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PREVENTION OF PARENT-TO-CHILD TRANSMISSION (PPTCT)

PROGRAMME DATA FOR TRACKING THE HIV EPIDEMIC IN INDIA



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EXECUTIVE SUMMARY

HIV Sentinel Surveillance (HSS), conducted among Antenatal Care (ANC) Clinics, is considered as proxy for general population HIV prevalence. HIV HSS has a sample size of 400 pregnant women per sentinel surveillance site and there are a limited number of sites in the country (829 sites in 640 districts out of total 716 districts) as compared to the routine ANC testing under the programme.

Anonymous unlinked HIV test was done among 4.45 lakh ANC samples from 829 valid sites during HSS 2017-18. As most of the HSS sites (499/829) also have prevention Prevention of Parent-to-Child Transmission (PPTCT) programme there is duplication of HIV testing during the surveillance period. PPTCT has better coverage than HSS (25,495 counselling and testing centres in 2018) with higher number of women tested for HIV (22 million in 2018-19). The coverage of PPTCT is projected to increase as the target of universal coverage is to be achieved by 2020.

Therefore, utility of PPTCT programme data for HIV surveillance was studied to find out whether PPTCT data can be used for HIV surveillance purpose in India.

Analysis of a sample of 185 HSS sites, which also had PPTCT programme since 2013, found high correlation ($r = 0.9$) of HIV prevalence between the ANC HSS data and the PPTCT programme data at the state level. At the individual level, comparison of HIV test positivity obtained from ANC HSS and PPTCT data among those who were tested in both the programme showed good agreement.

As in most of the states, HSS had reported HIV prevalence similar to PPTCT, the PPTCT programme data can provide reliable HIV trends. Operational framework for PPTCT based on HIV surveillance can be developed and implemented for tracking HIV epidemic in India at national, state and district levels.

Anonymous unlinked **HIV test was done among 4.45 lakh ANC samples from 829 valid sites during HSS 2017-18.** As most of the HSS sites (499/829) also have prevention Prevention of Parent-to-Child Transmission (PPTCT) programme there is duplication of **HIV testing during the surveillance period.**

THE ISSUE

In India, HSS was established by National AIDS Control Organisation (NACO) in 1998. HSS helps the nation in understanding the levels and trends of HIV epidemic among general population and in key populations across the country¹.

HSS conducted among ANC is considered as proxy for general population prevalence. Pregnant women represent a more homogenous group of sexually active segment of general population accessible to most of the public health facilities.

A consecutive sample of 400 pregnant women who visit antenatal clinics for the first time during the two to three month surveillance period irrespective of previous visits to the clinic before the start of surveillance are enrolled at each surveillance site. A questionnaire is administered and blood sample is collected for routine testing without taking the informed consent, and unlinked anonymous testing for HIV is done in State Reference Laboratory using two test strategy.

The number of HSS ANC sites has increased from 92 ANC sites in 1998 to 829 ANC sites in 2017; 640 districts out of total 716 districts had at least one site. A total of 4.45 lakh ANC samples were tested from 829 valid sites during HSS 2017-18. Most of the ANC HSS sites are in the programme sites that is where the PPTCT programme is running, leading to duplication of HIV testing. HIV testing in PPTCT programme is done in public health facilities using three test strategy.

PPTCT programme coverage has increased in recent years; till May 2017 there were 25,495 Integrated Counselling and Testing Centres (ICTCs). The HIV testing among pregnant women has increased from 8 million in 2011-12 to 22 million in 2018-19². PPTCT coverage is projected to increase as universal coverage is expected to be achieved in near future³.

¹NACO. Annual report 2016-17. Ministry of Health and Family Welfare, Government of India, 2017

²Ministry of Health and Family Welfare. Government of India. Health Management Information System (HMIS). 2018

³NACO. National Strategic Plan for HIV and STIs, 2017-24. Ministry of Health and Family Welfare, Government of India, 2017

THE STUDY

Considering the limitations of ANC HSS, especially smaller sample size at district level and the need to maintain confidentiality of test results, there is a debate on whether routinely collected PPTCT programme data can be used to monitor HIV trends in the country. As the large workload of HIV testing, recording and reporting in PPTCT programme may have reliability issues, existing data collected through the HIV surveillance system and PPTCT programme was analysed to find out whether PPTCT data can be used for the purpose of HIV surveillance in India.

THE METHODOLOGY

- Out of the total of 776 ANC sites, 499 sites, which had both HSS and PPTCT programme, were considered as sampling frame for the study in year 2015.
- A sample of 210 ANC sites (140 urban and 70 rural sites) were selected using stratified random sampling method from sites where both HSS and PPTCT programme were going on for the last three years and where adequate HSS sample size was attained in the last two rounds.
- Out of 210 sampled sites, data was received from 195 sites. Out of these 195 sites, 10 sites were dropped because of poor maintenance of ICTC registers (2 sites in Bihar), non-availability of ICTC register (4 sites in Jammu and Kashmir and 2 sites in Uttar Pradesh) and non-functional PPTCT sites during surveillance period (2 sites in Uttar Pradesh).

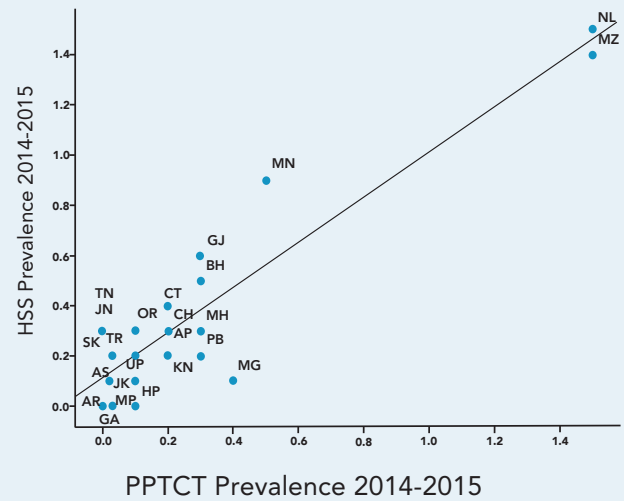
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FINDINGS

- The correlation of HIV prevalence between the HSS data and PPTCT programme data was high ($r = 0.9$) at the state level.
- Comparison of HIV test positivity obtained from HSS and PPTCT among those who were tested in both the programmes showed good agreement at individual level.
- Out of 29 states HSS reported similar prevalence in 26 states; PPTCT had slightly lower prevalence than HSS in three states (e.g., Uttar Pradesh, Rajasthan and Odisha).

HIV Prevalence



RECOMMENDATIONS

- The PPTCT programme has a large number of sites and tests a large number of pregnant women each month, therefore, it can provide reliable HIV trends at district, state and national level.
- Among States/UTs with established high PPTCT coverage, an operational framework for PPTCT based surveillance should be developed and piloted for implementation.
- With the increasing coverage of PPTCT in all states across the country, the complete replacement of ANC HSS can be done.

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ACKNOWLEDGEMENT

The study was undertaken as part of National HIV/AIDS Research Plan under NACP. We thank NACO and particularly, Strategic Information Division (Research & Evaluation) for providing support to the study. We would also like to acknowledge the support of development partners – UNAIDS, CDC, WHO, USAID, LINKAGES, FHI 360, ACCELERATE and JHU – in finalising the technical briefs. Printing was supported by UNAIDS using the Cooperative Agreement Number NU2GGH001971-01-00 funded by the CDC.

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