

# National Behavioural Surveillance Survey (BSS) 2006

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## EXECUTIVE SUMMARY



**National AIDS Control Organisation**

Ministry of Health and Family Welfare  
Government of India

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## **General Population**



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# Executive Summary

## Background

- The main aim of NACP-III is to halt and reverse the tide of the HIV epidemic in India by 2012. The programme aims to reduce new infections in all categories and prevent spread of HIV from High Risk Groups (HRG) to the general populations. NACP-III envisages to achieve the following objectives: Developing safe behaviours and attitudes particularly among the youth and high-risk groups and with a particular focus on most affected regions. It also aims to ensure that people infected and affected with HIV get easy access to a comprehensive package of services that include prevention, care, support and treatment. Establishing a world-class blood transfusion system in the country for bringing down the incidence of blood-transmissible diseases by actively promoting voluntary blood donation is another main objective. Finally, NACP-III aims to develop a systematic approach in order to integrate HIV/AIDS with the National Rural Health Mission, National TB Control Programme and health promotion aims at adopting healthy lifestyles. As the first step, NACO is adopting this process of integration at the district level by placing the District AIDS Prevention and Control units under the District Health Society.
- In order to develop strategic programme initiatives, NACP-III has given great importance to evidence based planning and strengthening of surveillance, research and monitoring. HIV surveillance is a crucial component providing information for programmatic decision making and planning. HIV surveillance includes HIV Sentinel Surveillance, AIDS Case Surveillance, STI Surveillance and Behavioural Surveillance. While the initial three components assess the epidemic after it has emerged, Behavioural Surveillance provides an understanding of the high risk behaviours that predispose to the emergence of an epidemic. It also gives inputs on the knowledge, awareness and practices of different population groups that may make them vulnerable to HIV infection.
- NACO conducted the first National Behavioural Surveillance Survey (BSS) in the year 2001 i.e. towards the beginning of NACP-II. After a gap of five years since the first BSS, NACO has commissioned the National BSS 2006 to measure the changes in behavioural indicators. BSS 2006 has been carried out among general population as well as High Risk Groups (FSWs, MSM, IDUs and clients of FSWs) following similar approach adopted in BSS 2001.
- The aim of carrying out the National BSS 2006 was to assess current risk behaviour in specific population groups in India and to measure behavioural changes from BSS 2001 to BSS 2006.
- The present report details the observations of the National BSS 2006 among the general population, which was conducted in all states and union territories of the country.

## Methodology and Sampling Design

- While planning for BSS 2006, it was felt important that all the key stakeholders agree on the goals of data collection as well as the practicalities. Keeping this basic premise in mind, NACO initiated a systematic consultation process among all the key partners right from the beginning of the planning stage of this survey. For the National BSS 2006, a Technical Resource Group (TRG) was constituted by NACO that included members from different national and

international organisations such as UNAIDS, UNICEF, WHO, NIMS, Clinton Foundation, RCSHA, and Population Council. TRG meetings were held on weekly basis at every stage of the study to review progress and plan for the effective use of the emerging data. The TRG members contributed substantially in terms of providing ideas and shared their experiences throughout the study period.

- BSS 2006 covered all the states and union territories in the country. All the states and union territories were categorised into 25 sampling units for the purpose of BSS 2006. The smaller states were combined with adjacent large states. Goa and Daman & Diu were clubbed into one group, as were Gujarat and Dadra & Nagar Haveli, Kerala and Lakshadweep, Punjab and Chandigarh, Tamil Nadu and Puducherry, West Bengal and Andaman & Nicobar Islands and five North Eastern states of Arunachal Pradesh, Nagaland, Meghalaya, Mizoram and Tripura. All other states in the country were taken as independent sampling units.
- BSS 2006 among general population (15-49 years) was carried out following the same methodology adopted for BSS 2001. As per the sampling design adopted for BSS 2006, a total sample of 97,240 respondents (males and females in the age group of 15-49 years) has been covered for the GP survey. There were an equal number of respondents from urban and rural areas in each sampling unit. This sample has been covered from 2434 rural and urban PSUs scattered over 25 states/groups of states. In both rural and urban PSUs the total sample was equally divided between males and females in the age group of 15-49 years. In each selected PSU, a sample of 40 respondents (20 males and 20 females) was covered for the GP survey.
- The required information for the GP survey was collected through the same questionnaires used for BSS 2001 with certain modifications to cover some additional issues. A detailed manual was prepared for field teams for their ready reference. The manual highlighted the survey objectives, methodology, techniques for interviewing and recording the answers and detailed description of each question.
- The fieldwork for the GP survey was carried out simultaneously all over India. It was initiated in mid-May 2006 and completed in June 2006. Standardisation and uniformity during the survey were ensured by a series of training workshops for the field personnel, back translation of schedules and tight quality control during data collection. All teams were briefed every morning and debriefed every evening during the phase of data collection.
- After field and office editing, the data was entered through a tailor made software module in Integrated System for Survey Analysis (ISSA version 7.0). The database was arranged by merging/splitting to make it suitable for further analysis and table generation. Appropriate weighting was done as disproportionate allocation of sample took place at different stages of sampling. After due cleaning of data, the analysis was carried out using Statistical Package for the Social Sciences (SPSS 10.0). Adequate checks were built in at data entry and data analysis stage to ensure data quality

## Key Findings for General Population

- **Profile of the Respondents**
  - ◆ A total of 97,240 respondents were contacted in the entire country during BSS 2006. Of these, 48,084 (49.4%) were residing in urban areas while 49,156 (51.6%) were from rural areas. Among the interviewed respondents, 48,617 (50%) were females while 48,623 (50%) were male respondents. The proportion of males and females in both the urban and rural samples were similar to the overall proportion. At the national level, the 25-39 years age

group contributed a relatively larger share of the sample respondents (43%). More than one-third (37%) of the sample respondents belonged to the younger age group of 15-24 years. The lowest representation in the achieved sample was thus the oldest age group, i.e. 40-49 years (19%). The median age of respondents was 28 years in BSS 2006 against 29 years in BSS 2001. Across all the states/groups of states, median age ranged between 27 and 29 years. More or less similar age wise mix was observed in the rural and urban areas of different states/groups of states. Majority of the sample both in BSS 2006 (71%) as well as BSS 2001 (75%) consisted of currently married respondents. The proportion of the currently married respondents was higher among the rural respondents (rural 73%, urban 67%) and among the females (78%) than the males (64%). Average literacy levels of the sampled respondents were high (BSS 2006 -76%, BSS 2001 -69%). Overall males and urban residents had higher literacy rates compared to females and rural residents.

- ◆ At national level the radio listenership has increased significantly from 39 percent in BSS 2001 to 49 percent in BSS 2006. In both urban and rural areas, the listenership was substantially higher among male respondents. Overall, three-fourths of the respondents in BSS 2006 against 57 percent in BSS 2001 had watched television at least once a week in last one month. Higher proportion of respondents in urban (88%) than the rural areas (59%) had exposure to television. Within both urban and rural areas, significantly higher proportion of males had an exposure to television as compared to their female counterparts. At the all India level, 45 percent of the respondents (35% in BSS 2001) reported reading newspaper/magazine at least once a week in last one month. As expected, the proportion was higher among males (60%) and urban (57%) respondents. At the national level, about 81 percent of the respondents reported being exposed to any of the three media in the last month.
  - ◆ At national level, 21 percent of respondents received Interpersonal Communication (IPC) on STD/HIV/AIDS in the last 12 months, compared to 14 percent in BSS 2001. No major difference is observed with respect to place of residence and gender. The proportion is observed to be highest in Karnataka (42%), Sikkim (36%) and Andhra Pradesh (34%) while it is lowest in Madhya Pradesh (6%). Distribution of respondents who received IPC on condom usage for protection against STD/HIV/AIDS is similar to IPC on STD/HIV/AIDS mentioned above. This proportion has increased from 10 percent in BSS 2001 to 19 percent in BSS 2006. Four-fifths of respondents in BSS 2006, against three-fourths of respondents in BSS 2001, reported mass media as the source of information on STD/HIV/AIDS. Seventy-eight percent of respondents at the national level were exposed to any message on HIV/AIDS from one or other mass media during the last one month preceding the survey. The level of exposure to messages on HIV/AIDS is significantly higher in urban areas (urban 89%, rural 73%) and among males (males 84%, females 72%).
- **Awareness of HIV/AIDS**
    - ◆ The percentage of respondents aware of HIV/AIDS has significantly increased over the years (BSS 2001 -67%, BSS 2006 -80%). The proportion of respondents aware of HIV/AIDS was significantly higher in urban (92%) areas and among male (87%) respondents. Consistent gender differential existed in both rural and urban areas. Except for Bihar (47%), in all other states more than 60 percent of the respondents had heard of HIV/AIDS. The awareness level was more than 90 percent in some of the northern states - Delhi, all north eastern states, southern states (Andhra Pradesh, Tamil Nadu and Puducherry, Kerala and Lakshadweep) and western states (Maharashtra, Goa and Daman & Diu) where the literacy level as well as the media exposure of the respondents was

also quite high. There was a small but significant decline in the level of awareness about HIV/AIDS across all sub samples (rural-urban and male-female) in the states of Punjab and Jammu & Kashmir.

- ◆ The male as well as female respondents in both rural and urban areas were more familiar with the terminology “AIDS” (80%) than “HIV” (64%).
- ◆ Nearly three-fourths of the respondents in BSS 2006 were aware that sexual contact could lead to HIV/AIDS. This proportion has increased significantly since BSS 2001 (62%). Nine out of ten respondents in urban areas as against seven out of ten in the rural areas were aware of this aspect. Across both rural and urban areas, the awareness of HIV transmission through sexual contact was significantly higher in males (89% in urban and 78% in rural) as compared to females (82% in urban and 60% in rural).
- ◆ Four out of every five respondents reported that HIV/AIDS could be transmitted by infected blood during transmission, which was a significant increase from BSS 2001 proportion (three out of five). The awareness in the rural (71%) areas was significantly lower than the urban (88%) areas. The awareness was poorest in Bihar (44%) followed by Madhya Pradesh (59%).
- ◆ Three-fourths (two-thirds in BSS 2001) of respondents were aware that HIV/AIDS can be transmitted through needle sharing. As in case of other issues, in this case also the awareness was observed to be significantly higher in urban areas (87%) and among male respondents (82%). The proportion of respondents reporting that HIV/AIDS could be transmitted through infected needles varied between 43 percent in Bihar and 95 percent in Kerala and Lakshadweep.
- ◆ Compared to the other routes of transmission, mother-to-child transmission was less known to the respondents across all states and union territories in the country. Across the states, the proportion was highest i.e. 89 percent in Goa and Daman & Diu, and Kerala and Lakshadweep, followed by Other North Eastern States (88%) and was lowest in Bihar (40%).
- ◆ Only half (55% in BSS 2006 and 49% in BSS 2001) of the respondents in the country were aware that HIV/AIDS could be transmitted through breast feeding. Tamil Nadu (78%) followed by north eastern states (74%) and Kerala and Lakshadweep (73%) reported highest awareness on the issue. The lowest awareness was reported in Bihar (35%) followed by Chhattisgarh (40%), Sikkim (41%), Rajasthan (45%) and Madhya Pradesh (46%).
- ◆ Nearly two-thirds of the respondents in BSS 2006 were aware that consistent condom use could prevent transmission of HIV/AIDS. There was a significant increase of 15 percent in this regard from BSS 2001. The awareness on this issue was significantly higher in urban (79%) and among male respondents (76%). Lowest awareness in this regard was recorded in Bihar (38%), Sikkim (45%), Orissa (52%), Karnataka (53%) and Madhya Pradesh (56%).
- ◆ Nearly two-thirds of the respondents in BSS 2006 against half in BSS 2001 were aware that having one faithful and uninfected sex partner could prevent transmission of HIV/AIDS. Again, this awareness was significantly higher among males and urban respondents. Over four-fifths of respondents in Kerala and Lakshadweep, Tamil Nadu and Himachal Pradesh, whereas, less than half in the states of Bihar, Sikkim, Chhattisgarh, Jharkhand and West Bengal and Andaman & Nicobar Islands were having such knowledge.
- ◆ The proportion of respondents aware of two important methods of prevention of transmission i.e. consistent condom use and sexual relationships with faithful and uninfected partners has significantly increased from 39 percent in BSS 2001 to 57 percent in BSS 2006. There existed significant gender (male 67%, female 16%) and rural-urban (urban 65%, rural 49%) differences in this regard. The awareness level was very low in Sikkim (37%), West Bengal and Andaman & Nicobar Islands (37%), Bihar (40%), Karnataka (41%), Orissa (45%) and Madhya Pradesh (53%).

- ◆ The proportion of the respondents having no misconception of HIV/AIDS transmission has increased significantly since BSS 2001 (BSS 2006 - 40%, BSS 2001-16%). The proportion of such respondents was quite low in Jammu & Kashmir (25%), Gujarat (28%), West Bengal and Andaman & Nicobar Islands (30%), Bihar (17%) and Madhya Pradesh (35%).
- **Awareness, Prevalence and Treatment Seeking Behaviour related to STDs**
  - ◆ Compared to the awareness of HIV/AIDS the awareness regarding STDs was significantly lower among various respondent categories. Awareness was consistently low across the country irrespective of whether respondents were males or females or resided in urban or rural areas. However, the awareness about STDs has significantly increased from 31 percent in BSS 2001 to 38 percent in BSS 2006.
  - ◆ Awareness of linkage between STDs and HIV/AIDS remains low although the awareness about this issue has increased significantly from 18 percent in BSS 2001 to 24 percent in BSS 2006. Gujarat and DNH (37%), Himachal Pradesh (37%), Andhra Pradesh (36%), Delhi (34%) reported considerable high awareness. The states reporting low awareness were Kerala and Lakshadweep (10%), Orissa (16%), Madhya Pradesh (12%) and Jammu & Kashmir (7%).
  - ◆ Awareness of the common symptoms of STDs among both men and women was uniformly low in the country. Female respondents were more aware of the STD symptoms among women as compared to male respondents. Similarly, high awareness in case of male STD symptoms was found among male respondents. The comparison of the results with BSS 2001 shows that awareness of STD symptoms among men as well as women has decreased in many states.
  - ◆ A small proportion (4% in BSS 2001, 3% in BSS 2006 ) of respondents stated that they suffered from genital discharge in the preceding 12 months. In the entire country there was a wide variation across states with a high of eight percent in Haryana to around one percent in Sikkim, Tamil Nadu, Bihar, West Bengal and Andaman & Nicobar Islands and Manipur.
  - ◆ Self reported prevalence of genital ulcer/sore in the country was also low. The states reporting very low prevalence were Uttarakhand, Karnataka, Himachal Pradesh, Chhattisgarh and Sikkim (1%), while Orissa (6%), Haryana, Delhi and Jharkhand (3%) reported high.
  - ◆ It was found that there was a wide variation in self-reported STD prevalence (genital discharge or ulcer/sore or both) across states/groups of states, ranging between two percent each in Sikkim, Karnataka and Tamil Nadu and 11 percent in Orissa followed by Haryana (9%). Overall, five percent respondents reported STDs in the country.
  - ◆ Over half of the respondents (59% in BSS 2001, 56% in BSS 2006) who suffered from a genital discharge/sore/ulcer in the preceding 12 months sought treatment from any healthcare provider. Higher proportion of respondents in urban (61%) than the rural (55%) areas sought treatment of STD symptoms from any healthcare provider. Fifty-five percent females and 58 percent males had sought treatment from any healthcare provider during the last episode of STD. Less than two-fifths of the respondents in Kerala and Lakshadweep and Jammu & Kashmir went to any healthcare provider for treatment of the STD symptoms.
  - ◆ The proportion of respondents seeking treatment for STDs from government hospitals/clinics has increased from 23 percent in BSS 2001 to 26 percent in BSS 2006. Proportion of respondents seeking treatment from a government facility was higher in Maharashtra (48%), Karnataka (44%) and Himachal Pradesh (39%) whereas, Kerala and Lakshadweep (4%) reported least preference for STD treatment from a government facility.



- ◆ A definite preference for government facility for STD treatment was observed across all the states. Preference for government facility was higher in the rural areas (65%) than the urban areas (56%). Relatively low proportion of female respondents preferred going to a government facility as compared to their counterparts.
- **Awareness, Availability and Accessibility of Condoms**
  - ◆ The awareness about condoms has increased from 77 percent in BSS 2001 to 82 percent in BSS 2006. Awareness of condoms was significantly higher in the urban (90%) as compared to the rural areas (78%). Within both urban and rural areas, higher proportions of males were aware of condoms than females. In a majority of the states the awareness level ranged between 85 and 95 percent.
  - ◆ Nearly three-fifths of the respondents were aware about the use of condoms for HIV/AIDS prevention. The states reporting lower awareness in this regard were Jharkhand, Chhattisgarh, Sikkim, West Bengal, Madhya Pradesh, Bihar and Karnataka (38% to 46%)
  - ◆ About 90 percent of the respondents in both BSS 2006 and BSS 2001 reported easy availability of condoms in their area. The proportion of respondents reporting easy availability ranged between 79 percent and 98 percent across the states.
  - ◆ The proportion of respondents reportedly taking less than 30 minutes to obtain a condom has increased significantly from 46 percent in BSS 2001 to 81 percent in BSS 2006. Respondents from Uttarakhand and Himachal Pradesh in north, Assam, Sikkim and Orissa in the east, Karnataka in south reported poorer access as compared to the remaining states.
- **Sexual Behaviour and Condom Usage**
  - ◆ The median age at first sex was 19 years in both BSS 2006 and BSS 2001. The median age at first sex was 19 and 20 years in rural and urban areas respectively. It was lower for female respondents (18 years) compared to their male counterparts (20 years). Across states/groups of states, the median age at first sex varied from 17 years (Bihar) to 22 years (Goa and Daman & Diu).
  - ◆ Similar proportion (6%) of respondents both in BSS 2006 and BSS 2001 reported sex with non-regular partners during 12 months preceding the survey. Significant variation was observed across different states with a lowest proportion (2%) in Bihar and Karnataka, and the highest (15%) in Andhra Pradesh. The other two states reporting higher proportion were Punjab and Chandigarh (10%) and Tamil Nadu (11%).
  - ◆ At the national level three percent of the sexually active males reported sex with a commercial partner in the last one year preceding the survey. The corresponding percentage was five percent and three percent in urban and rural areas respectively. As high as 19 percent of the sexually active males in Andhra Pradesh followed by nine percent in Tamil Nadu, six percent in Delhi and five percent in Kerala and Lakshadweep had sex with a commercial partner in last 12 months.
  - ◆ Among the respondents who had sex with any non-regular sex partner in last 12 months nearly three-fifths (58%) in BSS 2006 against two-fifths (40%) in BSS 2001 reported condom use during the last sex with any non-regular partner. The proportion reporting condom use during last sex with a non-regular partner was higher (77-82%) in Assam, Delhi, Goa, Daman & Diu, Punjab and Chandigarh, Other North Eastern States, Himachal Pradesh and lowest in Orissa (38%). The state-wise figures in this respect should be interpreted with caution due to small bases.
  - ◆ Among the respondents who had sex with a commercial partner during last 12 months, over four-fifths (urban 91% and rural 87%) reported condom usage during last sex with a commercial partner. More than 90 percent of the respondents in eleven



states reported use of condom with commercial partners in the last 12 months, 60 - 90 percent reported the same in sixteen other states and only one state had less than 60 percent respondents reporting use of condom with commercial partners in the last 12 months.

- ◆ The consistent condom use among the respondents who had sex with any non-regular sex partner in last 12 months has increased significantly from 27 percent in BSS 2001 to 42 percent in BSS 2006. The increase in the consistent condom use was reported in almost all the states, except Goa and Daman & Diu, Maharashtra and Himachal Pradesh. There were four states where consistent condom use in the last twelve months was reported by 60-90 percent of the respondents, nineteen states where it was reported by 30-60 percent respondents and five states where less than 30 percent respondents reported it.
  - ◆ Two-thirds of male respondents were aware of men having sex with men. The awareness was substantially higher in the urban areas (75%) than rural areas (62%). The awareness in this regard was highest in Kerala and Lakshadweep, Delhi (89%) and lowest in Karnataka (34%).
  - ◆ Among the male respondents, three percent were indulged in sex with males in the last one year. In the states with high awareness on the issue (Kerala and Lakshadweep and Punjab and Chandigarh) the involvement was also reported to be the highest.
  - ◆ Among the male respondents who had indulged in sexual activities with any male partner, only one-fifth used condoms during the last occasion of sex with a male partner.
- **Other Key Issues**
- ◆ Fifty-six percent of the respondents in BSS 2006 felt that PLHA should be allowed to stay in village/community. Higher stigma levels in rural areas (rural 52%, urban 68%) and among female respondents (males 64%, females 48%) was observed in this regard. Acceptability of PLHA in the community was reported highest (74%) in Andhra Pradesh and Delhi and lowest in Bihar (30%).
  - ◆ Around two-thirds of the respondents felt the need for a separate care centre for PLHA. The proportion was higher in urban areas (69%) and among male respondents (69%). Across the states, the proportion was reported highest in Goa and Daman & Diu and Maharashtra (83-84%). It was lowest in Delhi and Bihar (37-40%).
  - ◆ Overall, 44 percent (urban 56% rural 39%) of the respondents perceived that PLHA could be treated along with general patients. The proportion was observed to be highest in Delhi (69%) and lowest in Bihar (24%).
  - ◆ A significant increase from BSS 2001 (10%) to BSS 2006 (28%) was observed in the proportion of respondents who were aware of a testing facility for HIV/AIDS in the area. The highest level of awareness of any HIV testing facility was reported in high prevalence states of Maharashtra (60%) and Andhra Pradesh (52%). The lowest awareness levels were observed in Orissa, Assam, Bihar, West Bengal and Andaman & Nicobar Islands and Jammu & Kashmir (10-15%).
  - ◆ Three-fifths of the respondents perceived that if a testing facility is opened in their area, it would be possible for people to get tested confidentially. This proportion was significantly higher than that of BSS 2001 (42%).
  - ◆ Only one-fifth of the respondents were aware of ICTC and the proportion was significantly higher in urban areas and males. The lowest awareness in this regard was observed in Bihar (6%), Jammu & Kashmir (8%), Madhya Pradesh, Punjab and Chandigarh and Uttarakhand (9%).
  - ◆ The awareness about PPTCT is also low (overall 13%, urban 20%, rural 10%). Gujarat (47%) had the highest level of awareness followed by Maharashtra and Manipur

(31% and 29%). The lowest awareness with respect to PPTCT was observed in Uttar Pradesh, Uttarakhand, West Bengal and Andaman & Nicobar Islands and Bihar (3-4%).

- ◆ Around 22 percent of the respondents reported having come across a voluntary blood donation campaign. The exposure to these campaigns was observed to be slightly higher in urban areas (30%) as compared to rural areas (19%).
- ◆ One out of every 10 respondents across the country reported that HIV/AIDS can be cured. Across the states, the proportion was observed to be highest in Orissa (23%) and lowest in Manipur and Punjab and Chandigarh (4-5%).

# National Behavioural Surveillance Survey (BSS) 2006

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## Youth (15-24 Years)



National AIDS Control Organisation  
Ministry of Health and Family Welfare  
Government of India

# Executive Summary

## 1. Background

1. A clear understanding of the situation of young people and their needs is required to design and successfully implement interventions to stem the tide of infections among young people. Without this information, the scale of the response required and the focus and relative urgency of the interventions remain unknown. Since most new infections are in young people, modest changes in behaviour in this age group may have a significant impact on the epidemic. A positive feature of arming young people with knowledge and skills makes them more likely to adopt safe sexual behaviour compared to the older people with already entrenched habits.
2. In order to design evidence-based interventions among the young people, it is essential to understand the levels of knowledge about HIV/AIDS, attitude and sexual behaviour of young people. Behavioural Surveillance Surveys (BSS) are internationally standardised tools used for understanding the knowledge, attitude and behaviour of populations. Undertaking BSS among Youth is an important effort by NACO and UNICEF to monitor changes in behavioural aspects of young people who are vulnerable to HIV infection
3. The aim of the study is to provide a baseline for the interventions among the young people supported by NACO and UNICEF. The study will be repeated periodically for trend analysis, which will indicate the impact of the interventions as well generate invaluable information about behaviour and life style of young people in the country.

## 2. Methodology and Sampling Design

1. To effectively monitor the trends in cognitive information on HIV/AIDS and to assess changes in sexual behaviour and risk practices, NACO conducted BSS among general population (15-49 years) in 2001 i.e. towards the beginning of NACP-II. UNICEF and NACO undertook a detailed disaggregated analysis of National BSS 2001 data for the 15-24 population segments of the general population. However, the sample of 15-24 population culled out from BSS 2001 data was not adequate to provide representative estimates for male and female population (15-24 years) in rural and urban areas of different states. In view of this, UNICEF was planning to undertake a more comprehensive National BSS survey by covering representative sample of young people. Keeping in view the coverage of the National BSS among the young population and the time and resources required for the same, UNICEF and NACO decided to carry out the Youth survey along with BSS 2006 which was to be conducted by NACO in the year 2006.
2. The BSS among young people was carried out following the same methodology adopted for survey among general population (GP) in BSS 2006. As per the sampling design adopted for BSS 2006, a total sample of 97,240 respondents (male and female in the age group of 15-49 years) have been covered for the GP survey. This sample has been covered from 2434 rural and urban PSUs scattered over 25 states/group of states. In each selected PSU, a sample of 40 respondents (20 males and 20 females) was covered for the GP survey, which also included respondents in the age group of 15-24 years. Besides the above sample, an additional sample of 20 respondents (10 male and 10 female) aged 15-24 years was covered in each PSU for the BSS among young people. The total sample covered for the BSS among

young people was 78,916 of which 30,791 were from the GP survey and 48,125 was the additional sample covered for the Youth survey.

3. While planning for Youth BSS, it was felt important that all the key stakeholders agree on the goals of data collection as well as the practicalities. Keeping this basic premise in mind, UNICEF and NACO initiated a systematic consultation process among all the key partners right from the beginning of the planning stage of this survey. For BSS 2006, a Technical Resource Group (TRG) was constituted by NACO that included members from different national and international organisations as UNAIDS, UNICEF, WHO, NIMS, Clinton Foundation, RCSHA and Population Council. TRG meetings were held on a weekly basis at every stage of the study to review progress and plan for the effective use of the emerging data for BSS 2006 as well as the Youth BSS. The TRG members contributed substantially in terms of providing ideas and shared their experiences throughout the study period.
4. All the states and union territories in the country were categorised in 25 sampling units for the purpose of BSS 2006. The smaller states were combined with adjacent large states. Goa and Daman & Diu were clubbed into one group, as were Gujarat and Dadra & Nagar Haveli, Kerala and Lakshadweep, Punjab and Chandigarh, Tamil Nadu and Puducherry, West Bengal and Andaman & Nicobar Islands and five North Eastern states of Arunachal Pradesh, Nagaland, Meghalaya, Mizoram and Tripura. All the other states in country were taken as independent sampling units.
5. The required information for the Youth survey was collected through similar questionnaires used for BSS 2006. A detailed manual was prepared for field teams for their ready reference. The manual highlighted the survey objectives, methodology, techniques for interviewing and recording the answers and detailed description of each question.
6. The fieldwork for the GP survey as well as Youth survey was carried out simultaneously in all over India. It was initiated in mid May 2006 and was completed in June 2006.
7. After field and office editing, the data was entered through a tailor made software module in Integrated System for Survey Analysis (ISSA version 7.0). One day Workshop was organised at NIMS to finalise the analysis and tabulation plan for the Youth BSS. The Workshop was attended by the TRG members and experts in health sector particularly in HIV/AIDS and the core team members of the survey team. Before merging the two sets of data (Extracted sample from NACO BSS and additional sample through Youth BSS) appropriate weighting was done as disproportionate allocation of sample took place at state and other levels. After due cleaning of data, the analysis was carried out using SPSS 10.0 package. Adequate checks were built in at data entry and data analysis stage to ensure data quality

## 3. Salient Findings

### 3.1 Profile of Respondents

1. Of the total sample of 78,916 respondents covered for the BSS among young people, 40,029 (50.7%) were residing in rural areas and 38,887 (49.3%) were from urban areas.
2. Among the interviewed respondents, 40,027 (50.7%) were males while 38,889 (49.3%) were females.
3. At the national level, the median age of the youths was 20 years. The median age was similar (20 years) across residence as well as gender of the respondents.
4. Most of the respondents (87%) were literates. The proportion of literates was higher in urban areas and among male. Compared to other states lower proportion of literate respondents was reported in Bihar (71%), Uttar Pradesh (75%) and Madhya Pradesh (83%).

5. Overall, less than one-third of the youths were currently married. The proportion of the currently married youth was higher in rural areas (33%) and among females (44%). The lowest proportion of currently married youths was observed in Jammu & Kashmir, followed by Goa and Daman & Diu and Manipur.

### 3.2 Awareness of HIV/AIDS and its Modes of Transmission and Prevention

1. Most of the youths (86%) in BSS 2006 were aware of either HIV or AIDS or both and there has not been any change in this respect since the BSS 2001. The awareness about HIV/AIDS was significantly higher in urban areas and within both urban and rural areas, higher proportion of males than females were aware of HIV/AIDS. The proportion aware of HIV/AIDS was relatively lower in states like Bihar, Chhattisgarh and Madhya Pradesh.
2. The youth were more familiar with the terminology "AIDS" (86%) than "HIV" (72%).
3. Most of the youth aware of HIV/AIDS also knew that HIV/AIDS could be transmitted through unprotected sexual contacts (92%), transfusion of infected blood (95%) and sharing of used/infected needles (94%). However, lower proportion of the respondents knew that an HIV-infected mother could infect the child in her womb (83%) and HIV/AIDS could be transmitted through breast feeding (67%).
4. Almost all the respondents (97%) who were aware of HIV/AIDS also knew about at least two modes of its transmission.
5. Even among the youth aware about HIV/AIDS, only two-thirds reported that the disease can be prevented by consistent condom use and by having one faithful uninfected sex partner. Higher proportion of males (73%) and urban (71%) respondents had awareness of both the methods of prevention. Nearly two-fifths of the rural females in Karnataka, West Bengal and Andaman & Nicobar Islands, Assam and Sikkim and nearly half in Jharkhand, Orissa, Other North Eastern States and Maharashtra were aware of both the methods of prevention of HIV/AIDS.
6. More than two-fifths of the youths could correctly identify three common misconceptions on transmission of HIV/AIDS. This proportion was significantly higher in urban areas (52%). Less than one-fourth of the rural female respondents in the states of Andhra Pradesh, Jammu & Kashmir and West Bengal and Andaman & Nicobar Islands could correctly identify three common misconceptions on transmission of HIV/AIDS.
7. The proportion of respondents with comprehensive correct knowledge of HIV/AIDS transmission and prevention has increased significantly from 22 percent in BSS 2001 to 28 percent in BSS 2006. In both the surveys, the corresponding percentage was significantly higher among males and in urban areas. This proportion was relatively higher for 20-24 age group (30 percent) compared to the 15-19 years age group (27 percent).

### 3.3 Awareness of STDs and its Treatment Seeking Behaviour

1. Compared to the awareness of HIV/AIDS, the awareness regarding STDs was significantly lower among the youth. However, the awareness about STDs has significantly increased from 29 percent in BSS 2001 to 36 percent in BSS 2006. Higher proportion of male respondents from urban areas had ever heard of STDs, unlike rural areas where similar proportion of male and female respondents had heard of STDs. The awareness was reported to be lowest in Jammu & Kashmir (9%), followed by Madhya Pradesh (12%). It is higher in 20-24 years age group than 15-19 years.
2. Nearly two-thirds of the youths aware of STDs, knew that there is a linkage between STDs and HIV/AIDS. The proportion was considerably higher among males (73%) and in urban areas (72%). Hardly 25 percent of the females in Kerala and Lakshadweep and less than 45

percent of those in Orissa, Assam and other North Eastern states were aware of linkages between STDs and HIV/AIDS.

3. Overall, five percent of the respondents in BSS 2006 (4% in BSS 2001) reported any STD symptom (self-reported prevalence) in last 12 months. Higher proportion of females (6%) reported any STD symptom as compared to males (4%). Further, STD prevalence was observed to be marginally higher in rural areas (5 %) than urban areas (4 %). Across the age groups, higher proportion of respondents and 20-24 years (6%) reported STD symptom in the last 12 months compared to those in age group 15-19 years.
4. At the national level, 48 percent of the youth reporting STD prevalence in the last one year, visited any health institution during last episode of any STD symptom. The proportion was higher among male respondents at 55 percent as compared to females (43%). Significant variation was observed across different states/group of states in this respect with a highest proportion being reported in Tamil Nadu and Puducherry (85%) and lowest in Chhattisgarh (19%). This proportion was also higher among 20-24 age group (52%) than 15-19 years (41%).
5. The most commonly mentioned sources of treatment during last episode of STDs was reported to be Private clinic/ hospital (32 percent), followed by Govt. clinic/hospital (23 percent) and home based treatment (22 percent). Over one-fifth of the respondents who suffered from STD during past 12 months had not sought any treatment.

### 3.4 Awareness of Condoms

1. More than four-fifths of the respondents in both BSS 2001 and BSS 2006 were aware of condoms. Awareness of condoms was slightly higher in the urban areas (90%) as compared to the rural areas (82%). Within both urban and rural areas, higher proportions of males were aware of condoms than females. The awareness about condoms was lowest in Bihar (62%), followed by Karnataka (66%) and Chhattisgarh (74%).
2. Among the respondents aware of condoms nearly 15% did not know about the use of condoms for HIV/AIDS prevention. This was even lower among the respondents in rural areas and female respondents. Except for Sikkim (62%), West Bengal and Andaman & Nicobar Islands (67%), Assam (71%), Bihar (72%) and Orissa (78%) more than four-fifths of the respondents from all states/group of states reported that condoms can be used to prevent HIV/AIDS transmission.
3. About 92 percent of the respondents reported easy availability of condoms in their area. This proportion was lower in the states of Assam (81%) followed by Orissa and Karnataka (85%).
4. Among respondents aware of condoms, 85 percent reported that condom can be procured within 30 minutes. Following the trend with respect to awareness of condoms and easy availability, the proportion was observed to be higher in urban areas (91%) as compared to rural areas (81%). Further, across both urban and rural areas a higher proportion of males reported condom procurement within 30 minutes as compared to females.

### 3.5 Sexual Behaviour and Condom Usage

1. At all India level, the median age at first sex was reported to be 18 years in rural and urban areas as well as for male and female respondents. Across states/group of states, the median age at first sex was reported to be lowest in Bihar at 16 years and highest in the states of Goa and Daman & Diu at 20 years.
2. Eight percent of the youths in BSS 2006 against seven percent in BSS 2001 reported sex with non-regular partners during preceding 12 months. The proportion reporting sex with non-



regular partners was significantly higher among males at 13 percent as compared to females (3%). Significant variation was observed across different states/group of states with lowest proportion (3%) in Uttarakhand, Bihar, Karnataka and the highest in Punjab and Chandigarh and Delhi (15%). The other two states reporting higher proportion of casual sex were Andhra Pradesh (13%) and Maharashtra (12%).

3. Among the youth who had sex with a non-regular partner in the last 12 months, 62 percent reported condom usage during last sex with non-regular partner. There has been a significant increase in this respect since BSS 2001 (52%). Significantly higher proportion of respondents from urban areas (75%) as compared to rural areas (55%) reported last time condom use with non-regular sex partners.
4. Compared to 34 percent of the youth in BSS 2001, 47 percent in BSS 2006 reported consistent condom usage with non-regular sexual partner in last 12 months. Higher proportion of youth in urban (59%) than rural areas (42%) reported use of condom every time with non-regular partner. Across urban areas, higher proportion of males (60%) reported consistent condom usage with non-regular partner as compared to females (54%), while in the rural areas the trend was reverse (males 41%, Females 48%).
5. Overall, 69 percent of the male youth were aware of Men who have Sex with Men (MSM). The proportion was significantly higher among males from urban areas (76%) as compared to rural areas (65%). The proportion was reported to be highest in Punjab and Chandigarh (89%), Delhi (87%) and, Kerala and Lakshadweep (84%). The lowest proportion was reported in Chhattisgarh (42%) followed by Karnataka (44 %) and Manipur (47%).
6. Among the males aware of MSM behaviour, three percent indulged in such behaviour. This proportion was highest in Kerala and Lakshadweep (8%) followed by Punjab and Chandigarh (6%) and Delhi and Haryana (4%).

### 3.6 Awareness about Testing Facilities and Stigma against PLHA

1. Among respondents aware of HIV/AIDS, only around one-third (males 39%, females 30%) reported to be aware of any HIV/AIDS testing facility in their area. The awareness was observed to be higher among respondents from urban areas (43%) than those from rural areas (31%). The awareness of HIV/AIDS testing facility was quite low among the rural females in Assam (3%), West Bengal and Andaman & Nicobar Islands (7%), Orissa, Uttarakhand, Jammu & Kashmir, Punjab and Chandigarh, Chhattisgarh and Uttar Pradesh (10-15%).
2. Only 26 percent (males 27%, females 26%) of the respondents aware of HIV/AIDS knew about ICTC. A significantly higher proportion of urban respondents (35%) as compared to rural (22%) had heard of ICTC. Significant variation was observed across different states/group of states with a highest proportion being reported in Gujarat & Dadar & Nagar Haveli (48%), Maharashtra (47%) and Andhra Pradesh (43%). The proportion was observed to be lowest in Madhya Pradesh (10%) and Punjab & Chandigarh (9%).
3. Only 18 percent of respondents were aware of PPTCT. The awareness levels were noted to be significantly higher in urban areas (24%) as compared to rural areas (15%). Gender-wise, relatively higher proportion of females (19%) than males (17%) was aware of PPTCT.
4. At the all India level, 19 percent of the respondents aware of HIV/AIDS knew about someone infected with HIV/AIDS. Significant variation was observed across different states/group of states with lowest proportion in Jharkhand and Uttarakhand (2%), Assam and Himachal Pradesh (3%).
5. Among respondents aware of HIV/AIDS, 68 percent (urban 69%, rural 66%) reported that PLHA should be allowed to stay in the community/village. The proportion was significantly higher

for males (72%) than females (64%). In Kerala and Lakshadweep, the proportion was reported to be lowest at 19 percent followed by Orissa (38%) and Assam (48%).

6. More than three-fifths of the respondents aware of HIV/AIDS reported that they are willing to share food with a PLHA. This proportion was significantly higher for urban (69%) and male (64%) respondents. The proportion of respondents reporting willingness to share food with a PLHA was higher (over 70%) in the states of Chhattisgarh, Punjab and Chandigarh, Uttarakhand, Manipur, Himachal Pradesh and Delhi.

### 3.7 Exposure to IEC and Mass Media

1. Only 22 percent (males 23%, females 20%) received interpersonal communication on STDs/HIV/AIDS in last one year. Among states/group of states, proportion of respondents who received interpersonal communication was comparatively lower in Chhattisgarh (6%), followed by Madhya Pradesh (7%). Further, only 12 to 15 percent of the respondents in Jammu & Kashmir, Bihar, Tamil Nadu and Puducherry, and Kerala and Lakshadweep had access to interpersonal communication on HIV/AIDS during the last one year.
2. Overall, three-fourths of the respondents had watched television at least once a week in last one month. Higher proportion of respondents in urban (92%) than the rural areas (68%) had access to television. Within both urban and rural areas, significantly higher proportion of males had exposure to television as compared to their female counterparts. Except for Bihar (35%) and Uttar Pradesh (61%), more than two-thirds of the respondents in all the states had watched television at least once a week in last one month.
3. More than half (males 64%, females 41%) of the respondents had listened to radio at least once a week in last one month. Among the states/group of states, radio listenership was reported to be highest in Manipur (84%), followed by Maharashtra (74%) and Assam (70%). The proportion was lowest in Other NE States (31%), Orissa and Chhattisgarh (34%) and Andhra Pradesh (35%).
4. At the all India level, half of the respondents reported reading newspaper/magazine at least once a week in last one month. As expected, the proportion was higher among male (63%) and urban (64%) respondents. Highest proportion of respondents from Kerala and Lakshadweep (86%), followed by Maharashtra (78%) and, Goa and Daman & Diu (75%) reported that they had read newspaper/magazine at least once a week in last one month.

# **National Behavioural Surveillance Survey (BSS) 2006**

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## **Female Sex Workers (FSWs) and their Clients**



**National AIDS Control Organisation**

**Ministry of Health and Family Welfare  
Government of India**

# Executive Summary

## Background

- The main aim of NACP-III is to halt and reverse the tide of the HIV epidemic in India by 2012. The programme aims to reduce new infections in all categories and prevent spread of HIV from High Risk Groups (HRGs) to the general populations. NACP-III envisages to achieve the following objectives: Developing safe behaviours and attitudes particularly among the youth and high-risk groups and with a particular focus on most affected regions. It also aims to ensure that people infected and affected with HIV get easy access to a comprehensive package of services that include prevention, care, support and treatment. Establishing a world-class blood transfusion system in the country for bringing down the incidence of blood-transmissible diseases including HIV by actively promoting voluntary blood donation is another main objective. Finally, NACP-III aims to develop a systematic approach in order to integrate HIV/AIDS with the National Rural Health Mission, National TB Control Programme and health promotion aims at adopting healthy lifestyles. As the first step, NACO is adopting this process of integration at the district level by placing the District AIDS Prevention and Control units under the District Health Society.
- In order to develop strategic programme initiatives, NACP-III has given great importance to evidence based planning and strengthening of surveillance, research and monitoring. HIV Surveillance is a crucial component providing information for programmatic decision making and planning. HIV surveillance includes HIV Sentinel Surveillance, AIDS Case Surveillance, STI Surveillance and Behavioural Surveillance. While the initial three components assess the epidemic after it has emerged, Behavioural Surveillance provides an understanding of the high risk behaviours that predispose to the emergence of an epidemic. It also gives inputs on the knowledge, awareness and practices of different population groups that may make them vulnerable to HIV infection.
- NACO conducted the first National BSS in the year 2001 i.e. towards the beginning of NACP-II. After a gap of five years since the first BSS, NACO has commissioned BSS 2006 to measure the changes in behavioural indicators. BSS 2006 has been carried out among general population as well as HRGs (FSWs, MSM, IDUs and clients of FSWs) following similar approach adopted in BSS 2001.
- The aim of carrying out BSS 2006 was to assess current risk behaviour in specific population groups in India and to measure behavioural changes from BSS 2001 to BSS 2006.
- The present report details the observations of the National BSS 2006 among the FSWs and their clients, which was conducted in all states and union territories of the country.

## Methodology and Sampling Design

- While planning for BSS, it was felt important that all the key stakeholders agree on the goals of data collection as well as the practicalities. Keeping this basic premise in mind, NACO initiated a systematic consultation process among all the key partners right from the beginning of the planning stage of this survey. For BSS 2006, a Technical Resource Group (TRG) was constituted by NACO that included members from different organisations like UNAIDS,

UNICEF, WHO, NIMS, Clinton Foundation, RCSHA and Population Council. TRG meetings were held on a weekly basis at every stage of the study to review progress and plan for the effective use of the emerging data for BSS 2006. The TRG members contributed substantially in terms of providing ideas and shared their experiences throughout the study period.

- FSWs were defined in a similar manner as in BSS 2001, which is as follows:
  - ◆ Brothel-based FSWs - refers to women aged up to 49 years who have sold sex in the last one month within brothels.
  - ◆ Non-brothel based FSWs - refers to women aged up to 49 years who have sold sex in the last one month at defined sex access points outside brothels.

Among FSWs, it was decided that the survey would also cover a control group of FSWs at four locations across the country. Based on this decision, non-brothel based FSWs were covered in Delhi, Mumbai and Kolkata and brothel based FSWs were covered in Andhra Pradesh. Clients of FSWs were defined as men who have bought sex in the last one month.

- All the states and union territories in the country were categorised in 25 sampling units for the purpose of BSS 2006. The smaller states were combined with adjacent large states. Goa and Daman & Diu were clubbed into one group, as were Gujarat and Dadra & Nagar Haveli, Kerala and Lakshadweep, Punjab and Chandigarh, Tamil Nadu and Puducherry, West Bengal and Andaman & Nicobar Islands and five north eastern states of Arunachal Pradesh, Nagaland, Meghalaya, Mizoram and Tripura. All the other states in country were taken as independent sampling units.
- The required information for the survey was collected through similar questionnaires used for BSS 2006 General Population Survey. A detailed manual was prepared for field teams for their ready reference. The manual highlighted the survey objectives, methodology, techniques for interviewing and recording the answers and detailed description of each question.
- A total of 6613 clients of sex workers and 7417 FSWs were interviewed across all the sampling units. A two-stage cluster sampling design was adopted for selecting respondents.
- The survey was conducted between July 2006 and September 2006.
- After field and office editing, the data was entered through a tailor made software module in Integrated System for Survey Analysis (ISSA version 7.0). After due cleaning of data, the analysis was carried out using Statistical Package for the Social Sciences (SPSS 10.0). Adequate checks were built in at data entry and data analysis stage to ensure data quality.

## Key Findings for Clients of FSWs

### Profile of Respondents

- Nearly half of the respondents covered in both BSS 2006 as well as BSS 2001 were in the age group of 26 to 35 years. Those aged between 20 and 25 years comprised about one-fourth (one-third in BSS 2001) of the respondents. At the national level the median age of the respondents was 30 years in BSS 2006 and 27 years in BSS 2001. The median age of the clients of brothel based FSWs was 29 years as compared to 30 years in case of clients of non-brothel based FSWs.
- Nearly two-fifths of the respondents in BSS 2006 as well as in BSS 2001 were either illiterate or had studied only up to class V. Another two-fifths of the respondents in both the surveys had attained education up to X standard. Only seven percent (11% in BSS 2001) of the respondents had completed Grade XII.

- Nearly two-thirds (64%) of the respondents covered in BSS 2006 were reported to be ever married. This proportion was significantly lower (54%) in BSS 2001. The proportion of ever married respondents from brothel (66%) and non-brothel (63%) area was more or less similar.
- Nearly two-thirds of the respondents were currently married (63%) and majority of the currently married respondents were living with their spouse. A significant increase in the proportion of currently married respondents was also observed when compared with BSS 2001 (2006 - 63%, 2001 - 52%). The proportion of respondents who were currently married and not living with spouse or other sexual partner had decreased considerably from BSS 2001 (2006 - 5%, 2001 - 9%).
- The highest proportion of respondents (23%) were local transport workers, followed by petty business or small shop owners (17%), truck drivers (16%) and non-agricultural workers (11%). About five percent of the respondents were engaged in service.
- Majority of the respondents (86% in BSS 2006 and 81% in BSS 2001) reported that they live in the same city where they were interviewed. Of the respondents who resided in the same city, 56 percent had been living in the city since birth.
- Nearly three-fourths of the respondents in BSS 2006 reported ever-drinking alcohol. Across the entire country, nearly one-fourth of the respondents reported that they had ever tried any drug.

### **Awareness of HIV/AIDS**

- About 98 percent of the respondents reported that they had heard about HIV or AIDS or both.
- The proportion of respondents who were aware that consistent condom use could prevent HIV was 89 percent and the corresponding proportion was higher than BSS 2001 (85%). More than three-fourths (77%) of the respondents were aware that HIV can be prevented by having one faithful uninfected sex partner. About 71 percent of the respondents were aware of both the methods of prevention i.e. prevention by correct and consistent condom use and having one uninfected faithful sex partner. No significant difference was observed in awareness regarding different methods of prevention between clients of brothel and non-brothel FSWs.
- About 93 percent of respondents were aware that a person could get HIV/AIDS by sharing a needle that was already used by an infected person and 80 percent of the respondents were aware of vertical transmission (pregnant woman to her unborn child) of HIV. Two-thirds of the respondents in BSS 2006 reported that HIV could be transmitted from an infected mother to her newborn child through breast feeding.
- The proportion of respondents who were aware that HIV cannot be transmitted through sharing a meal with an infected person has significantly increased from 67 percent in BSS 2001 to 80 percent in BSS 2006. The awareness that HIV cannot be transmitted by mosquito bites was 74 percent and nearly three-fourths of the respondents were aware that a healthy looking person could be suffering from HIV. The proportion of respondents who had correct awareness on the two misconceptions (transmission of HIV through sharing a meal, mosquito bite) associated with the transmission of HIV and were aware that a healthy looking person could be infected with HIV was 51 percent in BSS 2006 against 39 percent in BSS 2001.

### **Awareness, Prevalence and Treatment Seeking Behaviour related to STDs**

- About 78 percent (76% in BSS 2001) of the respondents had heard of STDs. About three-fourths of the respondents (66% in BSS 2001) were able to correctly identify at least one or the other STD symptoms among men and almost 76 percent of the respondents (68% in BSS 2001) were aware of at least one of the STD symptoms among women.



- About 20 percent of the Clients of FSWs reported incidence of burning pain during urination and 12 percent reported genital ulcer/sore in the last 12 months. The corresponding percentages were slightly higher in BSS 2001 (24% and 14% respectively). From the above, the proportion of respondents who did not seek any treatment was observed to decrease from 18 percent in BSS 2001 to 13 percent in BSS 2006. However the decline was not statistically significant.
- The proportion of the respondents visiting a government hospital/clinic for treatment of STDs was observed to decline marginally from 28 percent in BSS 2001 to 25 percent in BSS 2006. Further, the proportion of respondents seeking treatment from private hospital/clinic significantly declined from 38 percent in BSS 2001 to 24 percent in BSS 2006. Nearly one-fifth of the respondents in both the surveys tried to avoid seeking treatment and borrowed prescriptions from friends or relatives.
- Nearly 35 percent of the respondents reported that they would seek treatment from a private hospital/clinic as compared to about 50 percent of respondents who would seek treatment from a government hospital/clinic. The corresponding figure for BSS 2001 was significantly higher for the private facilities as compared to government facilities as the preferred source of STD treatment for future episode.

### **Sexual Behaviour and Condom Usage**

- The age at first sex varied from 17 to 25 years. It was observed that a significant proportion (34%) of the respondents had their first sex at the age of 19-21 years followed by slightly less proportion (31%) of the respondents who had first sex at the age of 16-18 years. The median age was 20 years at the first sex with any partner. No substantial difference was observed in the median age reported by clients from brothel area vis-à-vis clients from non-brothel area. The mean age of first sexual partner for all locations was 22 years, which ranged from 18-30 years across various states. The age of first sexual partner had been reported as 16-18 years by a considerable proportion (36%) of the respondents.
- About 12 percent of the respondents reported sexual involvement with male partner. About 13 percent of clients from brothel area reported to have sex with any male partner as against 11 percent of clients from non-brothel area.
- The proportion of respondents who reported sex with any non-regular partner in the last three months was 24 percent in BSS 2006 against 16 percent in BSS 2001. The median age at first sex with any commercial female partner ranged from 19 to 26 years.
- The mean number and median number of commercial/non-regular/regular partner was observed to be the same as BSS 2001. Further, no significant difference was observed between clients from brothel area with those from non-brothel area. The mean number of commercial female partners was reported to be 4.4.
- About 85 percent of the respondents who had sex with commercial partner reported using condom last time, which is significantly higher from BSS 2001 (75%). This proportion was significantly high among those who had sex with commercial partner (85%) as compared to non-regular (50%) or regular partners (29%). The proportion of respondents who reported condom usage last time they had sex with non-regular partner has significantly increased from BSS 2001 to BSS 2006 among the brothel based clients (2006 60%, 2001-29%).
- Nearly three-fourths (74%) of respondents who had sex with commercial partner reported consistent condom use in the last three months, which is significantly higher as compared to BSS 2001 (57%).
- The main reason reported for not using a condom last time was 'think unnecessary' for commercial (30%), non-regular (20%) and regular (39%) partners. The other reasons for not using a condom with commercial partner were 'decreases pleasure' (16%) and 'don't like condoms' (14%).



## Other Salient Observations

- About one-fifth (22%) of the respondents perceived ‘very high’ chances of getting HIV infection. Almost equal proportion of respondents reported ‘moderate chance’ (25%), ‘low chance’ (26%) and ‘no chance’ (24%) of contracting HIV infection. The proportion of respondents who perceived very high chances of contracting HIV infection has increased significantly from BSS 2001.
- Nearly three-fourths (72%) of the respondents reported that it was possible to get a confidential test to find out if they were HIV infected. Overall, more than one-third (38%) of the respondents interviewed had heard about ICTC, while 17 percent were aware of PPTCT and only nine percent had heard of ART centre.
- Nearly one-third (against one-fifth in BSS 2001) of the respondents reported that they have had interpersonal communication on STI/HIV/AIDS.

## Key Findings for FSWs

### Profile of Respondents

- About half of the respondents covered in both BSS 2006 as well as BSS 2001 were aged between 20-29 years. About five percent of the respondents in BSS 2006 against eight percent in BSS 2001 were aged 15-20 years. The median age of the respondents was 28 years in BSS 2006 and 27 years in BSS 2001.
- Two-fifths of the FSWs covered in BSS 2006 were illiterate and more than half (55%) had studied up to X standard. Only three percent of the FSWs reported to have studied beyond X standard. The education status of the non-brothel based FSWs was much better than that of the brothel based FSWs. There existed wide variation in the educational status of the FSWs covered in BSS 2006 and BSS 2001. Against 61 percent of the FSWs in BSS 2001, only 42 percent of those covered in BSS 2006 were illiterate.
- More than two-thirds (69%) of the FSWs covered in BSS 2006 were ever married. The corresponding percentage in BSS 2001 was relatively lower at 62 percent. The proportion of non-brothel based sex workers who had ever been married was higher (72%) than brothel based sex workers (62%). Against 32 percent of the brothel based FSWs, 13 percent of the non-brothel based FSWs got married before the age of 15. Considerably higher proportions of non-brothel based FSWs were married between the age of 19-21 years and 22-25 years as compared with brothel based FSWs. The median age at marriage of the FSWs was 18 years in both the surveys.

At the national level, 38 percent of FSWs are ‘currently married and presently living with spouse’ while 29 percent are ‘not currently married, not living with sexual partner’ and 14 percent are ‘currently married, not living with spouse or other sexual partner’. However, about 10 percent of the FSWs were ‘currently married, living with other sexual partner’ and 8 percent of FSWs were ‘not currently married, living with sexual partner’. A higher proportion of non-brothel based FSWs were currently married and living with spouse (42%) than brothel based FSWs (29%). The proportion of brothel based FSWs not currently married and not living with sexual partner was higher than non-brothel based FSWs (37% and 26% respectively).

- Most of the FSWs covered in BSS 2001 (90%) as well as in BSS 2006 (89%) were living in the same city/town where the interview was conducted. Overall, about 41 percent of the FSWs in BSS 2006 (against 32% in BSS 2001) reported to be living in the city/town since birth, where the interview was conducted. This finding indicates a high degree of mobility among the FSWs.

- Almost similar proportion of the FSWs in BSS 2001 (44%) as well as in BSS 2006 (46%) survey reported that they had at some point of time taken any drink containing alcohol. Both the surveys show that ever consumption of alcohol was higher among non-brothel based FSWs than brothel based FSWs. In BSS 2006, about 11 percent of FSWs (15% in BSS 2001) who had reported ever consuming alcohol in any form, reported to be drinking it always before having sex and about 79 percent (74% in BSS 2001) of the FSWs had reported that they consumed alcohol sometimes before having sex. Only one-tenth of the respondents reported that they had never taken alcohol before having sex. A very low proportion of FSWs had ever tried any drug (2006-7% and 2001-6%). This proportion was higher among non-brothel based FSWs than brothel based FSWs (8% and 5% respectively).

### **Awareness of HIV/AIDS**

- About 72 percent of FSWs covered in BSS 2006 affirmed that they had ever heard of HIV. The level of awareness among the FSWs about either HIV or AIDS or both is almost universal in almost all the states. Overall, 98 percent of FSWs in BSS 2006 as compared to 94 percent in BSS 2001 had heard of HIV/AIDS.
- About 90 percent of FSWs were aware of consistent and correct use of condom as a mode of prevention from HIV/AIDS. This proportion was 83 percent in BSS 2001. About 89 percent of the FSWs in BSS 2006 compared to 76 percent in BSS 2001 were aware that one could be protected from HIV/AIDS, if he/she had one faithful and uninfected sexual partner. About 81 percent of FSWs in BSS 2006 compared to BSS 2001 estimate of 66 percent knew both the methods of prevention i.e. consistent condom use and having faithful and uninfected sexual partner. Nearly 84 percent and 80 percent of brothel and non-brothel based FSWs respectively, were aware of both modes of prevention.
- The proportion of FSWs who were aware that a person would not get HIV/AIDS by sharing a meal with an infected person has increased from 63 percent in BSS 2001 to 77 percent in BSS 2006. About 70 percent of FSWs (66% in BSS 2001) were aware that mosquito bites do not transmit HIV. The awareness that a healthy looking person could be suffering from HIV has increased from 58 percent in BSS 2001 to 72 percent in BSS 2006.

### **Awareness, Prevalence and Treatment Seeking Behaviour related to STDs**

- About 89 percent of FSWs in BSS 2006 reported that they had ever heard of sexually transmitted diseases and this proportion was lower at 83 percent in BSS 2001. The proportion of the FSWs aware of symptoms of STDs among women has declined from 83 percent in BSS 2001 to 77 percent in BSS 2006. About 63 percent of the FSWs in BSS 2006 against 68 percent in BSS 2001 were aware of any one symptom of STD among men.
- About half of the FSWs had suffered from any one symptom of STD during last 12 months prior to the survey. The corresponding percentage was relatively lower at 46 percent in BSS 2001. A higher proportion of non-brothel based FSWs (53%) were suffering at the time of survey from one or the other symptom of STD as compared with brothel based FSWs (44%). The overall proportion of FSWs suffering from more than one of the symptoms of STD has gone up from 31 percent in BSS 2001 to 38 percent in BSS 2006.
- The proportion of FSWs who did not undergo any treatment has declined significantly from 14 percent in BSS 2001 to eight percent in BSS 2006. Around 15 percent of the FSWs in both the surveys had sought home based treatment. About four percent tried to avoid seeking treatment and borrowed prescriptions from friends or relatives based on self-diagnosis of symptoms and medicated themselves accordingly. Another six percent took medicines already available with them. About 14 percent of the FSWs bought medicines from a chemist shop. This proportion in BSS 2001 was 19 percent. The proportion of the

FSWs visiting a government hospital/clinic for treatment of STDs has increased from 28 percent in BSS 2001 to 32 percent in BSS 2006. About 31 percent (35% in BSS 2001) of the FSWs went to a private hospital/clinic for the treatment of the problem. Treatment from NGO peer educator/clinic was sought by 21 percent (compared to 12% in BSS 2001) of the FSWs. A few of the FSWs (3%) reportedly sought treatment from the traditional healers.

### **Sexual Behaviour and Condom Usage**

- Nearly half of the FSWs had first sex between the ages of 16 and 18 years. The age at first sex reported by the FSWs in BSS 2006 and BSS 2001 was more or less similar. The median age at first sex was 17 years in both the surveys. Nearly half of the FSWs contacted in BSS 2001 as well as BSS 2006 had reportedly started sex work between 16 and 21 years of age. Only eight percent (10% in BSS 2001) of the FSWs started sex work when they were aged 15 years or less. The median age at starting sex work was 20 years in both the surveys.
- The FSWs covered in BSS 2006 had 10 paying clients (11 in BSS 2001) in last seven days prior to the survey. The mean number of paying clients in the last seven days among brothel based FSWs was 12 compared with 9 among non-brothel based FSWs. In the last seven days prior to the survey, 43 percent of the FSWs did not have any non-paying regular partners. A higher proportion of non-brothel based FSWs (45%) did not have any non-paying partner in the last seven days as compared with brothel based FSWs (37%).
- The proportion of FSWs reporting use of condom last time when they had sex with the paying clients has gone up from 76 percent in BSS 2001 to 88 percent in BSS 2006. Against 94 percent of the brothel based FSWs, 85 percent of the non-brothel based FSWs reported condom usage in the last occasion when they had sex with a paying client. About 54 percent of FSWs in BSS 2006 against 39 percent in BSS 2001 used condom last time when they had sex with non-paying partners.
- Overall, nearly three-fourths of the FSWs in BSS 2006 compared to half of those in BSS 2001 had used condom every time with all the paying clients during the last 30 days preceding the survey. A higher proportion of brothel based FSWs reported consistent condom use (85%) as compared with non-brothel based FSWs (69%). Only 37 percent of the FSWs (21% in BSS 2001) reported consistent use of condom with non-paying partner during the last 30 days.
- ‘Partner objection’ was reported as the main reason for not using condom at last sex with paying client and it has declined from 68 percent in BSS 2001 to 45 percent in BSS 2006. Significant decline is also noticed with respect to the proportion of FSWs reporting “non-availability of condoms” and “did not think it was necessary” as the reason for not using condom at last sex with the paying client. Overall, 87 percent of FSWs in BSS 2006 against 81 percent in BSS 2001 reported that they usually insisted their clients to use a condom.

### **Other Salient Observations**

- A significant increase since BSS 2001 can be seen in the proportion of FSWs who reported high risk of contracting HIV/AIDS (2001 - 17%, 2006 - 30%).
- More than three-fourths (77%) of the respondents reported that it was possible to get a confidential test to find out if they were HIV infected. Overall, nearly three-fifths (62%) of the FSWs reported that they had never undergone any HIV test. The corresponding percentage was higher (72%) in BSS 2001. Among the FSWs who had ever undergone HIV tests, over three-fourths had gone for the test voluntarily. A significantly high proportion (91%) of FSWs who had undergone test, reported to have got the result of their test.
- Overall, 56 percent of the FSWs reported that someone had approached them in the last one year for educating on STI/HIV/AIDS. This proportion was significantly higher for the brothel based FSWs (70%) than the non-brothel based FSWs (50%).

# Summary Sheet (FSWs)

Indicators		2006	CI	2001
<b>1.</b>	<b>Profile of Respondents</b>			
1.1	Median age of respondents	28	23-33	27
1.2	Percentage of illiterate respondents	41.8	36.4-47.2	61.0
1.3	Percentage of respondents received interpersonal communication on HIV/AIDS	56.1	50.6-61.6	46.9
<b>2.</b>	<b>Awareness about HIV/AIDS and Knowledge on HIV Transmission</b>			
2.1	Percentage of respondents who had ever heard of HIV/AIDS	98.1	96.6-99.6	93.5
2.2	Percentage of respondents reporting HIV/AIDS cannot be transmitted through sharing a meal with HIV infected person	77.3	72.7-81.9	63.4
2.3	Percentage of respondents reporting HIV/AIDS cannot be transmitted through mosquito bites	70.3	65.3-75.3	65.8
2.4	Percentage of respondents aware that a healthy looking person could be infected with HIV	71.9	66.9-76.9	58.1
<b>3.</b>	<b>Awareness about HIV/AIDS and Knowledge on HIV Prevention</b>			
3.1	Percentage of respondents reporting HIV/AIDS can be prevented by having one faithful uninfected partner	88.9	85.4-92.4	76.1
3.2	Percentage of respondents reporting HIV/AIDS can be prevented through consistent condom use	90.3	87.0-93.6	82.7
3.3	Percentage of respondents knowing both the methods of HIV prevention	81.0	76.7-85.3	65.7
<b>4.</b>	<b>Awareness of STDs, Self-reported Prevalence and Treatment Seeking Behaviour</b>			
4.1	Percentage of respondents ever heard of STDs	88.9	85.4-92.4	82.8
4.2	Percentage of respondents reporting at least one STD symptom in last 12 months	50.4	44.9-55.9	45.8
4.3	Percentage of respondents reporting STD treatment in a govt. hospital/clinic during last episode	31.9	26.8-37.0	27.8
<b>5.</b>	<b>Sexual Behaviour and Condom Usage</b>			
5.1	Median age of respondents at first sex	17	13-21	17
5.3	Percentage of respondents reporting last time condom use with non-regular sex partner	87.5	83.9-91.1	76.0
5.4	Percentage of respondents reporting consistent condom usage with paying clients in the last three months	73.4	68.5-78.3	50.3
5.5	Percentage of respondents reporting their usual insistence on client using a condom	86.7	83.0-90.4	80.5

# Summary Sheet (Clients of FSWs)

Indicators		2006	CI	2001
<b>1.</b>	<b>Profile of Respondents</b>			
1.1	Median age of respondents	30	44.7-55.7	27
1.2	Percentage of illiterate respondents	16.6	12.5-20.7	21.2
1.3	Percentage of currently married respondents	62.5	57.2-67.8	52.0
1.4	Percentage of respondents received interpersonal communication on HIV/AIDS	32.0	26.9-37.1	20.7
<b>2.</b>	<b>Awareness about HIV/AIDS and Knowledge on HIV Transmission</b>			
2.1	Percentage of respondents ever heard of HIV/AIDS	98.5	97.2-99.8	95.9
2.2	Percentage of respondents reporting HIV/AIDS can be transmitted through needle sharing	92.7	89.8-95.6	94.2
2.3	Percentage of respondents reporting HIV/AIDS can be transmitted through vertical transmission	79.9	75.5-84.3	86.3
2.4	Percentage of respondents had no incorrect belief on transmission of HIV/AIDS	50.6	45.1-56.1	38.5
<b>3.</b>	<b>Awareness about HIV/AIDS and Knowledge on HIV Prevention</b>			
3.1	Percentage of respondents reporting HIV/AIDS can be prevented by having one faithful uninfected partner	77.4	72.8-82.0	74.2
3.2	Percentage of respondents reporting HIV/AIDS can be prevented through consistent condom use	70.7	65.7-75.7	68.2
3.3	Percentage of respondents knowing both the methods of HIV prevention	89.0	85.6-92.4	85.1
<b>4.</b>	<b>Awareness of STDs, Self-reported Prevalence and Treatment Seeking Behaviour</b>			
4.1	Percentage of respondents ever heard of STDs	77.5	72.9-82.1	75.6
4.3	Percentage of respondents reporting at least one STD symptom in last 12 months	24.8	20.0-29.6	29.9
4.4	Percentage of respondents reporting STD treatment in a govt. hospital/clinic during last episode	24.9	20.1-29.7	27.6
<b>5.</b>	<b>Sexual Behaviour and Condom Usage</b>			
5.1	Median age of respondents at first sex	20	15-23	19
5.2	Percentage of respondents reporting sex with non-regular partner in last three months	23.9	19.2 – 28.6	16.3
5.3	Percentage of respondents reporting last time condom use with non-regular sex partner	49.6	44.1-55.1	32.8
5.4	Percentage of respondents reporting consistent condom use with all non-regular sex partners	39.8	34.4-35.2	21.8

# **National Behavioural Surveillance Survey (BSS) 2006**

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## **Men who have Sex with Men (MSM) and Injecting Drug Users (IDUs)**



**National AIDS Control Organisation**  
Ministry of Health and Family Welfare  
Government of India

# Executive Summary

## Background

- The main aim of NACP-III is to halt and reverse the tide of the HIV epidemic in India by 2012. The programme aims to reduce new infections in all categories and prevent the spread of HIV from High Risk Groups (HRG) to the general populations. NACP-III envisages to achieve the following objectives: Developing safe behaviours and attitudes particularly among the youth and high-risk groups and with a particular focus on most affected regions. It also aims to ensure that people infected and affected with HIV get easy access to a comprehensive package of services that include prevention, care, support and treatment. Establishing a world-class blood transfusion system in the country for bringing down the incidence of blood-transmissible diseases by actively promoting voluntary blood donation is another main objective. Finally, NACP-III aims to develop a systematic approach in order to integrate HIV/AIDS with the National Rural Health Mission, National TB Control Programme and health promotion aims at adopting healthy lifestyles. As the first step, NACO is adopting this process of integration at the district level by placing the District AIDS Prevention and Control units under the District Health Society.
- In order to develop strategic programme initiatives, NACP-III has given great importance to evidence based planning and strengthening of Surveillance, Research and Monitoring. HIV surveillance is a crucial component providing information for programmatic decision making and planning. HIV Surveillance includes HIV Sentinel Surveillance, AIDS Case Surveillance, STI Surveillance and Behavioural Surveillance. While the initial three components assess the epidemic after it has emerged, behavioural surveillance provides an understanding of the high risk behaviours that predispose to the emergence of an epidemic. It also gives inputs on the knowledge, awareness and practices of different population groups that may make them vulnerable to HIV infection.
- NACO conducted the first National BSS in the year 2001 i.e. towards the beginning of NACP-II. After a gap of five years since the first BSS, NACO has commissioned the second wave of National BSS to measure the changes in behavioural indicators. The National BSS 2006 has been carried out among general population as well as high risk groups (FSWs, clients of FSWs, MSM and IDUs) following similar approach adopted in National BSS 2001.
- The aim of carrying out the National BSS 2006 was to assess current risk behaviour in specific population groups in India and to develop a database so as to measure behavioural changes from National BSS 2001 to National BSS 2006.
- The present report would provide the detailed findings of BSS 2006 conducted among two high-risk population groups of IDUs and MSM, about their awareness, knowledge, attitude and behaviour with regards to STD/HIV/AIDS.

## Methodology and Sampling Design

- While planning for National BSS 2006, it was felt important that all the key stakeholders agree on the goals of data collection as well as the practicalities. Keeping this basic premise in mind, NACO initiated a systematic consultation process among all the key partners right from the beginning of the planning stage of this survey. For the National BSS 2006, a Technical Resource Group (TRG) was constituted by NACO that included members from



different national and international organisations like UNAIDS, UNICEF, WHO, NIMS, Clinton Foundation, RCSHA and Population Council. TRG meetings were held on a weekly basis at every stage of the study to review progress and plan for the effective use of emerging data. The TRG members contributed substantially in terms of providing ideas and shared their experiences throughout the study period.

- Among MSM, the survey was carried out in five locations in BSS 2001. These were Bangalore, Chennai, Delhi, Kolkata and Mumbai. In BSS 2006, it was decided that the survey would be carried out across 10 locations and the five locations added were Andhra Pradesh, Goa, Gujarat, Kerala and Uttar Pradesh.
- Among IDUs, BSS 2001 was conducted in five locations across the country - Chennai, Delhi, Kolkata, Manipur and Mumbai. In BSS 2006, five more locations were covered - Bangalore, Haryana, Kerala, Sikkim and Punjab. The selection of sites was based on the estimated size of these groups in different cities/states and on achieving a regional representation.
- A total of 2638 MSM and 2677 IDUs were interviewed in National BSS 2006 across all the sampling units. A two-stage cluster sampling design was adopted for selecting respondents for both the target categories.
- The required information for the HRG survey was collected through the same questionnaires used for the National BSS 2001 with certain modifications to cover some additional issues. A detailed manual was prepared for field teams for their ready reference. The manual highlighted the survey objectives, methodology, techniques for interviewing and recording the answers and detailed description of each question.
- The fieldwork was simultaneously launched all over India. It was initiated in mid-July 2006 and was completed in September 2006.
- Standardisation and uniformity during the survey were ensured by conducting a training of key trainers in Delhi. An extensive four-day training for supervisors and investigators was organised in each city/state. Schedules were back translated and tight quality control was maintained during data collection. Teams were briefed every morning and debriefed every evening during data collection.
- Data entry was done in the ISSA package at four locations in the country while the final data analysis was done using the Statistical Package for the Social Sciences (SPSS 10.0) software in Delhi. Adequate checks were built in at data entry and data analysis stages to ensure data quality.

## Key Findings for Men who have Sex with Men (MSM)

### Respondents' Profile

- The operational definition of MSM was “men who had sex (manual/oral/anal) with other men in the last six months”.
- The median age of respondents ranged from 24-30 years, with the highest reported in Bangalore (30 years), Gujarat (29 years), followed by Chennai (28 years) and lowest in Kolkata (24 years).
- In all the cities covered, highest proportion of illiterate respondents was reported in Delhi (34.8%), followed by Chennai (14.8%) and lowest in Kolkata (6.3%). Among the states, proportion of illiterate respondents was reported to be highest in Uttar Pradesh (39.2%) and lowest in Goa (3.6%).
- The major occupations reported by MSM across cities/towns were service, unemployed/not working/retired, petty business and students. Few of the MSM reported to be self employed. There existed wide variations in the occupation pattern of the MSM across cities/towns as well as between the National BSS 2001 and BSS 2006.

- The proportion of ever married respondents varied between 10 percent (Kolkata) and 50 percent in Delhi. This proportion showed significant increase from BSS 2001 in Bangalore, while it remained almost the same in Delhi and Mumbai. Across states, the proportion of ever married respondents was reported to be highest in Gujarat (56%) and lowest in Goa (24%).
- Among the cities, proportion of respondents living with a sexual partner was reported to be highest in Bangalore (38.9%) and Mumbai (23.3%) and lowest in Kolkata (10%). The proportion showed a decrease in all the cities except Bangalore. Among the states covered, 69.6 percent respondents in Gujarat reported to be living with sexual partner and the proportion was reported to be lowest in Goa (20.1%).
- Among the five cities covered, all the respondents in Delhi reported living in the same city where their interview was conducted and the lowest was reported in Chennai (88.9%). In all states covered, Goa (98%) reported the highest proportion of respondents living in the same state where interview was conducted, followed by Uttar Pradesh (95.6%) and Kerala (83.3%).
- In the cities, a high proportion of respondents in Bangalore (82%) reported that they usually travel to other places, followed by Mumbai where 53.3 percent respondents reported travelling to other places and the lowest proportion of travel was reported in Kolkata (35.2%). Among the states, a very high proportion of respondents in Andhra Pradesh (93.3%) reported that they usually travelled to other places and the lowest percent was reported in Goa (33.1%).
- The proportion of respondents who reported ever consuming alcohol was highest in Delhi (74%) and lowest in Mumbai (36%). Across states, proportion of respondents who reported consuming alcohol was highest in Goa (65%), Kerala (64%) and lowest in Gujarat (24.5%).
- Intoxicating drug use was reported to be highest in Delhi (60%), followed by Bangalore (21%) and lowest in Chennai (2%). In all states covered, 32.4 percent respondents in Uttar Pradesh reported they ever tried any drug whereas the proportion was lowest in Andhra Pradesh (0.4%).

### Awareness of HIV/AIDS

- Most of the respondents (80-90%) across all the selected cities reported that they had heard of HIV/AIDS. Since the National BSS 2001, this proportion has decreased in all the cities except Kolkata. Across states, this percentage varied between 48 percent in Uttar Pradesh and 99 percent in Goa.
- In cities, awareness of two methods of prevention i.e. consistent condom use and having single uninfected faithful sex partner was reported to be highest in Bangalore (92.6%), Chennai (88.9%) and lowest in Mumbai (53.0%). This proportion has increased significantly since the National BSS 2001, except in Mumbai and Delhi. Among states, this awareness is highest in Goa (89%) and lowest in Uttar Pradesh (55%).
- The proportion of respondents reporting transmission of HIV/AIDS through needle sharing varied between 86 percent and 97 percent across cities. The awareness in this regard has decreased since the National BSS 2001 in Bangalore, Chennai and Delhi. Among the states, lowest level of awareness of needle sharing as a mode of transmission was observed in Gujarat (77.6%), Uttar Pradesh (78.5%) and highest was reported in Andhra Pradesh (95.6%).
- The proportion of respondents aware of HIV transmission from mother to child was reported to be highest in Mumbai (91.1%) and lowest in Bangalore (77%) among cities. Across the states, proportion of respondents aware of vertical transmission (mother to child) was significantly low in Uttar Pradesh (61.1%), followed by Gujarat (71.0%) and highest in Goa (94.7%).
- The awareness level about HIV transmission through breast feeding varied between 47 percent in Delhi and 82 percent in Mumbai. In all the states, a relatively low proportion

of respondents reported that “breast feeding” could be a mode of transmission of HIV. This was lowest in Uttar Pradesh (35%), Gujarat (60%) and highest in Andhra Pradesh (78%).

- Across all metros, the proportion of respondents aware of the fact that HIV is not transmitted through sharing a meal with an infected person was highest in Mumbai (92%) and lowest in Bangalore (41%). In all states covered, highest proportion of respondents aware that HIV is not transmitted through sharing a meal was reported in Goa (96%), followed by Andhra Pradesh (86%) and lowest in Uttar Pradesh (57%).
- Among all cities the proportion of respondents aware that HIV is not transmitted through mosquito bite was reported to be highest in Mumbai (89%) and lowest in Delhi (61%). The corresponding percentage varied between 48 and 93 percent across states.
- The respondents aware that a healthy looking person might be suffering from HIV was highest in Kolkata (92%) and lowest in Delhi (61%). The proportion has significantly increased from National BSS 2001 in Bangalore, Chennai and Kolkata.
- The proportion of respondents who correctly identified all the three misconceptions is highest in Mumbai (75%) among cities and in Goa (80%) among states.

### **Awareness of STDs, STD Prevalence and Treatment Seeking Behaviour**

- The awareness about STDs among the MSM ranged between 41 and 83 percent across cities and states. Out of all the five states, 83 percent of respondents in Uttar Pradesh reported to be aware of STDs and lowest was reported in Andhra Pradesh (55%).
- Forty-six percent of the MSM in Delhi reported suffering from burning pain during urination, followed by Bangalore (29%). This proportion was lowest in Kolkata (2%). Across states this proportion varied between 12 and 29 percent.
- The proportion of respondents who reported at least one of the three symptoms in last 12 months was highest in Delhi (57%), followed by Bangalore (37%) and lowest in Kolkata (10%). The proportion of respondents who reported at least one of the three symptoms in last 12 months was highest in Gujarat (38.5%) and lowest in Kerala (15.6%).
- Across all metros, proportion of respondents who reported visiting government hospital for treatment of STIs was highest in Chennai (34.7%) and lowest in Delhi (13.0%). When compared with BSS 2001 this proportion has increased significantly in Kolkata and Mumbai, while in Chennai and Delhi it remained almost the same. Out of all the five states covered, 48 percent respondents in Goa reported visiting government hospital during the last episode and lowest proportion was reported in Andhra Pradesh (13%).
- Highest proportion of respondents in Bangalore (90%) and lowest in Mumbai (47%) took allopathic treatment. Also, this proportion has increased significantly in Chennai and Kolkata from the National BSS 2001 while in Bangalore and Mumbai a significant decline was observed in this regard. Highest proportion of respondents in Goa (91%) took allopathic treatment and lowest proportion was reported in Gujarat (50%).
- When compared with the National BSS 2001, the proportion of respondents who would prefer seeking treatment from a private hospital/clinic has decreased significantly in all five cities. Across states the proportion of respondents who would visit a private hospital/clinic was reported to be highest in Andhra Pradesh (41%) and lowest in Goa (23%).

### **Sexual Behaviour and Condom Usage**

- The proportion of respondents who had first sex with any female partner at less than 19 years of age was reported to be highest in Delhi (52%), Chennai (50.5%) and lowest in Bangalore (12.4%). Among the five states, this proportion was reported to be highest in Goa (54%) and lowest in Kerala (8%).

- The median age at first sex with any female partner ranged from 17 to 23 years across all 10 survey locations.
- Among the five cities covered, respondents reporting sexual intercourse with any female partner in the last six months was highest in Delhi (69.9%), Mumbai (25.9%) and lowest proportion was reported in Chennai (12.6%). Across states, highest proportion of respondents in Andhra Pradesh (54.8%) had sex with any female partner in last six months, whereas the lowest proportion was reported in Kerala (30.4%).
- Highest proportion of respondents in Delhi (70%) reportedly used condom while having sex with a female partner the last time whereas only 11 percent in Bangalore affirmed the same. Across states, highest proportion of respondents in Gujarat (51%) reported condom use, during last sex with female partner and lowest was reported in Uttar Pradesh (19%).
- In all cities covered, consistent use of condom with female partner in last six months was reported to be highest in Kolkata and Mumbai (33%) and lowest in Chennai (8.8%). This proportion showed a significant increase in Bangalore, Delhi, Kolkata and Mumbai while in Chennai it has decreased significantly when compared with BSS 2001.
- The median age at first sex with commercial partner ranged from 17 to 22 years in all 10 survey locations. The median age was reported to be highest in Bangalore (22 years), followed by Gujarat (21 years) and lowest in Uttar Pradesh (17 years).
- Highest proportion of respondents reporting having had sex with commercial male partners in last month was highest in Delhi (68.5%), followed by Bangalore (64%) and lowest in Mumbai (9%). Also, this proportion showed a significant increase since National BSS 2001 in Bangalore, Chennai and Delhi, while in Mumbai the proportion remained almost the same. Across the states, in Uttar Pradesh (61%) highest proportion of respondents reported having sex with commercial male partner in last one month.
- Among all cities, proportion of respondents who reported sex with a non-commercial male partner in last one month was highest in Kolkata (85.6%) and lowest in Bangalore (48.9%). It was observed that in Goa (96%), highest proportion of respondents reported having sex with non-commercial male partner in last one month and lowest was reported in Kerala (40%).
- The median number of commercial male partners during last one month ranged from 2 to 30 in all the 10 survey locations covered. The highest median was reported in Bangalore (30), followed by Chennai (10), Andhra Pradesh (6), Kerala (4) and lowest in Delhi and Mumbai (2).
- In all the 10 survey locations, the median number of non-commercial male partners in last one month ranged from one (Delhi) to 15 (Bangalore).
- Among the MSM who had sex with a commercial partner in last one month, 41 percent (Delhi) to 64 percent (Kolkata) had used condom last time. In all states, highest proportion of respondents who used condom last time with commercial partner was reported in Goa (87%) and lowest in Uttar Pradesh (13%).
- Highest proportion of respondents in Mumbai (88%) used condom last time with non-commercial partner and this proportion was lowest in Delhi (46%).
- The proportion of respondents who reported consistent condom use with commercial partner in last six months was highest in Mumbai (53%) and lowest in Delhi (19%). Also, the proportion has increased significantly in all the cities. Among the states, 65 percent in Goa reported condom use consistently in last six months. This proportion was lowest in Uttar Pradesh (7%).
- Among the respondents who had sex with a non-commercial partner, highest proportion in Mumbai (79%) reported consistent condom use whereas the proportion was lowest in Delhi (14%).

## Other Salient Observations

- Across the metros, highest proportion of respondents in Bangalore (53%) reported very high chance of getting HIV/AIDS infection and lowest was reported to be in Delhi (19.6%). Out of all the states covered, in Goa (58.6%) highest proportion of respondents perceived very high chances of getting HIV/AIDS infection and lowest in Gujarat (0.0%).
- In all survey locations the proportion of respondents who reported that it was possible for them to get a confidential HIV test was highest in Goa (97.6%), followed by Kolkata and Mumbai (89.3%), Bangalore (77.4%) and lowest in Delhi (67.4%).
- The proportion of respondents who reported having undergone an HIV test was highest in Mumbai (69%) and lowest in Delhi (21%). Among states covered, highest proportion of respondents in Goa (69%) and lowest in Uttar Pradesh (3%) reported that they had undergone an HIV test.
- Overall in the cities covered, in Bangalore (88%) highest proportion of respondents reported that they have received interpersonal communication on STI/HIV/AIDS in last one year, while in Delhi (32%) this proportion was reported to be lowest. Among the states, proportion of respondents who received interpersonal communication was highest in Goa (97%) and lowest in Uttar Pradesh (17%).

## Injecting Drug Users (IDUs)

### Respondents' Profile

- Operational definition of Injecting Drug Users was “men and women who have injected drugs in the last three months”.
- At the national level, a total of 2677 interviews were completed.
- Majority of the respondents across the survey locations were in the age group of 26 to 35 years and the median age of the respondents ranged between 25 and 38 years.
- The proportion of illiterate respondents was highest in Delhi (43%) and lowest in Bangalore (2%).
- Nearly one-third of the respondents in Chennai and Manipur and over half in Delhi, Kolkata and Bangalore were ever married. Except in Chennai, in all other locations this proportion has increased since the National BSS 2006.
- The proportion of respondents who were currently unmarried and not living with any sexual partner varied between 34 percent in Mumbai and 74 percent in Kerala. The proportion of such respondents has significantly declined across all locations except Chennai.
- Majority of the respondents in Chennai were local transport workers (38%) and unemployed (9%) while in Kolkata, casual labourers constituted one-third of the respondents. Almost half of the respondents in Mumbai and one-third in Sikkim were unemployed. In Punjab and Haryana, about one-fifth of the respondents were truck drivers.
- Across all survey locations, majority of the respondents reportedly stayed in the same city where the interview was conducted. Of the respondents who resided in the same city, 93 percent in Manipur and 92 percent in Kerala had lived in the same city since birth. This proportion was reported to be lowest in Delhi and Mumbai at about 43 percent.
- Most of the respondents (90%) in Punjab and Haryana reported that they ever had alcohol and the lowest proportions were reported in Delhi (60%) and Mumbai (65%). Overall, it was observed that alcohol usage among the respondents had declined since National BSS 2001 across all the locations except Manipur.



## Drug Use

- The mean age of starting injecting drugs ranged from 22 years in Sikkim to 30 years in Kolkata. As compared to National BSS 2001, the mean age of starting injecting drugs has increased significantly in Kolkata, Manipur and Mumbai.
- More than half of the respondents in Kolkata and Kerala reported injecting drugs more than once a day indicating the severity of the problem in these areas. This proportion was observed to decline significantly across the locations except Kolkata where it increased.
- Buprenorphine was reported mostly in Kolkata (44%) and Chennai (58%) while heroin was widely used in Manipur (79%), Chennai (52%) and Mumbai (41%).

## Needle and Syringe Sharing Behaviour

- Across survey locations, relatively higher proportion in Sikkim (71%), Chennai (62%), Manipur (26%) and lowest in Kolkata (12%) reported injecting drugs with a used needle or syringe in last one month.
- Across locations, 26 percent of respondents in Sikkim reported sharing a needle every time, followed by Kerala (11%). It is reported lowest in Haryana and Kolkata (1%).
- On being asked whether they could obtain new/unused needles/syringes when they needed them, more than 90 percent of the respondents in nine of the ten survey locations answered in the affirmative.
- Sixty three percent of the respondents in Bangalore and 46 percent in Delhi reported that they had used a pre-filled syringe in the last month. The proportion was lowest in Kolkata at five percent.
- Across all the survey locations maximum proportion of respondents reported that they have never received any treatment. This proportion was reported to be highest in Punjab (88%) and Haryana (80%) and lowest in Kolkata (33%) and Sikkim (47%).

## Awareness of HIV/AIDS

- The proportion of respondents who had ever heard of HIV/AIDS was significantly high across all the survey locations with all the respondents aware in Manipur, Bangalore and Sikkim.
- The proportion of respondents aware of needle sharing as one of the major modes of HIV transmission was reported to be highest in Manipur (99%) and Kolkata (98%) and lowest in Punjab (76%) and Delhi (86%).
- Most of the respondents were aware of consistent condom use (67-98%) as well as having one uninfected faithful partner (60-94%) as methods of prevention of HIV/AIDS. This proportion has increased significantly in all locations, except Delhi where the proportion was almost the same as compared to BSS 2001.
- The proportion of respondents aware of both methods of prevention i.e. consistent condom use and uninfected faithful partner was reported highest in Chennai (88%) and lowest in Delhi (46%) and Sikkim (58%). When compared with BSS 2001, a significant increase was seen in all locations except Mumbai and Delhi where the proportion has declined significantly.
- The proportion of respondents aware of the fact that HIV cannot be transmitted by sharing a meal varied between 70 and 98 percent across all survey locations. Highest proportion of respondents in Manipur (94%) were aware that a healthy looking person could be suffering from HIV and the lowest was reported in Bangalore (34%) and Punjab (59%).
- The proportion of respondents who correctly identified all three issues i.e. “a person cannot have HIV by sharing a meal with someone who is infected”; “a person cannot get HIV/AIDS

from mosquito bite” and “a healthy looking person could be suffering from HIV” was reported highest in Manipur (89%) and lowest in Delhi (30%). This proportion showed a significant increase in all locations except Chennai where this proportion has declined from BSS 2001.

### **Awareness of STDs, STD Prevalence and Treatment Seeking Behaviour**

- The proportion of respondents aware of STDs varied between 42 (Kerala) and 90 percent (Haryana) across different survey locations.
- About 89 percent of respondents in Haryana were aware of STD symptoms among women and lowest awareness levels were reported in Kerala (40%) and Mumbai (58%).
- The proportion of respondents aware of other symptoms among men was reported to be highest in Haryana (85%) and Punjab (83%) and lowest in Kerala (40%) and Mumbai (56%).
- The proportion of respondents who reported genital discharge in last 12 months was highest in Delhi (29%) and Mumbai (25%) and lowest in Kolkata (2%) and Haryana (3%). Less than one-fourth of the respondents in all survey locations except Delhi (27%) reportedly had ulcer/sore in last 12 months. The proportion of respondents who reported burning pain during urination was highest in Delhi (63%) and Mumbai (44%) and lowest in Kolkata (2%) and Punjab (10%).
- The proportion of respondents who didn't undergo any treatment was reported highest in Bangalore (60%) and Kerala (49%) and lowest in Punjab (2%) and Kolkata (8%). About 70 percent of respondents in Manipur reported that they visited private hospital/clinic, followed by Punjab (58%) and lowest proportion was reported in Bangalore (7%) and Chennai (9%). Among all survey locations, the proportion of respondents who went to a government hospital at last episode was highest in Sikkim (45%) and Manipur (34%), followed by Kolkata (33%), Delhi (12%) and lowest in Bangalore (9%).
- In all survey locations, except Bangalore and Punjab, highest proportion of respondents reported that they would seek treatment from a government hospital for future episodes. In those two locations, preference was higher for private hospital/clinic. Across all survey locations, except Delhi the proportion of respondents who would seek treatment from government hospital has decreased significantly from BSS 2001.

### **Sexual Behaviour and Condom Usage**

- In all locations, except Bangalore, Manipur and Kerala more than three-fourths of the respondents ever had sexual intercourse, with highest proportion in Haryana (96%) and Mumbai (95%) and lowest in Kerala (66%) and Manipur (70%).
- The median age at first sex ranged from 18 to 24 years across various survey locations with highest in Manipur and lowest in Delhi, Kolkata and Haryana.
- The proportion of respondents who had sex with any commercial partner in last 12 months was reported to be highest in Punjab (56%), Delhi and Mumbai (49%) and lowest in Kerala (7%) and Chennai (10%).
- Overall not very high proportion of respondents had sex with any non-regular partner in last 12 months, highest being reported in Sikkim (36%), followed by Delhi (31%) and lowest in Bangalore (7.4%).
- In all locations except Delhi and Mumbai, highest proportion of respondents had sex with regular partner in the last 12 months with highest proportion reported in Punjab (56%) and Haryana (58%) and lowest in Kerala (14%) and Chennai (18%).



- In Manipur all respondents who had sex with any commercial partner in last 12 months used condom the last time, followed by Haryana (95%) and lowest in Kerala (44%) and Chennai (46%). Except in Chennai, at the other four locations, condom use with commercial partner during last sex has increased since BSS 2001. The proportion of respondents who used condom last time with non-regular partner was reported highest in Mumbai (73%) and Manipur (72%) and lowest in Bangalore (11%). Of all the respondents who had sex with any regular partner, more than half in Sikkim (58%) and Mumbai (53%) reported using a condom last time. This proportion was reported to be lowest in Bangalore (7%) and Kerala (13%).
- The proportion of respondents who consistently used condom with commercial partner was reported highest in Haryana (79%) and Manipur (70%) and lowest in Kerala (13%). Of the respondents who had sex with non-regular partner, in Manipur (48%) and Mumbai (44%) highest proportion of respondents reported consistent use of condom. This proportion was reported lowest in Bangalore (6%) and Sikkim (19%). The proportion of respondents who consistently used condom with regular partner was highest in Chennai (18%) and Sikkim (17%) and nil in Kerala and Punjab.

### Other Salient Observations

- Highest proportion of respondents in Kolkata (56%) and Sikkim (54%) reported very high chance of getting HIV/AIDS infection and it was lowest in Punjab (5%) and Bangalore (6%). The proportion of respondents who reported moderate chance of getting HIV/AIDS infection was reported to be highest in Chennai (51%), followed by Punjab (41%), Kerala (21%) and lowest in Mumbai (14%).
- Sixty three to ninety three percent of the respondents across survey locations perceived that it was possible for them to get a confidential HIV test done to find out if they were infected with HIV.
- Compared to 4 to 22 percent of the respondents in Punjab, Haryana, Delhi, Chennai and Bangalore, 35 (Mumbai) to 79 percent (Kolkata) of the respondents in rest of the locations had ever undergone an HIV test. In all locations, the proportion of respondents who reported voluntary testing was highest in Punjab (100%) and Sikkim (81%) and lowest in Haryana (50%) and Manipur (51%). The proportion of respondents who found the result of the test was highest in Manipur (99%) and Kerala (98%) and lowest in Delhi (74%) and Sikkim (78%).
- The proportion of respondents who reported that they received interpersonal communication on STI/HIV/AIDS in last one year was highest in Kolkata (83%) and Manipur (76%) and lowest in Punjab (10%) and Haryana (25%).
- The proportion of respondents who attended or participated in any campaign or meeting on STI/HIV/AIDS in last one year was reported to be highest in Manipur (61%) and Kolkata (53%) and lowest in Punjab (2%).