Annual HIV Sentinel Surveillance Country Report 2007

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PREFACE

The Annual Sentinel Surveillance for HIV infection is conducted each year in the country since 1998. This effort focuses on generating scientific data for programme planning, including intervention projects; and for the estimation of the extent of HIV infection in the country. The sentinel surveillance reflects the joint efforts of National AIDS Control Organization (NACO), National Institute of Health Family Welfare (NIHFW), National Institute of Medical Statistics (NIMS) with State AIDS Control Societies (SACS) and reputed regional institutes of academic excellence across the country. This report, based on the data of 2007 and in conjunction with the past data, provides an insight into the HIV epidemic in the country.

The highlight of this year's surveillance was the increase in the number of sentinel sites from 1122 (one thousand one hundred twenty two) to 1134 (one thousand one hundred thirty four) and the intensive training including preparation of operational guidelines supported by WHO. Extensive supervision by the teams from Regional Institutes (RIs), State AIDS Control Societies (SACS), Central Team members and officers from WHO facilitated collection of quality data. The webbased data entry system was modified by NIHFW to include matching after double entry of data and making it 'user friendly'.

The report has made effort to describe the problems encountered in conduction of the surveillance activities and the findings on HIV status. The heterogeneity of the HIV epidemic is described in the context of the population groups and the specific geographic areas. The findings indicated that Gujarat needs immediate attention and among the low-HIV prevalence states, the others needing priority are: Mizoram, Delhi, Bihar, Kerala, Madhya Pradesh, Rajasthan, Uttar Pradesh, Punjab, West Bengal, Chhattisgarh and Orissa, where the prevalence is either increasing in general population or the prevalence amongst Injecting Drug Users (IDUs) and Men who have Sex with Men (MSM) is increasing compared to Female Sex Workers (FSWs). These states need intensified efforts to ensure that the epidemic is contained. Among the various recommendations for improving surveillance include that the northern states should increase coverage of the various HRG populations, with more TI sites which is a challenge for them since good functioning NGOs are lacking , for expansion. The report may help the states in better preparedness for conduction of surveillance activities and managing the HIV/AIDS Control Programme based on evidence.

The programme officers from various states may use this report to plan for improvement in the surveillance activities and managing progra especially the TIs. The NGOs may use this report to identify areas and populations for framing new proposals. This report will be of interest to the academicia to understand the HIV Sentinel Surveillance in the country.

I take this opportunity to thank the Director General and Secretary, Ms. Sujatha Rao for assigning this activity to the NIHFW and Dr. Ajay Khera, Joint Director and Dr. S. Venkatesh, Additional Project Director and their team from NACO for constant support. Special thanks are due to the members of Regional Institutes and the Central Team members for their untiring supervision in maintaining quality. We are grateful to Dr. DCS Reddy from WHO Country Office for valuable suggestions and to the WHO SEARO office and UNAIDS India for participation in monitoring. We express our gratitude to Dr. Arvind Pandey, Director, NIMS for his technical advice. Dr Usha Baveja is thanked for reviewing the report.

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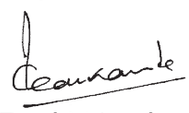

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immuno Deficiency Syndrome
ANC	Antenatal Clinic
ASHA	Accredited Social Health Activist
ART	Antiretroviral Therapy
AWW	Anganwadri Worker
BSS	Behavioural Surveillance Survey
CHC	Community Health Centre
CI	Confidence Interval
CMO	Chief Medical Officer
CBO	Community based Organisation
FSW	Female Sex Worker
HSS	HIV Sentinel Surveillance
HIV	Human Immunodeficiency Virus
HRG	High Risk Group
IBBS	Integrated Biological and Behavioural Surveys
ICTCs	Integrated Counseling and Testing Centers
IDU	Injecting Drug Users
MARP	Most At Risk Populations
MCH	Maternal and Child Health
MSM	Men who have Sex with Men
NACO	National AIDS Control Organization
NIHFW	National Institute of Health and Family Welfare
NGO	Non-Government Organization
PHC	Primary Health Centre
PPTCT	Prevention of Parent -to-Child Transmission
RI	Regional Institute
RCH	Reproductive and Child Health
SACS	State AIDS Control Society
SEARO	South East Asia Regional Office (of WHO)
SST	State Surveillance Teams
STD	Sexually Transmitted Disease
TB	Tuberculosis
TC	Testing Centre
TI	Targeted Intervention
VCTC	Voluntary Counseling and Testing Centre
WHO	World Health Organization

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF MAPS

LIST OF BOXES

EXECUTIVE SUMMARY

Background

The Annual Sentinel Surveillance for HIV was started in the country in 1998 using standardized methodology. It is conducted by the National AIDS Control Organization (NACO) and the States AIDS Control Societies (SACS). NIHFW has been associated with it for data collection, monitoring, analysis and preparing the country report since 1998. Over the years, the number and types of sites have increased and also multi-institutional supervision along with preparation of Surveillance Guidelines have led to an improvement in the quality of data and increased representativeness of the different population segments and geographical areas. Training of all concerned officers at the sentinel sites and testing centres is carried out prior to the surveillance activity. NIHFW, in collaboration with five Regional Institutes, Central team members and state surveillance teams, conducted the training, supervision and monitoring of the activities to ensure quality. The National Institute of Medical Statistics based on the surveillance estimates the burden of HIV in the country.

The Annual Sentinel Surveillance 2007 round was carried from 1st October 2007 to 15th January 2008 in all the states. The summary of the surveillance activities is given below:

Methodology

Sentinel surveillance was conducted among ante-natal attendees (both at urban and rural sites which represent the general population),among core high risk groups which include Men who have Sex with Men (MSM), Female Sex Workers (FSWs), Injecting Drug Users (IDUs), and the bridge population like STD patients, migrants, truckers, eunuchs etc. All individuals attending the designated sentinel sites during the period of surveillance constituted the sampling frame. The sample size of 400 individuals was considered for low risk group of antenatal clinic attendees and 250 individuals from each of the high risk groups of FSW, MSM, IDU, STD patients and migrant population. At the STD clinic sites 150 and 100 patients were taken from the STD clinic and gynaecology clinic respectively to ensure the adequate representation of men and women. The age group of the sampling units was restricted to 15 to 49 years.

At each site, the sampling units were selected by consecutive sampling and blood samples were collected from the attendees according to inclusion criteria. Information on age, sex, residence, order of pregnancy, migrant status, literacy, occupation, STD syndromic diagnosis, spouse occupation, etc were collected. Serum was separated from whole blood, coded at respective sentinel sites and sent to recognized laboratories for HIV testing, under recommended cold conditions. The testing strategy adopted for sentinel surveillance was 'Unlinked Anonymous' .HIV status was confirmed with two ELISA/Rapid/tests or a combination of these.

Implementation of Surveillance Process

Each yeara review meeting of the Task Force on Surveillance constituted by NACO is held prior to the start of the programme to discuss the guidelines and the steps to be adopted. Accordingly, in 2007 the activities were executed by officers from NACO with NIHFW/NIMS, the five Regional Institutes (RIs), SSTs and the SACS. In 2007, the specific changes adopted were: modification of the web based data entry software to make it more user friendly, addition of new sites and double data entry. Orientation of all RIs and Central Team Members was done by NIHFW using the 'Operational Guideline' manual by NACO. Subsequently the RI teams conducted training of all the personnel of the sentinel and HIV testing sites involved in surveillance, in the various states. Members from each RI and the Central teams then visited the sites and testing centers to ensure implementation of the guidelines. Each site was visited at least once and was visited more times if problems persisted and needed to be corrected. Monitoring was done by all the team members using a uniform checklist and continued till data were uploaded at the NIHFW website. The testing laboratories followed internal and external quality control. Supervisory visit reports were submitted by central team members to NIHFW/NACO. NIHFW downloaded, cleaned, collated and analyzed the data to prepare a country report and National Institute of Medical Statistics cooperated in the monitoring activities and were nodal institute for HIV estimation for the country.

Key Steps Taken for Quality Assurance

The following major steps were taken to ensure quality in the surveillance process:

- Supervision and monitoring of the surveillance process was strengthened by the visits to the HIV sentinel surveillance sites and HIV testing centers by members of RIs and SSTs together with the central team members. The teams ensured compliance with standards and protocols for surveillance and testing.
- The testing laboratories followed internal and external quality assessment.
- Double data entry was done of all the data and then uploaded on NIHFW website after matching and correction. The uploaded data was rechecked and analyzed by NIHFW after downloading.

Key Findings and Conclusions

- HIV Sentinel Surveillance 2007 was conducted at 1134 sentinel sites – 646 sites were ANC (representing the general population),229 sites were from core risk groups (FSW, MSM, IDU), 248 sites were in STD clinics,10 sites were among bridge population like, migrants and truckers and one site was for eunuchs. A total of 3, 59,043 samples were tested during HIV Sentinel Surveillance 2007. There is a lack of appropriate coverage in some States and especially for the high risk groups.
- The overall HIV prevalence among different population groups in 2007 continues to portray that the epidemic is concentrated among HRG in India, with more than 5% prevalence among the core risk groups of IDU (7.23%), MSM (7.40%) and FSW (5.06%). The prevalence of HIV was 3.59% and 0.48 % (unadjusted rate) amongst STD patients and pregnant women, respectively.
- ***HIV Prevalence among Female Sex Workers***: At the national level, the prevalence amongst FSWs is not on the rise but, the country figure at 5.06% and wide range (0.4 to 17.9%) of HIV prevalence in this group cannot be ignored. There are 18 sites with prevalence of more than or equal to 10% and most of these are in high prevalence states of Andhra Pradesh, Tamil Nadu, Maharashtra (including Mumbai)and Manipur except one site each in Delhi and West Bengal. In other moderate and low prevalence states, 12 sites are showing HIV prevalence of more than or equal to 5% these states are – in West Bengal (7 sites), Bihar (4 sites) and Delhi (1 site).The trend of HIV infection amongst FSWs is not increasing in nearly all the states of the country.
- ***HIV Prevalence among Injecting Drug Users:*** Epidemic among IDUs is spreading to more regions of the country from the North Eastern States. Apart from Maharashtra, Manipur and Tamil Nadu, high prevalence persists among IDUs in the states of Chandigarh, Punjab, Delhi, Orissa, Kerala and West Bengal. Six states Andhra Pradesh, Assam, Karnataka, Nagaland and Uttar Pradesh have shown HIV prevalence between 1% and 5% among IDUs. Overall, twenty four sites have shown HIV prevalence of more than or equal to 5% among IDUs. There are many states with no IDU site.
- ***HIV Prevalence among Men who have Sex with Men*:** All the new MSM sites established in Andhra Pradesh and Orissa have shown high HIV prevalence, suggesting that there may be many more pockets of high prevalence among MSM which need to be identified. Andhra Pradesh, Karnataka and Manipur have HIV prevalence more than 15% in MSM. A significant increase in trend observed in low prevalence states of Delhi, Orissa, Haryana and West Bengal.
- ***HIV Prevalence in the Bridge Populations-'Patients with Sexually Transmitted Diseases'*:** HIV prevalence among STD patients is highest in the south Indian states followed by Mizoram and Goa. At the district level, 48 sites have HIV prevalence more than or equal to 5% among STD clinic attendees, out of which 13 sites are in low and moderate prevalence states. There is no change observed as compared to last year.
- ***HIV Prevalence among Migrants and Truckers (Bridge Population):*** The HIV prevalence rate among migrants in the newly established site at Kolkata was high, though the site at Mumbai showed prevalence of only 1.6%. The rates among truckers have shown an increase in 4 out of 6 consecutive sites in India as compared to 2006. Overall, the HIV prevalence amongst truckers and migrants is in between that of core high risk groups and general population, indicating their 'bridge' role. More sites are needed amongst such groups to understand the epidemic better.
- ***HIV Prevalence among Antenatal Women:*** The HIV prevalence among antenatal women was 0.48% at the all India level. This is more than the figure of 0.3% obtained from NFHS III data based on community survey. The adjusted HIV prevalence was highest in Manipur and Nagaland (1.11 %) followed by high risk states of south namely Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu (0.85 %) followed by rest of the states (0.26%). New sites in States with low HIV had prevalence more than 1%.
- Considerable differences continue to exist in the prevalence rates across different geographical regions. Except Andhra Pradesh, Manipur and Nagaland all the other states have shown less than 1% HIV prevalence among antenatal women. Eleven sites have shown a very high prevalence of more than or equal to 3% among antenatal women and all of these sites are in high prevalence states. At the district level, a total of 117 sites which includes both urban and rural sites have shown 1% or more HIV prevalence. Out of these, 15 sites (14 districts) were from moderate and low prevalence states. 10 sites have been identified as having HIV prevalence of more than 1% among antenatal women for the first time since 2003 and it is significant to note that 9 of these sites fall in low and moderate prevalence states. The epidemic is showing significant upward trend in consistent sites in states of Gujarat and Bihar. The wives of truckers, unskilled workers and hotel staff continue to be most vulnerable.
- ***Socio-demographic Variables and HIV Prevalence:*** The urban illiterate women of age between 15 to 49 years are more vulnerable than their rural counterparts. Women above 25 are affected more with HIV. Higher education of women seems to have a protective role as the HIV prevalence was lowest amongst the graduate women. This difference is more apparent in urban areas as compared to rural areas. The birth order does not affect, HIV prevalence rates among antenatal women, at all India level. However, HIV positivity among women with birth order 5 or more has been found only in the high risk states of N-E region. This indicates the longer duration of the HIV epidemic in the NE states. Also, the unemployed or labourers and those in the transport or hotel industry are more prone to HIV infection as compared to those in service sector.

Recommendations

For Surveillance

1. Expand the number of sites for HRG with focus on low prevalence states especially those showing an upward trend in HIV prevalence amongst pregnant women such as the states of Bihar and Gujarat.
2. To overcome the problem of quality for blood samples sent to testing centers from the TI sites, Dried Blood Spot (DBS) method for collecting blood samples may be used. This procedure would facilitate increase in the number of sites for HRG and improve coverage.
3. PPTCT data can be used, instead of ANC site data for surveillance in clinics where more than 90% of the pregnant women agree to take the HIV test.
4. To minimize problems in the quality of data, only adequately trained site personnel should perform the surveillance activities.
5. Logistic and fund problems may be reduced by starting activities in a fixed time each year.
6. To expand the sampling frame and to understand the epidemic better, other 'bridge population' groups like drivers, factory workers, hotel staff, prison inmates, etc. may be considered for surveillance with independent sites.
7. The STD clinics may be renamed as 'Reproductive Tract Infection (RTI) Clinics' and services improved for enhancing attendance and reducing the stigma attached to these clinics.
8. Rural representation needs to be increased by opening 'Composite ANC sites' in rural areas for example at the CHC block but the samples to be collected proportionately from all the PHCs under it.
9. A 'core surveillance team' should be constituted in each state to keep track of the epidemic by analyzing the data, and initiate local area and problembased special surveys, whenever and wherever needed.

For Programme

- Initiate/strengthen harm prevention interventions among IDUs – 1) states of north east, Maharashtra and Tamil Nadu, the traditional high prevalence states and 2) The recently emerged hot spots like – Delhi, Chandigarh, Orissa, Punjab and West Bengal. Open more IUD sites in states with no such sites e.g. Gujarat, Goa, Chhattisgarh, Jharkhand, Madhya Pradesh, J&k and Rajasthan etc.
- Identification and support to NGOs and CBOs for MSM. Targeted interventions sites for MSM to increase and provide effective coverage and prevention programmes for MSM.
- Interventions for FSW in all the states to continue and intervention programmes for clients should be instituted as this would help bring down the epidemic further.
- As the antenatal women represent general population taking HIV/AIDS control programme to large scale with involvement of functionaries like AWWs, ASHAs, PHC personnel, NGOs, etc. and intersectoral co-ordination between Ministry of Health, and Family welfare, Ministry of Education, Ministry of Social Welfare and Women and Child Development etc.
- The positive women need rehabilitation programmes for themselves and children.
- Specific strategies are needed to address women of low-socio-economic status and adolescent girls.
- PPTCT services should be expanded to include all the districts.
- Education of general population in all the states with focus on women from rural areas or urban slums to be enhanced. This is essential as the third round of BSS has stated very low awareness of HIV amongst these women.
- Strengthening of BCC efforts for bridge population such as truck drivers, hotel workers, factory workers, migrants and labourers.
- Counseling services should be made available at all the STD and gynaecology OPDs, for not only HIV/AIDS but for all aspects of the reproductive health.
- Convergence of data on HIV/AIDS and on RCH in MOHFW for joint planning of services.

For Research

- Contribution of various bridge population/groups to the HIV epidemic.
- HIV prevalence among populations not attending the sentinel sites e.g. women who deliver at home or those attending private clinics for HIV testing, antenatal services or for STDs.
- Triangulation of data from ICTCs, PPTCTs, STD clinics, blood banks, sentinel surveillance and ART, for interpreting the status of epidemic in the country.