India - HIV Sentinel Surveillance, 1998-2008

National AIDS Control Organisation - Ministry of Health & Family Welfare

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Overview

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Overview

ABSTRACT
HIV Sentinel Surveillance (HSS) in India, since its inception in 1998, has evolved into a credible and robust system for HIV epidemic monitoring and acclaimed as one of the best in the world. Sentinel surveillance provides essential information to understand the trends and dynamics of HIV epidemic among different risk groups in the country. It aids in refinement of strategies and prioritization of focus for prevention, care and treatment interventions under the National AIDS Control Programme (NACP). HIV estimates of prevalence, incidence and mortality developed based on findings from HIV Sentinel Surveillance enable the programme in assessing the impacts at a macro level.

Coverage

GEOGRAPHIC COVERAGE
National

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National AIDS Control Organisation	Ministry of Health & Family Welfare

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Sampling

Sampling Procedure

The HIV Sentinel Surveillance was conducted among the following population groups at urban and rural sites: (i), the antenatal clinic (ANC) attendees who were representative of the general population; (ii) the key populations vulnerable to HIV, including men who have sex with men (MSM), transgender (TG), female sex workers (FSWs) and injecting drug users (IDUs) (these groups are collectively categorized as high-risk groups [HRG]); and (iii) population groups likely to act as a bridge for HIV transmission from the HRGs to the general population through unprotected sex or unsafe injecting drug use. The bridge population includes patients attending STI clinics, migrants and truckers.
The sampling frame encompassed all individuals attending the designated sentinel sites during the surveillance period. The sample size for ANC attendees was 400, while that for the HRGs and bridge population was 250. For ensuring sex-disaggregated data for the STI clinic attendees, the total sample size was broken down to 150 males and 100 female patients. The sampling units for ANC attendees, HRGs and the bridge population consisted of people between 15 and 49 years of age.
The unlinked anonymous method of sample collection was utilized at each ANC and STI surveillance site, that is, the sampling units were selected according to the inclusion criteria by consecutive sampling for a period of three months or until the sample size was completed. At the HRG and bridge population sites, the method used was either random sampling or consecutive sampling. The approach depended on the data available for the HRGs. At selected HRG sites, and wherever line lists were available, the method used was random sampling. Line lists were obtained from non-governmental organizations. This method was adopted at surveillance sites in Gujarat, where the line list of all the registered HRGs was available. In the majority of the remainder of the HRG and bridge population sites in the country, the consecutive sampling method was utilized.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
1998	2008	N/A

Data Collection Mode

Face-to-face [f2f]

DATA COLLECTION NOTES

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

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

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

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

The number of sites increased particularly in the case of HRGs as new sites were instituted in states that previously had no sites for one or all of the three HRGs. The number of FSW sites increased by 51, from 137 in 2007 to 188 in 2008, while that of MSM sites increased by 29, from 40 in 2007 to 69 in 2008. The number of sites for IDUs increased by 5, from 52 in 2007 to 57 in 2008. As for the bridge populations, an increase was noted only among the migrant sites-8 were instituted in 2008, which was an increase by 5 sites from the previous round. The number of truckers and transgender sites remained at 7 and 1, respectively. The total number of ANC sites (648) was comparable to the number in previous rounds. Of these, 486 were urban ANC sites in the high- and low-prevalence states and 162 were rural sites. Of the latter, 126 were in six high-prevalence states and 36 in the low-prevalence states. STI sites were considered redundant in certain of the southern high-prevalence states, where TI sites through Annual HIV Sentinel Surveillance - Country Report 2008-2009 iii NGOs for the HRGs had increased, and were thus closed under the 2008-09 surveillance round. The total number of STI sites under the 2008-09 round was 212.

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

Data Processing

No content available

Data Appraisal

No content available