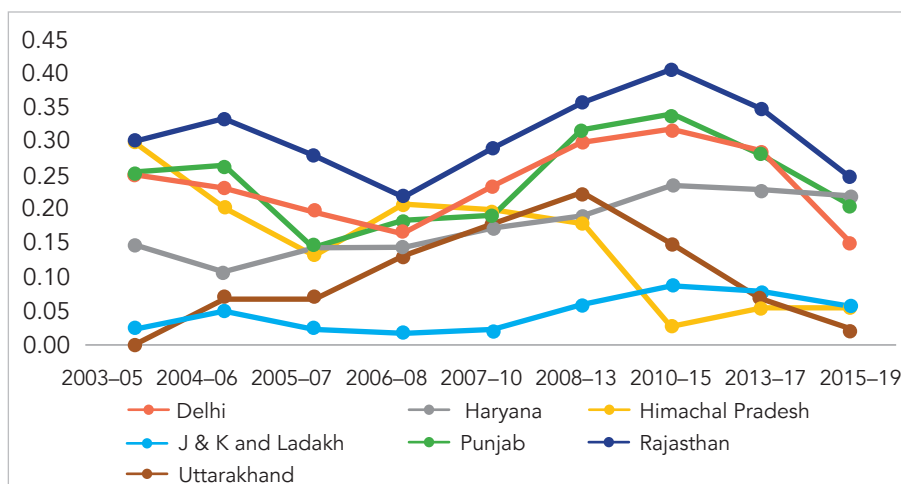


Figure 3.18: State-wise (eastern region) trends in ANC HIV prevalence based on consistent sites¹¹

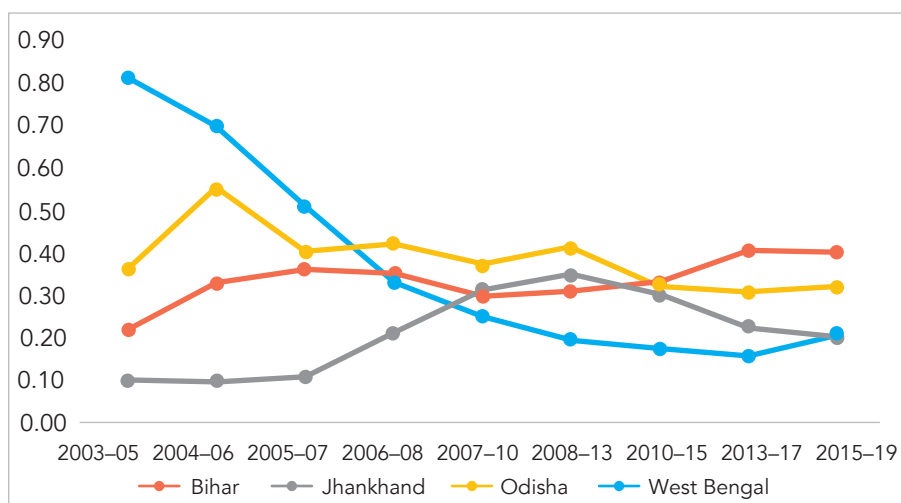
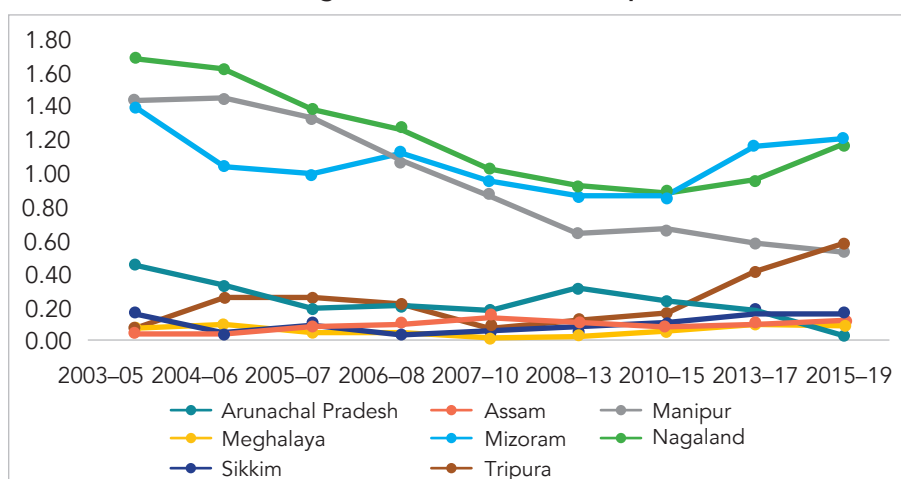


Figure 3.19: State-wise (north-eastern region) trends in ANC HIV prevalence based on consistent sites¹²



¹⁰ 3-yr moving averages based on consistent sites; Delhi-5, Haryana-11, Himachal Pradesh-6, Jammu and Kashmir and Ladakh-9, Punjab-11, Rajasthan-24, Uttarakhand-9

¹¹ 3-yr moving averages based on consistent sites; Bihar-21, Jharkhand-13, Odisha-23, West Bengal-11

¹² 3-yr moving averages based on consistent sites; Arunachal Pradesh-5, Assam-10, Manipur-14, Nagaland-15, Mizoram-4, Meghalaya-4, Sikkim-2, Tripura-2

3.5 HIV Prevalence by Respondent's Characteristics

Table 3.5 presents the HIV prevalence by pregnant women's characteristics at National level in HSS 2019. HIV prevalence among pregnant women has been increasing with age, with prevalence among 35+ years age group almost three times of that among the 15–19 years group (Figure 3.20). HIV prevalence was inversely associated with education; the prevalence decreased as education level increased (Figure 3.21). Highest prevalence was noted among illiterate (0.31%) while lowest prevalence was noted among those with post-graduate education (0.09%). HIV prevalence was at 0.22% among pregnant women belonging to urban areas, similar to that observed in 0.24% among pregnant women who belonged from rural areas (Figure 3.22).

HIV prevalence was highest at 0.59% among those who reported to have spouse occupation as truck driver/helper followed by 0.38% among ANC women with spouse working as local transport worker. HIV prevalence among pregnant women with unemployed spouse was at 0.29%. HIV prevalence was at 0.23% among respondents whose spouse migrate for work purposes in comparison to 0.23% among those whose spouse does not migrate (Figure 3.23). HIV prevalence among pregnant women who were referred from a private hospital to the ANC clinic where HSS 2019 was being implemented was at 0.69%, almost 3.5 times higher than those coming from other government hospital (Figure 3.24).

Figure 3.20: HIV prevalence by age group, ANC HSS 2019

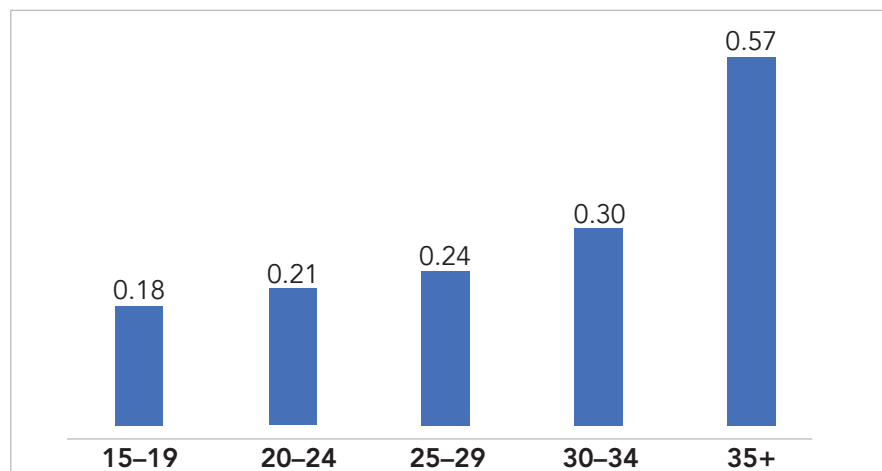


Figure 3.21: HIV prevalence by education, ANC HSS 2019

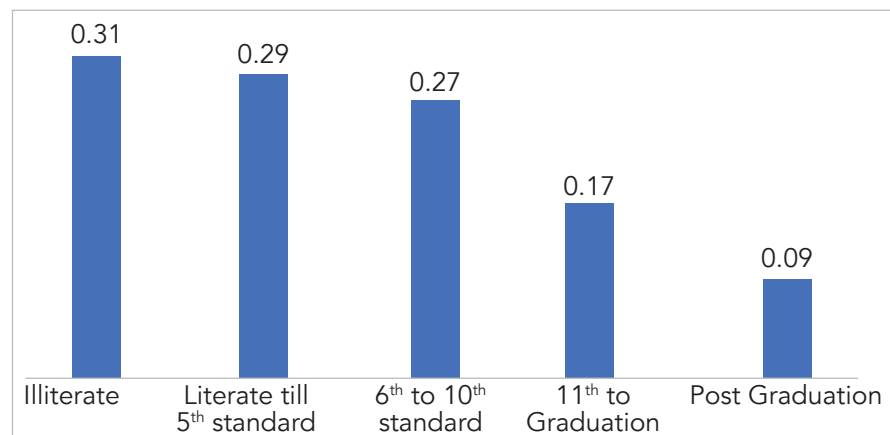


Figure 3.22: HIV prevalence by place of residence, ANC HSS 2019

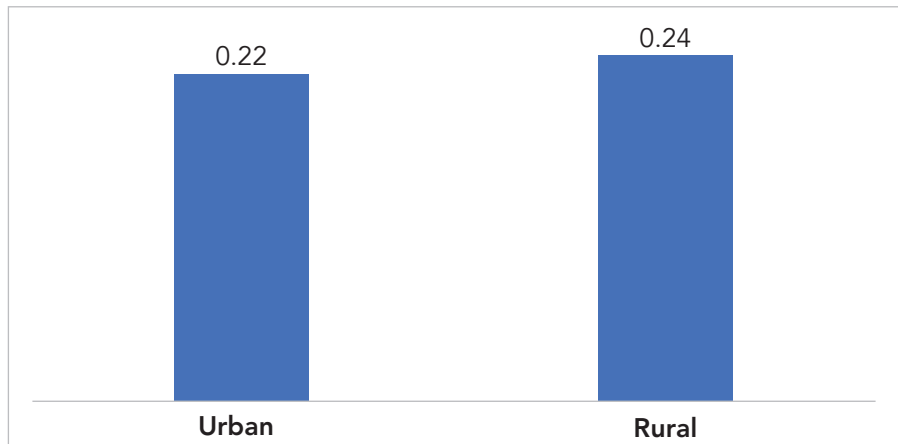


Figure 3.23: HIV prevalence by occupation of spouse of pregnant women, ANC HSS 2019

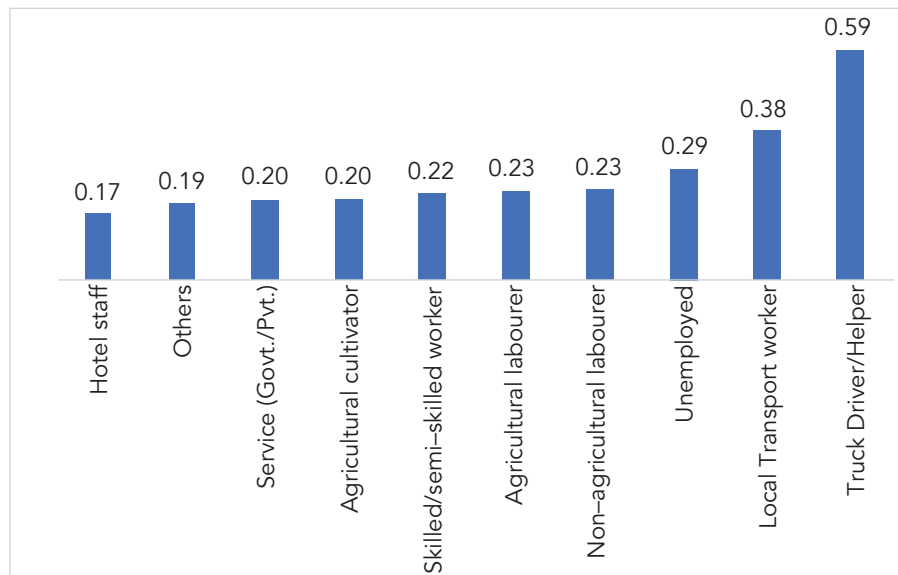


Figure 3.24: HIV prevalence by source of referral among pregnant women, ANC HSS 2019

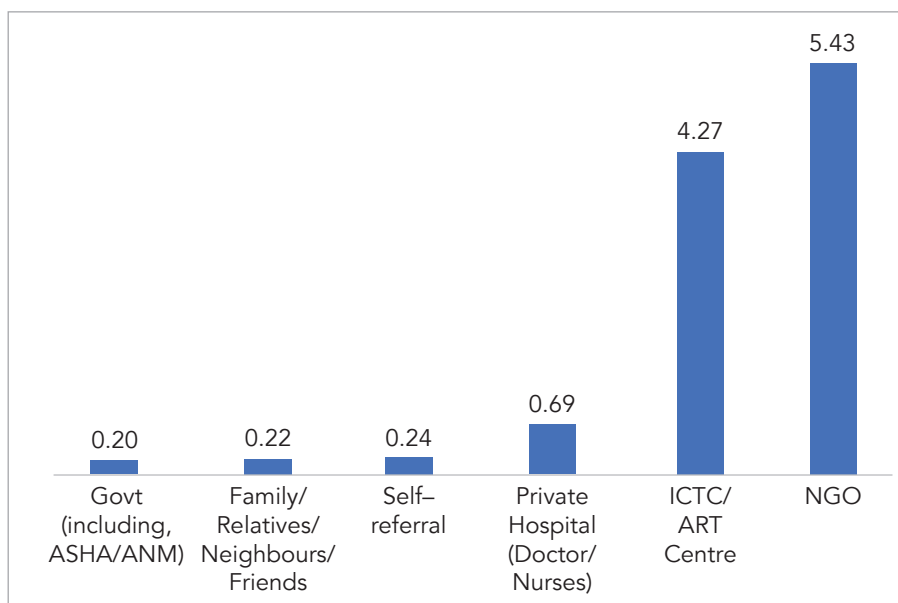


Table 3.5: HIV prevalence by key characteristics of antenatal clinic attendees, HSS 2019

Characteristics	Sub-group	Distribution		HIV Positive
		Frequency*	Percent#	Percent
Age	15–19	27682	8.3	0.18
	20–24	160645	48.4	0.21
	25–29	102357	30.9	0.24
	30–34	31702	9.6	0.30
	35+	9371	2.8	0.57
Residence	Urban	113664	34.3	0.22
	Rural	215854	65.1	0.24
Education	Illiterate	38582	11.6	0.31
	Literate till 5 th standard	43957	13.2	0.29
	6 th to 10 th standard	136351	41.1	0.27
	11 th to Graduation	97404	29.4	0.17
Gravidity	First	14973	4.5	0.09
	Second	150811	45.5	0.23
	Third or more	117050	35.3	0.22
	Third or more	63571	19.2	0.28
Pregnancy Duration	First trimester	92414	27.9	0.25
	Second trimester	123949	37.4	0.25
	Third trimester	114943	34.6	0.22
Source of Referral	Self-referral	60168	18.1	0.24
	Family/Relatives/Neighbours/Friends	76590	23.1	0.22
	NGO	129	0.0	5.43
	Private Hospital (Doctor /Nurses)	5783	1.7	0.69
	Govt (including, ASHA/ ANM)	187527	56.5	0.20
	ICTC/ART Centre	1031	0.3	4.27
	ICTC/ART Centre	1031	0.3	4.27
Spouse Occupation	Agricultural labourer	41930	12.7	0.23
	Non-agricultural labourer	68940	20.8	0.23
	Skilled/semi-skilled worker	51116	15.4	0.22
	Service (Govt. /Pvt.)	63494	19.2	0.20
	Truck Driver/Helper	5976	1.8	0.59
	Local Transport Worker	23914	7.2	0.38
	Hotel staff	4644	1.4	0.17
	Agricultural cultivator	20070	6.1	0.20
	Unemployed	4558	1.4	0.29
	Others	46417	14.0	0.19
Migrant Spouse	Yes	17985	5.5	0.32
	No	312013	94.5	0.23

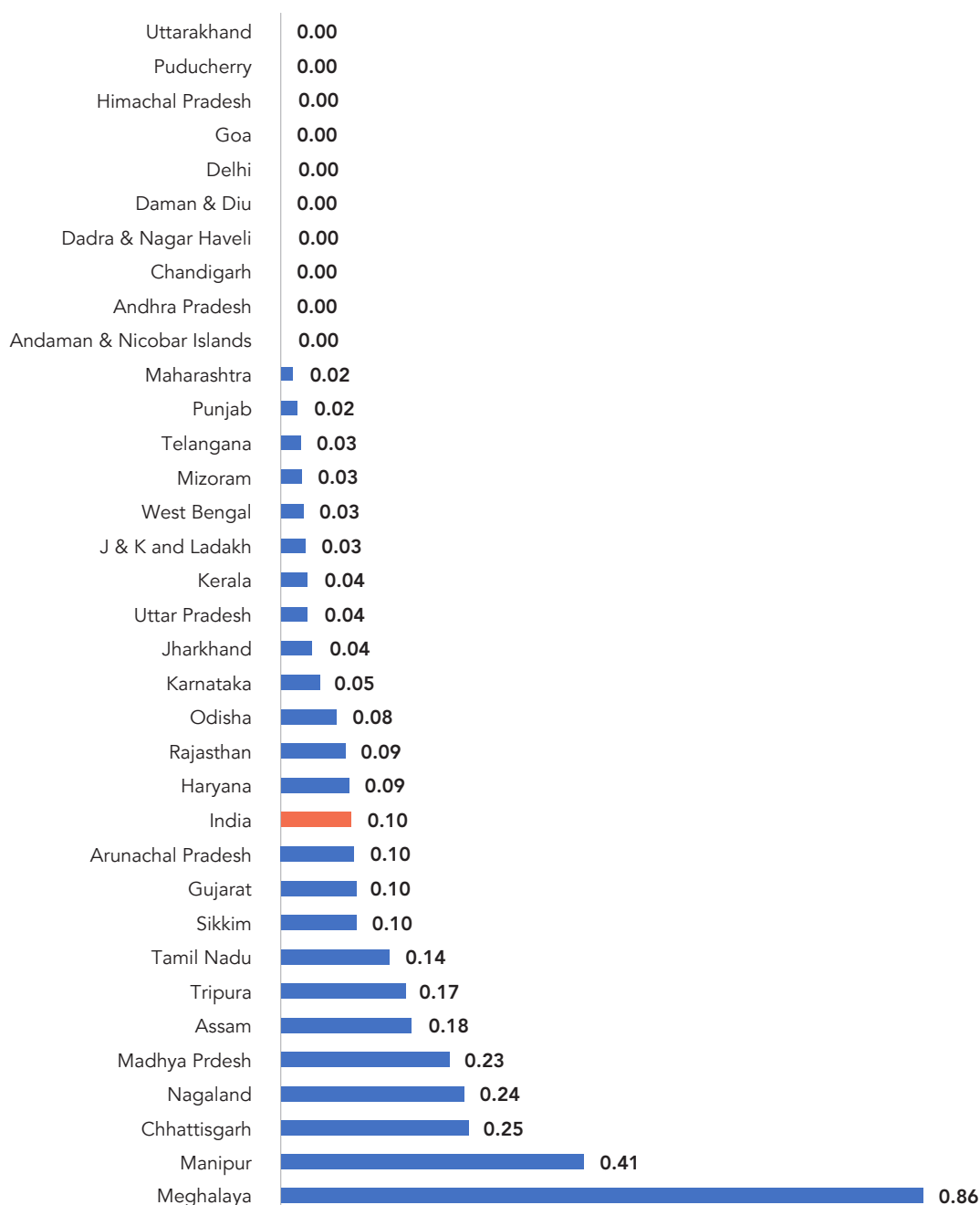
* Total may not add up to 331,757 because of missing/not applicable response
Total may not add up to 100% because of missing response

3.6 Syphilis Sero-Positivity

The blood specimens collected under ANC HSS are tested for Syphilis using non-treponemal Rapid Plasma Reagin (RPR) test. For Syphilis, two test protocol is used, i.e., first test is qualitative and the second test quantitative. Only those samples for which first qualitative test is found reactive, are subjected for the second quantitative test. Under HSS, RPR quantitative tests are reported as “reactive” at dilution of $\geq 1:8$.

Figure 3.25 shows State-wise Syphilis sero-positivity among ANC clinic attendees based on testing of 319,928 specimen. The ANC HSS 2019 specimen were not tested for Syphilis in Bihar. Overall the Syphilis sero-positivity was low at 0.10% (95%CI: 0.08–0.11). Eight States recorded Syphilis sero-positivity above the national average. These were the States of Meghalaya (0.86%) followed by Manipur (0.41%), Chhattisgarh (0.25%), Nagaland (0.24%), Madhya Pradesh (0.23%), Assam (0.18%), Tripura (0.17%) and Tamil Nadu (0.14%) were other States with sero-positivity higher than the national average in 2019 round of ANC HSS.

Figure 3.25 Syphilis prevalence (%) at ANC sites, India & States, 2019



The 16th round of HSS among ANC clinic attendees was successfully implemented at 833 sites covered in 642 districts across the country collecting 331,757 complete data forms and blood specimens. The findings indicate continuity of a declining trend in HIV prevalence among pregnant women at National level as well as in most of the States. At the same time, the findings also help us identify some States and districts where HIV epidemic continues to be high and/or rising.

In the 2019 round among pregnant women, the HIV prevalence continues to be low at 0.24% with a declining trend. However, there is a considerable degree of geographical heterogeneity in the level of prevalence. HIV prevalence in Nagaland was almost 7 times higher than that of the national average. In the north-eastern States of Mizoram, Tripura, Manipur and Meghalaya, the HIV prevalence among pregnant women was almost 2–4 times higher. All of these five States, except Manipur, have a rising trend in HIV prevalence over the recent past. Further, Syphilis sero-positivity among pregnant women in Meghalaya was almost 9 times higher than that of national average followed by Manipur (4 times) and Assam and Tripura (almost 2 times). In Arunachal Pradesh and Sikkim, which have shown a Syphilis sero-positivity similar to the national average but much lower HIV prevalence in ANC HSS 2019, (NFHS–4) in 2015–16 has shown that higher-risk sexual behaviour among males in these two States is more than 2 times that of the national average. The high prevalence, either of HIV or related risk behaviour, underlines the need for the sustaining and augmenting of the tailored HIV/AIDS response in the north-eastern States as focussed under NACP.

Among the rest of the States, Bihar, Himachal Pradesh, Gujarat and Uttar Pradesh have shown a rising HIV prevalence trend among pregnant women at the consistent sites in the recent past. While Bihar and Gujarat have HIV prevalence higher than the National level and four districts each with HSS sites with 1% or higher prevalence, Uttar Pradesh and Himachal Pradesh are still at much lower level of HIV prevalence among pregnant women. Uttar Pradesh and Bihar are among the top three populous States of India while Gujarat is the 10th most populous State as per Census of India 2011. Any rise in HIV prevalence in these States will lead to significant increase in HIV infected people and thus the need for intensified HIV detection, treatment and retention services.

The 16th round of HSS among ANC clinic attendees was successfully implemented at **833 sites** covered in **642 districts** across the country collecting **331,757 complete data forms and blood specimens**.

Among the erstwhile high HIV prevalence States of Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu and Telangana, the declining trend of HIV prevalence among pregnant women has continued in 2019 round of surveillance. Except for Andhra Pradesh, all of these States have shown a HIV prevalence similar to or lower than the national average among pregnant women. Overall only six districts in these five States had at least one site with HIV prevalence of 1% or higher. While the declining trend indicates a successful HIV programme in these States, the current level of HIV prevalence among pregnant women in these States needs to be analysed and interpreted with caution in view of declining fertility seen in these States.

Overall, HIV prevalence appears to be higher among those who are either illiterate or are only primary literate. Pregnant women with spouses working as truck driver/helper or as local transport worker also have higher prevalence and so are pregnant women with unemployed spouse. HIV prevalence is also higher among pregnant women with migrant spouse vis-à-vis pregnant women with non-migrant spouse. NFHS-IV has indicated that women with no schooling or less than 5 years of schooling as well as those belonging to the lowest wealth index has lowest level of knowledge about HIV/AIDS. These are important associations that need to be further examined and findings shall be shared with the programme to further augment location and population specific strategies appropriately.

HIV surveillance is fundamental to the epidemic monitoring under the NACP. The 2019 round of surveillance among pregnant women has provided the updated evidence on HIV levels, trends and differentials among pregnant women signifying the successes as well as challenges which will be used under programme under the spectrum of strategic information as country progresses towards achieving 'End of AIDS' as a public health threat by 2030.

NFHS-IV has indicated that women with **no schooling or less than 5 years of schooling as well as those belonging to the lowest wealth index** has lowest level of knowledge about HIV/AIDS

ANNEXURE

5.1 Annexure 1: HSS 2019: Data Form for Antenatal Clinic (ANC) Attendees

HSS 2019: DATA FORM FOR Antenatal Clinic (ANC) Attendees

एच.एस.एस. 2019: प्रसवपूर्व जांच केंद्रों में जाने वाली महिलाओं के लिए डेटा प्रपत्र

Please fill the site details in the box below or paste the sticker with site details/Stamp the site details in the empty Box
सेंटिनलसाइट की जानकारी यहाँ लिखें/छापें/चिपकाएं

State/राज्य:.....District/जिला:.....	
Site/Sub-site Name/साइट/सब साइट का नाम:	
(Site Code) (Sub-site No.) (Sample No.) (Date-DD/MM/YY)	
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

1. Age in completed years (आयु (सम्पूर्ण वर्षों में))

2. Literacy Status/साक्षरता स्थिति

- | | |
|--|---|
| 1. Illiterate/निरक्षर | 2. Literate and till 5 th standard/साक्षर और पांचवी तक |
| 3. 6 th to 10 th standard/छठी से दसवी तक | 4. 11 th to Graduation/ग्यारहवीं से स्नातक तक |
| 5. Post-Graduation/ स्नातकोत्तर | |

3. Order of current pregnancy/वर्तमान गर्भ का क्रम

- | | |
|--------------------|------------------------------------|
| 1. First/पहली बार | 2. Second/दूसरी बार |
| 3. Third/तीसरी बार | 4. Fourth/More/चौथी या उससे ज्यादा |

4. Duration of current pregnancy/वर्तमान गर्भ का समय

- | | | |
|--------------------------------|----------------------------------|---------------------------------|
| 1. First Trimester/पहली तिमाही | 2. Second Trimester/दूसरी तिमाही | 3. Third Trimester/तीसरी तिमाही |
|--------------------------------|----------------------------------|---------------------------------|

5. Has respondent received Antenatal care services from any healthcare facility (including this facility) during her current pregnancy before today?/ क्या प्रतिवादी ने वर्तमान गर्भावस्था के दौरान पहले कभी भी प्रसवपूर्व जांच किसी अस्पताल से कराया है?

- | | |
|-------------|-------------|
| 1. Yes/ हाँ | 2. No/ नहीं |
|-------------|-------------|

6. Source of Referral to the ANC clinic/ प्रसवपूर्व जांच केंद्रों में रेफरल का स्रोत

1. Self-Referral/ स्वतःरेफरल
2. Family/Relatives/Neighbours/Friends/परिवार/रिश्तेदार/पड़ोसी/मित्र
3. NGO/ एन.जी.ओ.
4. Private Hospital (Doctor/Nurses) निजी अस्पताल (चिकित्सक/नर्स)
5. Govt. Hospital (including ASHA/ANM) सरकारी अस्पताल (आशा/ए.एन.एम. सहित)
6. ICTC/ART Centre/ आई.सी.टी.सी./ए.आर.टी. केन्द्र

7. Current Place of Residence/ वर्तमान निवास स्थान

1. Urban (Municipal Corporation/Council/Cantonment)/शहरी (नगरपालिका/निगम/छावनी)
2. Rural/ग्रामीण

8. Current Occupation of the Respondent/ प्रतिवादी का वर्तमान व्यवसाय

1. Agricultural Labourer/ कृषि श्रमिक
2. Non-Agricultural Labourer/गैर कृषि श्रमिक
3. Domestic Servant/घरेलू नौकर
4. Skilled/Semi-skilled worker/कुशल/अर्धकुशल श्रमिक
5. Petty business/small shop/लघु उद्योग/छोटी दुकान
6. Large Business/Self-employed/विस्तृत उद्योग/स्वरोजगार
7. Service (Govt. Pvt.) कर्मचारी (सरकारी/निजी)
8. Student/ विद्यार्थी
9. Hotel staff/होटल कर्मचारी
10. Truck Driver/Helper/ ट्रक चालक/सहायक
11. Local Transport worker (auto/taxi/driver, hand cart puller, rickshaw pullers, etc./ स्थानीय परिवहन कर्मचारी (ऑटो/टैक्सी चालक, ठेले वाले, रिक्शे वाले)
12. Agricultural cultivator/landholder/ कृषक/जमींदार
13. Housewife/गृहिणी

9. Current Occupation of the Spouse/ प्रतिवादी के पति का वर्तमान व्यवसाय

1. Agricultural Labourer/ कृषि श्रमिक
2. Non-Agricultural Labourer/गैर कृषि श्रमिक
3. Domestic Servant/घरेलू नौकर
4. Skilled/Semi-skilled worker/कुशल/अर्धकुशल श्रमिक
5. Petty business/small shop/लघु उद्योग/छोटी दुकान
6. Large Business/Self-employed/विस्तृत उद्योग/स्वरोजगार
7. Service (Govt. Pvt.) कर्मचारी (सरकारी/निजी)
8. Student/ विद्यार्थी
9. Hotel staff/होटल कर्मचारी
10. Truck Driver/Helper/ ट्रक चालक/सहायक
11. Local Transport worker (auto/taxi/driver, hand cart puller, rickshaw pullers, etc./ स्थानीय परिवहन कर्मचारी (ऑटो/टैक्सी चालक, ठेले वाले, रिक्शे वाले)
12. Agricultural cultivator/landholder/ कृषक/जमींदार
13. Unemployed/बेरोजगार
99. Not Applicable (For never married/widows/divorced/separated)/ लागू नहीं होता (अविवाहित/विधवा/तलाकशुदा/अलग महिलाओं के लिए)

10. Does spouse reside alone in another place/town away from wife for work for longer than 6 months?/ क्या प्रतिवादी के पति उनके दूर काम के लिए 6 महीने से ज्यादा किसी दूसरे स्थान पर रहते हैं?

1. Yes/ हाँ
 2. No/ नहीं
99. Not Applicable (For never married/widows/divorced/separated)/ लागू नहीं होता (अविवाहित/विधवा/तलाकशुदा/अलग महिलाओं के लिए)

11. Has respondent ever been tested for HIV?/ क्या प्रतिवादी ने कभी एच.आई.वी. जांच करायी है?

उनके दूर काम के लिए 6 महीने से ज्यादा किसी दूसरे स्थान पर रहते हैं?

1. Yes/ हाँ
2. No/ नहीं

If the respondent has never been tested for HIV (i.e. option "2" encircled in question 11) please encircle option "99" as response code from 12-15/ यदि प्र. 11 का उत्तर (2. नहीं) है तो प्र. 12-15 तक 99 को अंकित करें

12. If ever tested for HIV, when was the last she was tested for HIV?/यदि प्रतिवादी ने कभी एच.आई.वी. जांच कराई है, तो पिछली बार कब जांच कराई थी?

1. Tested previously during current pregnancy/वर्तमान गर्भावस्था के दौरान पहले जांच कराई थी
2. Consented today/ आज सहमति दी है
3. Tested before current pregnancy/ वर्तमान गर्भावस्था से पहले जांच कराई थी
99. Not Applicable (For never tested)/ लागू नहीं होता (जिन्होंने एच.आई.वी. जांच कभी नहीं कराई है)

13. What was the result of respondent's last HIV test?/ प्रतिवादी के अंतिम एच.आई.वी. जांच का परिणाम क्या था? पिछली बार कब जांच कराई थी?

1. Postive/पॉजिटिव
2. Negative/ नेगेटिव
3. Did not collect the test result/जांच का परिणाम नहीं लिया
4. No Response/ कोई जवाब नहीं
99. Not Applicable (For never tested/consented today)/ लागू नहीं होता (जिन्होंने एच.आई.वी. जांच कभी नहीं कराई है/आज सहमति दी है)

If the respondent was not HIV positive (i.e. option "1" was not encircled in question 13) please encircle option "99" as response code for question 14 and 15/ यदि प्र. 13 का उत्तर (1. पॉजिटिव) नहीं है तो प्र. 14-15 तक 99 को अंकित करे

14. If positive, is respondent seeking care from any of the following for management of HIV? Multiple response possible)/यदि एच.आई.वी. जांच का परिणाम पॉजिटिव है, तो क्या आप एच.आई.वी. के उपचार निम्न में से किसी भी जगह से ले रहे/रही हैं? (एक से अधिक प्रतिक्रिया संभव)

1. Government Hospital/ART centres/ सरकारी अस्पताल/ए.आर.टी. केन्द्र
2. NGO Doctor/ एन.जी.ओ. चिकित्सक
3. Private Facilities (Hospital/Stand-along clinic)/निजी सुविधाएं (अस्पताल/स्टैंड-अलोनक्लिनिक)
4. Pharmacist/Chemist/ फार्मसिस्ट/दवा की दुकान
5. Alternative/non-allopathic doctor (Ayurvedic/homoeopathic/siddha)/अल्टरनेटिव/गैर-एलोपैथिक डॉक्टर (आयुर्वेदिक/होम्योपैथिक/सिद्धा)
6. Any other type of doctor/ अन्य प्रकार के चिकित्सक
7. Not seeking care for HIV Management/ एच.आई.वी. का उपचार नहीं ले रहे हैं
99. Not Applicable (For all who were either never tested or not positive when last tested for HIV/consented today)/ लागू नहीं होता (जिन्होंने एच.आई.वी. जांच नहीं कराई थी/जिनका एच.आई.वी. जांच का परिणाम पॉजिटिव नहीं था/आज सहमति दी है)

15. Is respondent currently taking antiretroviral medications/HIV tablets/क्या प्रतिवादी वर्तमान में ए.आर.टी. दवा/एच.आई.वी. की गोलियां ले रही हैं?

1. Yes/ हाँ
2. No/ नहीं
99. Not Applicable (For all who were either never tested or not positive when last tested for HIV/consented today)/ लागू नहीं होता (जिन्होंने एच.आई.वी. जांच नहीं कराई थी/जिनका एच.आई.वी. जांच का परिणाम पॉजिटिव नहीं था/आज सहमति दी है)

Signature/ हस्ताक्षर:

Name/ नाम:

(Person who filled the form)/व्यक्ति जिसके द्वारा फॉर्म भरा गया):

Signature/ हस्ताक्षर:

Name/ नाम:

(Sentinel Site in-charge)/ सेंटिनल साइट प्रभारी):

National AIDS Control Programme (NACP) implemented the sixteenth round of the entirely domestically funded and one of the world's most extensive HIV Sentinel Surveillance (HSS) system among Ante Natal Clinic (ANC) attendees in the year 2019 at 833 sites across 642 districts in 35 States/UTs collecting a total of 331,757 complete data forms and biological specimens. The method continues to be the consecutive sampling method following the linked-anonymous testing strategy. This technical report presents the results from the 16th round of sentinel surveillance among pregnant women.



सत्यमेव जयते



सोमनाथं धनुं धर्मस्यम्

