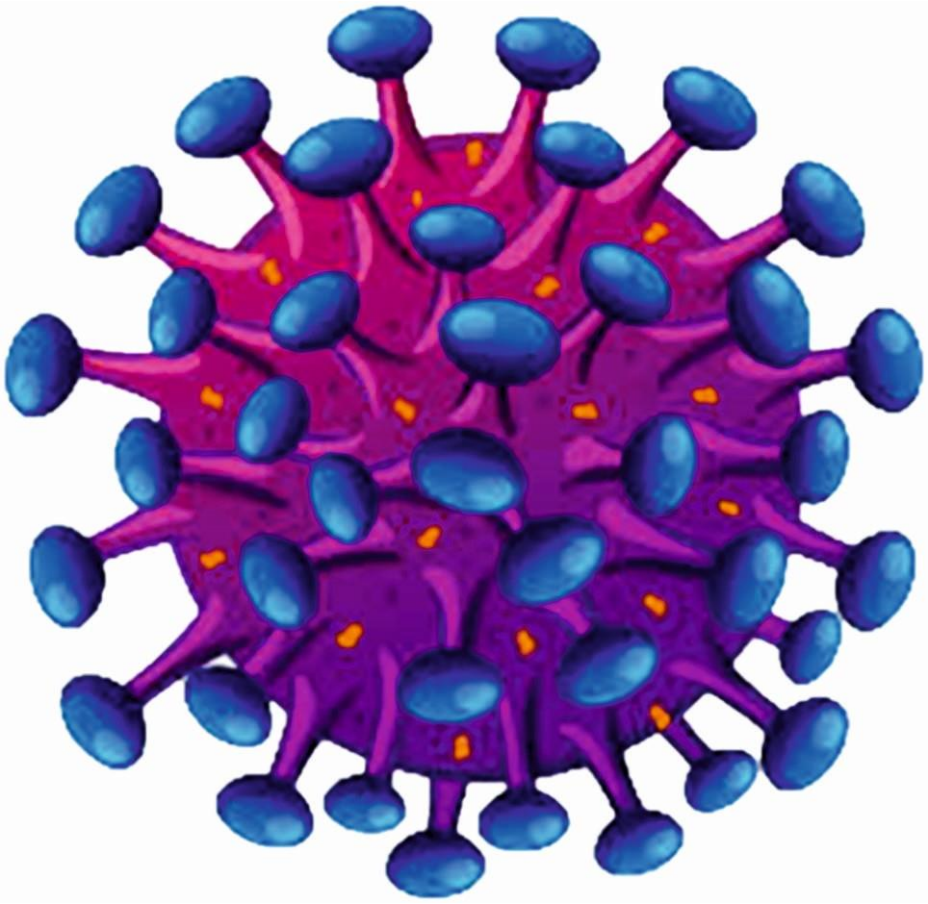
HIV SENTINEL SURVEILLANCE (ANC)

Odisha State Report



2018-19

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HIV

SENTINEL SURVEILLANCE (ANC)

Odisha State Report

2018-19

ICMR-NATIONAL INSTITUTE OF EPIDEMIOLOGY
Chennai

NATIONAL AIDS CONTROL ORGANISATION
New Delhi

ODISHA STATE AIDS CONTROL SOCIETY
Bhubaneswar

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Foreword

HIV Sentinel surveillance among ANC attendees is one of the most important national level activities, as it helps the programme managers in framing health policies towards controlling HIV infection in the state and the country as well. The objectives of HIV sentinel surveillance are to understand the trends, assess spread and distribution of HIV infection among geographical areas across the state. In order to have uniform geographical coverage, the number of sentinel sites in the state has been increased over a period of years by keeping at least one site in each district.

The National Institute of Epidemiology, Chennai, one of the Regional Institutes for 8 southern states, is involved in the HIV surveillance activities since 2006. This report is prepared based on the data collected during the 16th round of surveillance, in conjunction with the past years data to analyze the trend and to have an insight of epidemiological factors. I hope this report will serve as a very useful tool for the policy makers, scholars, researchers and other stakeholders in formulating guidelines in controlling HIV and enhancing their knowledge of HIV in their state.

I take this opportunity to thank Dr. Shobini Rajan, Assistant Director General, NACO and Dr. Pradeep Kumar, Consultant (surveillance) & his team for entrusting this activity to NIE and also for providing technical support in implementing the surveillance. I also wish to thank the Project Director and nodal officer of State AIDS Control Society for their help in completing the surveillance activities in a timely manner. I express my gratitude to all the State Referral Laboratories, National Referral Laboratories, State Surveillance Team members, Sentinel sites personnel and other National and International partners who helped us in completing the surveillance successfully.

Dr. Manoj V Murhekar

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Contents

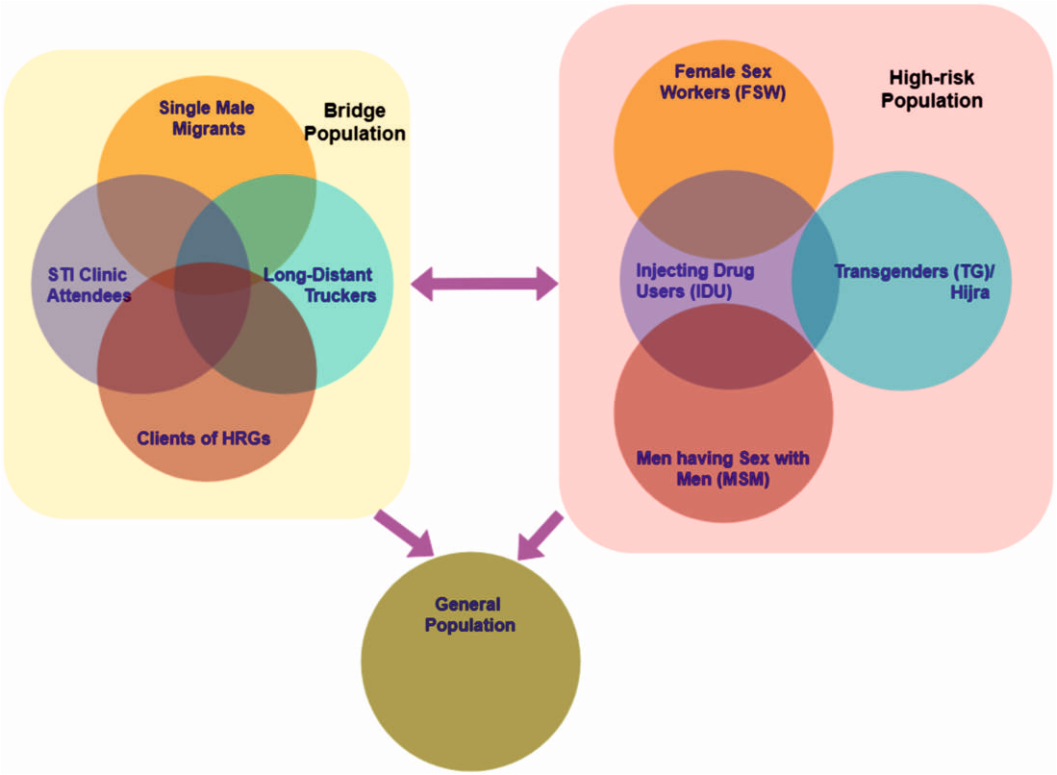
CHAPTER 1.

INTRODUCTION: HIV AND HSS

Acquired immune deficiency syndrome or acquired immunodeficiency syndrome (AIDS), caused by the human immunodeficiency virus (HIV), progressively reduces the effectiveness of the immune system, leaving the infected susceptible to opportunistic infections. HIV was first reported in USA in 1981, following which the infection spread globally. Three decades since its inception, the epidemic still continues to be a global public health threat and interventions at various levels are ongoing for HIV management. Unprotected sex, sharing used needles or syringes and transfusion of untested blood increases the risks of HIV infection.

The first HIV case in India was reported in 1986 in Chennai, followed by a rapid spread across the nation within a decade. Based on their risk of disease transmission and HIV prevalence levels, the population in India is divided into 3 categories high-risk groups with - high prevalence, bridge populations with moderate prevalence and general population low prevalence.

Figure 1: HIV Transmission Dynamics among HIV Sub-population groups

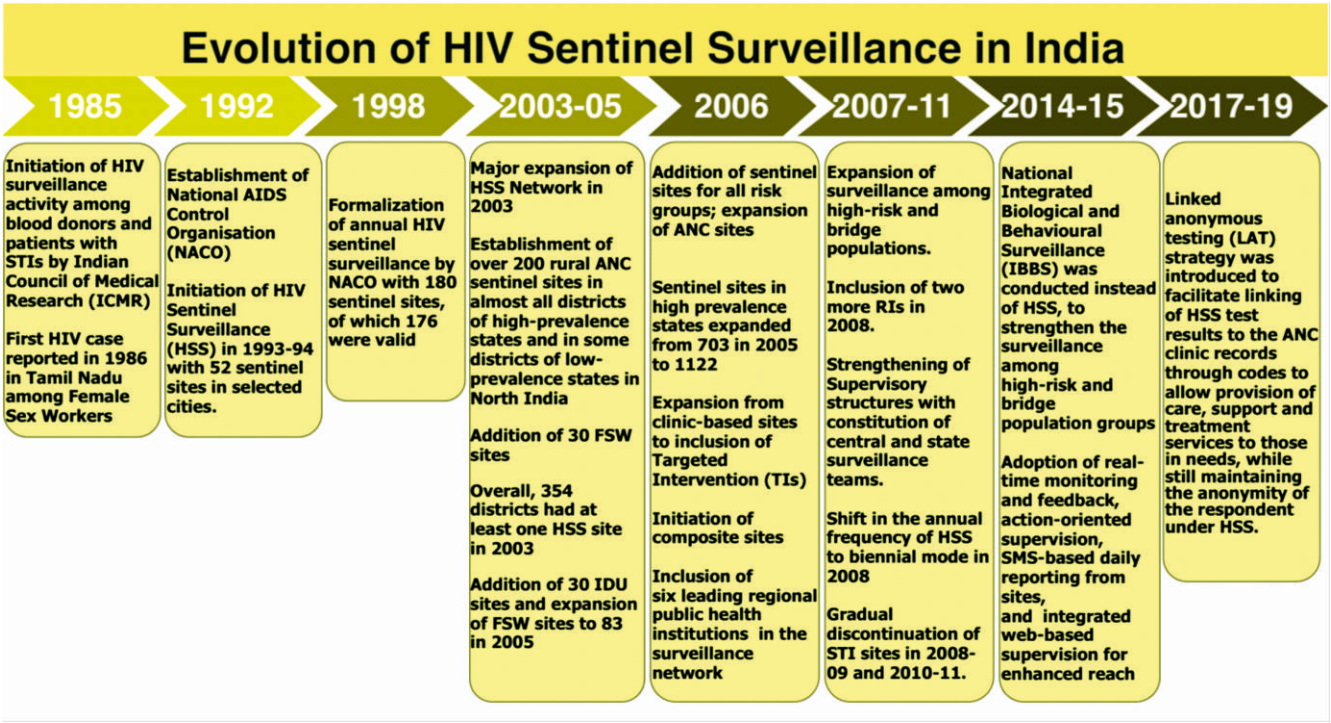


HIV in India is highly concentrated among the high-risk population groups. Unprotected sex with female sex workers (FSW), injecting drug users (IDU), and unprotected anal sex between men are the three primary routes of HIV transmission in India. The bridge population, generally the clients or partners of high-risk population, transmit the disease to the general population. Hence measures to reduce the HIV prevalence levels in high-risk population has been observed as an effective method to reduce the transmission risks.

1.1 HIV Sentinel Surveillance (HSS)

HIV sentinel surveillance is defined as a system of monitoring the HIV epidemic among the specified population groups by collecting information on HIV from designated sites (sentinel sites) over years, through a uniform and consistent methodology that allows comparison of findings across place and time, to guide programme response. A sentinel site is a designated service point/facility where blood specimens and relevant information are collected from a fixed number of eligible individuals from a specified population group over a fixed period of time, periodically, for the purpose of monitoring the HIV epidemic.

Figure 2: Evolution of HIV sentinel surveillance in India



The HIV sentinel surveillance (HSS) in India was initiated in 1985 among the blood donors and patients with STIs by the Indian Council of Medical Research (ICMR). It is one of the largest HSS systems in the world which helps to understand the dynamics of the HIV epidemic and monitor the trends among different population groups and geographical areas. It provides inputs to the programme for strengthening prevention and control activities. The sentinel sites have been scaled up in a phased manner from 176 in 1998 (including 92 ANC sites) to 1359 in 2010-11 (including 696 ANC sites). HSS 2019 was implemented at 776 ANC sites. In continuation, the 16th round of HIV Sentinel Surveillance (HSS) among antenatal care (ANC) clinic attendees was implemented during year 2019 at 833 sites across 35 States/UTs and 642 districts (out of total of 727 districts). This is highest in various rounds of HSS under NACP till now.

Figure 3: Objectives and Application of HIV Sentinel Surveillance

CHAPTER 2

HSS - METHODOLOGY AND IMPLEMENTATION

2.1 Implementation Structure of HIV Sentinel Surveillance in India

HIV sentinel surveillance has a robust structure for planning, implementation, and review. It follows a four-tier supervisory structure at national, regional, state, and district levels.

National level Organizations and Institutes act as Nodal Agencies while the 8 regional institutes provide technical support to the State AIDS Control Societies (SACS) for all HSS activities. SACS is primarily responsible for implementation of HSS in their respective states with the support of functional district AIDS Prevention and Control Units (DAPCUs), for coordination of HSS activities at the sentinel sites and the associated testing labs. The entire HSS structure is involved the assessment of HSS implementation plans and review of the outcomes of each round.

Figure 4: Implementation Structure of HSS

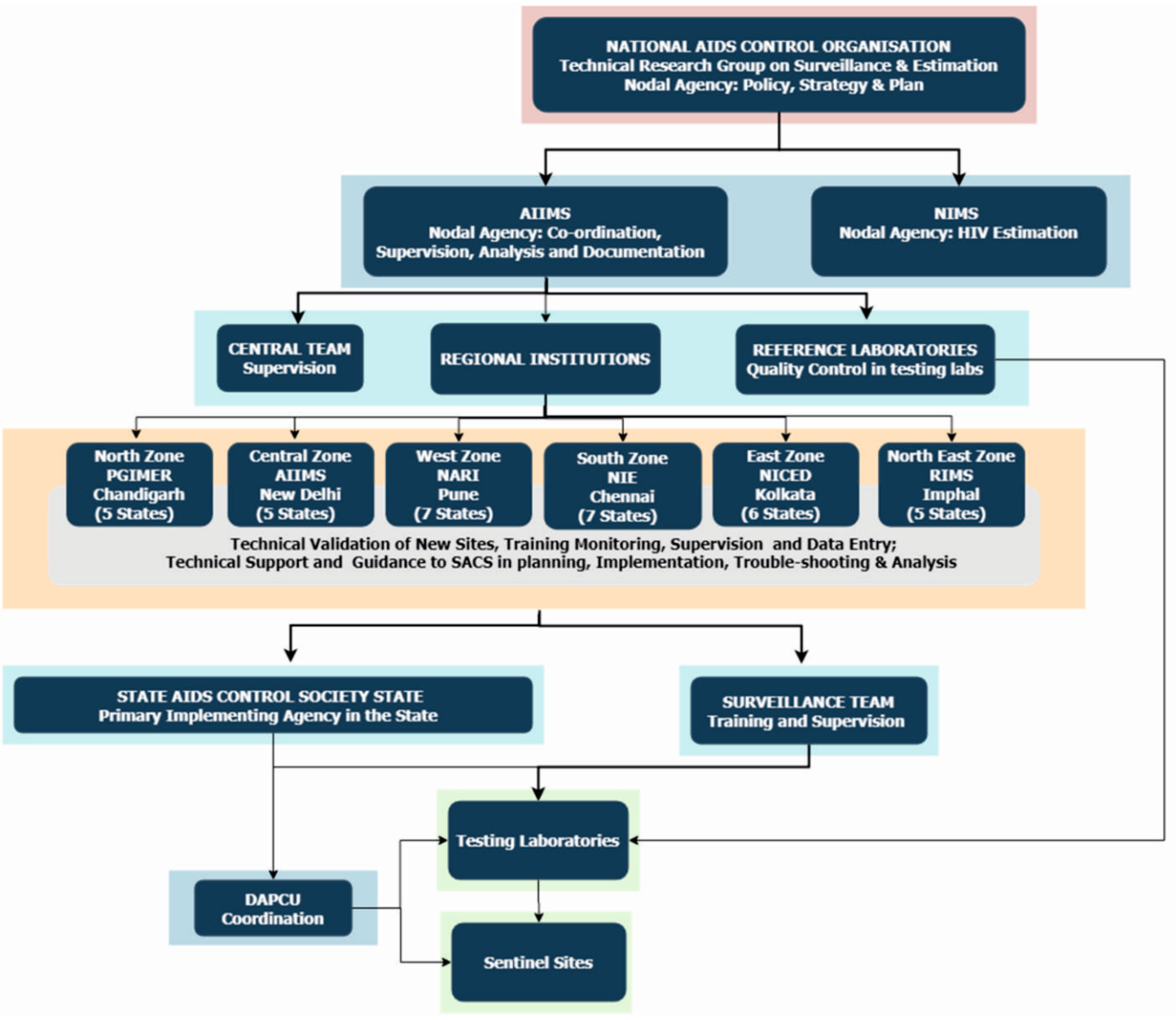


Table 1: Regional Institutes and their States Covered

Name of regional institution	Responsible states
Central: All India Institute of Medical Science, New Delhi	Uttar Pradesh, Bihar, Jharkhand, Uttaranchal, and Delhi.
North: PostgraduateInstitute of Medical Education and Research, Chandigarh	Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, and Chandigarh.
West: National AIDS Research Institute, Pune	Maharashtra, Gujarat, Goa, Madhya Pradesh, Rajasthan, Daman & Diu, and Dadra Nagar Haveli.
South: National Institute of Epidemiology, Chennai	Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Odisha, Puducherry, and Lakshadweep and Telangana.
East: National Institute of Cholera and Enteric Diseases, Kolkata	West Bengal, Chhattisgarh, Sikkim, Andaman & Nicobar Islands, Meghalaya, and Nagaland.
Northeast: Regional Institute of Medical Sciences, Imphal	Manipur, Mizoram, Tripura, Assam, and Arunachal Pradesh.

2.2 Initiatives during HSS 2018-19:

In response to key issues identified in the implementation of HSS during the previous rounds as well as to improve the quality and promptness of the surveillance, several new initiatives were implemented in the 16th round, as part of continuous quality improvement.

SACS checklist for preparatory activities:

- Developed to monitor the planning process for HSS in each state (Annex 3).
- All preparatory activities were broken into specific tasks with clear timelines and all SACS were required to submit the completion status for each task.
- A team of officers from NACO coordinated with state nodal persons to ensure that preparatory activities in all states adhered to the timelines.

Pre-surveillance sentinel site evaluation (SSE):

- A pre-surveillance evaluation of ANC and STD sentinel sites was conducted to identify and correct human resources and infrastructure-related issues at the sentinel sites before initiation of surveillance.
- The evaluation also provided site information such as type of facility, average OPD attendance, availability of HIV and AIDS services, and distance of facilities from HSS labs (Annex 4), which may have implications on adherence to methodology.

Standard operational manuals, wall charts, and bilingual data forms:

- Developed to simplify the HSS methodology for site-level personnel and to ensure uniform implementation of the guidelines in all the sentinel sites.
- These were printed centrally and distributed across the country.

Training during HSS 2018-19:

Steps to improve quality of training:

1. A well-structured training programme was adopted to ensure that all the personnel involved in HSS at different levels were adequately and uniformly trained in the respective areas of responsibility.

2. The training agenda, curriculum, and planning and reporting formats were standardized and used in all the states. Standard slide sets and training manuals for training of sentinel site personnel were developed centrally to ensure uniformity.

3. Trainings included group work and a "know your sentinel site" exercise, which helped participants to identify the routine practices that could affect the implementation of surveillance at their sites and recommended actions to address the same.

4. Pre and post-test assessments were given to each participant at the site-level trainings. Analysis of these scores helped state teams to identify the priority sites for supervisory visits.

5. Training reports for each batch were submitted in standard formats at the end of each training.

Details of trainings:

1. Trainings started with two batches of national pre-surveillance meetings with about 90 personnel from regional institutes and SACS to discuss the critical aspects of planning for HSS 2018-19 and to clearly understand the system for supportive supervision through the online Strategic Information Management System (SIMS) application.

2. This was followed by 2-day regional TOTs organised by the RIs for SACS officers and state surveillance teams, comprised of public health experts and microbiologists, to create state-level master trainers and to plan for the site-level trainings.

3. Site-level trainings (2 days per batch @ 8-10 sites per batch) were conducted in all the states. Representatives from the regional institutes and NACO observed the trainings to ensure that trainings were provided as per the protocol and that all the sessions were covered as per the session plan.

4. Separate trainings on surveillance testing protocols and lab reporting mechanisms through the SIMS application for HSS were organised for microbiologists and lab technicians from 117 ANC/STD testing labs and 13 NRLs.

5. Overall, 40 central team members; 30 officers from six RIs; 95 SACS officers including in-charge surveillance, Epidemiologists, and M&E officers; 280 state surveillance team members; 260 laboratory personnel including microbiologists and lab technicians from the designated testing labs; and more than 3,000 sentinel site personnel including medical officers, nurse/counsellors, and lab technicians were trained under HSS 2018-19.

Laboratory system:

- The laboratory system was strengthened by limiting the sample testing to designated SRLs.
- introduction of web based reporting through the SIMS application ensured real-time monitoring of the quality of blood specimens and laboratory processes
- Quality assurance aspects of sample testing under HSS were standardized
- Responses in case of discordant test results between testing lab and reference lab were streamlined through the SIMS application.

Supervisory mechanisms for HSS 2018-19:

- Supervision of all HSS activities was prioritized to ensure smooth implementation and high-quality data collection.
- Extensive mechanisms were developed to set up a comprehensive supervisory system for HSS and to ensure that 100 % of HSS sites were visited in the first 15 days of the start of sample collection.
- The principles adopted included action-oriented supervision, real-time monitoring and feedback, accountability for providing feedback and taking action, and an integrated web-based system to enhance the reach and effectiveness of supervision.

SIMS modules for web-based supervision:

- Specific modules were developed and made operational in the web-based SIMS for HSS to facilitate real-time monitoring of HSS 2018-19.
- Field supervision was conducted by trained supervisors who visited the sentinel sites to monitor the quality of recruitment of respondents and other site-level procedures. Real-time reporting of field supervision used the SIMS supervisor module via the field supervisory quick feedback and action taken report sub-modules. The module was used extensively by all the supervisors and helped in quick identification and resolution of challenges in the field.
- Data were supervised by data managers at RIs to monitor the quality of data collection and transportation using the SIMS module.
- Laboratory supervision was conducted by SRLs and NRLs to monitor the quality of blood specimens, progress in laboratory processing, and external quality assurance, using the SIMS lab module.
- Overall, 80 % of supervisors reported on the SIMS field supervisor quick feedback format, and 52 % of action taken report formats were submitted by HSS focal persons from SACS and RIs. Laboratory reporting through the lab module was completed by 87% of SRLs.

Integrated monitoring and supervision plan:

- An integrated supervision plan for each state was developed by RIs, SACS, and AIIMS to avoid duplication in monitoring coverage, thereby facilitating maximum coverage of surveillance sites.
- The first round of visits was conducted by RI, SACS, and SST members.
- Central team members (CTM) visited the top priority sites identified in feedback from the first round of visits.
- Subsequent visits were based on priority with a goal of making at least three visits to each identified site which require supervision.

2.3 Methodology of HSS at ANC Sentinel Sites:

The methodology for the 2019 round of HSS at ANC clinic attendees remained as same as the earlier round. The complete methodology may be found in the HIV Sentinel Surveillance Operational Guidelines available on the website of the National AIDS Control Organisation (NACO).

Figure 5: HSS Methodology

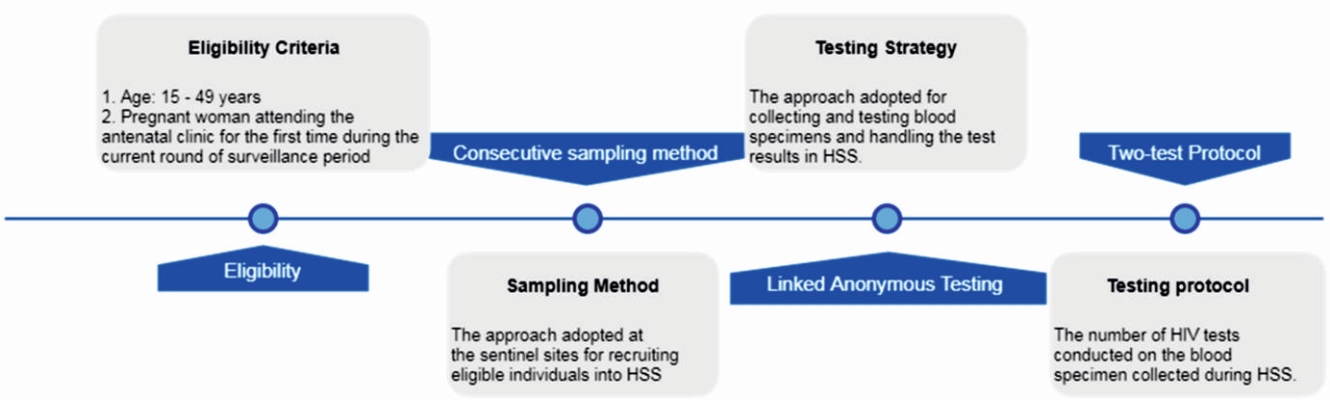


Table 2: Summary of HSS Methodology at ANC Sentinel Sites

Sentinel site	Antenatal clinic
Sample size	400
Duration	3 months
Frequency	Once in 2 years (biennial)
Sampling method	Consecutive sampling
Eligibility	Pregnant women ages 15-49 years attending ANC clinic for the first time during the current round
Testing strategy	Linked anonymous testing
Blood specimen	Serum collected through venous blood specimen
Testing protocol	Two-test

Key elements of the HSS methodology:

- In HSS among pregnant women, recruitment of respondents is conducted biennially for three months between January to March at selected ANC sentinel sites, across the nation.
- Because of the low HIV prevalence in India, the classical survey method of sample size calculation gives a large sample size. Owing to the practical difficulty in data and sample collection from such a large sample size through facility-based surveillance on regular basis, a sample size of 400 for surveillance among ANC attendees has been fixed.
- All eligible respondents are enrolled until the sample size of 400 in each sentinel site is reached or until the end of the surveillance period, whichever is earlier.
- Eligibility: All pregnant women eligible under the above inclusion criteria are included in the survey irrespective of the date of antenatal registration, known HIV positivity status, testing status under PPTCT programme or participation in the previous rounds of HSS.
- Inclusion Criteria: i. Age 15-49 years; ii. Pregnant woman attending the antenatal clinic for the first time during the current round of surveillance period
- Exclusion Criteria: i. Pregnant women not in the age group of 15-49 years; ii. Pregnant woman attending the antenatal clinic for the second or more time during the current round of surveillance period
- Sampling method, testing strategy and test protocol are standard components of any surveillance. Consecutive sampling method, linked anonymous testing strategy and two-test protocol are followed in HSS among pregnant women.

2.4 Information Collected under HSS at ANC Sentinel Sites

Information on 15 variables pertaining to the respondents' socio-demographic characteristics, HIV testing and management was collected. The data collected during the surveillance is robust and gives an insight on the socio-demographics and vulnerabilities of the respondents. The data helps the program managers and policy makers to identify of specific characteristics associated with higher risk of acquiring HIV infection. Thus the data has guided the HIV intervention program in responding to the epidemic effectively.

Figure 6: Recruitment process of ANC attendees at ANC Sentinel Sites for HSS

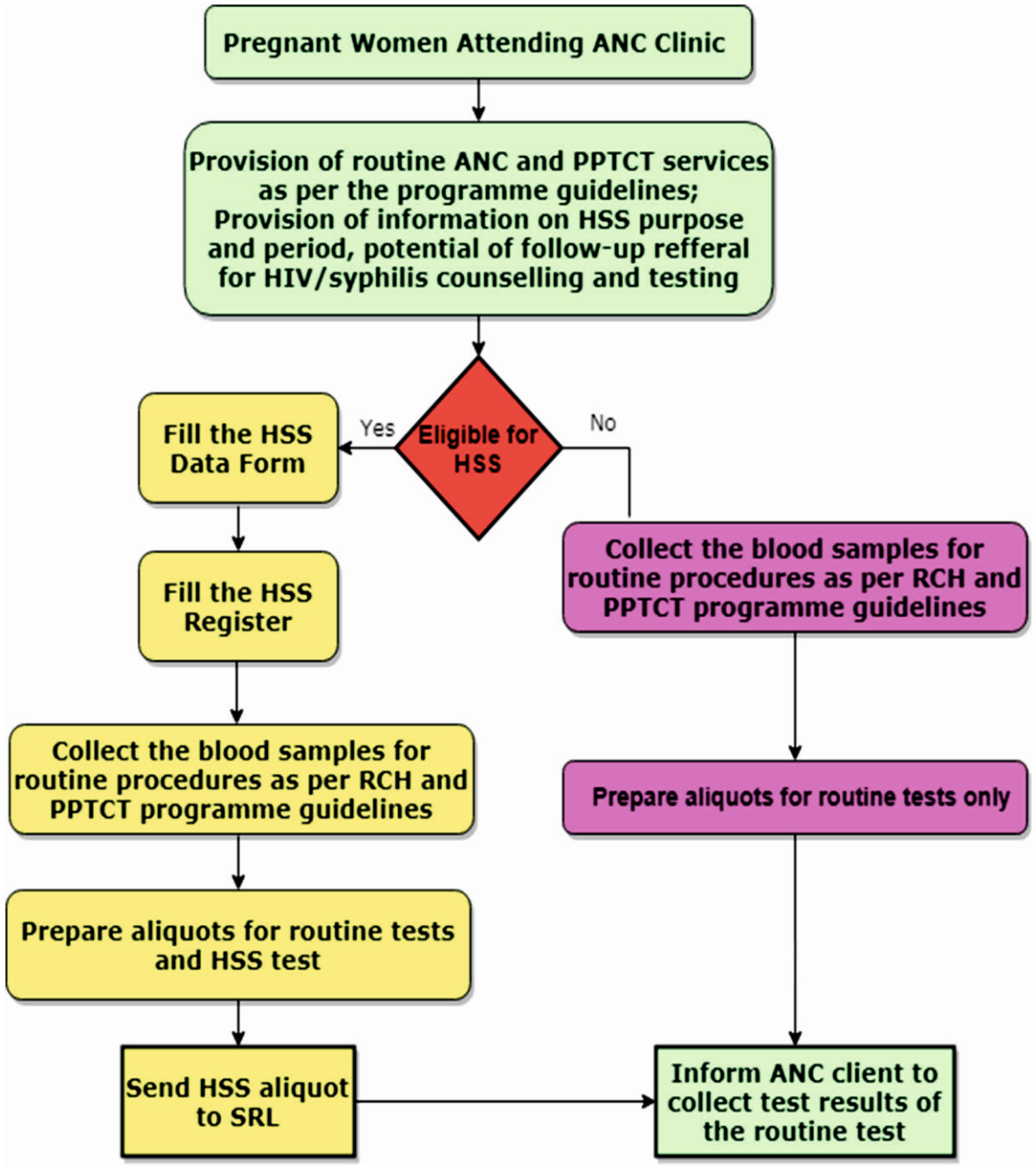
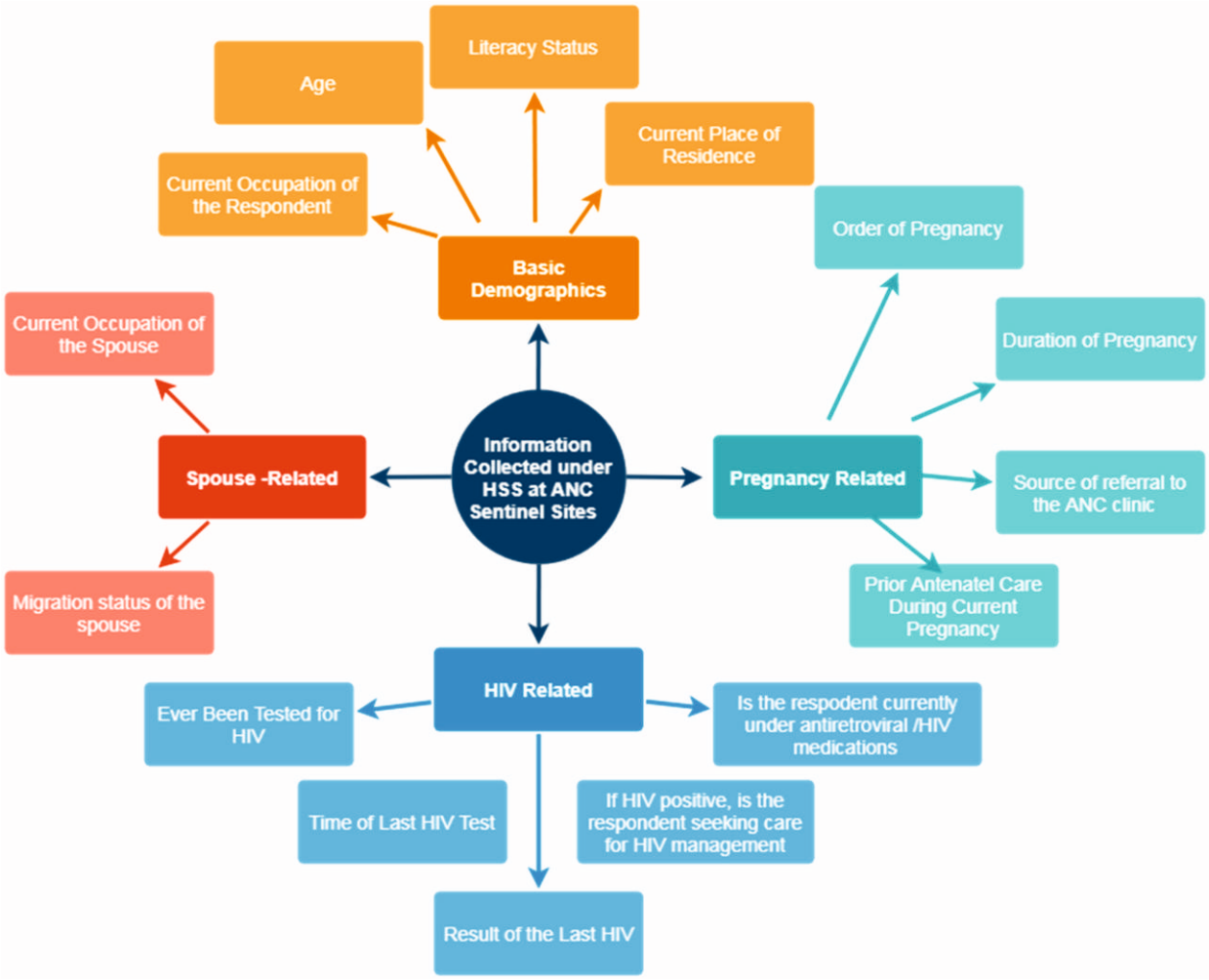


Figure 7: Information Collected under HSS at ANC Sentinel Sites

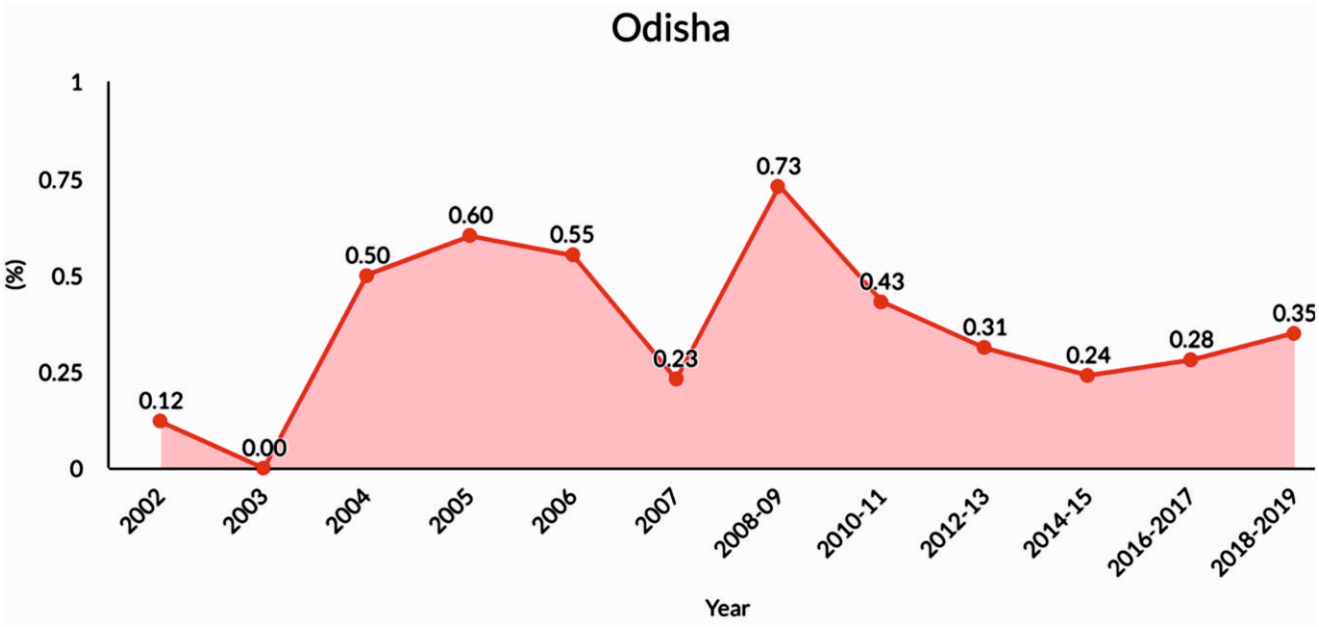


CHAPTER 3

PROFILE OF ANC ATTENDEES IN ODISHA

Odisha, situated at East India, shares its boundary with West Bengal and Jharkhand to the north, Chhattisgarh to the west, Andhra Pradesh to the south and Bay of Bengal in the east.Odisha has 37 districts with a total area of 155,707sq. Km and a population of 45.98 million in 2011. The first HIV case in Odisha was reported in 1993 in Nayagarh district and was considered as one of the HIV high prevalent states in India, with heterosexual transmission being the predominant mode of HIV transmission. The pregnant women who attend the ANC clinics are considered proxy for general population and serve as a key indicator of the adult HIV prevalence. Odisha has pioneered various programmes to bring down the HIV prevalence in the state. As a result, HIV prevalence among pregnant women which was 0.12% in 2002, peaked to 0.73% in 2009 and has declined to 0.35% in 2019.

Figure 8: HIV Prevalence Trend in Odisha among ANC Attendees, 2002-19



The section presents findings form 2019 round of sentinel surveillance among the antenatal clinic attendees in Odisha. First, the distribution of the respondents by their background characteristics has been presented by followed by HIV and Syphilis sero-positivity. Analysis of these variables is important because they help programme managers and policy makers understand the background characteristics of clinic attendees. Also they help in the identification of particular characteristics which make respondents more prone to acquiring HIV infection.

Table 3: Distribution of the respondents by their background characteristics		
Variables	**Odisha (N=13200)**	
Age	Number*	%#
15-24	7125	54.0
25-34	5710	43.3
35-44	360	2.7
45-49	5	0.0
Literacy Status		
Illiterate	1345	10.2
Literate Up to Std 5	2127	16.1
Std 6 to Std 10	6985	52.9
Std 11 to Graduation	2618	19.8
Post-Graduation	118	0.9
Order of current pregnancy		
First	6603	50.0
Second	4660	35.3
Third	1454	11.0
Fourth or more	479	3.6
Duration of current pregnancy		
First trimester	4387	33.2
Second trimester	5242	39.7
Third trimester	3561	27.0
Received ANC service during current pregnancy		
Yes	7686	58.2
No	5502	41.7
Source of referral to the ANC clinic		
Self-Referral	1221	9.3
Family/ Relatives/ Neighbours/ Friends	3118	23.6
NGO	9	0.1
Private Hospital (Doctor/ Nurses)	324	2.5
Govt. Hospital (including, ASHA/ ANM)	8513	64.5
ICTC / ART Centre	1	0.0
Current place of residence		
Urban	3437	26.0
Rural	9759	73.9
Current occupation of the respondent		
1. Agricultural Labourer	143	1.1
2. Non- Agricultural Labourer	153	1.2
3. Domestic Servant	7	0.1
4. Skilled / Semi Skilled Worker	30	0.2
5. PettyBusiness / Small Shop Owner	38	0.3
6. Large Business/SelEmployed	12	0.1
7. Service (Government/Private)	295	2.2
8. Student	25	0.2
9. Hotel Staff	1	0.0
10. Truck driver/Helper		
11. Local transport worker (auto/taxi driver, hand cart pullers, rickshaw pullers etc)	2	0.0
12. Agricultural Cultivator / Landholder	14	0.1
13. Housewife	12475	94.5

Current occupation of the spouse		
1. Agricultural Labourer	1295	9.8
2. Non-Agricultural Labourer	2120	16.1
3. Domestic Servant	11	0.1
4. Skilled / Semi-skilled Worker	1971	14.9
5. Petty business / small shop	2078	15.7
6. Large Business/Self employed	337	2.6
7. Service (Govt./Pvt.)	2139	16.2
8. Student	19	0.1
9. Hotel staff	201	1.5
10. Truck driver/Helper	229	1.7
11. Local transport worker (auto/taxi driver, hand cart pullers, rickshaw pullers etc)	916	6.9
12. Agricultural cultivator / landholder	1812	13.7
13. Unemployed	50	0.4
99.Not Applicable (For Never married/widows/Divorced/Separated)	19	0.1
Spouse resides alone in another place/town from wife for work for longer than 6 months		
Yes	655	5.0
No	12524	94.9
Not Applicable (For Never married/Widows/Divorced/Separated)	19	0.1
Ever Been tested for HIV		
Yes	4715	35.7
No	8484	64.3
If ever tested HIV, when was the last test taken?		
Tested during current pregnancy Consented today	1347	10.2
Tested before current pregnancy	3368	25.5
NA (For never tested)	8484	64.3
Result of respondent's last HIV test		
Result of respondent's last HIV test		
Positive	24	0.2
Negative	4536	34.4
Did not collect the last result	95	0.7
No response	60	0.5
NA (For never tested/Consented today)	8484	64.3
If previous HIV test positive, taking ART medications		
Yes	22	0.2
No	2	0.0
NA (For never tested or Not positive when last tested/Consented today)	13175	99.8
HIV		
Negative	13154	99.65
Positive	46	0.35
Syphilis		
Negative	13190	99.92
Positive	10	0.08

***Total may not add up to 13200 because of missing/not applicable response**

 # Total may not add up to 100% because of missing response

CHAPTER 4

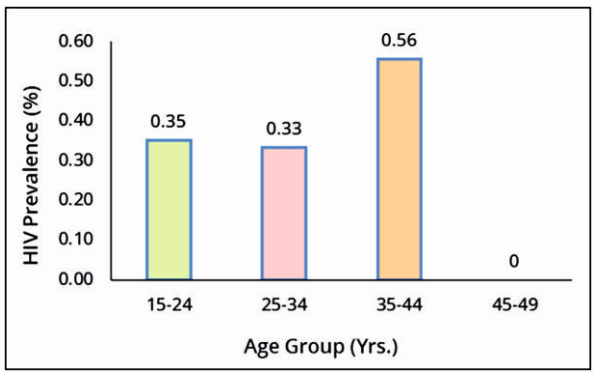
DISTRIBUTION AND HIV PREVALENCE BY SOCIO-DEMOGRAPHIC VARIABLES

The correlation between respondent's background characteristics and HIV prevalence has been presented.

4.1 Distribution and HIV Prevalence by Age Group:

Figure 9: Percentage (%) Distribution of respondents by age group

Figure 10: HIV Prevalence among ANC Clinic Attendees by Age



Age of the respondents ranged from 15 to 44 years with a median age of 24 years. Majority (54.0%) of the respondents was aged from 15 to 24 years and more than a third (43.3%) were in the age group of 25-34 years. The HIV prevalence among the former was 0.35% and the later was 0.33% in 25-34. While only 2.7 % respondents belonged to the age group of 35-44 years, HIV prevalence among them was 0.56%. None of the respondents were in the age group of 45-49 years.

4.2 Distribution and HIV Prevalence by Literacy Status

Figure 11: Percent Distribution of respondents by educational status

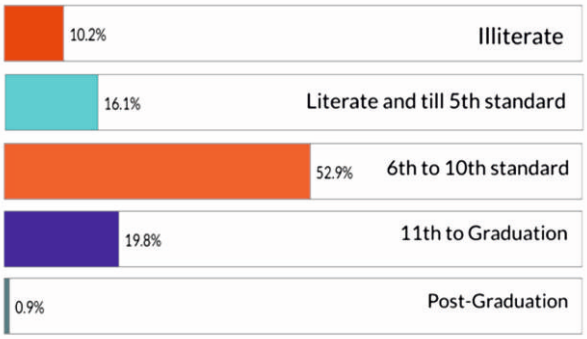
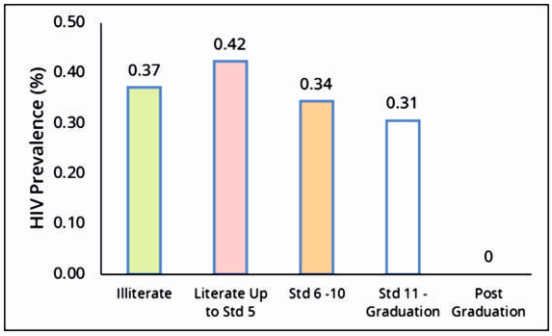


Figure 12: HIV Prevalence (%) among ANC Clinic Attendees by Literacy Status



About half of the respondents (52.9%) had secondary level of education while about one-fifth (19.8%) had higher secondary or undergraduate level education. The HIV prevalence among the former was 0.34% and the later was 0.31%. While about10.2% were illiterates and 16.1% were educated up to primary levels, 0.9% were post-graduates. The HIV prevalence among them was 0.37%, 0.42% and 0.0% respectively.

4.3 Distribution and HIV Prevalence by Order of Pregnancy

Figure 13: Percent Distribution of respondents by order of pregnancy

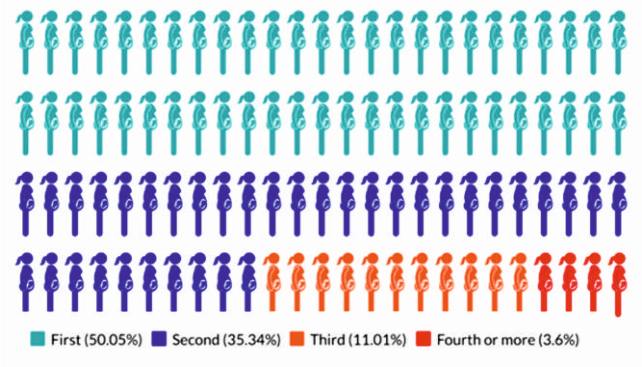
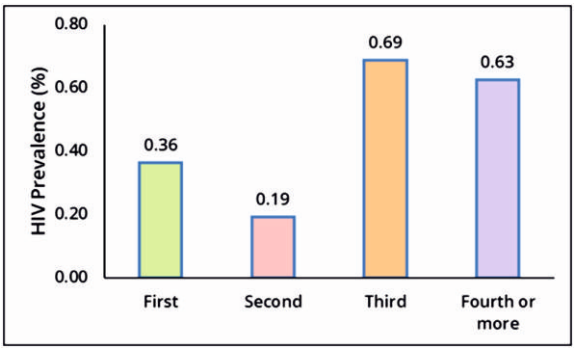


Figure 14: HIV Prevalence (%) among ANC Clinic Attendees by Order of Pregnancy



The order of pregnancy, also known as gravida, is the number of times a woman had become pregnant including live births, still births and abortions. About 47% of the respondents were in their first gravida, 39.9% in their second and 10.4% in their third with a prevalence of 0.19%, 0.17% and 0.10% respectively. Other higher order pregnancies were only 2.7% with a prevalence of 0.39%.

4.4 Distribution and HIV Prevalence by Duration of Pregnancy:

Figure 15: Percent Distribution of respondents by duration of current pregnancy

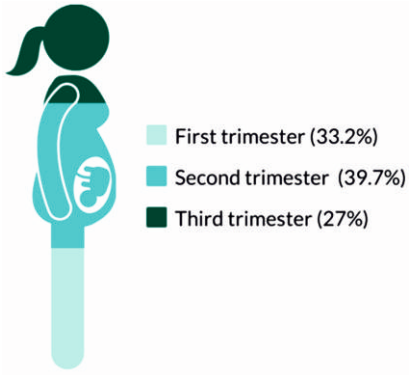
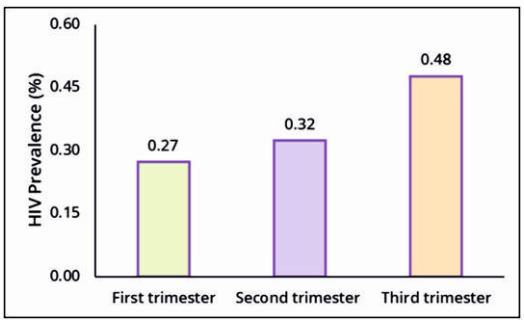


Figure 16: HIV Prevalence (%) among ANC Clinic Attendees by Duration of Pregnancy



Half of the respondents (53.31%) belonged to the third trimester followed by 30.86% in second trimester and 15.83% in the first trimester. However, highest HIV prevalence (0.20%) was recorded among respondents in first trimester, followed by 0.19% in third and 0.14% in second trimesters.

4.5 Distribution and HIV Prevalence by ANC Service Utilization:

Figure 17: Percent Distribution of respondents by ANC service uptake

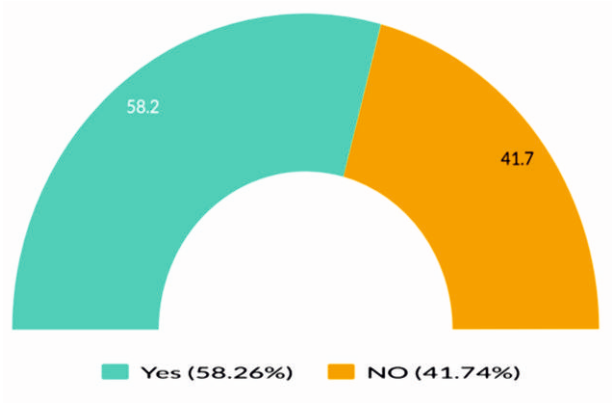
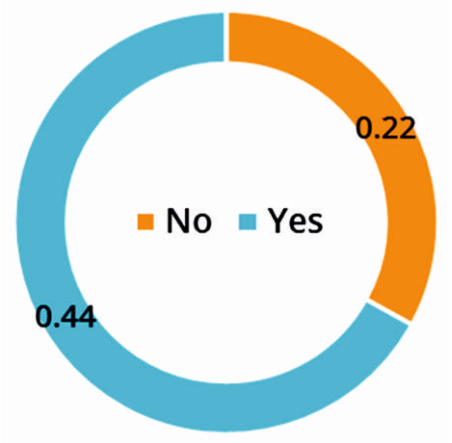


Figure 18: HIV Prevalence among ANC Clinic Attendees by ANC service uptake



This refers to any prior receipt of antenatal care services from a health care facility (PHC/CHC/District hospitals/Maternity hospitals/Private health care facilities/NGO Health care facilities) by the pregnant women during her current pregnancy. In Odisha, about 58.26% of respondents had received ANC services during current pregnancy prior to the surveillance whereas 41.74% of respondents had not received prior ANC services. HIV prevalence was 0.44% and 0.22 % among respondents who had and had not received prior ANC services, respectively.

4.6 Distribution and HIV Prevalence by Source of Referral:

Figure 19: Percent Distribution of respondents by source of referral

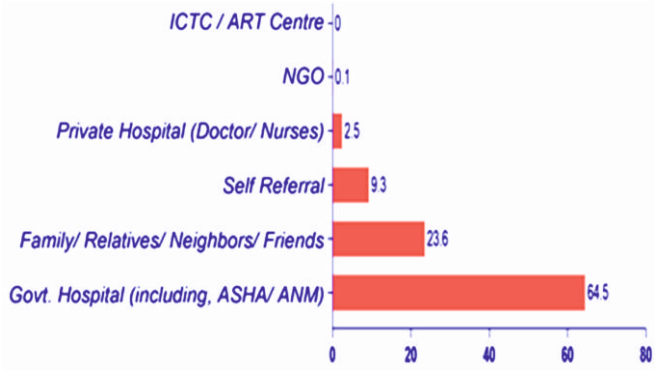
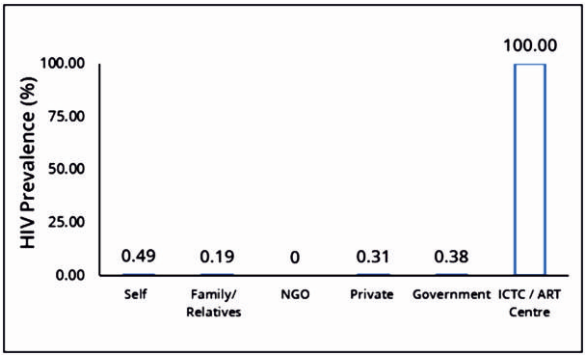


Figure 20: HIV Prevalence (%) among ANC Clinic Attendees by Source of Referral



Knowing the sources of referral helps to identify referral bias being introduced in the sample due to specific referrals of HIV-positive cases from any source. Government based sources including hospital, ANM/ASHA were identified as the major referral source (64.5%) to ANC clinics, followed by family/relatives/neighbour/friends (23.6 %), and self-referral (9.3%). Highest HIV prevalence (100 %) was recorded in respondents referred by ICTC/ART centres although the proportion referred accounted to less than 0.1%.

4.7 Distribution and HIV Prevalence by Place of Residence:

Figure 21: Percent Distribution of respondents by current place of residence

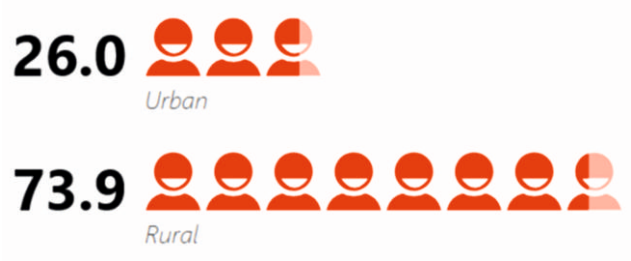
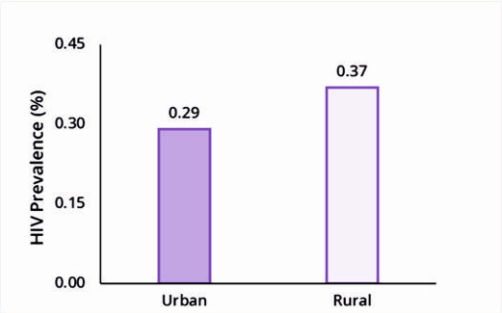


Figure 22: HIV Prevalence (%) among ANC Clinic Attendees by Place of residence



Current residence of the respondent was recorded either as urban or rural. Areas under Municipal Corporation, municipal council, or cantonment area, were classified as urban and the rest were classified as rural. At the state level, 73.9 % of the respondents reported to be currently residing in rural areas and the rest (26.0%) reported to be currently residing in urban areas. However, there were inter-district variations. HIV prevalence among the urban-resident respondents was 0.29%; whereas it was 0.37% among the rural-resident respondents.

4.8 Distribution and HIV Prevalence by Occupation of the Respondent:

Figure 23: District-wise % Distribution of respondents by Occupation

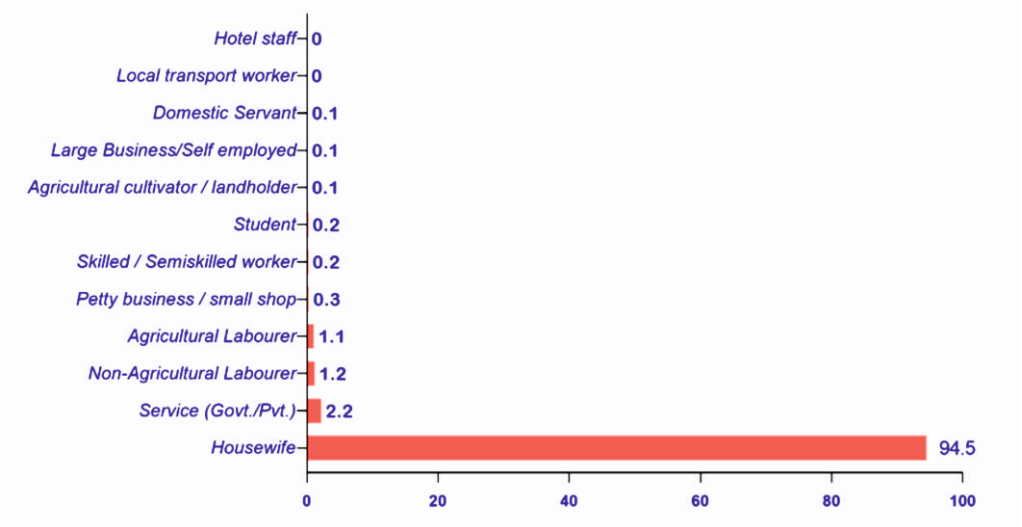
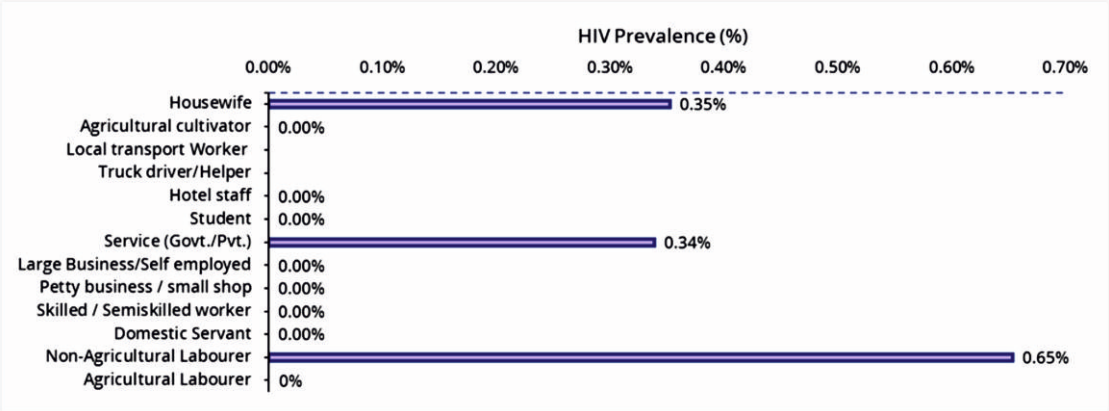


Figure 24: HIV Prevalence (%) among ANC Clinic Attendees by Current Occupation of Respondent



Certain occupations are associated with higher risk of exposure and HIV infection. Hence, understanding the profile of respondents with respect to their occupation, helps to identify specific focus areas. While a vast majority of them were housewives, about 2.2 % were in the service sector followed by non-agricultural labourer (1.2%) and agricultural labourer (1.1 %). In Odisha, the highest HIV prevalence was recorded among pregnant mothers whose current occupation was non-agricultural labourers (0.65%) followed by housewives (0.35%) and those in service sectors (0.34%).

4.9 Distribution and HIV Prevalence by Occupation of the Respondents' Spouse:

HIV transmission in South India is mainly driven through heterosexual route and pregnant mothers represent the sexually active population. Hence occupation of spouse serves to identify population groups at higher infection risk. The occupation of spouses of ANC corresponded to service sector (16.2%), non-agricultural labourers (16.1%), petty business / small shop owners (15.7%)skilled/semi-skilled workers (14.9%) and agricultural cultivator/landlords (13.7%). About 9.8 % were agricultural labourers, 6.9 % were local transport workers and 1.7 % were truckers. HIV prevalence was the highest among the ANC attendees who were never married or those not living with their spouses (5.26%) followed by truckers (1.75 %), local transport workers (0.55%), non-agricultural labourers (0.52%) and hotel staffs (0.50%). The prevalence ranged from 0.17% to 0.41% among respondents whose spouses were agricultural labourers or cultivators, skilled or semi-skilled workers, self-employed or large shop owners, petty / small shop owners and service sector employees.

Figure 25: % Distribution of respondents by the Occupation of spouse

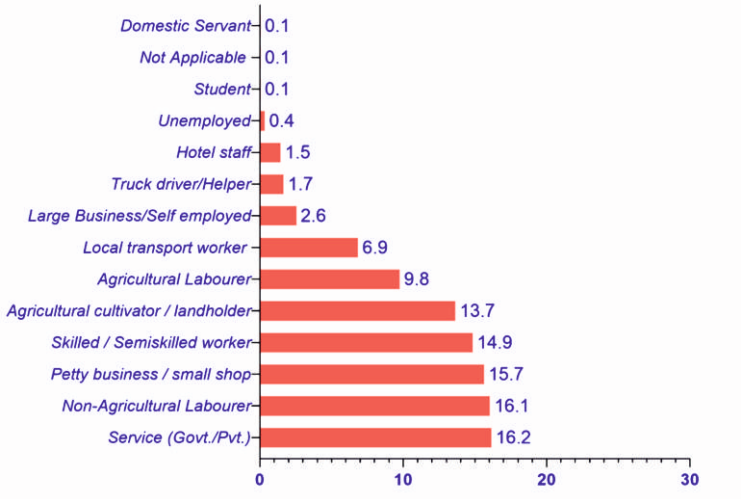
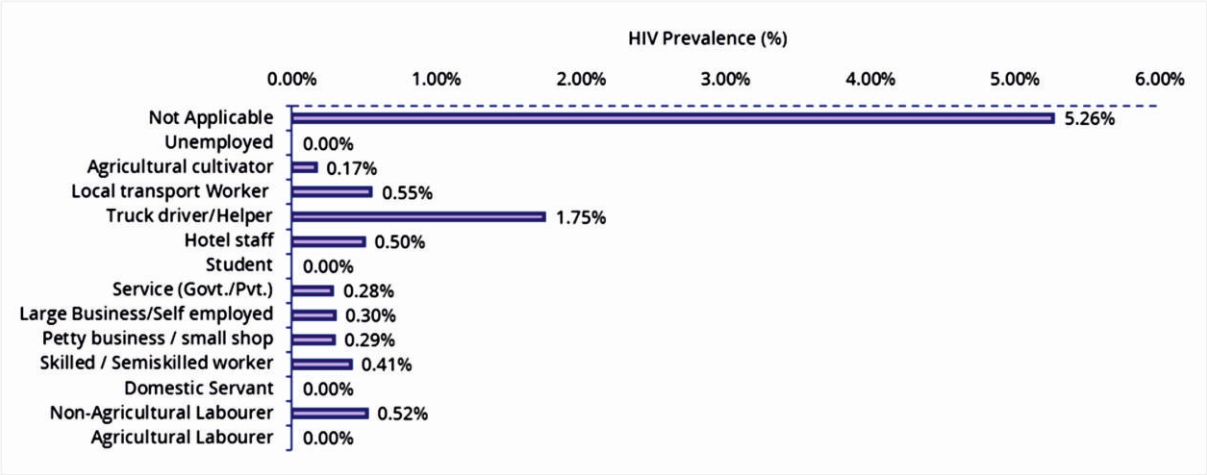


Figure 26: HIV Prevalence among ANC Clinic Attendees by Current Occupation of Spouse



4.10 Distribution and HIV Prevalence by Migration Status of the Respondents' Spouse:

The spouse of the respondent is considered to be a migrant if he resides alone in another place or town away from wife for work for longer than 6 months. In Odisha, during HSS 2019, 94.9% of the pregnant women reported their husbands to be non-migrants while the spouses of 5.0% pregnant women were migrants. About 0.1% of the pregnant women were not living with their spouses (never married / separated/ widowed/divorced). While the HIV prevalence among pregnant women with migrant spouses was 0.76%, that of the pregnant women with non-migrant spouses was 0.32%. Highest prevalence (5.26 %) was among pregnant women who were not living with their spouses

Figure 27: Percentage of respondents with migrant spouse

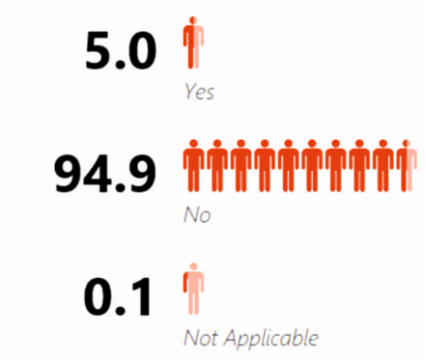
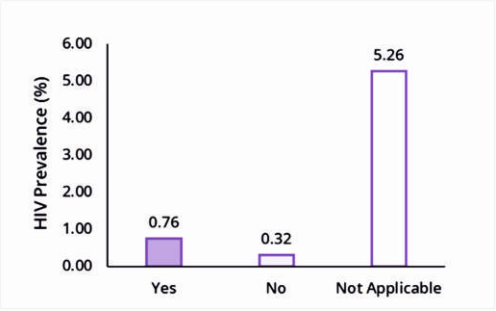


Figure 28: HIV Prevalence among ANC Clinic Attendees by Migration status of Spouse



4.11 Distribution and HIV Prevalence by HIV Test History:

With reference to their previous HIV test history, 35.7% of the respondents were already tested for HIV, prior to the current surveillance. HIV prevalence among those who had previously tested for HIV was 0.53%.

HIV Testing has been mandated for all pregnant mothers. Among the respondents, 10.2% had tested for HIV prior to the surveillance during current pregnancy while 25.5% had tested before current pregnancy, whereas 64.3% had not tested for HIV.

Of the total respondents, 35.7% had last tested for HIV, prior to the current surveillance, 34.4% were HIV Negative, 0.2% were HIV positive, 0.7% had not collected the results of the last HIV test and 0.5% had no response.

Figure 29: Percent Distribution of respondents by HIV testing history

Figure 30: HIV Prevalence by HIV Test History

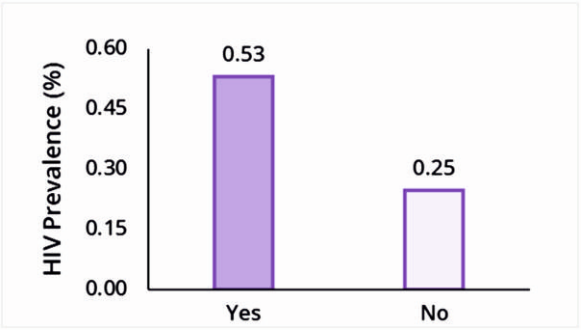


Figure 31: Percent Distribution of respondents by Time of last HIV Testing

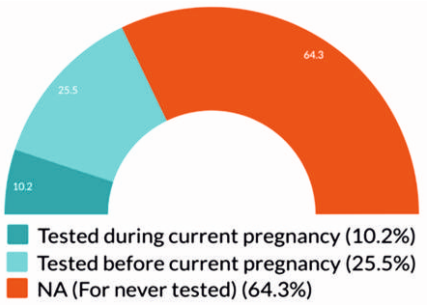
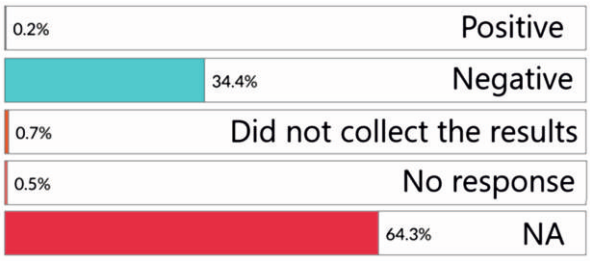


Figure 32: HIV prevalence by Result of last HIV test



4.12 Distribution and HIV Prevalence by HIV Management:

Based on the result of the last HIV test of the respondents, 46 pregnant women were reported to be known-positives. HIV management related information were gathered from known-positive respondents. With reference to the enrolment of HIV positive respondents in any HIV care, either for pre-ART or ART services, at the time of surveillance, 97.8% (n=45) of them, were taking care from Government hospital/ART centres, 2.2% (n=1) were not seeking any care for HIV management. With reference to the current uptake of 'Antiretroviral therapy' or HIV medications, 97.8% (n=45) of them, were taking ART or HIV medications, whereas 2.2% (n=1) were not taking any HIV medications.

CHAPTER 5

5.1 District-wise Distribution of Respondents, HIV Prevalence and Trend

The national, state and district response to the HIV epidemic is guided by data obtained through HIV Sentinel Surveillance (HSS). The HIV epidemic in India continues to be concentrated among HRG with low level and declining prevalence among general population. Over time, HIV Sentinel Surveillance has offered vital clues to newer areas where HIV was emerging, highlighting rising trends in certain districts or regions.

This chapter gives district-wise distribution of respondents, HIV prevalence and its trend details as observed against the key fifteen socio-demographic variables which were recorded for each respondent. Data from the year 2002 has been used for trend analysis. Data from only consistent sites was used for trend analysis as it avoids the effect of addition of new sites on HIV prevalence in subsequent years, and hence provides a better picture of HIV trends in a district. Though there was a clear declining trend seen in Odisha, within the state, there are variations in HIV prevalence among the districts. A detailed district-wise analysis by applying local knowledge about vulnerabilities and risk factors, will be needed to understand heterogeneity of the disease and inter-district variations, which is essential for planning district strategies in HIV prevention and control.

Figure 33: District-wise HIV Prevalence in Odisha, 2019

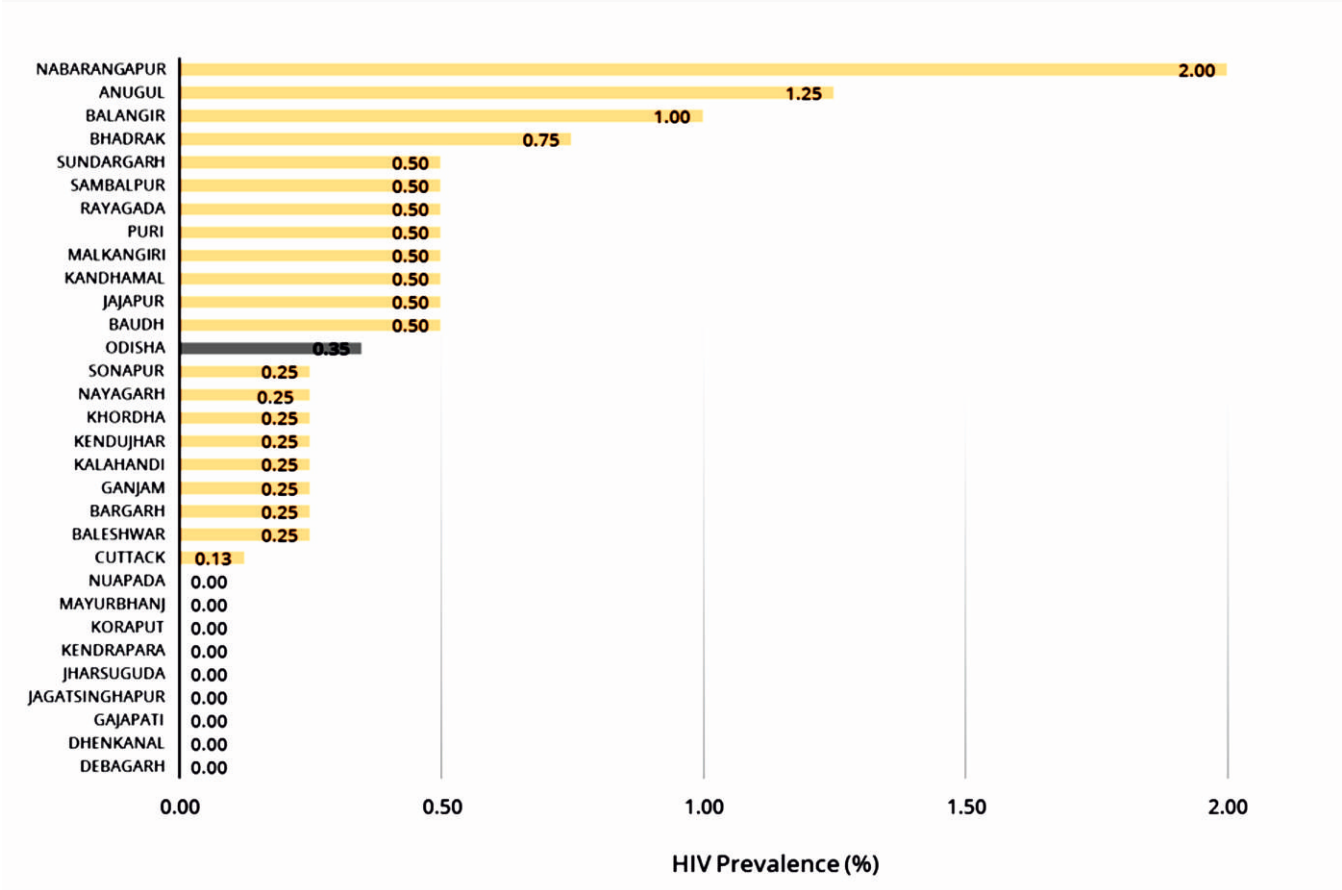


Figure 34 : Spatial Representation of district-wise HIV Prevalence in Odisha, 2019

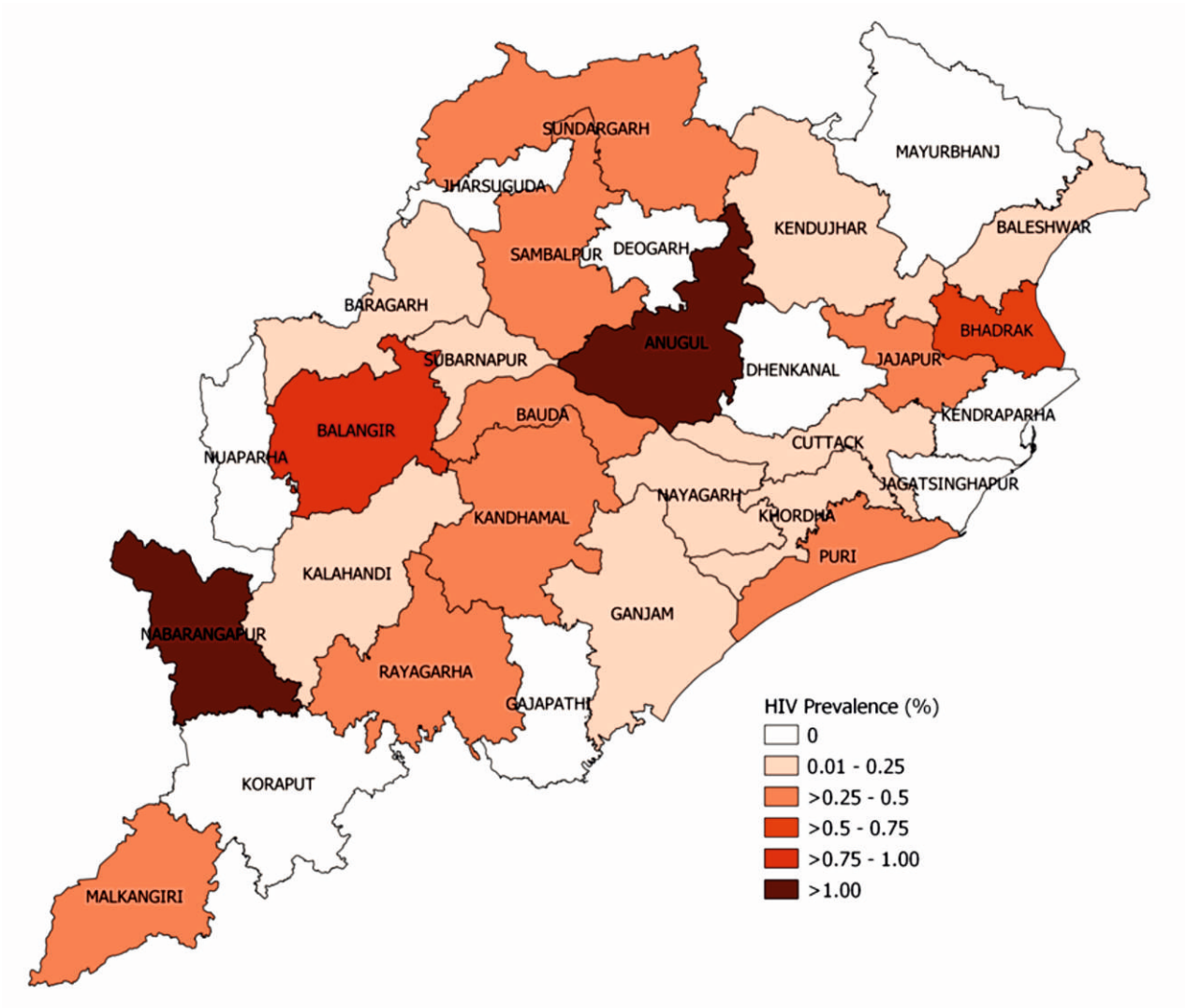


Table 4 : District-wise distribution of respondents based on the age group (%)

Age Group	15-24	25-34	35-44	45-49	Total
Orissa	54.0	43.3	2.7	0	**13200**
Anugul	59.0	38.8	2.3	0	400
Balangir	55.0	41.5	3.5	0	400
Baleshwar	61.0	37.5	1.5	0	400
Bargarh	51.5	45.5	2.8	0.3	400
Baudh	64.5	32.5	3.0	0	400
Bhadrak	43.5	50.5	6.0	0	400
Cuttack	42.1	54.5	3.4	0	800
Debagarh	59.0	38.3	2.8	0	400
Dhenkanal	57.3	39.0	3.8	0	400
Gajapati	65.0	32.5	2.5	0	400
Ganjam	61.1	37.0	1.9	0	800
Jagatsinghapur	39.8	56.0	4.3	0	400
Jajapur	34.8	64.5	0.8	0	400
Jharsuguda	49.3	47.8	3.0	0	400
Kalahandi	54.5	41.3	4.3	0	400
KANDHAMAL	48.3	48.0	3.8	0	400
Kendrapara	36.0	56.3	7.5	0.3	400
Kendujhar	58.8	38.3	2.8	0.3	400
Khordha	46.0	52.5	1.5	0	400
Koraput	57.9	39.8	2.4	0	800
Malkangiri	64.5	34.5	1.0	0	400
Mayurbhanj	64.5	35.0	0.5	0	400
NABARANGAPUR	56.5	40.5	2.8	0.3	400
Nayagarh	66.3	32.5	1.3	0	400
Nuapada	60.3	38.5	1.3	0	400
Puri	44.0	53.5	2.5	0	400
Rayagada	54.0	42.5	3.3	0.3	400
Sambalpur	52.8	44.0	3.3	0	400
Sonapur	61.0	38.0	1.0	0	400
Sundargarh	52.3	45.5	2.3	0	400

Table 5: District-wise distribution of respondents based on the literacy status (%)

State/District	Illiterate	Literate and till 5th standard	6th to 10th standard	11th to Graduation	Post Graduation	Total
Orissa	10.2	16.1	52.9	19.8	0.9	**13200**
Anugul	6.8	9.8	55.8	27.0	0.8	400
Balangir	2.3	13.0	60.5	24.3	0.0	400
Baleshwar	0.5	17.2	50.8	29.8	1.8	400
Bargarh	8.3	11.3	62.8	17.8	0.0	400
Baudh	3.5	11.5	63.5	20.8	0.8	400
Bhadrak	3.5	21.5	47.8	25.8	1.5	400
Cuttack	1.4	9.3	72.5	15.6	1.3	800
Debagarh	11.8	11.3	55.0	22.0	0.0	400
Dhenkanal	0.8	17.8	62.5	18.8	0.3	400
Gajapati	18.8	55.0	23.5	2.8	0.0	400
Ganjam	6.5	22.8	55.3	14.5	1.0	800
Jagatsinghapur	4.8	26.0	49.8	19.5	0.0	400
Jajapur	0.0	7.0	61.8	30.5	0.8	400
Jharsuguda	3.3	17.8	55.0	24.0	0.0	400
Kalahandi	12.5	31.8	42.3	13.0	0.5	400
KANDHAMAL	1.5	26.3	44.3	26.3	1.8	400
Kendrapara	3.0	11.3	73.8	11.8	0.3	400
Kendujhar	45.5	22.5	21.3	10.8	0.0	400
Khordha	1.3	7.3	56.3	32.0	3.3	400
Koraput	35.4	14.0	30.5	19.1	1.0	800
Malkangiri	27.5	7.8	44.5	18.8	1.5	400
Mayurbhanj	13.0	14.0	50.5	22.3	0.3	400
NABARANGAPUR	28.5	15.0	40.0	14.8	1.8	400
Nayagarh	0.3	5.3	71.3	22.5	0.8	400
Nuapada	2.3	15.0	70.5	11.3	1.0	400
Puri	0.3	10.3	66.3	22.5	0.8	400
Rayagada	39.6	8.3	27.1	22.8	2.3	400
Sambalpur	3.8	20.5	53.8	20.3	1.8	400
Sonapur	1.5	11.5	67.0	20.0	0.0	400
Sundargarh	5.5	14.5	53.6	24.8	1.5	400

Table 6: District-wise distribution of respondents based on the Order of Pregnancy (%)

State/District	First	Second	Third	Fourth or more	Total
Orissa	50.0	35.3	11.0	3.6	**13200**
Anugul	53.3	39.0	6.0	1.8	400
Balangir	42.0	41.8	12.5	3.8	400
Baleshwar	53.8	36.5	8.0	1.8	400
Bargarh	47.3	39.0	11.0	2.8	400
Baudh	51.8	31.5	12.0	4.8	400
Bhadrak	40.3	37.0	16.8	6.0	400
Cuttack	55.6	31.5	9.0	3.9	800
Debagarh	52.3	34.0	10.3	3.5	400
Dhenkanal	46.5	33.8	15.5	4.3	400
Gajapati	52.5	34.3	9.3	4.0	400
Ganjam	49.3	39.3	9.9	1.6	800
Jagatsinghapur	50.8	37.5	9.8	2.0	400
Jajapur	75.3	24.5	0.3	0.0	400
Jharsuguda	43.3	39.5	11.8	5.5	400
Kalahandi	49.5	32.8	12.3	5.5	400
KANDHAMAL	46.0	33.8	15.0	5.3	400
Kendrapara	39.0	43.8	14.5	2.8	400
Kendujhar	55.3	31.3	10.0	3.5	400
Khordha	48.0	45.0	6.5	0.5	400
Koraput	48.0	31.8	15.1	5.1	800
Malkangiri	53.8	31.8	10.8	3.8	400
Mayurbhanj	52.8	36.3	10.0	1.0	400
NABARANGAPUR	49.5	25.0	15.3	10.3	400
Nayagarh	54.0	34.3	8.3	3.5	400
Nuapada	46.8	35.3	13.8	4.0	400
Puri	51.3	38.5	8.3	2.0	400
Rayagada	44.8	32.3	16.3	6.8	400
Sambalpur	48.3	35.0	12.3	4.0	400
Sonapur	45.0	43.0	9.5	2.5	400
Sundargarh	52.5	34.0	10.0	3.3	400

Table 7: District-wise distribution of respondents based on the Duration of Pregnancy (%)

State/District	First trimester	Second trimester	Third trimester	Total
Orissa	33.2	39.7	27.0	**13200**
Anugul	28.8	37.3	34.0	400
Balangir	27.5	55.8	16.8	400
Baleshwar	38.8	39.0	22.3	400
Bargarh	34.3	36.3	29.5	400
Baudh	56.0	35.0	9.0	400
Bhadrak	45.5	43.3	11.3	400
Cuttack	28.5	42.4	29.0	800
Debagarh	30.8	46.5	22.8	400
Dhenkanal	9.8	49.8	40.5	400
Gajapati	6.8	29.3	64.0	400
Ganjam	31.4	37.5	31.1	800
Jagatsinghapur	58.3	28.3	13.5	400
Jajapur	16.3	60.8	23.0	400
Jharsuguda	57.0	27.5	15.5	400
Kalahandi	30.8	45.3	24.0	400
KANDHAMAL	43.0	44.0	13.0	400
Kendrapara	59.0	32.0	9.0	400
Kendujhar	16.3	43.0	40.5	400
Khordha	62.5	31.8	5.8	400
Koraput	27.0	43.3	29.5	800
Malkangiri	16.0	39.3	44.8	400
Mayurbhanj	38.3	46.8	14.5	400
NABARANGAPUR	24.3	45.8	30.0	400
Nayagarh	33.5	45.8	20.8	400
Nuapada	13.0	21.8	65.3	400
Puri	40.8	37.5	21.8	400
Rayagada	20.5	43.3	36.0	400
Sambalpur	28.3	39.8	31.5	400
Sonapur	56.0	33.3	10.8	400
Sundargarh	31.5	26.8	41.5	400

Table 8: District-wise distribution of respondents based on the Prior ANC service uptake (%)

State/District	YES	NO	Total
Orissa	**58.2**	**41.7**	**13200**
Anugul	94.8	5.3	400
Balangir	99.0	1.0	400
Baleshwar	99.3	0.3	400
Bargarh	59.0	41.0	400
Baudh	28.8	71.3	400
Bhadrak	84.3	15.8	400
Cuttack	43.0	57.0	800
Debagarh	10.8	88.5	400
Dhenkanal	53.0	47.0	400
Gajapati	81.8	18.3	400
Ganjam	42.3	57.8	800
Jagatsinghapur	44.3	55.8	400
Jajapur	77.3	22.8	400
Jharsuguda	34.5	65.5	400
Kalahandi	61.3	38.8	400
KANDHAMAL	99.0	1.0	400
Kendrapara	29.3	70.5	400
Kendujhar	18.5	81.5	400
Khordha	18.8	81.3	400
Koraput	59.6	40.3	800
Malkangiri	100.0	0.0	400
Mayurbhanj	23.8	76.3	400
NABARANGAPUR	96.8	3.3	400
Nayagarh	100.0	0.0	400
Nuapada	97.8	1.8	400
Puri	52.0	48.0	400
Rayagada	26.5	73.5	400
Sambalpur	52.3	47.0	400
Sonapur	41.8	58.3	400
Sundargarh	47.8	52.3	400

Table 9 : District-wise distribution of respondents based on the Source of Referral (%)

State/District	Self Referral	Family/ Relatives/ Neighbors/ Friends	NGO	Private (Doctor/ Nurses)	Govt (including, ASHA/ ANM)	ICTC / ART Centre	Total
Orissa	**9.3**	**23.6**	**0.1**	**2.5**	**64.5**	**0.0**	**13200**
Anugul	0.0	0.0	0.0	2.8	97.3	0.0	400
Balangir	0.0	0.5	0.0	0.5	99.0	0.0	400
Baleshwar	5.8	10.5	0.0	0.3	83.0	0.3	400
Bargarh	62.5	0.0	0.0	0.0	37.5	0.0	400
Baudh	1.0	83.3	0.3	0.0	15.5	0.0	400
Bhadrak	0.3	0.3	0.0	39.0	60.5	0.0	400
Cuttack	12.5	3.9	0.0	0.0	83.6	0.0	800
Debagarh	8.0	78.8	0.0	0.0	13.3	0.0	400
Dhenkanal	8.0	62.3	0.0	0.8	29.0	0.0	400
Gajapati	1.8	22.5	0.0	0.0	75.8	0.0	400
Ganjam	0.0	15.5	0.1	0.0	84.4	0.0	800
Jagatsinghapur	0.0	0.0	0.0	0.0	99.8	0.0	400
Jajapur	1.8	59.0	0.0	0.0	39.3	0.0	400
Jharsuguda	0.0	0.0	0.0	0.8	99.3	0.0	400
Kalahandi	5.3	2.0	0.3	9.5	83.0	0.0	400
KANDHAMAL	5.3	65.3	0.0	0.0	29.5	0.0	400
Kendrapara	10.5	41.5	0.0	0.3	47.8	0.0	400
Kendujhar	15.0	12.8	0.0	10.0	62.3	0.0	400
Khordha	5.8	20.3	0.0	0.8	73.3	0.0	400
Koraput	4.5	45.1	0.0	0.0	50.4	0.0	800
Malkangiri	0.0	0.3	0.0	0.3	99.3	0.0	400
Mayurbhanj	28.5	0.5	0.3	15.8	54.8	0.0	400
NABARANGAPUR	3.3	0.0	0.0	0.0	96.8	0.0	400
Nayagarh	0.0	0.0	0.3	0.0	99.8	0.0	400
Nuapada	1.0	58.5	0.8	0.3	39.0	0.0	400
Puri	2.0	71.8	0.0	0.0	26.3	0.0	400
Rayagada	5.0	44.8	0.3	0.0	49.3	0.0	400
Sambalpur	5.8	11.3	0.0	0.3	82.0	0.0	400
Sonapur	95.0	4.8	0.0	0.0	0.3	0.0	400
Sundargarh	0.0	0.0	0.0	0.0	99.5	0.0	400

Table 10: District-wise distribution of respondents based on Place of Residence (%)

State/District	Urban	Rural	Total
Orissa	26.0	73.9	**13200**
Anugul	11.3	88.8	400
Balangir	26.5	73.5	400
Baleshwar	40.3	59.8	400
Bargarh	28.8	71.3	400
Baudh	13.8	86.3	400
Bhadrak	39.5	60.5	400
Cuttack	15.0	85.0	800
Debagarh	6.0	94.0	400
Dhenkanal	16.5	83.5	400
Gajapati	10.5	89.5	400
Ganjam	18.3	81.8	800
Jagatsinghapur	15.5	84.5	400
Jajapur	23.0	77.0	400
Jharsuguda	79.8	20.3	400
Kalahandi	26.3	73.8	400
KANDHAMAL	27.0	73.0	400
Kendrapara	9.3	90.8	400
Kendujhar	19.3	80.5	400
Khordha	81.0	19.0	400
Koraput	27.9	72.1	800
Malkangiri	28.0	72.0	400
Mayurbhanj	25.8	74.3	400
NABARANGAPUR	18.3	81.8	400
Nayagarh	4.8	95.3	400
Nuapada	12.8	87.0	400
Puri	21.5	78.3	400
Rayagada	32.3	67.8	400
Sambalpur	38.0	61.8	400
Sonapur	9.0	91.0	400
Sundargarh	72.8	27.3	400

Table 11: District-wise distribution of respondents based on the Occupation (%)

State/District	Agricultural Labourer	Non-Agricultural Labourer	Domestic Servant	Skilled / Semiskilled worker	Petty business / small shop	Large Business/Self employed	Service (Govt./Pvt.)	Student	Hotel staff	Truck driver/Helper	Local transport Worker	Agricultural cultivator	Housewife	Total
Orissa	1.1	1.2	0.1	0.2	0.3	0.1	2.2	0.2	0.0	0.0	0.0	0.1	94.5	**13200**
Anugul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	400
Balangir	5.3	2.0	0.0	0.3	0.0	0.3	1.5	0.5	0.0	0.0	0.0	0.0	90.3	400
Baleshwar	0.0	0.3	0.0	0.3	1.3	0.3	4.8	0.0	0.0	0.0	0.0	0.3	93.0	400
Bargarh	0.0	0.3	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.0	98.8	400
Baudh	1.8	3.0	0.0	1.3	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	92.5	400
Bhadrak	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.0	98.3	400
Cuttack	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	99.0	800
Debagarh	2.3	1.5	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0	1.0	94.0	400
Dhenkanal	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3	0.0	0.0	0.0	0.3	98.3	400
Gajapati	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	99.8	400
Ganjam	0.0	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	99.0	800
Jagatsinghapur	3.0	9.0	1.3	3.5	0.5	0.5	8.0	0.3	0.0	0.0	0.0	0.5	73.5	400
Jajapur	0.0	0.8	0.0	0.3	5.0	0.3	7.5	0.0	0.0	0.0	0.0	0.0	86.3	400
Jharsuguda	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.0	99.0	400
Kalahandi	9.8	13.8	0.0	0.3	0.0	0.3	2.5	0.3	0.3	0.0	0.0	0.5	72.5	400
KANDHAMAL	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.5	0.0	0.0	0.0	0.0	94.5	400
Kendrapara	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	99.0	400
Kendujhar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.5	400
Khordha	0.0	0.3	0.0	0.5	0.5	0.3	3.5	0.8	0.0	0.0	0.0	0.0	94.3	400
Koraput	6.1	1.8	0.0	0.4	0.8	0.1	4.5	0.3	0.0	0.0	0.0	0.1	86.0	800
Malkangiri	0.5	0.3	0.0	0.0	0.0	0.0	4.5	0.3	0.0	0.0	0.0	0.5	94.0	400
Mayurbhanj	0.0	1.0	0.0	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.3	98.0	400
NABARANGAPUR	0.3	0.0	0.0	0.0	0.0	0.5	2.0	0.5	0.0	0.0	0.3	0.0	96.5	400
Nayagarh	0.3	0.0	0.0	0.0	0.3	0.0	1.5	0.3	0.0	0.0	0.0	0.0	97.8	400
Nuapada	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	97.5	400
Puri	0.0	0.0	0.0	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	99.0	400
Rayagada	0.0	0.3	0.0	0.3	0.0	0.3	2.8	0.0	0.0	0.0	0.0	0.0	96.5	400
Sambalpur	0.3	0.8	0.0	0.0	0.0	0.0	4.5	0.5	0.0	0.0	0.0	0.0	94.0	400
Sonapur	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	98.8	400
Sundargarh	0.3	0.5	0.5	0.3	0.0	0.0	2.3	0.8	0.0	0.0	0.0	0.0	95.5	400

Table 12: District-wise distribution of respondents based on the Occupation of spouse (%)

State/District	Agricultural Labourer	Non-Agricultural Labourer	Domestic Servant	Skilled / Semiskilled worker	Petty business / small shop	Large Business/Self employed	Service (Govt./Pvt.)	Student	Hotel staff	Truck driver/Helper	Local transport Worker	Agricultural cultivator	Unemployed	Not Applicable	Total
Orissa	9.8	16.1	0.1	14.9	15.7	2.6	16.2	0.1	1.5	1.7	6.9	13.7	0.4	0.1	**13200**
Anugul	0.0	15.8	0.0	12.0	18.3	0.0	36.5	0.0	1.3	3.3	7.0	5.5	0.3	0.3	400
Balangir	9.5	16.0	0.0	16.5	13.3	5.8	11.0	0.3	0.5	0.5	5.8	21.0	0.0	0.0	400
Baleshwar	0.8	5.5	0.3	17.0	34.0	0.5	17.8	0.0	2.3	2.3	19.0	0.3	0.3	0.3	400
Bargarh	23.5	24.0	0.0	14.0	14.3	0.0	7.8	0.0	0.3	0.0	8.3	7.5	0.3	0.3	400
Baudh	2.0	14.0	0.0	12.5	14.8	0.5	11.0	0.3	0.3	2.0	3.8	38.8	0.0	0.3	400
Bhadrak	0.5	26.5	0.0	7.3	31.3	2.8	16.0	0.5	4.0	0.0	6.5	4.8	0.0	0.0	400
Cuttack	9.8	9.3	0.0	21.6	15.6	2.4	22.9	0.0	4.4	0.4	10.4	2.9	0.3	0.0	800
Debagarh	6.0	22.0	0.0	5.8	3.3	3.0	7.0	0.0	0.8	3.5	3.0	45.0	0.5	0.3	400
Dhenkanal	1.0	25.3	0.0	29.8	7.8	6.0	12.0	0.0	1.3	5.8	5.3	4.3	1.3	0.5	400
Gajapati	54.8	0.8	0.0	27.0	9.0	0.3	6.8	0.3	0.0	0.0	1.3	0.0	0.0	0.0	400
Ganjam	2.0	28.3	0.6	12.9	18.3	2.0	11.0	0.0	1.6	2.6	6.9	13.3	0.6	0.0	800
Jagatsinghapur	8.0	12.0	0.0	17.0	11.5	4.3	20.8	0.0	11.5	3.8	4.5	6.5	0.0	0.3	400
Jajapur	0.8	5.0	0.0	27.5	34.8	9.3	19.5	0.0	0.5	0.5	1.8	0.5	0.0	0.0	400
Jharsuguda	0.0	33.0	0.5	8.0	13.3	3.3	29.8	0.3	0.5	0.0	9.0	2.3	0.0	0.3	400
Kalahandi	2.0	32.8	0.0	15.8	10.8	4.5	13.8	0.3	1.0	0.3	8.0	10.5	0.5	0.0	400
KANDHAMAL	25.8	24.5	0.0	7.3	14.3	0.5	15.8	0.0	1.0	0.5	7.5	1.3	1.3	0.5	400
Kendrapara	12.5	15.5	0.0	33.3	19.3	0.3	11.8	0.0	1.8	3.8	2.0	0.0	0.0	0.0	400
Kendujhar	33.8	0.5	0.8	12.0	10.5	5.3	6.5	0.0	1.5	7.0	2.5	16.0	3.8	0.0	400
Khordha	0.5	6.8	0.0	16.0	20.5	7.0	29.5	0.0	1.0	1.0	16.8	1.0	0.0	0.0	400
Koraput	25.9	18.6	0.0	10.8	10.5	0.9	19.3	0.9	0.3	2.0	10.3	0.6	0.0	0.0	800
Malkangiri	1.3	8.8	0.0	17.3	11.8	0.8	17.0	0.5	0.5	0.5	6.8	34.8	0.3	0.0	400
Mayurbhanj	0.8	14.3	0.0	7.8	21.8	1.3	16.8	0.0	0.0	2.0	9.0	26.5	0.0	0.0	400
NABARANGAPUR	7.0	21.5	0.0	13.8	6.5	9.8	10.5	0.0	1.5	1.5	8.3	18.8	0.5	0.5	400
Nayagarh	7.3	13.5	0.0	25.3	20.8	0.0	14.5	0.3	0.0	4.5	9.8	4.3	0.0	0.0	400
Nuapada	3.0	5.0	0.0	0.5	9.3	0.0	12.3	0.0	0.0	0.3	2.3	67.0	0.5	0.0	400
Puri	18.8	3.8	0.0	15.3	31.8	0.0	21.5	0.0	2.5	0.0	6.5	0.0	0.0	0.0	400
Rayagada	1.3	11.8	0.0	8.8	9.0	2.3	24.0	0.5	1.0	1.3	4.0	36.3	0.0	0.0	400
Sambalpur	7.8	21.0	0.0	13.3	11.5	0.5	13.3	0.0	0.5	1.0	3.3	27.8	0.3	0.0	400
Sonapur	20.0	3.3	0.0	11.0	15.3	5.5	4.8	0.0	0.8	0.0	3.5	36.0	0.0	0.0	400
Sundargarh	0.3	35.3	0.0	11.0	12.8	0.8	21.0	0.0	1.8	2.3	9.0	3.3	1.3	1.5	400

Table 13: District-wise distribution of respondents based on Migration of Spouse (%)

State/District	Yes	No	Not Applicable	Total
Orissa	5.0	94.9	0.1	**13200**
Anugul	3.5	96.3	0.3	400
Balangir	5.8	94.3	0	400
Baleshwar	17.8	81.8	0.3	400
Bargarh	0	99.8	0.3	400
Baudh	0.3	99.5	0.3	400
Bhadrak	17.3	82.8	0	400
Cuttack	8.5	91.5	0	800
Debagarh	3.8	96.0	0.3	400
Dhenkanal	3.0	96.5	0.5	400
Gajapati	5.0	95.0	0	400
Ganjam	1.1	98.9	0	800
Jagatsinghapur	11.5	88.3	0.3	400
Jajapur	9.5	90.5	0	400
Jharsuguda	0	99.8	0.3	400
Kalahandi	0.3	99.8	0	400
KANDHAMAL	0	99.5	0.5	400
Kendrapara	23.5	76.5	0	400
Kendujhar	10.8	89.0	0	400
Khordha	0.3	99.8	0	400
Koraput	2.1	97.9	0	800
Malkangiri	2.5	97.5	0	400
Mayurbhanj	14.5	85.5	0	400
NABARANGAPUR	0.3	99.3	0.5	400
Nayagarh	1.8	98.3	0	400
Nuapada	0	100.0	0	400
Puri	5.5	94.5	0	400
Rayagada	3.0	97.0	0	400
Sambalpur	0.3	99.8	0	400
Sonapur	0	100.0	0	400
Sundargarh	0.5	98.0	1.5	400

Table 14: District-wise distribution of respondents based on HIV tested history (%)

State/District	Yes	No	Total
Orissa	35.7	64.3	**13200**
Anugul	18.3	81.8	400
Balangir	49.5	50.5	400
Baleshwar	50.3	49.8	400
Bargarh	0.3	99.8	400
Baudh	27.0	73.0	400
Bhadrak	40.8	59.3	400
Cuttack	26.1	73.9	800
Debagarh	0.3	99.8	400
Dhenkanal	27.3	72.8	400
Gajapati	49.0	51.0	400
Ganjam	18.3	81.8	800
Jagatsinghapur	56.0	44.0	400
Jajapur	24.5	75.5	400
Jharsuguda	63.8	36.3	400
Kalahandi	44.0	56.0	400
KANDHAMAL	29.0	71.0	400
Kendrapara	2.3	97.8	400
Kendujhar	22.3	77.5	400
Khordha	43.8	56.3	400
Koraput	45.5	54.5	800
Malkangiri	92.5	7.5	400
Mayurbhanj	37.3	62.8	400
NABARANGAPUR	36.8	63.3	400
Nayagarh	42.5	57.5	400
Nuapada	49.8	50.3	400
Puri	39.0	61.0	400
Rayagada	44.8	55.3	400
Sambalpur	25.3	74.8	400
Sonapur	51.8	48.3	400
Sundargarh	31.5	68.5	400

Table 15: District-wise distribution of respondents based on the Time of their last HIV test (%)

(Only the respondent whom tested for HIV test previously)

State/District	Tested previously during current pregnancy	Consented today	Tested before current pregnancy	Total
Orissa	28.57	0.00	71.43	**4715**
Anugul	5.48	0.00	94.52	73
Balangir	1.52	0.00	98.48	198
Baleshwar	17.41	0.00	82.59	201
Bargarh	100.00	0.00	0.00	1
Baudh	33.33	0.00	66.67	108
Bhadrak	15.34	0.00	84.66	163
Cuttack	48.80	0.00	51.20	209
Debagarh	0.00	0.00	100.00	1
Dhenkanal	76.15	0.00	23.85	109
Gajapati	4.59	0.00	95.41	196
Ganjam	0.00	0.00	100.00	146
Jagatsinghapur	45.54	0.00	54.46	224
Jajapur	1.02	0.00	98.98	98
Jharsuguda	32.55	0.00	67.45	255
Kalahandi	15.34	0.00	84.66	176
KANDHAMAL	93.10	0.00	6.90	116
Kendrapara	100.00	0.00	0.00	9
Kendujhar	0.00	0.00	100.00	89
Khordha	1.14	0.00	98.86	175
Koraput	7.97	0.00	92.03	364
Malkangiri	57.57	0.00	42.43	370
Mayurbhanj	0.67	0.00	99.33	149
NABARANGAPUR	16.33	0.00	83.67	147
Nayagarh	1.18	0.00	98.82	170
Nuapada	2.51	0.00	97.49	199
Puri	97.44	0.00	2.56	156
Rayagada	21.23	0.00	78.77	179
Sambalpur	68.32	0.00	31.68	101
Sonapur	66.67	0.00	33.33	207
Sundargarh	36.51	0.00	63.49	126

Table 16: District-wise distribution of respondents based on the Result of their last HIV test (%)

(Only the respondent whom tested for HIV test previously)

State/District	Positive	Negative	Did not collect the test result	No Response	Total
Orissa	0.51	96.20	2.01	1.27	**4715**
Anugul	4.11	95.89	0.00	0.00	73
Balangir	0.51	99.49	0.00	0.00	198
Baleshwar	0.50	99.00	0.50	0.00	201
Bargarh	0.00	100.00	0.00	0.00	1
Baudh	0.00	100.00	0.00	0.00	108
Bhadrak	1.84	98.16	0.00	0.00	163
Cuttack	0.48	99.04	0.48	0.00	209
Debagarh	0.00	100.00	0.00	0.00	1
Dhenkanal	0.00	100.00	0.00	0.00	109
Gajapati	0.00	100.00	0.00	0.00	196
Ganjam	0.68	99.32	0.00	0.00	146
Jagatsinghapur	0.00	100.00	0.00	0.00	224
Jajapur	1.02	51.02	0.00	47.96	98
Jharsuguda	0.00	100.00	0.00	0.00	255
Kalahandi	0.57	89.20	3.98	6.25	176
KANDHAMAL	0.86	99.14	0.00	0.00	116
Kendrapara	0.00	100.00	0.00	0.00	9
Kendujhar	0.00	100.00	0.00	0.00	89
Khordha	0.57	99.43	0.00	0.00	175
Koraput	0.00	100.00	0.00	0.00	364
Malkangiri	0.27	99.73	0.00	0.00	370
Mayurbhanj	0.00	100.00	0.00	0.00	149
NABARANGAPUR	2.72	97.28	0.00	0.00	147
Nayagarh	0.00	100.00	0.00	0.00	170
Nuapada	0.00	92.46	7.54	0.00	199
Puri	1.28	98.72	0.00	0.00	156
Rayagada	0.00	59.22	39.66	1.12	179
Sambalpur	1.98	98.02	0.00	0.00	101
Sonapur	0.00	100.00	0.00	0.00	207
Sundargarh	0.79	99.21	0.00	0.00	126

Table 17: District-wise distribution of respondents based on the HIV management (%)

State/District	(1) ART	(2) NGO	(3) PVt	(4)Pharmacist/ Chemist	(5) Alternative/non Allopathic	(6) Any other type	(7) Not seeking taking for HIV management	Total
Orissa	**23**						**1**	**24**
Anugul	3							3
Balangir	1							1
Baleshwar	1							1
Bhadrak	3							3
Cuttack	1							1
Ganjam	1							1
Jajapur	1							1
Kalahandi	1							1
KANDHAMAL	1							1
Khordha	1							1
Malkangiri	1							1
NABARANGAPUR	3						1	4
Puri	2							2
Sambalpur	2							2
Sundargarh	1							1

Table 18: District-wise distribution of HIV positive respondents based on the ART uptake (%)

(Results Only;If respondent whom Previous HIV test results positive and ART taken currently or not)

State/District	1. Yes	2. No	Total
Orissa	**91.7**	**8.3**	**24**
Anugul	100	0	3
Balangir	100	0	1
Baleshwar	100	0	1
Bhadrak	100	0	3
Cuttack	100	0	1
Ganjam	100	0	1
Jajapur	100	0	1
Kalahandi	100	0	1
KANDHAMAL	100	0	1
Khordha	100	0	1
Malkangiri	100	0	1
NABARANGAPUR	50.0	50.0	4
Puri	100	0	2
Sambalpur	100	0	2
Sundargarh	100	0	1

Table 19 : HIV Prevalence among ANC Clinic Attendees by Age

State/Districts	15-24		25-34		35-44		45-49		Total
	%	Total	%	Total	%	Total	%	Total	
Orissa	0.35	7125	0.33	5710	0.56	360	0	5	**13200**
Anugul	1.69	236	0.65	155	0	9			400
Balangir	0.45	220	1.81	166	0	14			400
Baleshwar	0	244	0.67	150	0	6			400
Bargarh	0.49	206	0	182	0	11	0	1	400
Baudh	0	258	0.77	130	8.33	12			400
Bhadrak	0.57	174	0.99	202	0	24			400
Cuttack	0	337	0.23	436	0	27			800
Debagarh	0	236	0	153	0	11			400
Dhenkanal	0	229	0	156	0	15			400
Gajapati	0	260	0	130	0	10			400
Ganjam	0.20	489	0.34	296	0	15			800
Jagatsinghapur	0	159	0	224	0	17			400
Jajapur	0.72	139	0	258	33.33	3			400
Jharsuguda	0	197	0	191	0	12			400
Kalahandi	0	218	0.61	165	0	17			400
KANDHAMAL	0.52	193	0.52	192	0	15			400
Kendrapara	0	144	0	225	0	30	0	1	400
Kendujhar	0	235	0.65	153	0	11	0	1	400
Khordha	0	184	0.48	210	0	6			400
Koraput	0	463	0	318	0	19			800
Malkangiri	0.39	258	0.72	138	0	4			400
Mayurbhanj	0	258	0	140	0	2			400
NABARANGAPUR	2.21	226	1.85	162	0	11	0	1	400
Nayagarh	0.38	265	0	130	0	5			400
Nuapada	0	241	0	154	0	5			400
Puri	0.57	176	0.47	214	0	10			400
Rayagada	Ê	216	0	170	0	13	0	1	400
Sambalpur	0.95	211	0	176	0	13			400
Sonapur	0.41	244	0	152	0	4			400
Sundargarh	0.96	209	0	182	0	9			400

Table 20: HIV Prevalence (%) among ANC Clinic Attendees by Literacy Status and Districts

State/District	1. Illiterate		2. Literate and till 5th standard		3. 6th to 10th standard		4. 11th to Graduation		5. Post Graduation		Total
	%	Total	%	Total	%	Total	%	Total	%	Total	
Orissa	0.37	1345	0.42	2127	0.34	6985	0.31	2618	0	118	**13200**
Anugul	0	27	2.56	39	0.90	223	1.85	108	0	3	400
Balangir	0	9	1.92	52	0.83	242	1.03	97	0		400
Baleshwar	0	2	0	68	0.50	201	0	118	0	7	400
Bargarh	0	33	0	45	0.40	251	0	71	0		400
Baudh	0	14	2.17	46	0.39	254	0	83	0	3	400
Bhadrak	0	14	2.33	86	0.52	191	0	103	0	6	400
Cuttack	0	11	0	74	0.17	579	0	125	0	10	800
Debagarh	0	47	0	45	0	220	0	88	0		400
Dhenkanal	0	3	0	71	0	250	0	75	0	1	400
Gajapati	0	75	0	220	0	94	0	11	0		400
Ganjam	0	52	0	182	0.45	442	0	116	0	8	800
Jagatsinghapur	0	19	0	104	0	199	0	78	0		400
Jajapur	0		0	28	0.81	247	0	122	0	3	400
Jharsuguda	0	13	0	71	0	220	0	96	0		400
Kalahandi	2.00	50	0	127	0	169	0	52	0	2	400
KANDHAMAL	16.67	6	0	105	0.56	177	0	105	0	7	400
Kendrapara	0	12	0	45	0	295	0	47	0	1	400
Kendujhar	0	182	1.11	90	0	85	0	43	0		400
Khordha	0	5	0	29	0.44	225	0	128	0	13	400
Koraput	0	283	0	112	0	244	0	153	0	8	800
Malkangiri	0.91	110	0	31	0	178	1.33	75	0	6	400
Mayurbhanj	0	52	0	56	0	202	0	89	0	1	400
NABARANGAPUR	0.88	114	5.00	60	1.25	160	3.39	59	0	7	400
Nayagarh	0	1	0	21	0.35	285	0	90	0	3	400
Nuapada	0	9	0	60	0	282	0	45	0	4	400
Puri	0	1	0	41	0.75	265	0	90	0	3	400
Rayagada	0.63	158	0	33	0.93	108	0	91	0	9	400
Sambalpur	0	15	0	82	0.47	215	1.23	81	0	7	400
Sonapur	0	6	0	46	0.37	268	0	80	0		400
Sundargarh	0	22	0	58	0.47	214	1.01	99	0	6	400

Table 21: HIV Prevalence (%) among ANC Clinic Attendees by Order of Pregnancy and districts

State/District	First		2. Second		3. Third		4. Fourth or more		
	%	N	%	N	%	N	%	N	Total
Orissa	0.36	6603	0.19	4660	0.69	1454	0.63	479	**13200**
Anugul	1.88	213	0	156	4.17	24	0	7	400
Balangir	1.19	168	0	167	2.00	50	6.67	15	400
Baleshwar	0	215	0	146	3.13	32	0	7	400
Bargarh	0.53	189	0	156	0	44	0	11	400
Baudh	0.48	207	0	126	2.08	48	0	19	400
Bhadrak	0	161	0.68	148	1.49	67	4.17	24	400
Cuttack	0.22	445	0	252	0	72	0	31	800
Debagarh	0	209	0	136	0	41	0	14	400
Dhenkanal	0	186	0	135	0	62	0	17	400
Gajapati	0	210	0	137	0	37	0	16	400
Ganjam	0.25	394	0	314	1.27	79	0	13	800
Jagatsinghapur	0	203	0	150	0	39	0	8	400
Jajapur	0.66	301	0	98	0	1	0		400
Jharsuguda	0	173	0	158	0	47	0	22	400
Kalahandi	0	198	0	131	2.04	49	0	22	400
KANDHAMAL	0	184	0.74	135	1.67	60	0	21	400
Kendrapara	0	156	0	175	0	58	0	11	400
Kendujhar	0	221	0	125	2.50	40	0	14	400
Khordha	0.52	192	0	180	0	26	0	2	400
Koraput	0	384	0	254	0	121	0	41	800
Malkangiri	0.47	215	0.79	127	0	43	0	15	400
Mayurbhanj	0	211	0	145	0	40	0	4	400
NABARANGAPUR	1.52	198	4.00	100	0	61	2.44	41	400
Nayagarh	0.46	216	0	137	0	33	0	14	400
Nuapada	0	187	0	141	0	55	0	16	400
Puri	0	205	1.30	154	0	33	0	8	400
Rayagada	1.12	179	0	129	0	65	0	27	400
Sambalpur	0.52	193	0	140	2.04	49	0	16	400
Sonapur	0.56	180	0	172	0	38	0	10	400
Sundargarh	0.95	210	0	136	0	40	0	13	400

Table 22: HIV Prevalence (%) among ANC Clinic Attendees by Duration of Pregnancy and districts

State/District	First trimester		Second trimester		Third trimester		Total
	%	N	%	N	%	N	
Orissa	0.27	4387	0.32	5242	0.48	3561	**13200**
Anugul	1.74	115	0.67	149	1.47	136	400
Balangir	0	110	0.90	223	2.99	67	400
Baleshwar	0	155	0	156	1.12	89	400
Bargarh	0	137	0.69	145	0	118	400
Baudh	0.45	224	0.71	140	0	36	400
Bhadrak	0	182	0.58	173	4.44	45	400
Cuttack	0	228	0	339	0.43	232	800
Debagarh	0	123	0	186	0	91	400
Dhenkanal	0	39	0	199	0	162	400
Gajapati	0	27	0	117	0	256	400
Ganjam	0.40	251	0	300	0.40	249	800
Jagatsinghapur	0	233	0	113	0	54	400
Jajapur	0	65	0	243	2.17	92	400
Jharsuguda	0	228	0	110	0	62	400
Kalahandi	0	123	0	181	1.04	96	400
KANDHAMAL	0	172	1.14	176	0	52	400
Kendrapara	0	236	0	128	0	36	400
Kendujhar	0	65	0.58	172	0	162	400
Khordha	0.40	250	0	127	0	23	400
Koraput	0	216	0	346	0	236	800
Malkangiri	0	64	1.27	157	0	179	400
Mayurbhanj	0	153	0	187	0	58	400
NABARANGAPUR	3.09	97	1.64	183	1.67	120	400
Nayagarh	0	134	0	183	1.20	83	400
Nuapada	0	52	0	87	0	261	400
Puri	0	163	1.33	150	0	87	400
Rayagada	1.22	82	0	173	0.69	144	400
Sambalpur	0.88	113	0.63	159	0	126	400
Sonapur	0.45	224	0	133	0	43	400
Sundargarh	0.79	126	0	107	0.60	166	400

Table 23: HIV Prevalence (%) among ANC Clinic Attendees by ANC service uptake and districts

State/District	Yes		No		N
	%	N	%	N	
Orissa	0.44	7686	0.22	5502	**13200**
Anugul	1.32	379	0	21	400
Balangir	1.01	396	0	4	400
Baleshwar	0.25	397	0	1	400
Bargarh	0	236	0.61	164	400
Baudh	0	115	0.70	285	400
Bhadrak	0.89	337	0	63	400
Cuttack	0.29	344	0	456	800
Debagarh	0	43	0	354	400
Dhenkanal	0	212	0	188	400
Gajapati	0	327	0	73	400
Ganjam	0.30	338	0.22	462	800
Jagatsinghapur	0	177	0	223	400
Jajapur	0.32	309	1.10	91	400
Jharsuguda	0	138	0	262	400
Kalahandi	0.41	245	0	155	400
KANDHAMAL	0.51	396	0	4	400
Kendrapara	0	117	0	282	400
Kendujhar	1.35	74	0	326	400
Khordha	0	75	0.31	325	400
Koraput	0	477	0	322	800
Malkangiri	0.50	400	0		400
Mayurbhanj	0	95	0	305	400
NABARANGAPUR	2.07	387	0	13	400
Nayagarh	0.25	400	0		400
Nuapada	0	391	0	7	400
Puri	0.48	208	0.52	192	400
Rayagada	0	106	0.68	294	400
Sambalpur	0.48	209	0.53	188	400
Sonapur	0	167	0.43	233	400
Sundargarh	0.52	191	0.48	209	400

Table 24: HIV Prevalence (%) among ANC Clinic Attendees by Source of Referral

State/District	1. Self Referral		2. Family/ Relatives/ Neighbors/ Friends		3. NGO		4. Private (Doctor/ Nurses)		5. Govt (including, ASHA/ ANM)		6. ICTC / ART Centre		Total
	%	N	%	N	%	N	%	N	%	N	%	N	
Orissa	0.49	1221	0.19	3118	0	9	0.31	324	0.38	8513	100.00	1	**13200**
Anugul							0	11	1.29	389			400
Balangir			0	2			0	2	1.01	396			400
Baleshwar	0	23	0	42			0	1	0	332	100.00	1	400
Bargarh	0.40	250							0	150			400
Baudh	0	4	0.60	333	0	1			0	62			400
Bhadrak	0	1	0	1			0.64	156	0.83	242			400
Cuttack	0	100	0	31					0.15	669			800
Debagarh	0	32	0	315					0	53			400
Dhenkanal	0	32	0	249			0	3	0	116			400
Gajapati	0	7	0	90					0	303			400
Ganjam			0	124	0	1			0.30	675			800
Jagatsinghapur									0	399			400
Jajapur	14.29	7	0.42	236					0	157			400
Jharsuguda							0	3	0	397			400
Kalahandi	0	21	0	8	0	1	0	38	0.30	332			400
KANDHAMAL	0	21	0.38	261					0.85	118			400
Kendrapara	0	42	0	166			0	1	0	191			400
Kendujhar	0	60	0	51			0	40	0.40	249			400
Khordha	0	23	0	81			0	3	0.34	293			400
Koraput	0	36	0	361					0	403			800
Malkangiri			0	1			0	1	0.50	397			400
Mayurbhanj	0	114	0	2	0	1	0	63	0	219			400
NABARANGAPUR	0	13							2.07	387			400
Nayagarh					0	1			0.25	399			400
Nuapada	0	4	0	234	0	3	0	1	0	156			400
Puri	12.50	8	0.35	287					0	105			400
Rayagada	0	20	0.56	179	0	1			0.51	197			400
Sambalpur	8.70	23	0	45			0	1	0	328			400
Sonapur	0.26	380	0	19					0	1			400
Sundargarh									0.50	398			400

Table 25: Prevalence among ANC Clinic Attendees by Place of Residence and district

State/District	Urban		Rural		N
	%	N	%	N	
Orissa	0.29	3437	0.37	9759	**13200**
Anugul	2.22	45	1.13	355	400
Balangir	0.94	106	1.02	294	400
Baleshwar	0	161	0.42	239	400
Bargarh	0	115	0.35	285	400
Baudh	0	55	0.58	345	400
Bhadrak	0.63	158	0.83	242	400
Cuttack	0	120	0.15	680	800
Debagarh	0	24	0	376	400
Dhenkanal	0	66	0	334	400
Gajapati	0	42	0	358	400
Ganjam	0	146	0.31	654	800
Jagatsinghapur	0	62	0	338	400
Jajapur	0	92	0.65	308	400
Jharsuguda	0	319	0	81	400
Kalahandi	0	105	0.34	295	400
KANDHAMAL	0	108	0.68	292	400
Kendrapara	0	37	0	363	400
Kendujhar	0	77	0.31	322	400
Khordha	0.31	324	0	76	400
Koraput	0	223	0	577	800
Malkangiri	1.79	112	0	288	400
Mayurbhanj	0	103	0	297	400
NABARANGAPUR	0	73	2.45	327	400
Nayagarh	0	19	0.26	381	400
Nuapada	0	51	0	348	400
Puri	1.16	86	0.32	313	400
Rayagada	0.78	129	0.37	271	400
Sambalpur	1.32	152	0	247	400
Sonapur	0	36	0.27	364	400
Sundargarh	0	291	1.83	109	400

Table 26: HIV Prevalence among ANC Clinic Attendees by Current Occupation of Respondent

State/District	Agricultural Labourer		Non-Agricultural Labourer		Domestic Servant		Skilled / Semiskilled worker		Petty business / small shop		Large Business/Self employed		Service (Govt./Pvt.)		Student		Hotel staff		Truck driver/Helper		Local transport Worker		Agricultural cultivator/		Housewife		Total
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
Orissa	0%	143	0.65%	153	0.00%	7	0.00%	30	0.00%	38	0.00%	12	0.34%	295	0.00%	25	0.00%	1				2	0.00%	14	0.35%	12475	13200
Anugul																									1.25%	400	400
Balangir	0%	21	0.00%	8			0.00%	1				1	16.67%	6		2									0.83%	361	400
Baleshwar			0.00%	1			0.00%	1	0.00%	5		1	0.00%	19									0.00%	1	0.27%	372	400
Bargarh			0.00%	1									0.00%	3		1									0.25%	395	400
Baudh	0%	7	0.00%	12			0.00%	5					0.00%	6											0.54%	370	400
Bhadrak			33.33%	3									0.00%	3		1									0.51%	393	400
Cuttack												1	0.00%	5											0.13%	792	800
Debagarh	0%	9	0.00%	6									0.00%	3		1							0.00%	4	0.00%	376	400
Dhenkanal													0.00%	5		1							0.00%	1	0.00%	393	400
Gajapati													0.00%	1											0.00%	399	400
Ganjam			0.00%	2									0.00%	5							1				0.25%	792	800
Jagatsinghapur	0%	12	0.00%	36	0.00%	5	0.00%	14	0.00%	2		2	0.00%	32		1							0.00%	2	0.00%	294	400
Jajapur			0.00%	3			0.00%	1	0.00%	20		1	0.00%	30											0.58%	345	400
Jharsuguda													0.00%	3		1									0.00%	396	400
Kalahandi	0%	39	0.00%	55			0.00%	1				1	0.00%	10		1		1					0.00%	2	0.34%	290	400
KANDHAMAL													0.00%	20		2									0.53%	378	400
Kendrapara													0.00%	4											0.00%	396	400
Kendujhar																									0.25%	398	400
Khordha			0.00%	1			0.00%	2	0.00%	2		1	0.00%	14		3									0.27%	377	400
Koraput	0%	49	0.00%	14			0.00%	3	0.00%	6		1	0.00%	36		2							0.00%	1	0.00%	688	800
Malkangiri	0%	2	0.00%	1									0.00%	18		1							0.00%	2	0.53%	376	400
Mayurbhanj			0.00%	4					0.00%	1			0.00%	2									0.00%	1	0.00%	392	400
NABARANGAPUR	0%	1										2	0.00%	8		2					1				2.07%	386	400
Nayagarh	0%	1							0.00%	1			0.00%	6		1									0.26%	391	400
Nuapada													0.00%	10											0.00%	390	400
Puri									0.00%	1			0.00%	3											0.51%	396	400
Rayagada			0.00%	1			0.00%	1				1	0.00%	11											0.52%	386	400
Sambalpur	0%	1	0.00%	3									0.00%	18		2									0.53%	376	400
Sonapur													0.00%	5											0.25%	395	400
Sundargarh	0%	1	0.00%	2	0.00%	2	0.00%	1					0.00%	9		3									0.52%	382	400

Table 27 : HIV Prevalence among ANC Clinic Attendees by Current Occupation of Spouse

State/District	Agricultural Labourer		Non-Agricultural Labourer		Domestic Servant		Skilled / Semiskilled worker		Petty business / small shop		Large Business/Self employed		Service (Govt./Pvt.)		Student		Hotel staff		Truck driver/Helper		Local transport Worker		Agricultural cultivator/		Unemployed		Not Applicable		Total
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
Orissa	**0.00%**	**1295**	**0.52%**	**2120**	**0**	**11**	**0.41%**	**1971**	**0.29%**	**2078**	**0.30%**	**337**	**0.28%**	**2139**	**0**	**19**	**0.50%**	**201**	**1.75%**	**229**	**0.55%**	**916**	**0.17%**	**1812**	**0**	**50**	**5.26%**	**19**	**13200**
Anugul			3.17%	**63**			2.08%	**48**	0.00%	**73**			1.37%	**146**			0.00%	**5**	0.00%	**13**	0.00%	**28**	0.00%	**22**		**1**	0.00%	**1**	400
Balangir	0.00%	**38**	1.56%	**64**			1.52%	**66**	1.89%	**53**	0.00%	**23**	2.27%	**44**		**1**	0.00%	**2**	0.00%	**2**	0.00%	**23**	0.00%	**84**					400
Baleshwar	0.00%	**3**	0.00%	**22**		**1**	0.00%	**68**	0.00%	**136**	0.00%	**2**	0.00%	**71**			0.00%	**9**	0.00%	**9**	0.00%	**76**	0.00%	**1**		**1**	100.00%	**1**	400
Bargarh	0.00%	**94**	1.04%	**96**			0.00%	**56**	0.00%	**57**			0.00%	**31**			0.00%	**1**			0.00%	**33**	0.00%	**30**		**1**	0.00%	**1**	400
Baudh	0.00%	**8**	0.00%	**56**			4.00%	**50**	0.00%	**59**	0.00%	**2**	0.00%	**44**		**1**	0.00%	**1**	0.00%	**8**	0.00%	**15**	0.00%	**155**			0.00%	**1**	400
Bhadrak	0.00%	**2**	1.89%	**106**			0.00%	**29**	0.80%	**125**	0.00%	**11**	0.00%	**64**		**2**	0.00%	**16**			0.00%	**26**	0.00%	**19**					400
Cuttack	0.00%	**78**	0.00%	**74**			0.00%	**173**	0.00%	**125**	0.00%	**19**	0.55%	**183**			0.00%	**35**	0.00%	**3**	0.00%	**83**	0.00%	**23**		**2**			800
Debagarh	0.00%	**24**	0.00%	**88**			0.00%	**23**	0.00%	**13**	0.00%	**12**	0.00%	**28**			0.00%	**3**	0.00%	**14**	0.00%	**12**	0.00%	**180**		**2**	0.00%	**1**	400
Dhenkanal	0.00%	**4**	0.00%	**101**			0.00%	**119**	0.00%	**31**	0.00%	**24**	0.00%	**48**			0.00%	**5**	0.00%	**23**	0.00%	**21**	0.00%	**17**		**5**	0.00%	**2**	400
Gajapati	0.00%	**219**	0.00%	**3**			0.00%	**108**	0.00%	**36**	0.00%	**1**	0.00%	**27**		**1**					0.00%	**5**							400
Ganjam	0.00%	**16**	0.88%	**226**		**5**	0.00%	**103**	0.00%	**146**	0.00%	**16**	0.00%	**88**			0.00%	**13**	0.00%	**21**	0.00%	**55**	0.00%	**106**		**5**			800
Jagatsinghapur	0.00%	**32**	0.00%	**48**			0.00%	**68**	0.00%	**46**	0.00%	**17**	0.00%	**83**			0.00%	**46**	0.00%	**15**	0.00%	**18**	0.00%	**26**			0.00%	**1**	400
Jajapur	0.00%	**3**	0.00%	**20**			0.91%	**110**	0.00%	**139**	0.00%	**37**	0.00%	**78**			50.00%	**2**	0.00%	**2**	0.00%	**7**	0.00%	**2**					400
Jharsuguda			0.00%	**132**		**2**	0.00%	**32**	0.00%	**53**	0.00%	**13**	0.00%	**119**		**1**	0.00%	**2**			0.00%	**36**	0.00%	**9**			0.00%	**1**	400
Kalahandi	0.00%	**8**	0.00%	**131**			1.59%	**63**	0.00%	**43**	0.00%	**18**	0.00%	**55**		**1**	0.00%	**4**	0.00%	**1**	0.00%	**32**	0.00%	**42**		**2**			400
KANDHAMAL	0.00%	**103**	1.02%	**98**			0.00%	**29**	1.75%	**57**	0.00%	**2**	0.00%	**63**			0.00%	**4**	0.00%	**2**	0.00%	**30**	0.00%	**5**		**5**	0.00%	**2**	400
Kendrapara	0.00%	**50**	0.00%	**62**			0.00%	**133**	0.00%	**77**	0.00%	**1**	0.00%	**47**			0.00%	**7**	0.00%	**15**	0.00%	**8**							400
Kendujhar	0.00%	**135**	0.00%	**2**		**3**	0.00%	**48**	0.00%	**42**	0.00%	**21**	0.00%	**26**			0.00%	**6**	3.57%	**28**	0.00%	**10**	0.00%	**64**		**15**			400
Khordha	0.00%	**2**	0.00%	**27**			0.00%	**64**	0.00%	**82**	0.00%	**28**	0.00%	**118**			0.00%	**4**	0.00%	**4**	1.49%	**67**	0.00%	**4**					400
Koraput	0.00%	**207**	0.00%	**149**			0.00%	**86**	0.00%	**84**	0.00%	**7**	0.00%	**154**		**7**	0.00%	**2**	0.00%	**16**	0.00%	**82**	0.00%	**5**					800
Malkangiri	0.00%	**5**	0.00%	**35**			1.45%	**69**	0.00%	**47**	0.00%	**3**	1.47%	**68**		**2**	0.00%	**2**	0.00%	**2**	0.00%	**27**	0.00%	**139**		**1**			400
Mayurbhanj	0.00%	**3**	0.00%	**57**			0.00%	**31**	0.00%	**87**	0.00%	**5**	0.00%	**67**					0.00%	**8**	0.00%	**36**	0.00%	**106**					400
NABARANGAPUR	0.00%	**28**	1.16%	**86**			0.00%	**55**	3.85%	**26**	2.56%	**39**	0.00%	**42**			0.00%	**6**	33.33%	**6**	6.06%	**33**	1.33%	**75**		**2**	0.00%	**2**	400
Nayagarh	0.00%	**29**	0.00%	**54**			0.00%	**101**	0.00%	**83**			0.00%	**58**		**1**			0.00%	**18**	2.56%	**39**	0.00%	**17**					400
Nuapada	0.00%	**12**	0.00%	**20**			0.00%	**2**	0.00%	**37**			0.00%	**49**					0.00%	**1**	0.00%	**9**	0.00%	**268**		**2**			400
Puri	0.00%	**75**	0.00%	**15**			0.00%	**61**	1.57%	**127**			0.00%	**86**			0.00%	**10**			0.00%	**26**							400
Rayagada	0.00%	**5**	0.00%	**47**			2.86%	**35**	0.00%	**36**	0.00%	**9**	0.00%	**96**		**2**	0.00%	**4**	0.00%	**5**	0.00%	**16**	0.69%	**145**					400
Sambalpur	0.00%	**31**	0.00%	**84**			0.00%	**53**	0.00%	**46**	0.00%	**2**	1.89%	**53**			0.00%	**2**	25.00%	**4**	0.00%	**13**	0.00%	**111**		**1**			400
Sonapur	0.00%	**80**	0.00%	**13**			0.00%	**44**	0.00%	**61**	0.00%	**22**	0.00%	**19**			0.00%	**3**			7.14%	**14**	0.00%	**144**					400
Sundargarh	0.00%	**1**	0.71%	**141**			0.00%	**44**	0.00%	**51**	0.00%	**3**	0.00%	**84**			0.00%	**7**	0.00%	**9**	0.00%	**36**	7.69%	**13**		**5**	0.00%	**6**	400

Table 28: HIV Prevalence among ANC Clinic Attendees by Migration status of Spouse

State/District	Yes		No		Not Applicable		Total
	%	N	%	N	%	N	
Orissa	0.76	655	0.32	12524	5.26	19	13200
Anugul	0	14	1.30	385	0	1	400
Balangir	0	23	1.06	377			400
Baleshwar	0	71	0	327	100.00	1	400
Bargarh			0.25	399	0	1	400
Baudh	0	1	0.50	398	0	1	400
Bhadrak	1.45	69	0.60	331			400
Cuttack	0	68	0.14	732			800
Debagarh	0	15	0	384	0	1	400
Dhenkanal	0	12	0	386	0	2	400
Gajapati	0	20	0	380			400
Ganjam	0	9	0.25	791			800
Jagatsinghapur	0	46	0	353	0	1	400
Jajapur	5.26	38	0	362			400
Jharsuguda			0	399	0	1	400
Kalahandi	0	1	0.25	399			400
KANDHAMAL			0.50	398	0	2	400
Kendrapara	0	94	0	306			400
Kendujhar	2.33	43	0	356			400
Khordha	0	1	0.25	399			400
Koraput	0	17	0	783			800
Malkangiri	0	10	0.51	390			400
Mayurbhanj	0	58	0	342			400
NABARANGAPUR	0	1	2.02	397	0	2	400
Nayagarh	0	7	0.25	393			400
Nuapada			0	400			400
Puri	0	22	0.53	378			400
Rayagada	0	12	0.52	388			400
Sambalpur	100.00	1	0.25	399			400
Sonapur			0.25	400			400
Sundargarh	0	2	0.51	392	0	6	400

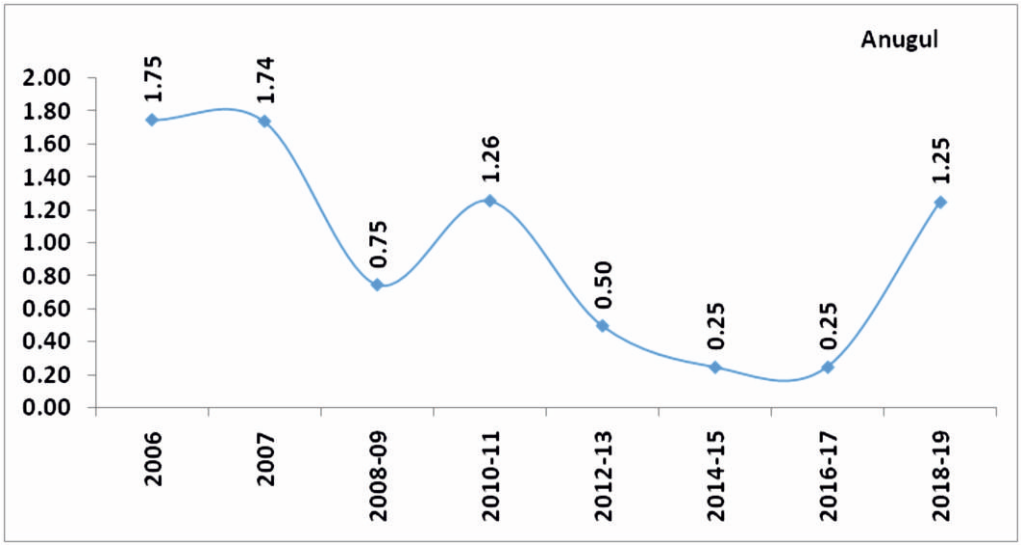
Table 29: HIV Prevalence among ANC Clinic Attendees based on HIV tested history

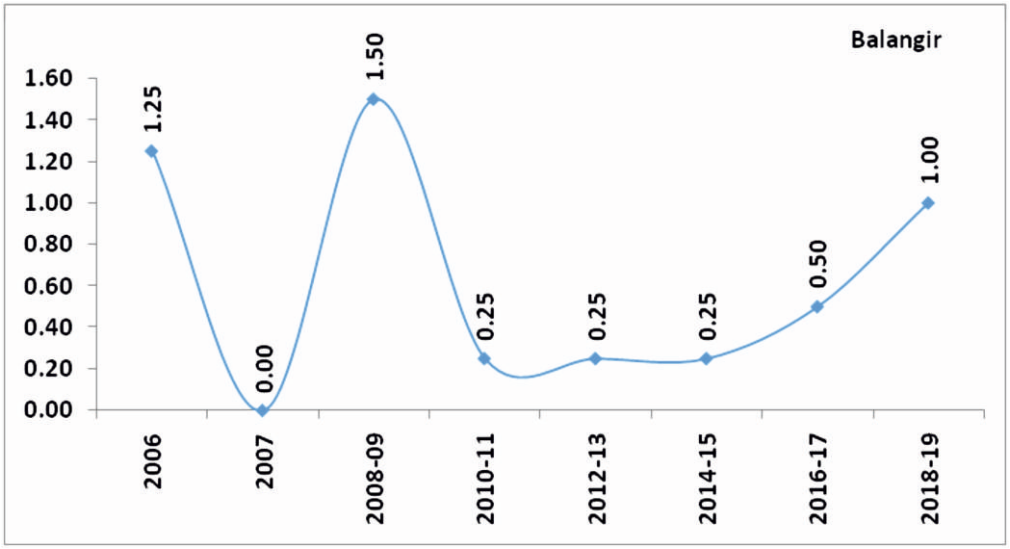
State/District	YES		NO		G. Total
	%	N	%	N	
Orissa	0.53	4715	0.25	8484	**13200**
Anugul	2.74	73	0.92	327	400
Balangir	1.01	198	0.99	202	400
Baleshwar	0.50	201	0	199	400
Bargarh	0	1	0.25	399	400
Baudh	0	108	0.68	292	400
Bhadrak	1.84	163	0	237	400
Cuttack	0.48	209	0	591	800
Debagarh	0	1	0	399	400
Dhenkanal	0	109	0	291	400
Gajapati	0	196	0	204	400
Ganjam	0.68	146	0.15	654	800
Jagatsinghapur	0	224	0	176	400
Jajapur	1.02	98	0.33	302	400
Jharsuguda	0	255	0	145	400
Kalahandi	0.57	176	0	224	400
KANDHAMAL	0.86	116	0.35	284	400
Kendrapara	0	9	0	391	400
Kendujhar	0	89	0.32	310	400
Khordha	0.57	175	0	225	400
Koraput	0	364	0	436	800
Malkangiri	0.54	370	0	30	400
Mayurbhanj	0	149	0	251	400
NABARANGAPUR	2.72	147	1.58	253	400
Nayagarh	0	170	0.43	230	400
Nuapada	0	199	0	201	400
Puri	1.28	156	0	244	400
Rayagada	0	179	0.90	221	400
Sambalpur	1.98	101	0	299	400
Sonapur	0	207	0.52	193	400
Sundargarh	0.79	126	0.36	274	400

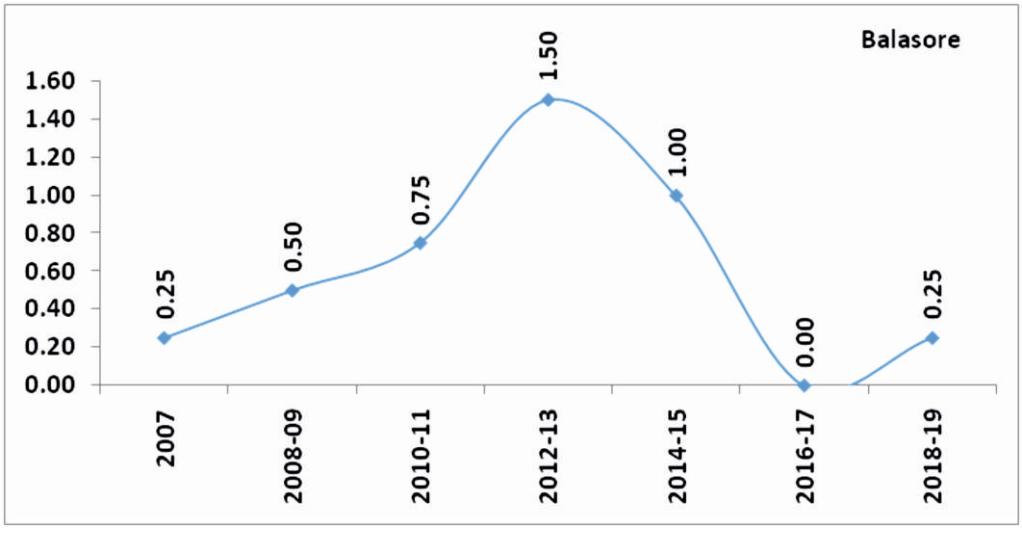
Table 30: District-wise HIV Prevalence trend 2002 -2019

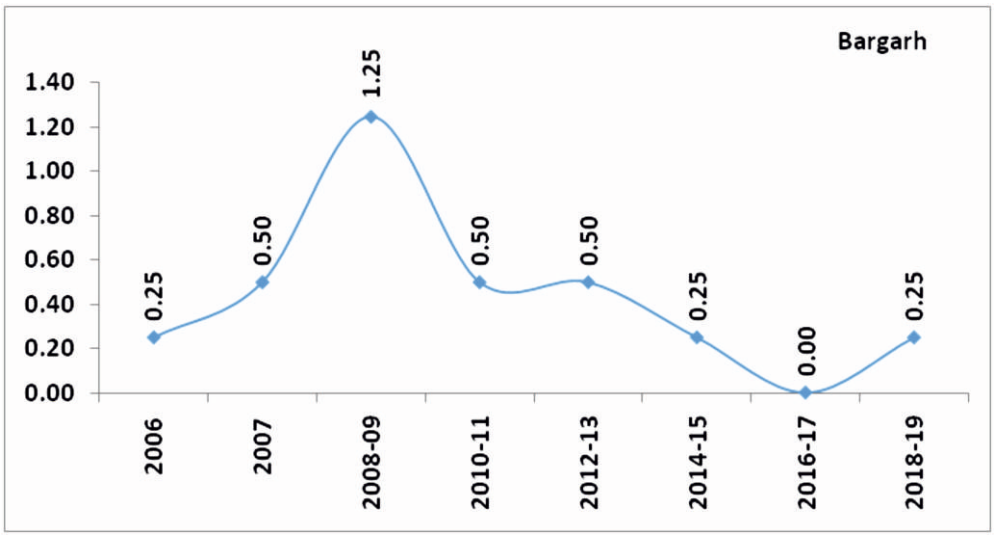
District	2002	2003	2004	2005	2006	2007	2008	2011	2013	2015	2017	2019
Anugul					1.75	1.74	0.75	1.26	0.50	0.25	0.25	1.25
Balangir					1.25	0.00	1.50	0.25	0.25	0.25	0.50	1.00
Balasore						0.25	0.50	0.75	1.50	1.00	0.00	0.25
Barg arh					0.25	0.50	1.25	0.50	0.50	0.25	0.00	0.25
Baudh					0.00	0.00	0.50	0.00	0.00	0.25	0.00	0.50
Bhadrak					1.00	0.25	0.00	0.00	0.00	0.00	0.25	0.75
Cuttack	0.25	0.00	0.50	0.50	0.75	0.00	1.00	1.50	1.75	1.00	2.75	0.13
Deog arh						1.00	0.50	0.50	0.25	0.25	0.25	0.00
Dhenkanal					0.00	0.25	0.00	0.00	0.25	0.00	0.50	0.00
Gajapati						0.00	0.25	0.75	0.00	0.00	0.00	0.00
Ganjam		0.00	1.50	2.25	3.25	0.37	1.25	0.75	0.88	0.75	0.00	0.25
Jagatsinghapur	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.25	0.00
Jajapur					0.25	0.50	0.25	0.82	0.00	0.00	0.25	0.50
Jhar suguda					0.00	0.00	2.00	0.25	0.25	0.75	0.50	0.00
Kalahandi					0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.25
Kandhamal					0.00	0.00	2.00	0.25	0.00	0.00	0.25	0.50
Kendrapara					0.00	0.00	0.75	0.25	0.25	0.00	0.00	0.00
Kend ujhar					0.50	0.00	0.75	0.25	0.00	0.00	0.00	0.25
Khordha					0.25	0.00	0.00	1.00	0.00	0.25	0.00	0.25
Kora put						0.00	0.00	0.38	0.13	0.13	0.00	0.00
Malkangiri						0.00	0.25	0.50	0.00	0.00	0.00	0.50
Mayurbhanj					0.50	0.00	0.50	0.50	0.00	0.00	0.50	0.00
Nabarangapur						0.25	0.75	0.50	0.25	0.25	1.00	2.00
Naya garh					0.75	0.25	0.00	0.50	0.00	0.25	0.25	0.25
Nuapada						0.00	2.00	0.50	0.00	0.00	0.00	0.00
Puri					0.50	0.25	0.75	0.00	0.50	0.25	0.25	0.50
Rayagada					0.50	0.25	0.25	0.50	1.50	0.00	0.25	0.50
Sambalpur	0.25	0.00	0.50	0.00	0.50	0.75	0.00	0.00	0.25	0.25	0.25	0.50
Sonapur					0.00	0.00	1.75	0.00	0.00	0.00	0.00	0.25
Sund argarh	0.00	0.00	0.00	0.25	0.25	0.00	1.75	0.25	0.00	0.00	0.75	0.50

5.2 HIV Prevalence trend at district level





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0.60
0.40
0.20
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0.50
1.25
0.50
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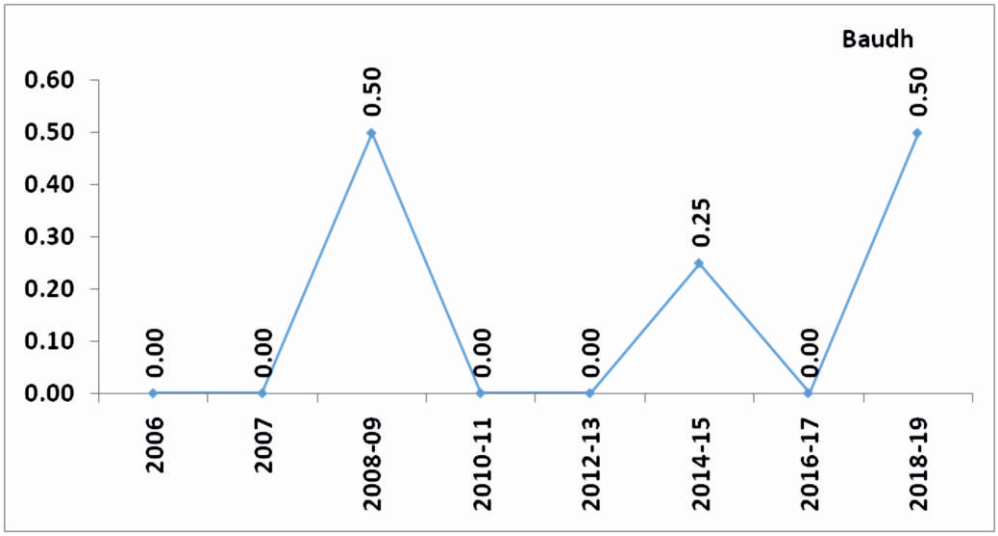
0.25
0.00
0.25
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19


Baudh
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0.00
0.00
0.00
0.50
0.00
0.00
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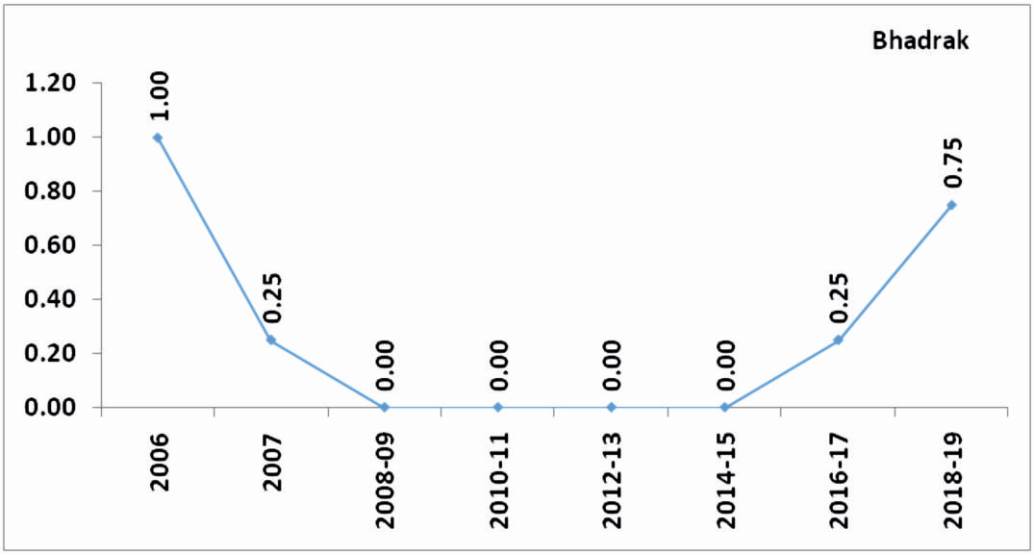
0.00
0.50
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.00
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0.00
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0.25
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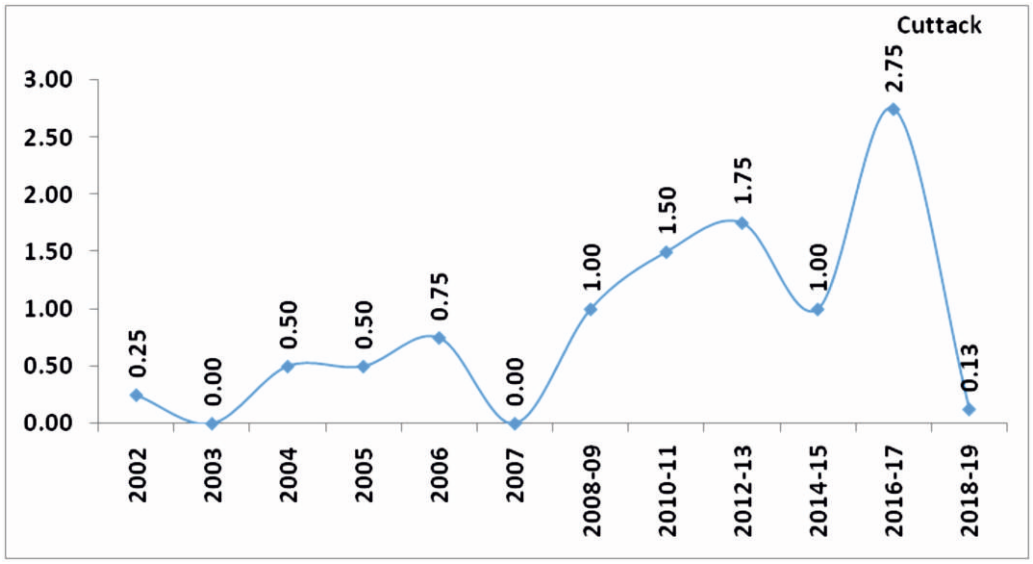
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.00
0.50
0.50
0.75
0.00
1.00
1.50
1.75
1.00
2.75
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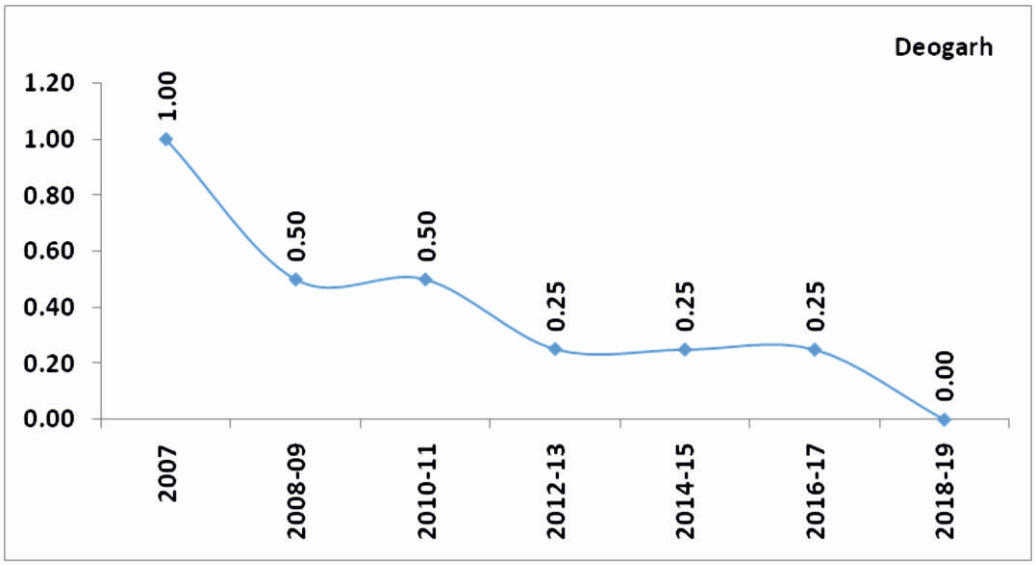
2003
2004
2005
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.40
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0.00
1.00
0.50
0.50
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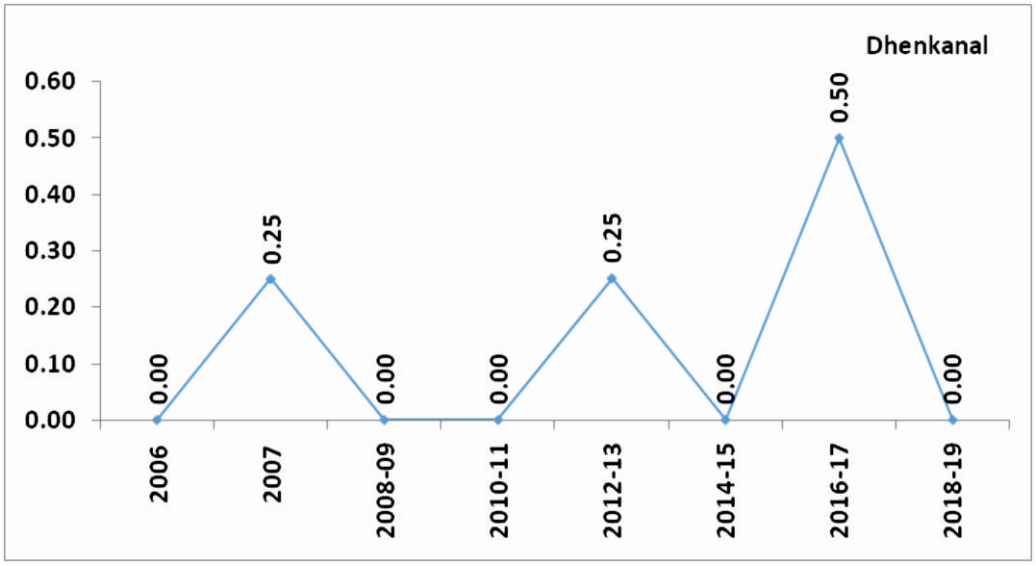
0.25
0.25
0.00
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.00
0.25
0.00
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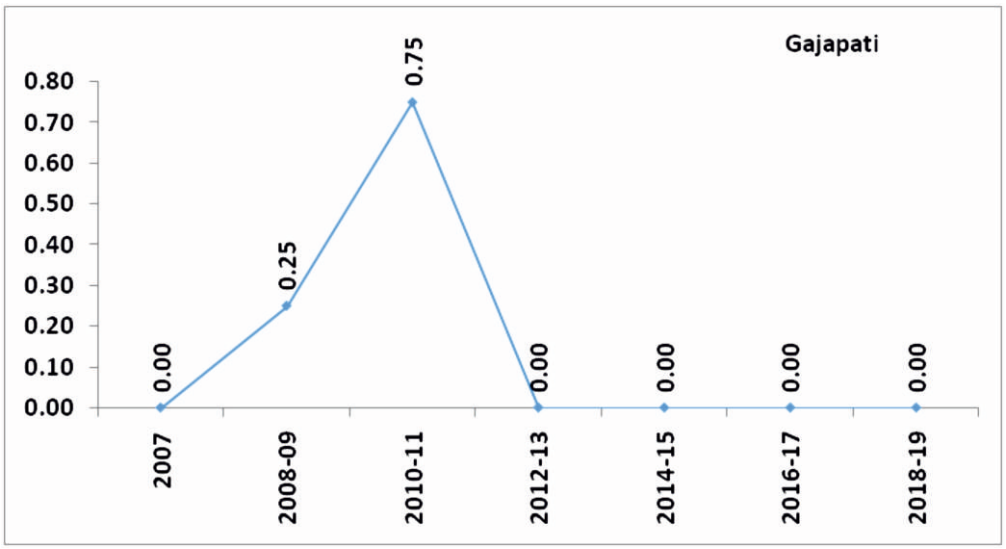
0.25
0.00
0.50
0.00
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.50
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0.30
0.20
0.10
0.00
0.00
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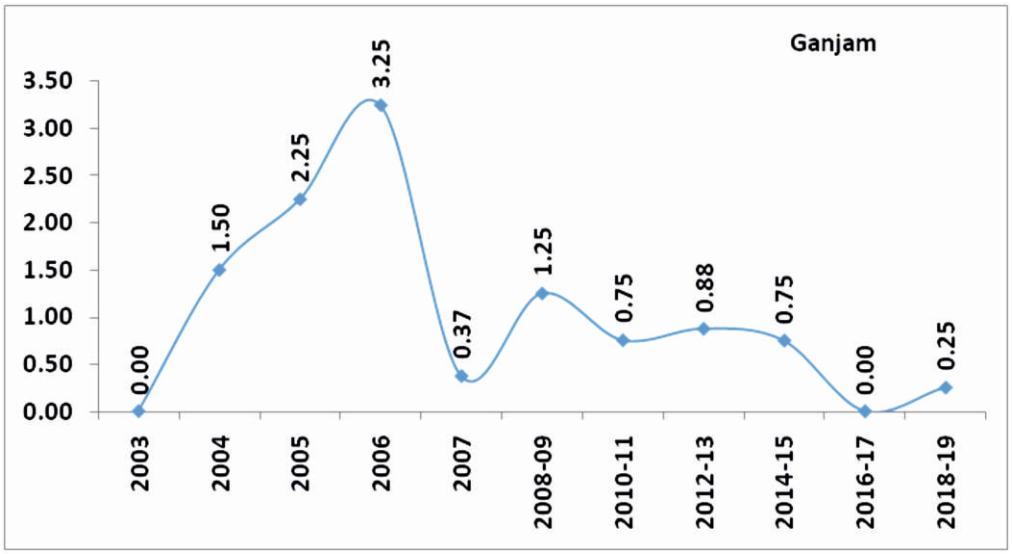
0.00
0.00
0.00
0.00
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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2.00
1.50
1.00
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0.00
0.00
1.50
2.25
3.25
0.37
1.25
0.75
0.88
0.75
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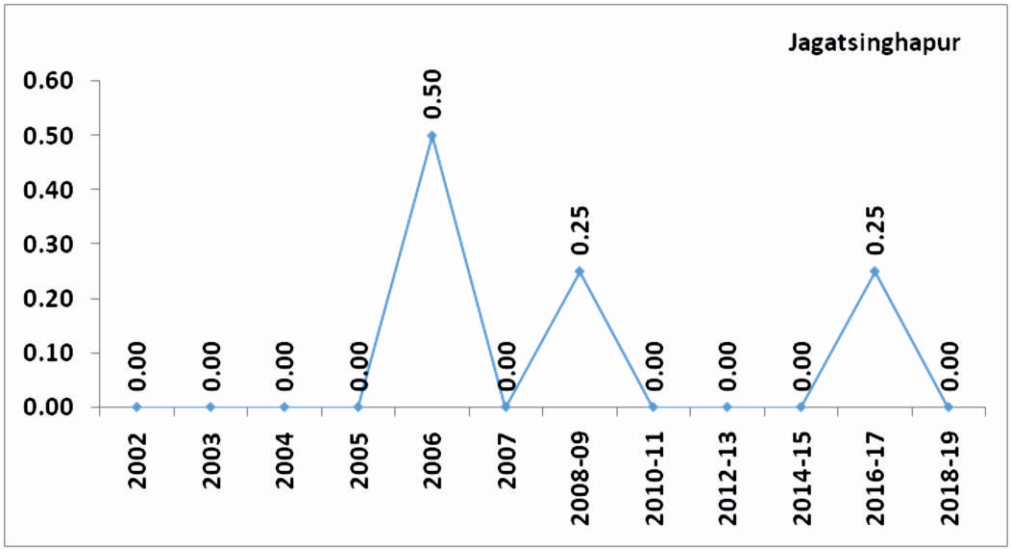
2004
2005
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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0.00
0.00
0.00
0.50
0.00
0.25
0.00
0.00
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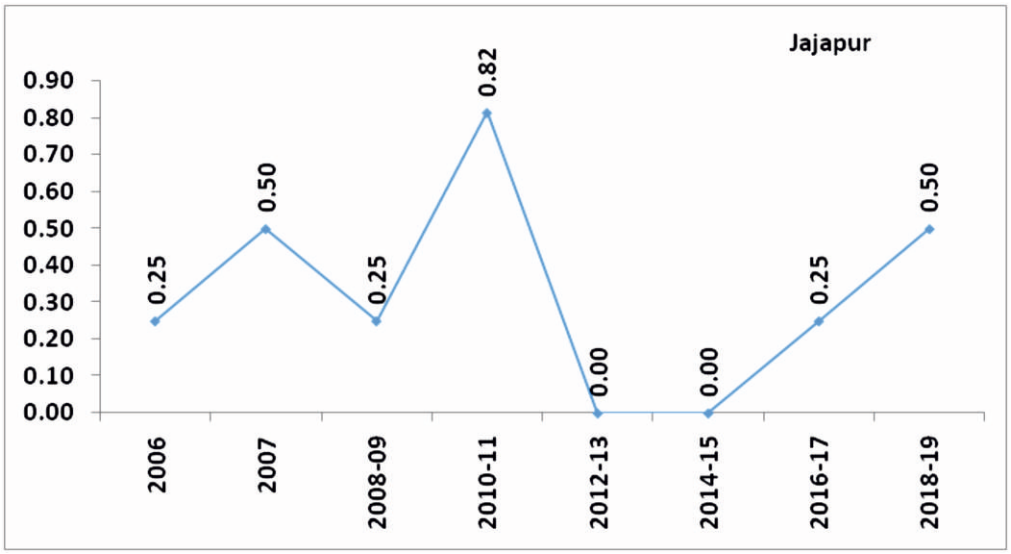
0.25
0.00
2002
2003
2004
2005
2006
2007
2008-09
2010-11
2012-13
2014-15
2016-17
2018-19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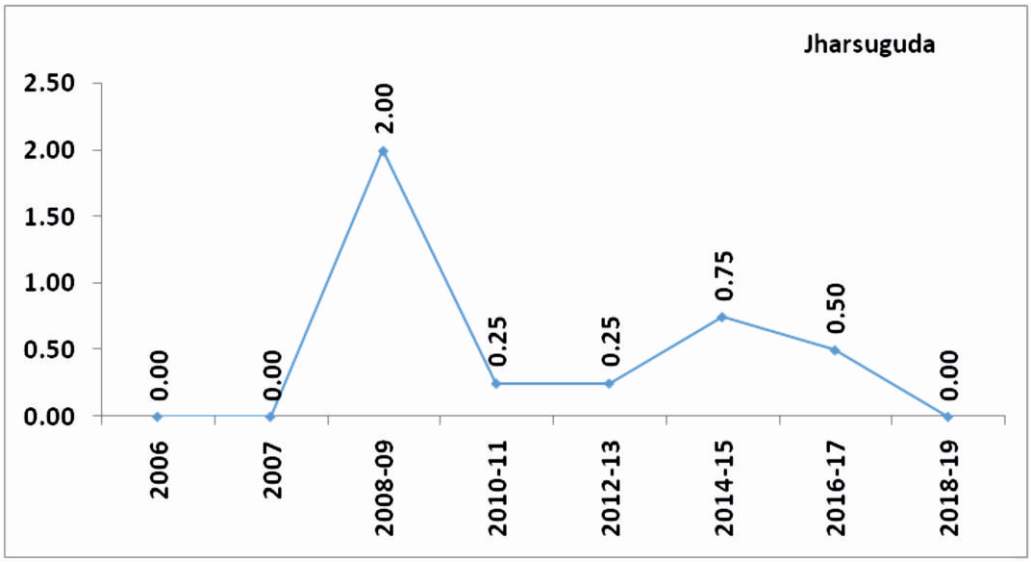
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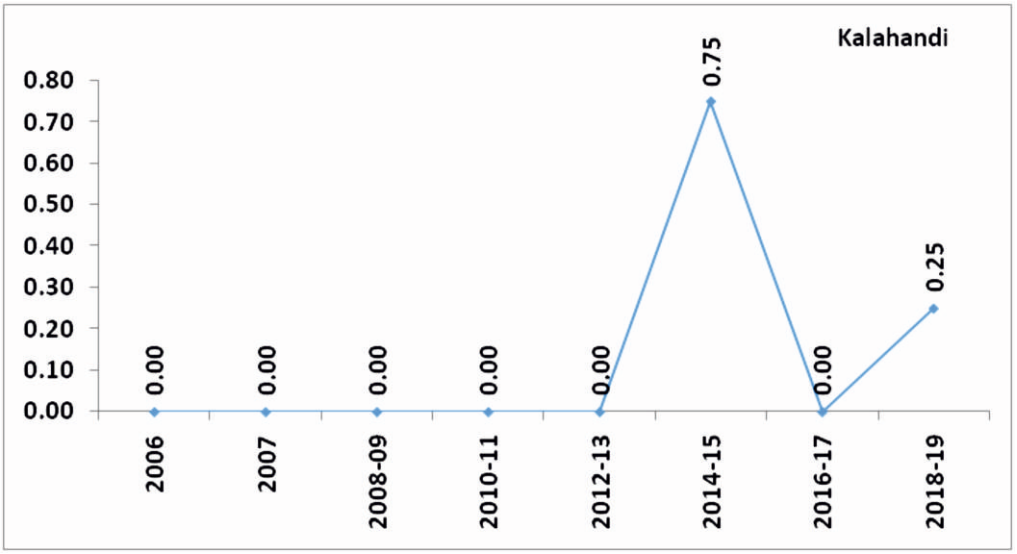
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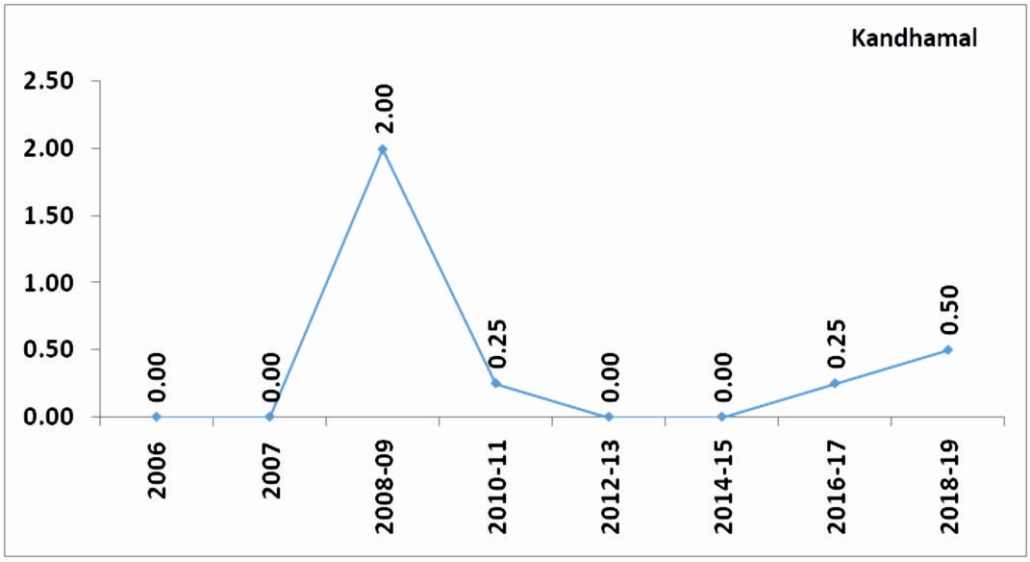
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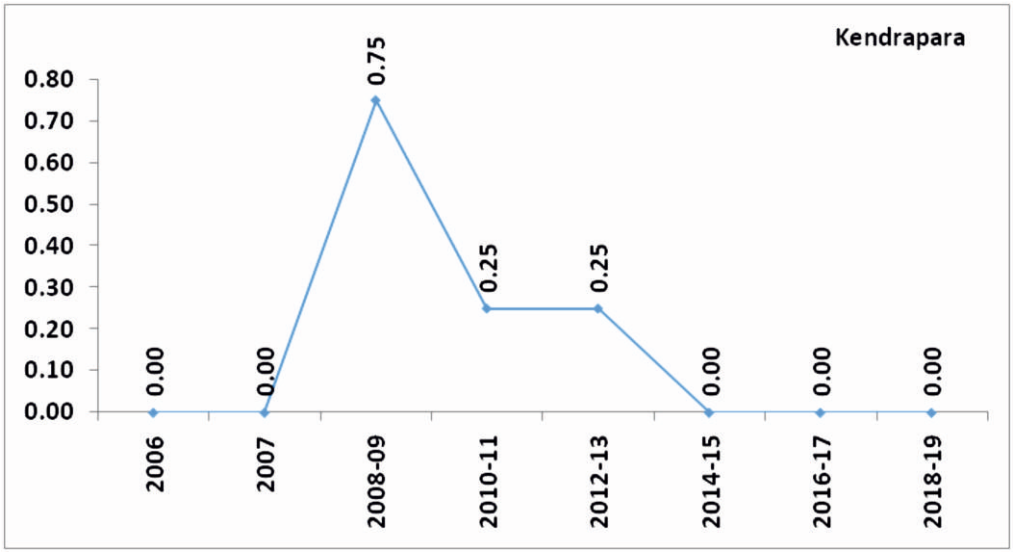
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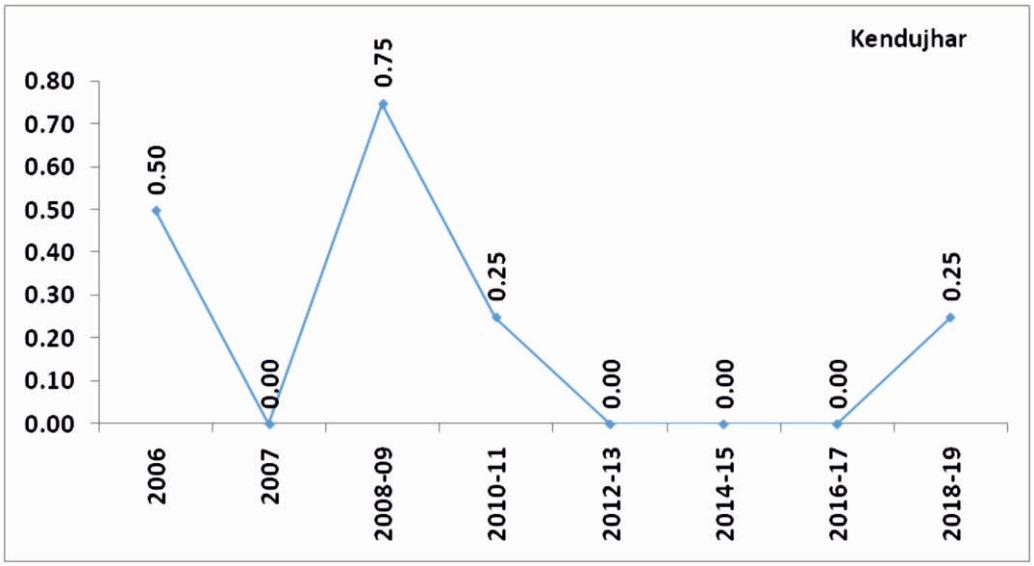
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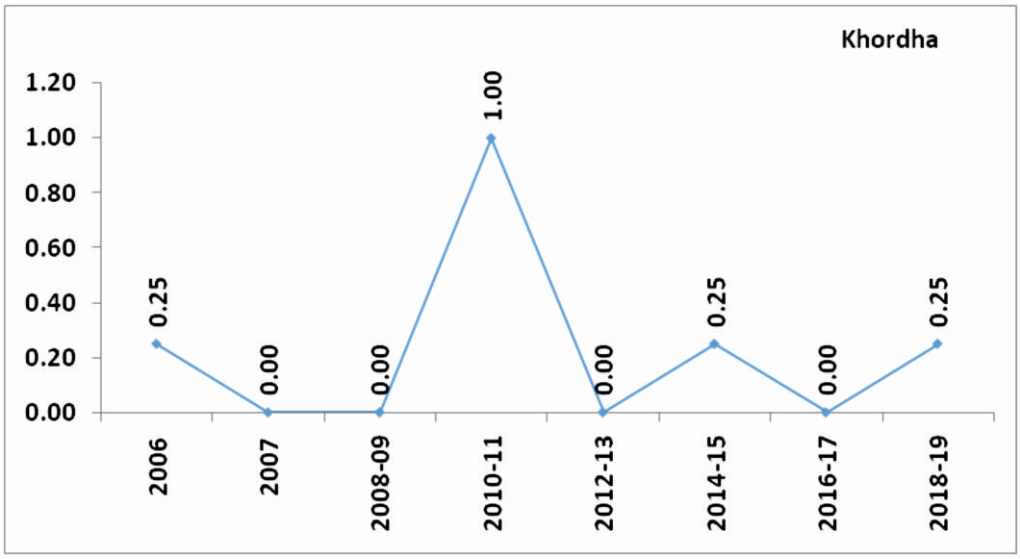
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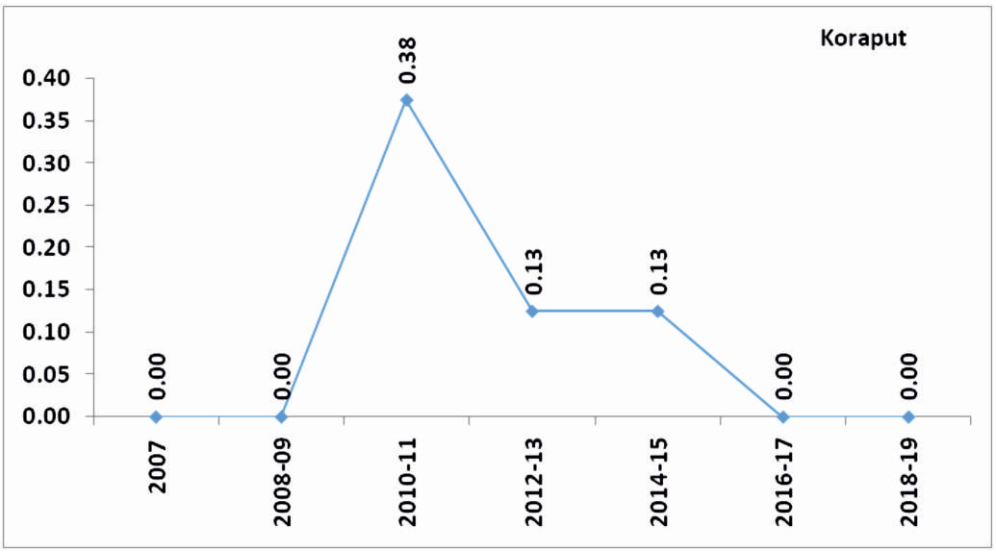
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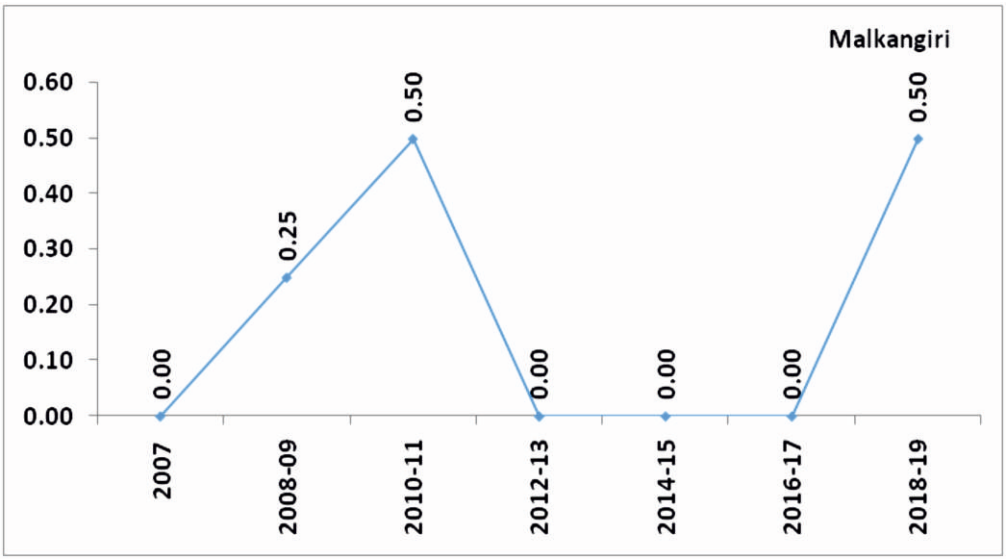
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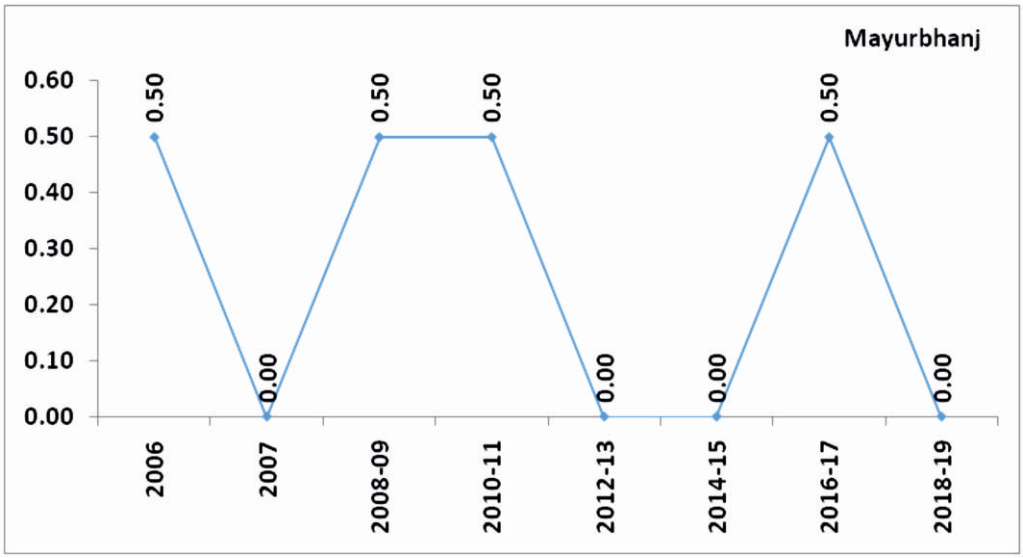
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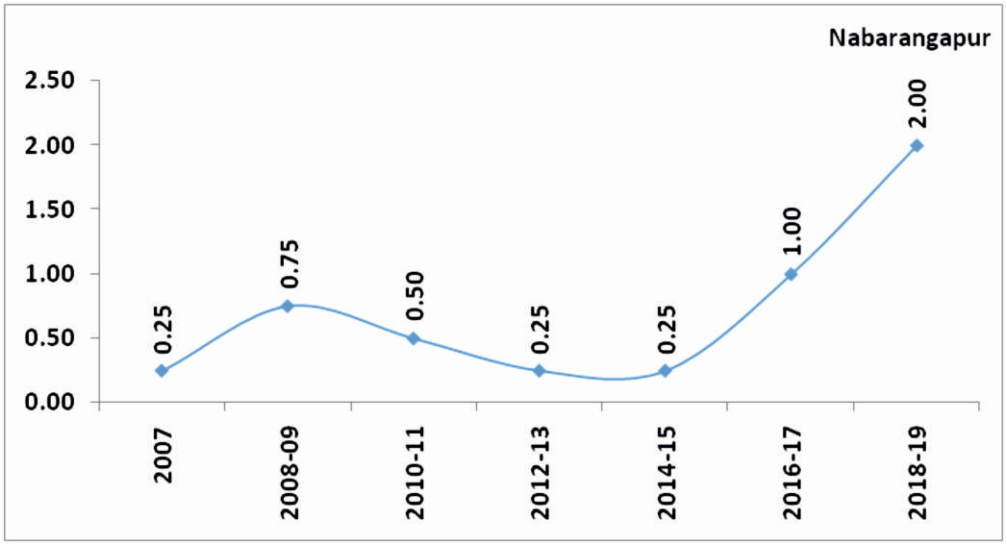
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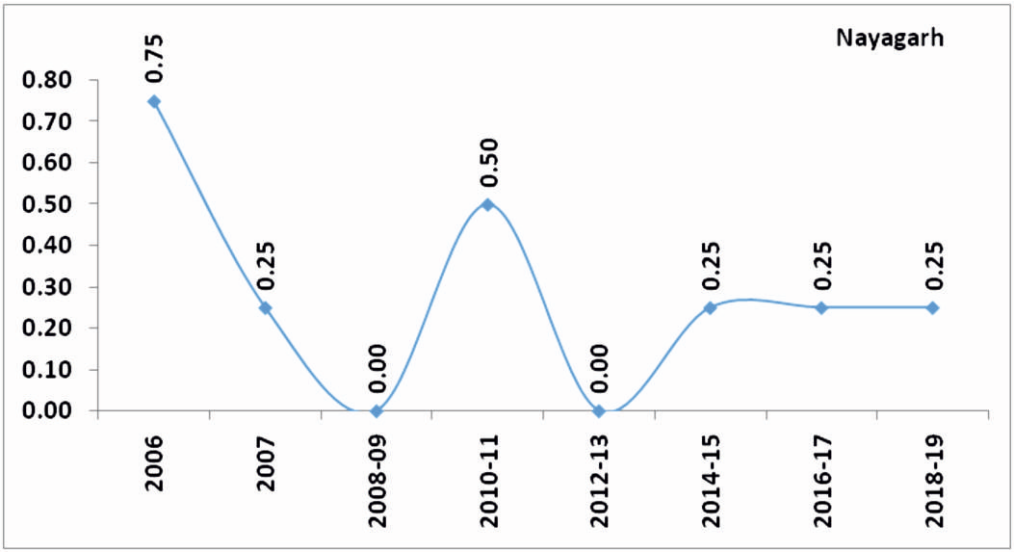
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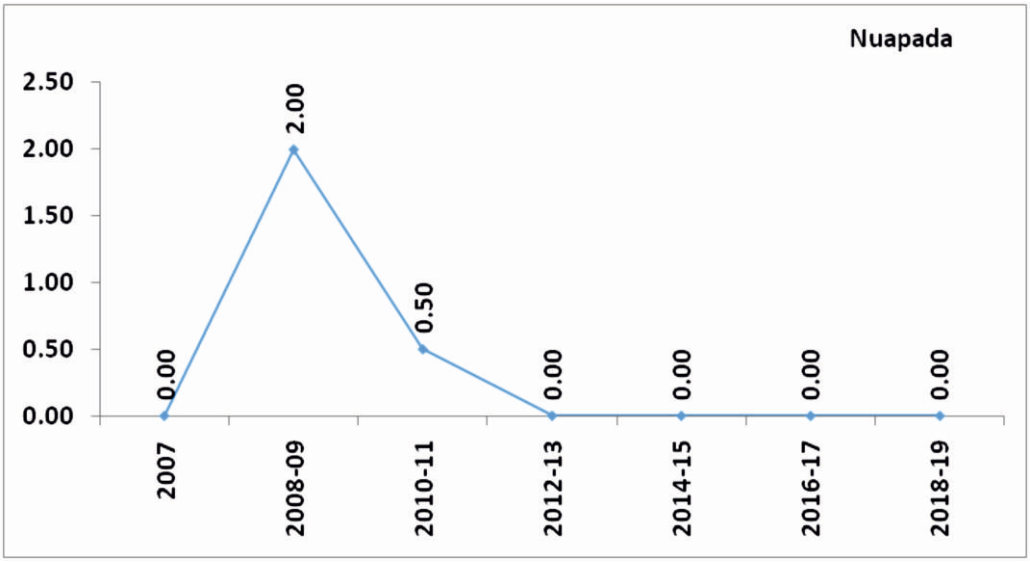
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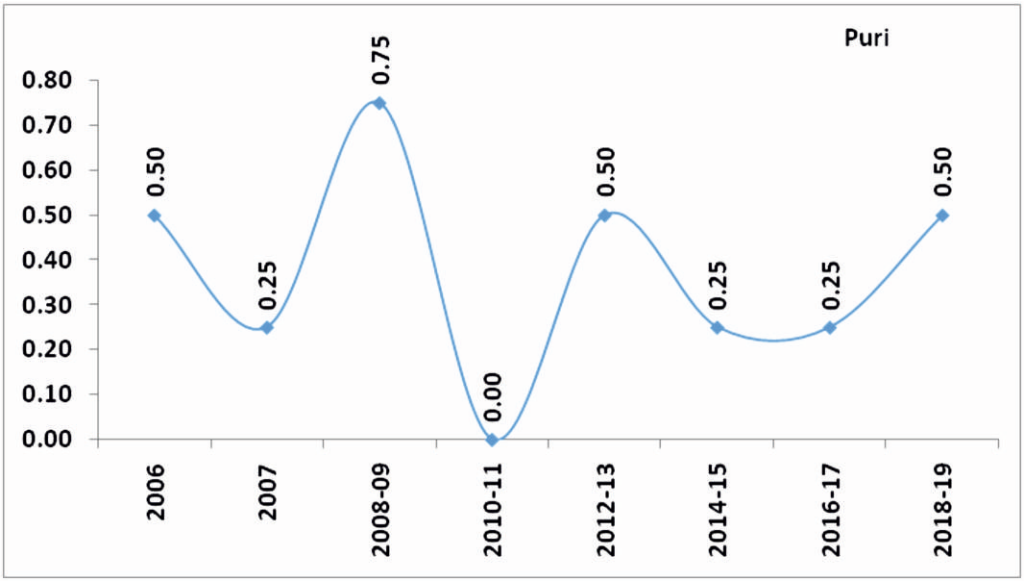
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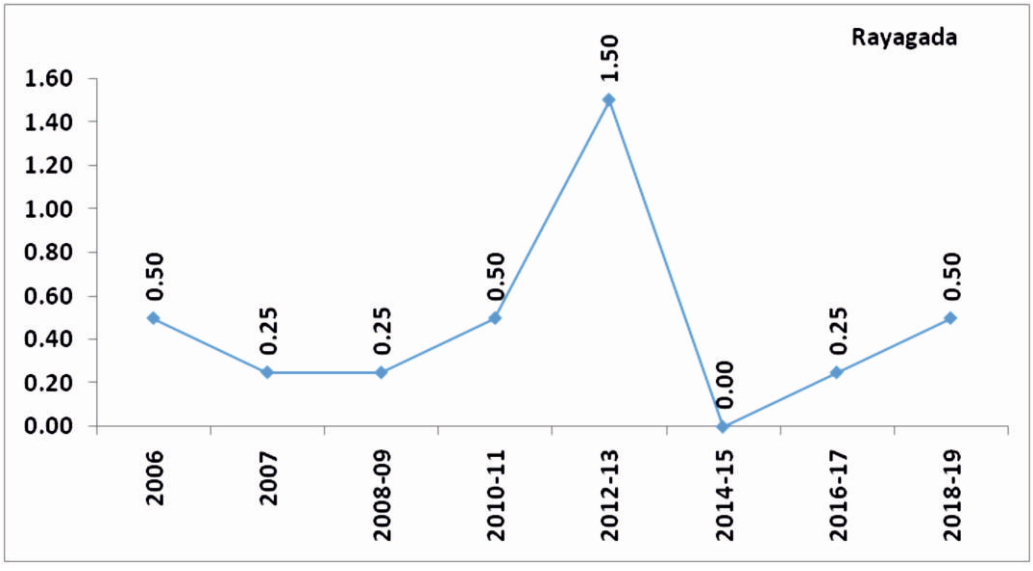
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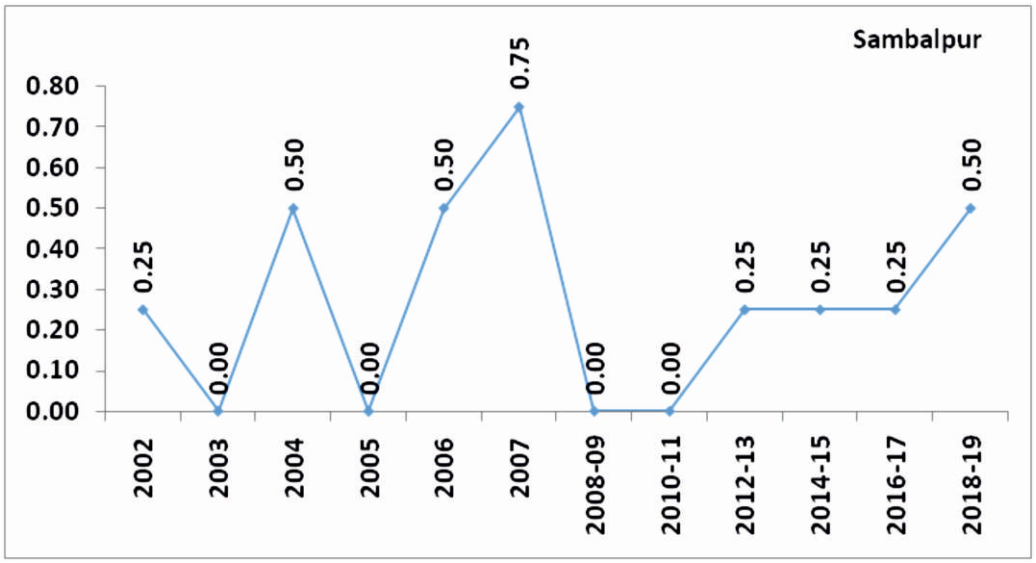
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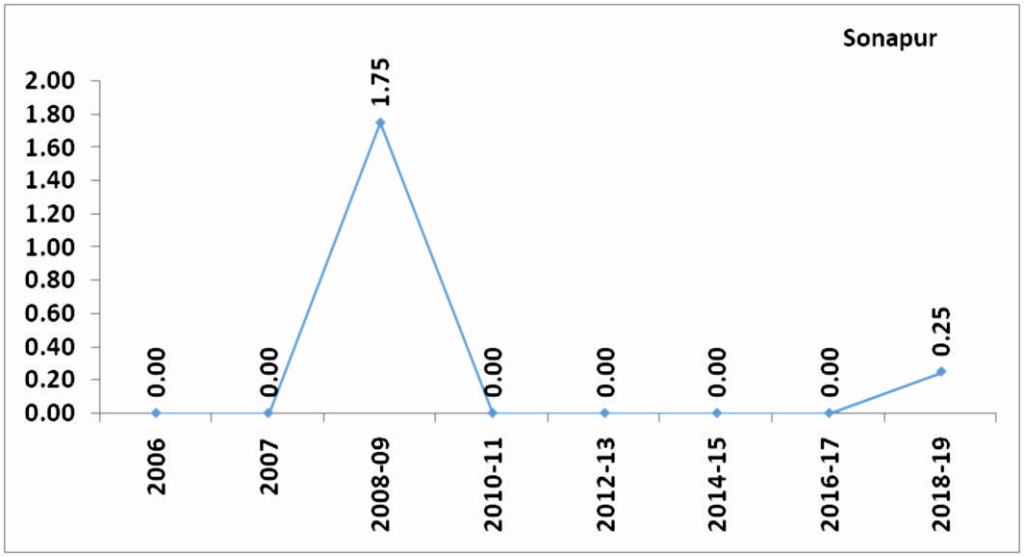
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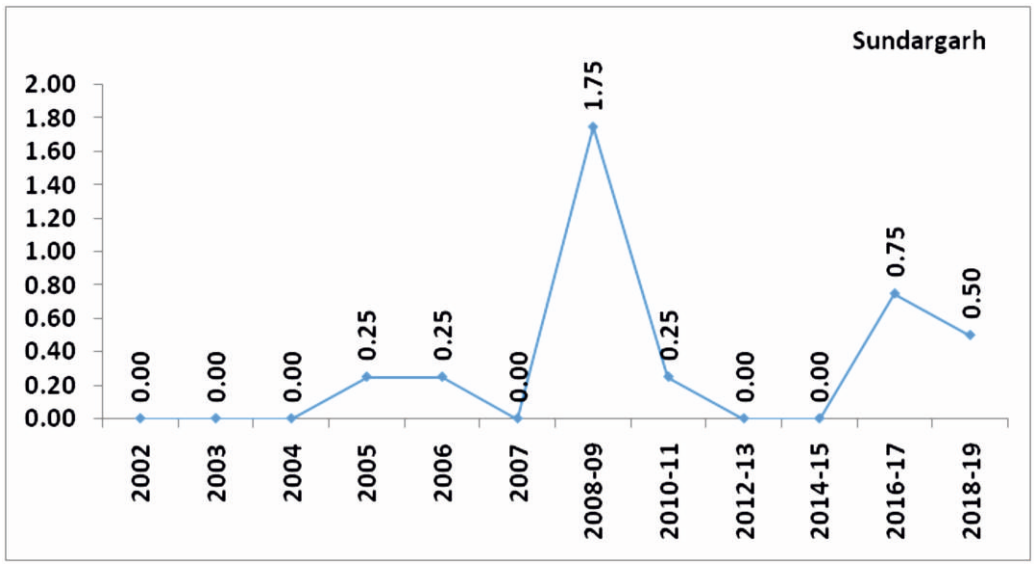
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CHAPTER 6

SUMMARY

The 16th round of HSS among pregnant women in 2019 was implemented at 30 sites across 30 districts in Odisha collecting a total of 13200 complete data forms and biological specimens following consecutive sampling method and linked anonymous strategy as in previous round. In India, Odishahas the third highest number of ANC HSS sites.

The median age of respondents were 24 years in the state and ranged between 15 and 47 years across the districts. The overall HIV prevalence among ANC clinic attendees in Odisha in 2019 was low 0.35%. District-wise, Nabarangapur (2.00%), Anugul (1.25%), Balangir (1.00%) and Bhadrak (0.75%) werethe top districts with high HIV prevalence. Sundargarh, Sambalpur, Rayagada, Puri, Malkangiri, Kandhamal, Jajapur and Baudh were other major districts with HIV prevalence (0.50%) higher than the state average. Sonapur, Nayagarh, Khordha, Kendujhar, Kalahandi, Ganjam, Bargarh, Baleshwar recorded HIV prevalence of 0.25% and Cuttack 0.13%. The remaining ninedistricts had zero HIV prevalence among the ANC attendees.

HIV prevalence among ANC clinic attendees exhibits a fluctuating trend with a rise in the prevalence level at the state level as well as in most districts. Notably, HIV prevalence in Cuttack has declined to 0.13 % in 2019 from 2.75% in 2017, while it has increased from 0.25% in 2015 to 2% in 2019 in Nabarangapur.

Overall, HIV prevalence appears to be higher among older mothers and rural residents. HIV Prevalence was the highest among pregnant women who were non-agricultural labours. HIV Prevalence was the highest among pregnant women who were not living with their spouses and those with migrant spouses. HIV prevalence was higher among pregnant women whose spouses were truckers, local transport workers, non-agricultural labours and hotel staffs.

Findings from 2019 round of ANC HSS corroborates with previous rounds showing a low and declining trend at the state level, with persistent geographical diversity at district level. Sustained declining trend among ANC clients nationally and at the stat-level, is positive indicator of the successful response of the National AIDS Control Programme (NACP). However, district-level fluctuating trends are a continuing challenge. The findings will be used as a compass by the policy makers and programme managers towards achieving 'End of AIDS' as a public health threat by 2030.

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