

# CHAPTER-I

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## INTRODUCTION

The Acquired Immunodeficiency Syndrome (AIDS) is the fourth leading infectious cause of adult deaths in the world. As an epidemic, it has affected almost every country on the globe. AIDS is a fatal transmissible disease of the immune system caused by the human immunodeficiency virus (HIV). HIV slowly attacks and destroys the immune system, the body's defense against infection, leaving an individual vulnerable to a variety of other infections. AIDS is the final stage of HIV infection (Encyclopedia of Britannica 2003; Barnett and Whiteside 2002; Unnikrishna et al. 1993). The pathology of HIV involves three stages (1) primary HIV infection, (2) the asymptomatic phase, and (3) AIDS. Primary HIV infection is first stage during which transmitted HIV replicates rapidly. The second phase – asymptomatic period, lasts an average of 10 years. During this period the virus continues to replicate concurrent to a gradual decrease in the CD4 count (the number of T-cells). When the CD4 count falls to about 200 cells per micro-litre of blood (in an uninfected adult it is about 1000 cells per micro-litre), patients begin to experience opportunistic infections (OIs). This is AIDS. Full blown AIDS is the final stage of HIV infection. The most common OIs include *Pneumocystis carini pneumonia (PCP)*, *Mycobacterium tuberculosis*, herpes simplex infection, Kaposi's sarcoma, lymphomas and toxoplasmosis. Death results from the unremitting growth of opportunistic pathogens or from the body's inability to fight off malignancies.

HIV is transmitted by the direct transfer of bodily fluids, such as blood and blood products, semen and other genital secretions, or breast milk from an infected person to an uninfected person. HIV is not spread by coughing, sneezing or casual contact. The primary means of HIV transmission worldwide is heterosexual intercourse with an infected individual. HIV is fragile and cannot survive long outside of the body. Therefore, direct transfer of bodily fluids is required for transmission. Sexually transmitted diseases, such as syphilis, genital herpes, gonorrhoea, and chlamydia, increase the risk of contracting HIV through sexual contact, probably due to the genital lesions that they cause (Encyclopedia of Britannica 2003; Barnett and Whiteside 2002; Unnikrishna et al. 1993). Tests for the disease are done through the identification of HIV antibodies, which accumulate after four weeks to six months

after the exposure. The most common test for HIV is the enzyme-linked immunosorbent assay (ELISA). Other tests are Western blot, Polymerase Chain Reaction (PCR) and Single Use Diagnostic Screening (SUDA). There is no cure or effective vaccine for HIV infection. Efforts at prevention have focused primarily on changing sexual behaviour, promoting use of condoms, discouraging needle reuse, etc. To treat HIV infection, antiretroviral drugs (ART) are available. Since HIV rapidly rebuilds resistance to any single antiretroviral treatment, combination treatment is necessary for effective viral suppression. Highly active antiretroviral therapy (HAART), a combination of three or more drugs, has resulted in a marked drop in the mortality rate from HIV infection. Though HAART largely halts viral replication and thereby allowing the immune system to reconstitute itself, but it does not appear to eradicate HIV. Viral replication resumes if HAART is discontinued. Each drug has unique side effects and, in addition, treatment with combinations of these drugs leads to additional side effects.

AIDS is now considered not only as a health problem, but also as a developmental and security threat. Although the epidemic began in USA more than 27 years ago, over 96% of new infections now occur in low and middle income countries, which are unfortunately least equipped to respond effectively to the challenge (UNAIDS 2008). It is now well recognized that AIDS is affecting developed and developing countries differently. In developed countries, AIDS is now a chronic disease and a manageable health problem largely due to the availability of anti-retroviral medication. However, in developing countries, AIDS is now destroying societies, nations and communities. Even now less than 25% of those at risk of HIV infection have access to basic prevention services (Jha et al. 2002). The antiretroviral treatments (ART) that have increased the longevity of patients in the industrialized countries are unfortunately beyond the reach of those in the developing world. The disease is therefore, widening the gap between the haves and have-nots, between rich and poor nations, thereby presenting a new ethical and human rights dilemma (Narain 2004).

### **Global HIV/AIDS Scenario**

At the end of 2007, UNAIDS estimated 33.2 million (30.6 – 36.1 million) people living with HIV/AIDS worldwide (see Table-1.1). While 30.8 million (28.2 – 33.6 million) of these were adults, 15.4 million (13.9 – 16.6 million) were women and 2.1

million (1.9 – 2.4 million) were children under the age of 15 years. Total number of people newly infected with HIV in 2007 was 2.5 million (1.8 – 4.1 million). Total AIDS deaths in 2007 was 2.1 million (1.9 – 2.4 million), out of which adults 1.7 million (1.6 – 2.1 million), children under 15 years were 290 000 (270 000 – 320 000). More than 25 million already died since the beginning of the epidemic, bringing the number of infected more than 65 million worldwide (UNAIDS 2008). Over 6800 new HIV infections a day in 2007 and over 5700 persons die from AIDS, mostly because of inadequate access to HIV prevention and treatment services. More than 96% of new infections are occurring in low and middle-income countries. Out of these new infections, about 1200 are in children under 15 years of age and about 5800 are in adults aged 15 years and older of whom: — almost 50% are among women. Young people aged 15–24 account for an estimated 45% of new HIV infections worldwide (UNAIDS 2008).

Today, AIDS is the leading cause of death in Sub-Saharan Africa which has highest number of HIV positive people (22.5 million), followed by South and South-East Asia with 4.0 million infected individuals. In seven Sub-Saharan African nations, more than 22% of the population aged 15 to 49 is infected with HIV. Africa accounts for 83% of all AIDS deaths worldwide. The epidemic has an adverse effect on life expectancy in Sub-Saharan Africa. Gains made in life expectancy before 1980 have been lost and it is estimated that life expectancies affected by HIV infection and AIDS may be less than 40 years (UN Population Division 2001). The epidemic is growing fastest in South Africa where it is estimated that over 1500 new infections occur daily (UNAIDS 2002). In South Africa, AIDS deaths are widespread that small children now play a new game called “Funerals”. In Zimbabwe, the AIDS epidemic has shortened life expectancy by 22 years. Two out of every three Zimbabweans aged 15 to 39 are HIV positive. Sub-Saharan Africa remains the region most heavily affected by HIV, accounting for 67% of all people living with HIV and for 75% of AIDS deaths in 2007. More than 90% HIV infected children are living in Sub-Saharan Africa. In sub-Saharan Africa alone, the epidemic has orphaned nearly 12 million children aged less than 18 years (UNAIDS 2008). However, some of the most worrisome increases in new infections are now occurring in populous countries in other regions, such as Indonesia, the Russian Federation, and various high-income countries.

**Table-1.1:** Global HIV/AIDS Estimation, 2007 (Region-wise).

<i>Region</i>	<i>A &amp; C living with HIV/AIDS. (Range)</i>	<i>Newly infected (A &amp; C) in 2007</i>	<i>Adult Prevalence Rate * (%)</i>	<i>Main mode of transmission for Adults</i>
Sub-Saharan Africa	22.5 million (20.9 - 24.3 million)	1.7 million (1.4 - 2.4 million)	5.0 % (4.6-5.5%)	Heterosexual
Middle East & North Africa	3,80,000 (2.7 - 5.0 lakh)	35,000 (16,000-65,000)	0.3 % (0.2-0.4%)	Heterosexual, IDU
South & South East Asia	4.0 million (3.3 - 5.1 million)	3,40,000 (1.8 - 7.4 lakh)	0.3 % (0.2- 0.4%)	Heterosexual, IDU
East Asia	8,00,000 (6.2 - 9.6 lakh)	92,000 (0.21 – 2.2 lakh)	0.1% (< 0.2 %)	Heterosexual, IDU, MSM
Latin America	1.6 million (1.4 - 1.9 million)	1,00,000 (0.47 – 2.2 lakh)	0.5% (0.4- 0.6%)	Heterosexual, IDU, MSM
Caribbean	2,30,000 (2.1 - 2.7 lakh)	17,000 (15-23 thousand)	1.0% (0.9- 1.2%)	Heterosexual, MSM
Eastern Europe & Central Asia	1.6 million (1.2 - 2.1 million)	1,50,000 (0.70 – 2.9 lakh)	0.9% (0.7- 1.2%)	IDU
Western & Central Europe	7,60,000 (0.6 - 1.1 million)	31,000 (19-86 thousand)	0.3% (0.2- 0.4%)	MSM, IDU
North America	1.3 million (0.48 - 1.9 million)	46,000 (38-68 thousand)	0.6% (0.5- 0.9%)	Heterosexual, IDU, MSM
Oceania	75,000 (53,000 - 1,20,000)	14,000 (11-26 thousand)	0.4 % (0.3- 0.7%)	MSM
TOTAL	33.2 million (30.6 - 36.1 million)	2.5 million (1.8- 4.1 million)	0.8% (0.7- 0.9%)	

Source: UNAIDS Report on the Global AIDS Epidemic 2008.

\* The proportion of adults (15-49 years of age) living with HIV/AIDS in 2001, using population numbers.

A & C = Adult and Children

AIDS was relatively slow in coming to Asia and until the late 1980s; no Asian country had experienced a major epidemic. But now it is spreading rapidly and the epidemic is in a fairly advanced stage in many countries (WHO 1997; Phoolcharoen 1998). According to surveillance data, the rapid spread of HIV in Asia began when high HIV prevalence (up to 30% or more) among female sex workers (FSWs) in Thailand, Cambodia and Myanmar reported. Thailand is the first country to report HIV in Asia. Both in Thailand and Myanmar, the epidemic has been shown to occur in waves beginning with the reported increase in HIV infection among injecting drug users (IDUs) and sex workers, followed by their partners, and then ultimately from mother to children during child birth or through breast-feeding (WHO 2003). In Asia, an estimated 5.0 million (4.1 million–6.2 million) people were living with HIV in 2007 and approximately 380 000 (270 000–490 000) died from AIDS-related illnesses.

**Table-1.2:** The HIV/AIDS Epidemic in Selected Asian Countries

<i>Country</i>	<i>Adult HIV (15-49yrs) Prevalence (%)</i>	<i>PLWH in 2007 (numbers)</i>	<i>Heterosexual</i>	<i>Injecting drug use</i>
Bangladesh	< 0.1	12,000	+	+
Bhutan	0.1	<500	+	--
DPR Korea	< 0.1	n/a	--	--
Indonesia	0.2	2,70,000	+	++
India	0.3	24,00,000	+++	+
Maldives	< 0.1	<100	+	--
Myanmar	0.7	2,40,000	+++	++
Nepal	0.5	70,000	+	++
Thailand	1.4	6,10,000	+++	++
Sri Lanka	< 0.1	3,800	+	--
Timor Leste	< 0.1	n/a	n/a	n/a

*Source:* UNAIDS (2008) and WHO (2003) for sources of HIV transmission.

Notes: (--) unknown or minimal HIV transmission;  
 (+) limited HIV transmission.  
 (++) moderate HIV transmission;  
 (+++) major HIV transmission.  
 PLWHA= People Living With HIV/AIDS.

Based on the HIV prevalence rates, Asian countries could be divided into three broad categories – (1) those with HIV prevalence rate more than one percent among general population, namely, Cambodia, Myanmar, Thailand and parts of India; (2) those with prevalence of less than one percent in general population, but more than five percent among population with high-risk behaviour, namely, Malaysia, Nepal Indonesia, Vietnam, China and Pakistan; and (3) the remaining countries with low prevalence of less than one percent among high- risk population (see Table-1.2).

Though the national HIV prevalence rates relatively low in most of the Asian countries, there is no cause for complacency. National HIV infection levels are highest in South-East Asia, where there are disparate epidemic trends. During 2007 alone, nearly 3.8 lakh (2.0-6.5 lakh) people acquired HIV in Asia. Many countries are experiencing serious localized epidemics. The epidemics in Cambodia, Myanmar and Thailand all show declines in HIV prevalence. However, epidemics in Indonesia (especially in its Papua province), Pakistan, and Viet Nam are growing rapidly. New HIV infections are also increasing steadily, in populous countries such as Bangladesh and China (UNAIDS 2008). In Asia, where infection rates are much lower than in Africa, HIV causes a greater loss of productivity than any other disease, and is likely to push an additional 6 million households into poverty by 2015 unless national responses are strengthened (Commission on AIDS in Asia 2008).

In Asia, therefore, the epidemic remains dynamic and is evolving rapidly. Nearly half of the world's population lives in Asia and it has the potential to significantly influence the course and over all impact of the global HIV/AIDS pandemic. The region's vulnerability to HIV can be attributed to various factors like men having multiple sex partners and patronizing sex workers, injecting drug use, high prevalence of sexually transmitted infections (STIs), low condom use, illiteracy, poverty and limited access to health and information services (Narain 2004). Poverty is one of the major contributors to societal vulnerability. While the infected poor tend to die soon after developing AIDS, poverty and other social factors force women to undertake prostitution for survival and thereby enhancing the risk of acquiring HIV. These risk behaviours and vulnerability that are responsible for promoting, facilitating and fuelling HIV transmission are present virtually in all countries, and therefore, the chances of further spread are significant.

The epidemic has effects on the agriculture, education, health, labour and transport sectors. AIDS pushes people deeper into poverty as households lose bread

earners, livelihoods are compromised and savings are consumed by the cost of health care and funerals. Women are left bearing bigger burdens as caregivers, workers and mothers. Yet, their legal, social and political status leaves them more vulnerable to HIV/AIDS. The vast majority of people living with HIV/AIDS worldwide are in the prime of their working lives. The epidemic hits productivity through absenteeism, organizational disruption, adding costs, diverting resources and depleting skills. In all affected countries, the HIV/AIDS epidemic is putting the health sector under strain. Overall quality of health care dropped. There is a shortage of hospital beds. While demand for health services is expanding, more health care personnel are affected by HIV/AIDS. Development has ceased in many countries where struggling economies are no longer able to repay loans to strengthen the health and agricultural sector. AIDS has a profound impact on growth, income and poverty. For countries with HIV/AIDS prevalence rates of 20% or more, the GDP growth has been estimated to drop by an average of 2.6% annually (UNAIDS 2002). HIV has inflicted the “single greatest reversal in human development” in modern history (UNDP 2005).

### **AIDS Epidemic in India**

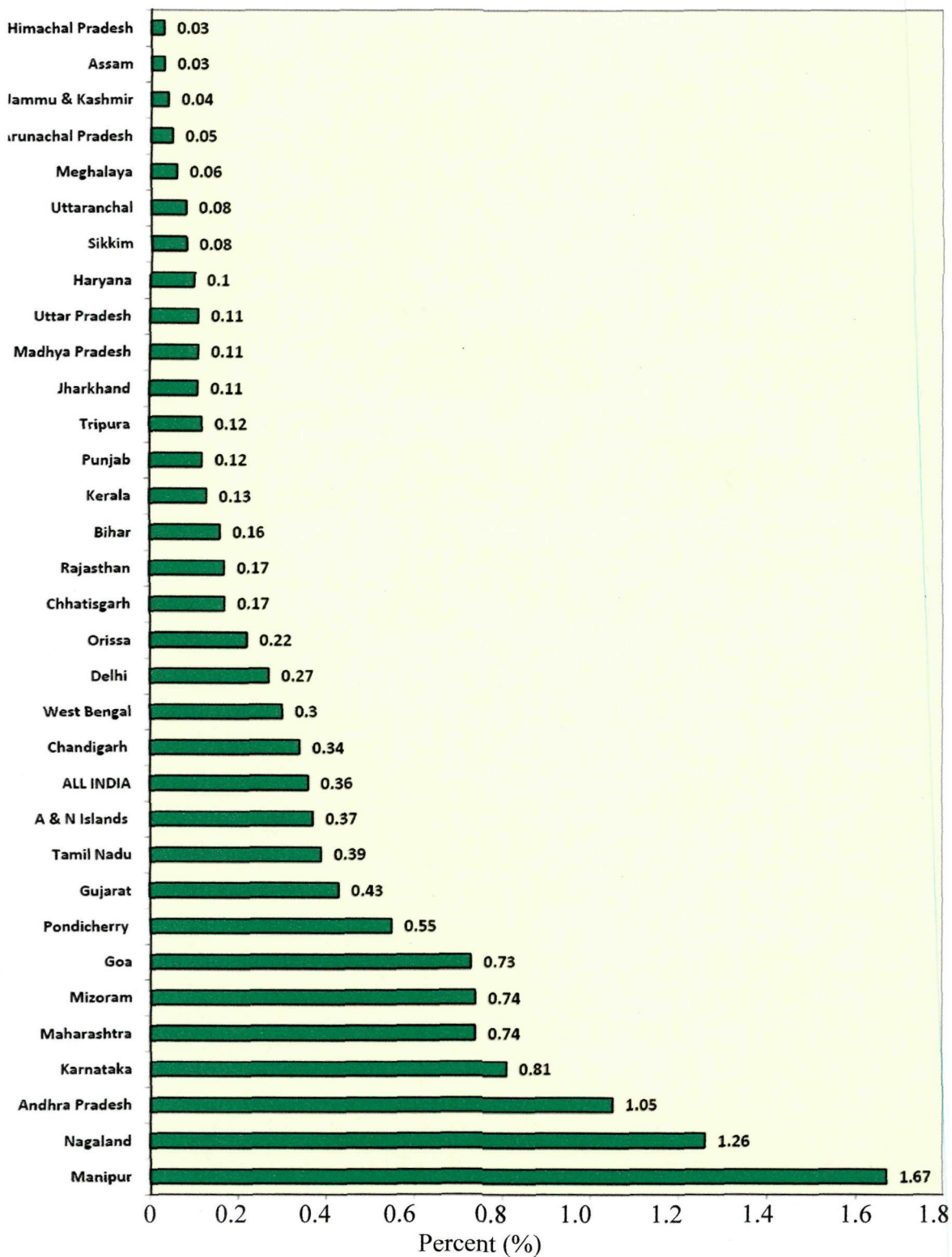
The first HIV infection in India was detected in 1986 in a group of female sex workers from Chennai. Within a short period it has evolved as one of the most serious public health problems across the whole country. The initial cases of HIV/AIDS were detected among the commercial sex workers in Chennai and Mumbai, and among the IDUs in north – eastern state of Manipur. In Mumbai, the prevalence rate of HIV among sex workers increased dramatically from one percent in 1986 to 18 percent in 1990 and to 51 percent in 1996 (Larson and Narain 2001). By 1996 Maharashtra, Tamilnadu and Manipur together constituted 77 percent of total AIDS cases in India (UNAIDS/WHO 2002).

HIV situation in the country is assessed and monitored through regular annual sentinel surveillance mechanism established since 1992. The sentinel surveillance started with 180 sentinel sites. Over the years, the numbers of sentinel sites were increased from 180 in 1998 to 703 in 2005. This was expanded greatly for 2006 surveillance round to a total of 1,122 sites, to cover all the districts of the country. Out of these, 628 sites are established at Antenatal clinics where blood is collected for HIV testing from the pregnant women attending these clinics. Other 494 sites are



established among high-risk group populations such as STD clinic attendees, Female Sex Workers (FSWs), Injecting Drug Users (IDUs), Men who have Sex with Men (MSM), Migrants, Truckers and Transgender (NACO/HSS 2006).

**Figure-1.1:** State-wise Estimated Adult HIV Prevalence in India, 2006.



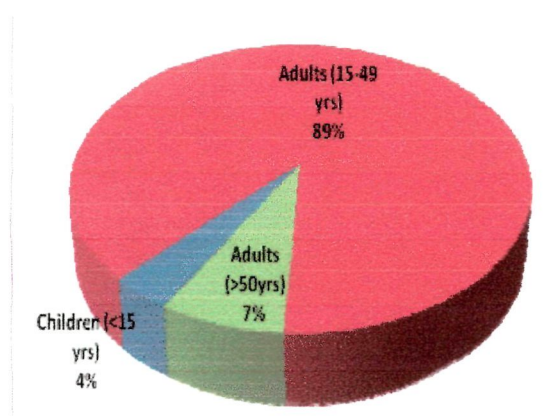
Source: NACO, 2006.

The total number of people living with HIV/AIDS (PLWHA) in the country is estimated to be 2.47 million (2.0-3.1 million). Andhra Pradesh, Tamil Nadu, Karnataka and Kerala contribute 63% of total PLWHA in India. The highest number of PLWHA is in Andhra Pradesh and Maharashtra, with nearly 0.5 million each. Apart from these high prevalence states, Gujarat, Uttar Pradesh and West Bengal have higher burden of the epidemic with greater than 0.1 million PLWHA in each of these states (NACO/HSS 2006). Based on the revised estimates (NACO/HSS 2006), the adult HIV prevalence in 2006 is estimated to be 0.36% (0.27% - 0.47%) at the all India level. Estimated HIV prevalence is greater among males (0.43%) than females (0.29%). The adult HIV prevalence is more than 1% in Manipur (1.67%), Nagaland (1.26%) and Andhra Pradesh (1.05%). The adult HIV prevalence is less than 1% in Karnataka, Maharashtra and Tamil Nadu, while Mizoram and Goa (0.70%-0.80%) is closed to the high HIV prevalence states. Figure-1.1 shows the state-wise estimated HIV prevalence. It shows that 11 states have adult HIV prevalence greater than the national average.

Based on the sentinel surveillance data for the last three years (2004-2006), all the districts in the country have been classified into four categories. There are 156 A category districts, 39 B category districts and the remaining are in categories C & D. Category A denotes those districts where HIV Prevalence among general population is high. (> 1% among ANC clinic attendees), category B denotes where the HIV Prevalence among high-risk groups is high. (> 5% among High risk groups), category C denotes where the HIV Prevalence is < 5% among high-risk groups and category D denotes those districts where there is no hotspots. In West Bengal, there are 4 high prevalence districts (A category) – Purulia, Burdwan, Uttar Dinajpur and Kolkata.

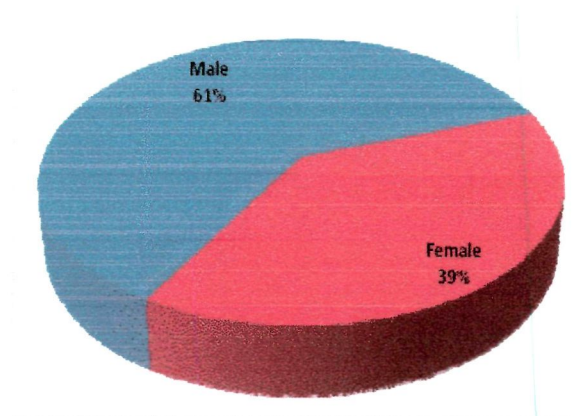
Recent estimates of HIV infection show that, of the 2.5 million PLWH in 2006, 88.7% are adults (15-49 yrs), 7.5% are aged 50 and above, while 3.8% are children (<15 yrs). The proportion of infections among children and adults above 50 years age has been increasing during the past five years. Females constitute 39.3% of the PLHA in the country. Figure 1.2 & Figure 1.3 show the distribution of PLHA in India by age and gender respectively.

**Figure-1.2:** Percentage Distribution of PLWHA by Age in India, 2006.



Source: NACO, 2006.

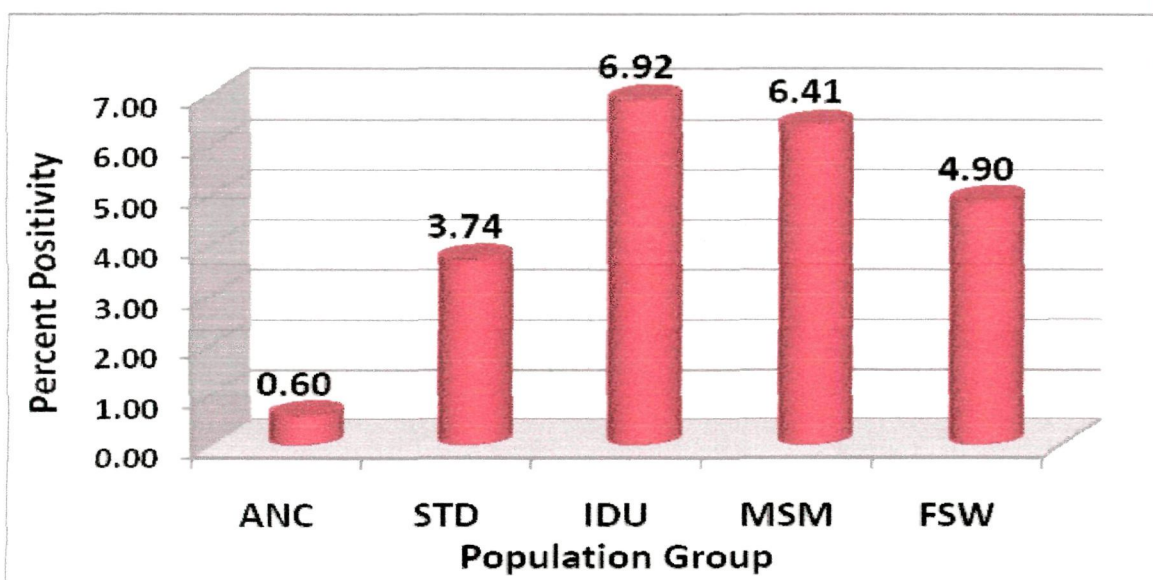
**Figure-1.3:** Percentage Distribution of PLWHA by Gender in India, 2006.



Source: NACO, 2006.

The HIV Prevalence among high-risk groups continues to be nearly six to eight times greater than that among general population. HIV Sentinel Surveillance utilizes data from the pregnant women at antenatal clinic as a surrogate for general population.

**Figure-1.4:** HIV Prevalence among Different Population Groups in India, 2006.



Source: NACO, 2006.

India continues to be in the category of concentrated epidemic. Figure-1.4 depicts the concentrated nature of HIV epidemic in India. Higher HIV prevalence among IDUs is an important feature of North Eastern States. But in 2006, new pockets of high HIV prevalence among IDUs has also been recorded in states of Punjab, Tamil Nadu, West Bengal, Kerala and Maharashtra indicating dual nature of the epidemic in the country (see Table-1.3).

**Table-1.3: State-wise HIV Prevalence among Different Population groups, 2006**

Sl. No.	State/UT	STD	ANC	IDU	MSM	FSW
1	A & Nicobar Island	0.80	0.17	NS	NS	NS
2	Andhra Pradesh	24.40	1.26	NS	10.25	8.84
3	Arunachal Pradesh	0.42	0.00	0.00	NS	0.00
4	Assam	0.50	0.00	2.86	0.78	0.40
5	Bihar	0.40	0.50	0.20	0.30	0.60
6	Chandigarh	1.66	0.25	17.60	4.80	0.67
7	Chattisgarh	2.58	0.00	NS	NS	1.65
8	Dadra & Nagar Haveli	NS	0.00	NS	NS	NS
9	Daman & Diu	NS	0.00	NS	NS	NS
10	Delhi	2.00	0.00	10.00	12.27	1.40
11	Goa	8.6	0.50	NS	4.8	NS
12	Gujrat	3.31	0.50	NS	11.20	6.40
13	Haryana	0.81	0.13	0.00	0.00	0.40
14	Himachal Pradesh	0.60	0.00	NS	0.44	0.66
15	Jammu & Kashmir	0.00	0.00	2.50	NS	0.00
16	Jharkhand	0.40	0.00	0.40	NS	0.87
17	Karnataka	7.57	1.00	3.60	19.20	9.60
18	Kerala	1.23	0.13	9.57	0.40	0.00
19	Lakshadweep	0.00	0.00	NS	NS	NS
20	Madhya Pradesh	0.47	0.00	NS	NS	1.07
21	Maharashtra	10.00	0.75	20.40	15.60	12.80
22	Manipur	4.80	1.25	20.00	10.40	11.60
23	Meghalaya	1.18	0.00	3.30	NS	NS
24	Mizoram	3.07	1.00	1.60	NS	10.40
25	Nagaland	0.00	0.93	1.25	NS	16.40
26	Orissa	2.80	0.50	10.40	NS	1.00
27	Pondicherry	4.03	0.25	NS	2.47	1.44
28	Punjab	0.27	0.00	13.80	4.80	1.60
29	Rajasthan	1.60	0.00	NS	0.00	1.20
30	Sikkim	0.00	0.10	0.20	NS	NS
31	Tamil Nadu	8.00	0.25	24.20	5.60	3.60
32	Tripura	0.45	0.42	0.00	NS	NS
33	Uttar Pradesh	0.62	0.00	4.63	NS	1.00
34	Uttaranchal	0.00	0.00	NS	NS	NS
35	<b>West Bengal</b>	<b>1.01</b>	<b>0.00</b>	<b>4.00</b>	<b>6.60</b>	<b>7.58</b>

Source: NACO, 2006.

Note: (1) Blue shaded cells indicate the States where the number of sites in a category is 3 or less and hence, mean positivity is presented. In all other cases, median prevalence is presented. (2) NS: No sites.

By the end of April 2005, a total of 1, 04,824 AIDS cases had been reported (NACO 2005). The estimated number of HIV infected people in the country calculated on the basis of sentinel surveillance data. However, the estimates mainly focused on people belonging to 15 to 49 years age group and did not take into account the unreported cases of AIDS. Epidemiological analysis of reported AIDS cases reveals that the disease is mainly affecting people in the sexually active age group. A majority of the patients (88.6%) are in the age group of 15 to 49 years, thereby making a considerable economic impact to the country (Anand et al. 1999). Trends indicate two distinct characteristics of the spread of HIV infection from groups practicing risk behaviours to general population and from urban to rural areas (NACO 2001b). The predominant modes of transmission of HIV infection in AIDS patients are heterosexual contact (87.4%), injecting drug use (1.8%), blood and blood products (1.7%), perinatal (4.7%), and others (4.4%). The analysis also reveals that males account for 74.88% of AIDS cases and females 25.12%. The ratio between male and female is 3:1 (see Table-1.4).

**Table-1.4:** Mode of HIV Transmission in India, 2007.

<i>Sl. No.</i>	<i>Risk/Transmission Categories</i>	<i>Percentage</i>
1	Sexual	87.40
2	Perinatal Transmission	4.70
3	Blood/Blood products	1.70
4	Injectable Drug Users	1.80
5	Others (Not specified)	4.40
	TOTAL	100.00

*Source: NACO, 2007.*

The transmission of HIV to the children in India occurred in the early phase of the epidemic and mostly through the transfusion of infected blood and blood products (Bhushan et al. 1994; De et al. 1990; Sen. et al. 1993; Sengupta et al. 1992; Singh et al. 1991). A considerable number of thalassaemic and haemophilic children were infected through this route. Although the situation has improved since then, India is yet to achieve 100% safe blood transfusion through out the country. The situation is more difficult in peripheral places – in rural settings as well as in hilly areas.

Contaminated blood and blood products are still a matter of concern as sources of HIV infection (Indian Express 2001). Of the nearly 2 million bottles of blood transfused every year in the country, the professional blood donors were reportedly supplying more than half. Currently, only 60% of the demand is being met through official sources, and this has implications for HIV transmission (Salunka et al. 1998). The 'component therapy' rather than whole blood transfusion is yet to be exploited to its potential. Kumar and his colleagues documented mother - to - child transmission (MCT) of HIV in 1995 (Kumar et al. 1995). The study recorded an overall vertical transmission rate of 48% in the tribal women of Uttar Pradesh. The problem of IDUs is limited to north-eastern states and the metropolitan cities. Needles sharing among IDUs are a high-risk activity that has fuelled the spread of HIV/AIDS. Since drug use is illegal and covert, these high-risk populations are particularly difficult to target for intervention.

In 2006, the Behavioural Surveillance Survey (BSS) conducted among the general population (15-49 years) as opposed to surveys earlier conducted in groups observing high-risk behaviour – is the biggest of its kind in the world. A total of 97,240 respondents were interviewed in which males and females participated in equal proportion; urban and rural representation was also equal in this survey (NACO/BSS 2006). The BSS shows that awareness level varies widely from state to state. 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. 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 states – Delhi, Andhra Pradesh, Tamil Nadu and Pondicherry, Kerala, Maharashtra, Goa and all North Eastern states, where the literacy level as well as the media exposure of the respondents was also quite high. 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 (62% in BSS 2001) of the respondents in BSS 2006 were aware that sexual contact could lead to HIV/AIDS. Nine out of ten respondents in urban areas as against seven out of ten in the rural areas were aware of this aspect. Four out of every five respondents (three out of five in BSS 2001) reported that HIV/AIDS could be transmitted by infected blood during transmission. Three-fourths (two-thirds in BSS 2001) of respondents were aware that

HIV/AIDS could 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%). 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. 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. 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. 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. 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%). Generally awareness levels are higher in high-prevalence states than the low-prevalence states. The rural women particularly are the most disadvantaged in terms of awareness especially in Bihar, Gujrat, Uttar Pradesh, Madhya Pradesh and West Bengal. Compared to the awareness of HIV/AIDS, the awareness regarding STDs was significantly lower among various respondent categories (31% in BSS 2001 to 38% in BSS 2006). Awareness of linkage between STDs and HIV/AIDS remains low although the awareness about this issue has increased significantly from 18% in BSS 2001 to 24% in BSS 2006. One of the key factors precipitating the spread of HIV is STI. It is now established that an individual with STI not only vulnerable to contracting HIV, but can also spread infection to others more rapidly. STI rates also indicate the extent of unprotected sex. Majority of such STI infected people do not turn up for timely treatment – especially the women due to social stigma. Fifty-six percent of the respondents in BSS 2006 felt that PLHA should be allowed to stay in village/community. Higher stigma levels were observed in rural areas and among female respondents in this regard. Acceptability of PLHA in the community was reported highest in Andhra Pradesh and Delhi (74%) and lowest in Bihar (30%). 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, Chandigarh and Uttarakhand (9%). The awareness about PPTCT is also low (overall 13%, urban 20%, and rural 10%).

In India, another feature of the epidemic is the existence of a dual epidemic of TB and HIV/AIDS. With about 14 million TB cases prevalent in India, HIV/AIDS also poses a twin challenge of HIV/TB co-infection. Approximately 65% of the AIDS cases are reported to be opportunistic TB infection cases (NACO 2001). Other major opportunistic infections reported are Candidiasis (57.5%), Cryptococcus (36%), PCP (3.8%), Kaposi sarcoma (0.6%) and others (8%). Treatment of TB among the HIV infected people is a new threat to the National TB Control Programme. Some of the drugs, which are referred for TB treatment, create complications in case of HIV infected persons. Simultaneously, looking for HIV among TB patients will also create the problem of scaring away of innumerable TB infected cases in India from seeking treatment under DOT strategy. HIV/AIDS is not a disease that spread randomly, but is transmitted as a result of a specific behavioural pattern and has strong socio-economic impact. It not only costs huge funds in terms controlling the opportunistic infections such as TB, pneumonia and Cryptococcal meningitis, but also seriously affects individuals in their prime productive years causing grave economic loss to them and their families. All these aspects provide an unusual task of HIV infection through many routes, which comes with its long period of invisibility and does not reveal the OIs till a few years.

The attributable reasons for such accelerated spread of the epidemic in the country at present is migration and mobility in search of employment from economically backward to more advanced regions, low literacy levels leading to low awareness among the potentially high-risk groups, gender disparity, RTIs/STIs both among men and women. The social stigma attached to STIs also holds good for HIV/AIDS in, even in much more serious way. This along with a large population and population density, HIV/AIDS is one of the most challenging health problem ever faced by the country.

The future of the epidemic in India is contingent upon the extent and effectiveness of current and future prevention efforts. Moreover, since it takes 7-10 years for people with HIV to develop AIDS, the annual toll will continue to grow in future, requiring further efforts for the next several years. This will have a major impact on the already fragile health and economic infrastructure in terms of direct medical and patient care costs, indirect costs in the form of absenteeism and decreased productivity. In terms of economic impact studies during 1990s indicated that India might have lost up to US\$ 11 billion due to HIV/AIDS by 2000 (Charles et al. 1993).



The impact of epidemic has been documented at the family and community level, especially in the poor and marginalized groups. Poor families become poorer and lower-middle income group become poor. Significant but less quantifiable are the emotional psychological costs to the individual, family and community.

## **Response to HIV/AIDS in India**

### **(A) Government Response**

From the very beginning, the Government of India is fully committed to preventing HIV/AIDS before it emerges as a catastrophic epidemic. It looks at HIV/AIDS prevention and control as a development issues with deep socio-economic issues and not merely a public health issue. In 1985, the Indian Council of Medical Research (ICMR) established a task force on AIDS to screen sera from high-risk groups at National Institute of Virology, Pune and ICMR Centre for Advanced Research in Virology located in Christian Medical College, Vellore. The first detection of HIV in 1986 in Chennai led to the formation of National AIDS Committee. The members of the Committee were senior government officials from Health and other departments and administrator of Voluntary Health Association of India (VHAI) – a leading NGO. Discussions and deliberations at this forum led to the evolution of National AIDS Control Programme in 1987, which concentrated in surveillance, information, education and communication (IEC), blood safety in the areas perceived to be risk prone. As a part of this programme, a Central AIDS Cell and AIDS cell in each States were established. This programme of 1987 was reviewed in 1990 in consultation with WHO and a medium – term plan (MTP) for three years prepared with an estimated cost of US \$20 million. The focus of MTP was on four identified high-risk metropolitan cities – Delhi, Mumbai, Chennai and Kolkata and the states of Maharashtra, Tamil Nadu, Manipur and West Bengal.

A comprehensive five-year strategic plan was launched during 1992-97 with World Bank credit as the National AIDS Control Programme Phase-I (NACP-I). The National AIDS Control Organisation (NACO) was established in 1992 to coordinate the nationwide programmes. The major component of NACP-I were: (1) strengthening the management capacity for AIDS control; (2) promoting public awareness and community support; (3) improving blood safety and promoting rational use of blood; (4) building surveillance and clinical management capacity; and controlling STDs. Project activities were to be implemented through the existing

government health infrastructure, private sector, NGOs and mass media institutions. The coordination of the project, procurement and development of policies and technical guidelines – were the functions of Govt. of India. Implementation was the responsibility of State governments and NGOs funded by Govt. of India through NACO. A sub-committee was appointed to examine the social, ethical and legal issues related to HIV/AIDS and to make recommendation to the government. NACP-I was extended up to October 1999.

The Second phase of NACP (NACP-II) started from November 1999 for a period of five-years (1999-2004). The NACP-II has been started through a participatory process with GOI, State governments, UNAIDS and bilateral agencies working in collaboration with community members, PLWHA, industry and labour organizations, NGOs and civil societies. Each States and Union Territories (UTs) has registered States AIDS Control Society, which will be accountable for the implementation of the programme at the state level. The NACP-II was formulated with two key objectives of reducing the spread of HIV infection in the country and to strengthen India's capacity to respond to HIV/AIDS on a long-term basis (NACO 1999a; 1999b). The specific objectives NACP-II include interventions to change behaviour, especially among high-risk groups through targeted interventions, decentralization of service delivery through State AIDS Control Societies (SACS), protection of human rights, operational research and management reform. Another feature of this phase is inter-sectoral collaboration with all government departments, elected representatives of the people, chambers of commerce and industry, community-based organizations (CBOs) and the civil society in general. The project cost was approximately US \$229.8 million (Rs. 1155 crores). The World Bank assured \$191 million with GOI's share of 38.8 million. Besides it, USAID assisted AVERT project in Maharastra for Rs. 166 crores and DFID assisted projects for Orissa, Kerala, Gujrat, Andhra Pradesh and West Bengal for Rs. 104 crores. The World Bank and DFID assisted projects are for duration of 5 years (1999-2004), while USAID's AVERT project for 7 years (1999-2006).

During the last few years, NACP has witnessed rapid expansion and decentralization in the country. SACS have been set up in 35 States/UTs and three municipal corporations of Mumbai, Chennai and Ahmedabad. These 38 SACS have adequate financial and administrative powers to identify and respond to local needs. Each SACS developed a Project Implementation Plan (PIP) as part of preparation for

addressing the second phase, which allows for addressing specific needs of the epidemic in the state. SACS operate through regular health infrastructure and have designated district nodal officers to carry out the programme activities with the help of NGOs. The government in 2002 adopted two landmark policies, the National Blood Policy and the National AIDS Prevention and Control Policy. Considerable progress has been made during past few years in implementing TI projects. Some of the specific areas of response are being discussed here.

Over 1000 blood banks were upgraded and 82 blood component separation facilities were set up to ensure blood safety in the country. Testing for all transfusion-transmitted infections has been mandatory for all blood banks and strict licensing system has been introduced under the Drug and Cosmetics Act. There are 1088 public sector and 2100 private blood banks collecting over 5 million units both in 2006, and 2007 (NACO 2007). The work of the Programme on blood safety has yielded good results with transmission of HIV through Blood Transfusion reduced from 6.07 percent (1999) to 1.7 percent (2006) and 1.1 percent (2007). Over 18,000 medical officers from government hospitals and 10,000 private physicians were trained in STI care management (Saukat and Panakadan 2004). The guideline for STI management and treatment were revised and a training manual prepared by NACO was widely disseminated. At the end of 2007, 845 STI treatment centres treating over 2.3 million patients and 5 regional STI centres were upgraded to conduct training, research, supervision and monitoring. By 2007, 4245 Integrated Counselling and Testing Centres (ICTCs) tested 5.5 million persons and provided counseling, social and psychological support to those infected and affected by HIV (NACO 2007). The Prevention of Parent to Child Transmission (PPTCT) programmes offers a combination of low-cost, short-term prevention drug treatment, safe delivery practices, counseling and support, and safe infant – feeding methods. In January 2003, GFATM assigned a grant of US \$ 100 million for PPTCT programmes. In 2007, 8.3 percent of HIV infected pregnant women received Nevirapine Prophylaxis to reduce the risk of transmission to child. HIV spending in India has seen a growth of 28 percent in 2006-07 i.e. from US\$ 133 million in 2005-06 to US\$ 171 million in 2006-07 (NACO 2007).

The school AIDS Programme of NACO is a crucial intervention which focuses on raising awareness level, helping young people in resisting peer pressure to participate in risky behaviour and helping to develop safe and responsible lifestyles.

Life skills education provided in 114,345 government secondary schools (79 percent) are some key achievements in the prevention front during 2007 (NACO 2007). Another example of a successful programme for youth is Universities Talk AIDS (UTA) programme, which covered 3.5 million students in 4044 institutions in the country during 2003. This programme is implemented by NSS with assistance from the WHO and NACO. Besides this, the Family Health Awareness Campaigns another innovative initiative to create awareness and encourage health-seeking behaviour among rural population on STIs and RTIs, and also sensitize field level health functionaries. During this campaign in 2000, 126 million target beneficiaries (15 to 49 yrs) were covered. 3.5 million cases referred and 1.5 million cases were treated (Saukat and Panakadan 2004). Under IEC activities, multimedia campaigns are being taken up. All print media, electronic media, small and folk media are also being used. Special communication packages are developed for vulnerable groups like MSMs, IDUs, truckers and sex workers. AIDS hotline with 1097 toll-free number have established in major cities of the country. Recognizing the adequate information and understanding, NCERT developed an AIDS education training package for teachers (NACO 1995).

Since April 2004, free ART is being provided through selected government hospitals. On the Care and support front, 137 ART centers provide free ART to 118,052 adults (19.6%) and 8347 (35.1%) children with advanced HIV infection. National Paediatric ART Initiative was launched in late 2006. Positive People Networks have been established and/or strengthened in 22 states and 221 districts. (NACO 2007). Government has funded about 35 community care centers. Linkages have been made between HIV care services and revised National TB Control (RNTCP) to facilitate free TB treatment. Quality of condoms was improved and included in schedule R of the Drugs and Cosmetics Act. A combination of free distribution and social marketing strategies is being used to make quality condom available to the high-risk group and general population. The NACP-II has an inbuilt component for monitoring and evaluation to ensure that continuous central information on the course of epidemic and response is being supplied for taking quick remedial actions. This evaluation system includes a computerized MIS, training of programme management staff, conducting base line, mid-term and final evaluation, and conducting annual performance reviews (APER).

The success of NACP is dependent in the coverage and quality of targeted intervention projects (TIPs) that have been launched among the most vulnerable groups. About 790 TIPs are being implemented across the country and covering 43% of the most-at-risk population such as CSWs, MSMs, truckers, street children, IDUs, migrant workers and prison inmates in 2007. TIPs use innovative approaches based on best available practices in the counter, combining behaviour change communication (BCC), counseling and general health care including the treatment of STDs, promotion of condom use and creating an enabling environment that nurtures empowerment. These interventions are carried out by NGOs, as they are best suited to reach these populations, which often can be hard to access and may not trust the public establishments. NACO has also developed guidelines for the effective participation of NGOs in NACP. The government hopes that all participating agencies in the government and NGO sector including international and bilateral agencies will also adopt policies and programmes in conformity with NACP in their efforts to prevent and control HIV/AIDS in India. Currently, NACP-III (2007-2011) is in operation from June 2007.

#### **(B) NGO Response to HIV/AIDS in India**

From the above discussion, it is found that NGOs play a key role in combating the AIDS epidemic. Voluntary organizations and NGOs have a long and rich history in India. During the 19<sup>th</sup> and early 20<sup>th</sup> century, on the one hand, mainly Christian churches came into existence to intervene in the social and religious life of the indigenous people through improvement of health, social welfare and social reform. On the other hand, as a part of anti colonial resistance numerous indigenous organizations emerged to accelerate social and religious reform (Sheth and Sethi 1996). In fact, more involvement of initiatives of NGOs has been occurring since late 1970s. At present, NGOs have become very crucial in the process of decentralization of power and development (Mathew 1999). In India, in the process of development, NGOs play a key role in carrying out various programmes related to formal and non-formal education, social awareness, income generation training, rural entrepreneurship development, computer training, agro-based training, safe drinking water, low cost sanitation, family counseling, legal aid for women, child labour, welfare for the disables, aged and backward communities and so on (Sarkar 2005).

Especially in the field of health care, NGOs have acquired a considerable importance in India since 1978 (Pattanaik 1988). In the same year, the Alma-Ata Conference gave birth to a new approach in health care i.e. 'Primary Health Care Approach' and fixed a goal of "Health for All By 2000 A.D". The said conference was preceded by a joint study of WHO and UNICEF for finding out alternative approaches to meet the basic health needs of the Third World people. The study examined some of the isolated voluntary health projects in these countries like in Jamkhed of India. The conclusion drawn from the study went strongly in favour of NGOs (Sarkar 2005). In 1983, National Health Policy also recognized the need for greater reliance on the voluntary and private sector for achieving the goal of "Health For All By 2000 A.D" (Duggal 1988). In 1985, Ministry of Health and Family Welfare agreed with the Planning Commission on the issue of greater involvement of NGOs in health care (Duggal, Gupta & Jesani 1986). In 2000, National Population Policy also focused on the voluntary and non-profit sector for population control. During last two and half decades, NGOs have contributed remarkably in the health sector by their innovative genius in the field of health, family welfare and in preventing the spread of communicable diseases.

Similarly, NGOs also made significant contribution in HIV/AIDS control and prevention programme. The history of HIV/AIDS action in India began in the voluntary sector, with efforts towards awareness and control at a time when government responses were restricted to denial. Among the first, were the Indian Health Organisation in Mumbai (then Bombay), the Gujrat AIDS Awareness and Prevention unit in Ahmedabad, and the AIDS Research Foundation of India in Chennai (then Madras). It was some four years after the Indian Health Organisation (now Indian People's Organisation) began its pioneering efforts in the red light areas of Mumbai in 1982 that the ICMR and Directorate General of Health Services (DGHS) launched a national programme of serological surveillance (Chatterjee and Sehgal 2004). This was to be the important event toward a national approach to the epidemic – National AIDS Control Programme of 1987. In response to national and international pressure, two years later, a medium-term plan was worked out in collaboration with WHO. It was evident from these influences that the challenge of HIV/AIDS would require a level of mobilization well beyond the capacity of India's strained public health system. In 1992, National AIDS Control Organisation (NACO) was established to coordinate the National AIDS Control Programme (NACP).

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NACO identified the importance of NGO participation and sought cooperation in all activities taken up for the implementation of NACP. A comprehensive guideline for the involvement of NGOs was drawn up in consultation with the representatives of NGOs and State AIDS Control Societies (SACS). Some pilot studies and intervention projects were started with the help of NGOs in Delhi, Kolkata, Mumbai and Guwahati. NGOs are also associated with training activities, IEC assessment studies, risk behaviour studies and the preparation and discrimination of IEC materials. In this context, it would be appropriate to discuss about the activities of NGOs engaged in HIV/AIDS prevention and care in India.

*Shalom*, an NGO in Manipur has received international recognition for its work on injecting drug use and HIV. In 1995, Shalom set up a needle and syringe pilot project, which was initially regarded, controversial by the authorities. The authorities perceived the project to be a blatant endorsement of drug use, but evidence showed that the intervention actually helped to reduce rampant practices of needles sharing among IDUs and subsequently helped to decrease HIV transmission. It now has evolved into a statewide programme involving twelve other NGOs under Manipur SACS and receives support from national and international agencies.

*Mahila Sarvangeen Utkarsh Mandal (MASUM)*, Pune was set up in 1987 at the request of local women and engaged in identifying the various forms of exploitation and abuse faced by women and helped them to organize themselves to deal with these problems. A few kilometers outside the Pune city, the draught zone starts. Many people migrated to urban cities like Mumbai for employment and returning home after contracting the HIV. MASUM set up Streewadi Arogya Kendra (the feminist health centre) as apart of an action research project of ICMR. The center was serving the women with STIs and RTIs. Despite many problems faced by them, members of MASUM started to have an influence on community attitudes. A group of local youth performs street plays about the problem of deserted women, violence against women, illiteracy and AIDS to sensitize the people. In 1994, the group won the first prize from the India health organization for an instructive play on HIV/AIDS. MASUM's activities are assisting to promote new attitudes and forms of behaviour leading to a social climate in which women are more assertive and less open to exploitation and abuse – thereby becoming less vulnerable to HIV infection.

*Lawyers' Collective, Mumbai* – a small group of practicing lawyers involved in Public Interest litigation (PIL) became famous with Dominic D'Souza case.

D'Souza, a young man from Goa, was detected HIV positive in February 1989 after donating blood to a local hospital. Due to his HIV-positive status, he was arrested and placed in a separate cell under the Goa Public Health Act. Mr. Anand Grover on behalf of Lawyers' Collective filed a PIL, and D'Souza was released after 64 days' detention when the court delivered the verdict of amending the Act. Thereafter, it was no longer mandatory to detain people with HIV. Later on, it felt that there was a dire necessity for a new comprehensive legislation to deal with the multi-faceted human rights issues arising from HIV/AIDS epidemic in the country. It started to train lawyers with a view to develop a countrywide network of lawyers to take up such individual cases. It also organizes workshops to frame policies for protecting human rights of PLWHA. The Collective works in collaboration with WHO and UNDP, and represents in National Legal and ethical Committee on HIV/AIDS of NACO. The Collective's lobbying of political leaders at the national level helped in persuading the government to leave its plan for mandatory testing and confinement of people with HIV. It also publishes a journal "The lawyers" and presently operating from two offices in Mumbai and in Delhi. They never charge any fees; the personal resources of its members finance all PIL activities.

*Seva Mandir, Udaipur* has been working over past 30 years with the local tribal people (the Bhil) in a wide variety of rural development activities. There were not known cases of HIV/AIDS in this zone, social, economic and geographical elements combine to make local the people vulnerable to STDs along with HIV. Everyday about 8000 trucks ply up and down NH-8 between Delhi and Mumbai. This highway like others across the country is therefore major route not only for goods, but also for the spread of STDs and HIV/AIDS. Roadside hotels (Dhaba) at the truck stops near Udaipur are very popular among the truckers. Because, near the highway, tribal women sell sex to the truckers in order to survive, exposing themselves at the risk of contracting HIV and then passing it to their husbands and sexual partners. Pre-marital and extra-marital sex are common and widely accepted among the Bhils. Seva Mandir's AIDS programme started in 1992. It formed 6 Highway Contact Teams to contact local women, dhaba workers and sex workers and 14 Village Contact Teams to visit communities for disseminating information on STDs and HIV/AIDS, distributing condoms and referring villagers to Seva Mandir's health clinics for STD treatment. Seva Mandir's AIDS programme now covers more than 200 villages and it has incorporated AIDS awareness in all of its other development



projects. The formation of these teams helped to sharpen the focus on HIV/AIDS. The changing social climate brought about by Seva Mandir is helping to give individuals and communities the choice of breaking away from high-risk sexual behaviour and to choose other forms of safer sexual expression (Satpathy 2003).

### **NGO Response to HIV/AIDS in West Bengal**

The present study has been conducted to understand the NGO response to HIV/AIDS in West Bengal. The main reason for selecting West Bengal is its unique and long history of NGOs started with the social reform movement of Brahmo Samaj. Subsequently, due to its unique socio-political background, numbers of movements were organized in West Bengal, such as freedom movement, tebhaga movement, naxalite movement, land reform movement, etc (Sarkar 2005). These movements led to form a large number of NGOs. Besides it, first National AIDS Control Policy aided by WHO was also started in West Bengal in 1987. NACO has also classified West Bengal in the Group-B states where HIV infection rate among high-risk group crossed 5% or more. Nature of activities of a few NGOs engaged in HIV/AIDS prevention can be worthy to mention in this regard.

*Durbar Mahila Samanaya Committee (DMSC)*, Kolkata is a network of women sex workers from Sonagachi, the largest red-light area in Kolkata existing for over a century. DMSC now mobilized around 60,000 sex workers in West Bengal. The peer education programme of early 1990s led to the empowerment of these sex workers. This peer-to-peer interaction elicited more open and accepting response from the sex workers. One of the DSMC's most documented successes is the dramatic increase in over all condom use from 2.7% in 1992 to over 90% in 1998 among female sex workers (FSWs). The Sonagachi project is now considered as an example of a 'best practice' intervention in the world, which clearly demonstrates that close involvement and ownership of the project by the community are essential for a sex worker (or any marginalized group) project to success. Presently DMSC is implementing numbers of TI projects in different districts of West Bengal. Besides HIV/AIDS project, DSMC developed a self-run cooperative called Usha Cooperative society to save the sex workers from pimps and moneylenders by extending loans to them. DMSC also took the leaderships in mobilizing all the sex workers of the country and protested with one voice against social injustice and demanded government attention particularly on police harassment, recognition of sex workers as

workers, poor health care and forced HIV Testing. The DMSC is also now receiving funds from international agencies like WHO, USAID, UNAIDS and Bill and Melinda Gates Foundation. Recently DMSC organized international conference of sex workers in India.

*Society for Positive Atmosphere and Related Support to HIV/AIDS* (SPARSHA) is a unique organization of HIV positive and HIV negative people. In the late 1980s, a group of children and young persons with hemophilic contracted HIV through transfusion of contaminated blood and blood products. The care needs of these youth remained unaddressed for long. The HIV infected hemophiliacs, therefore, had no other way but to form a loose group with support, inspiration and active participation of a few health care providers. This was a pioneering effort which was initiated 1998 and paved the way for greater involvement of PLWHA. In 2001, Australian Agency for International Development (AusAID) funded a project entitled “Creation of a Support Network for People Living with HIV in West Bengal” which helped the group to consolidate into a registered body named SPARSHA. It is mainly run by a group of PLWHA and their friends and now implementing TI projects of WBSAP&CS. It has also undertaken and complemented numbers of research projects of DFID, UNDP, UNICEF and WBSAP&CS. It is also providing subsidized ART to children of impoverished family, reaching out to PLWHA in need of home-based care and running a residential community care center for PLWHA in Howrah district.

*MANAS Bangla*, Kolkata is a network having seven member organizations to coordinate and enhance their efforts in promoting health and general well being of MSM. It is dealing with issues on homophobia, violence and stigma around sexual and gender identities. The focus is on empowerment and affirmation of the rights based on sexualities or gender of MSMs. HIV infected MSMs are doubly stigmatized because of their sexual behaviour and their HIV status. MANAS Bangla is currently implementing a TI project of WBSAP&CS, which is first in the state as well as in the whole northeastern India. It is a nodal intervention using rights based approach and is entirely community owned.

From the above discussion, it is evident that many NGOs in West Bengal are working among the different vulnerable groups infected and affected by HIV/AIDS epidemic. Hence, initiating an in-depth study to understand the role of NGOs in HIV/AIDS prevention and care in West Bengal is meaningful and realistic.

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