HIV/AIDS in India

India is one of the largest and most populated countries in the world, with over one billion inhabitants. Of this number, it's estimated that around 2.5 million people are currently living with HIV.¹

HIV emerged later in India than it did in many other countries, but this has not limited its impact. Infection rates soared throughout the 1990s, and have increased further in recent years. The crisis continues to deepen, as it becomes clearer that the epidemic is affecting *all* sectors of Indian society, not just the groups – such as sex workers and truck drivers – that it was originally associated with.

In a country where poverty, illiteracy and poor health are rife, the spread of HIV presents a daunting challenge.

"How do you talk about HIV/AIDS to someone who does not know the basics about health and hygiene?"

Ratna Gaekwad, outreach co-ordinator with the Delhi NGO Pratyatna²

The History of HIV/AIDS in India

At the beginning of 1986, despite over 20,000 reported AIDS cases worldwide ³, India had no reported cases of HIV or AIDS.⁴ There was recognition, though, that this would not be the case for long, and concerns were raised about how India would cope once HIV and AIDS cases started to emerge. One report, published in a medical journal in January 1986, stated:

"Unlike developed countries, India lacks the scientific laboratories, research facilities, equipment, and medical personnel to deal with an AIDS epidemic. In addition, factors such as cultural taboos against discussion of sexual practices, poor coordination between local health authorities and their communities, widespread poverty and malnutrition, and a lack of capacity to test and store blood would severely hinder the ability of the Government to control AIDS if the disease did become widespread."⁵

Later in the year, India's first cases of HIV were diagnosed among sex workers in Chennai, Tamil Nadu. It was noted that contact with foreign visitors had played a role in initial infections among sex workers, and as HIV screening centres were set up across the country there were calls for visitors to be screened for HIV. Gradually, these calls subsided as more attention was paid to ensuring that HIV screening was carried out in blood banks.⁶⁷

In 1987 a National AIDS Control Programme was launched to co-ordinate national responses. Its activities covered surveillance, blood screening, and health education. ⁸ By the end of 1987, out of 52,907 who had been tested, around 135 people were found to be HIV positive and 14 had AIDS. Most of these initial cases had occurred through heterosexual sex, ⁹ but at the end of the 1980s a rapid spread of HIV was observed among injecting drug users in Manipur, Mizoram and Nagaland - three north-eastern states of India bordering Myanmar (Burma). ¹⁰

At the beginning of the 1990s, as infection rates continued to rise, responses were strengthened. In 1992 the government set up NACO (the National AIDS Control Organisation), to oversee the formulation of policies, prevention work and control programmes relating to HIV and AIDS.¹¹ In the same year, the government launched a Strategic Plan for HIV prevention. This plan established the administrative and technical basis for programme management and also set up State AIDS

bodies in 25 states and 7 union territories. It was able to make a number of important improvements in HIV prevention such as improving blood safety.¹²



A human daisy chain on World Aids Day in India, December 2004.

By this stage, cases of HIV infection had been reported in every state of the country. ¹³ Throughout the 1990s, it was clear that although individual states and cities had separate epidemics, HIV had spread to the general population. Increasingly, cases of infection were observed among people that had previously been seen as *'low-risk'*, such as housewives and richer members of society. ¹⁴ In 1998, one author wrote:

"HIV infection is now common in India; exactly what the prevalence is, is not really known, but it can be stated without any fear of being wrong that infection is widespread... it is spreading rapidly into those segments that society in India does not recognise as being at risk. AIDS is coming out of the closet." ¹⁵

In 2001, the government adopted the National AIDS Prevention and Control Policy. During that year, Prime Minister Atal Bihari Vajpayee addressed parliament and referred to HIV/AIDS as one of the most serious health challenges facing the country. The Prime Minister also met the chief ministers of the six high-prevalence states to plan the implementation of strategies for HIV/AIDS prevention.¹⁶

HIV had now spread extensively throughout the country. In 1990 there had been tens of thousands of people living with HIV in India; by 2000 this had risen to millions.¹⁷

Current estimates

In 2006 UNAIDS estimated that there were 5.6 million people living with HIV in India, which indicated that there were more people with HIV in India than in any other country in the world. ¹⁸ However, NACO disputed this estimate, and claimed that the actual figure was lower. ¹⁹ In 2007, using a more effective surveillance system, UNAIDS and NACO agreed on a new estimate – between 2 million and 3.6 million people living with HIV. This puts India behind South Africa and Nigeria in numbers living with HIV.²⁰

In terms of AIDS cases, the most recent estimate comes from July 2005, at which stage the total number of AIDS cases reported to NACO was 111,608. Of this number, 32,567 were women, and 37% were under the age of 30. These figures are not completely accurate reflections of the actual situation though, as large numbers of AIDS cases go unreported. ²¹

Overall, around 0.36% of India's population is living with HIV. ²² While this may seem a low rate, India's population is vast, so the actual number of people living with HIV is remarkably high. There are so many people living in India that a mere 0.1% increase in the HIV prevalence would increase the estimated number of people living with HIV by over half a million.

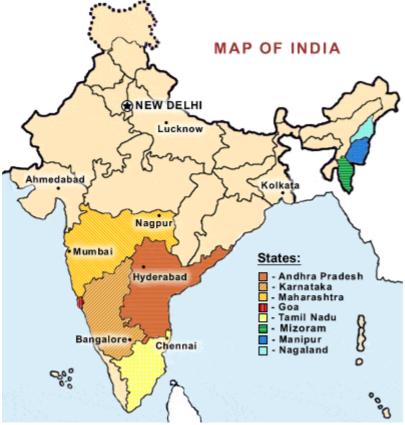
The national HIV prevalence has risen dramatically since the start of the epidemic, but a study released at the beginning of 2006 suggests that the HIV infection rate has fallen in southern India, the region that has been hit hardest by AIDS. ²³ In addition, NACO has released figures suggesting that the overall rate of new HIV infections in the country is slowing. ²⁴ Researchers claim that this decline is the result of successful prevention campaigns, which have led to an increase in condom use.

Some AIDS activists are doubtful of the suggestion that the situation is improving, though:

"It is the reverse. All the NGOs I know have recorded increases in the number of people accepting help because of HIV. I am really worried that we are just burying our head in the sand over this." Anjali Gopalan, the Naz Foundation, Delhi²⁵

For more detailed information on HIV prevalence and AIDS deaths, see our HIV and AIDS statistics for India page.

The HIV/AIDS situation in different states



Map of India showing the worst affected states.

The vast size of India makes it difficult to examine the effects of HIV on the country as a whole. The majority of states within India have a higher population than most African countries, so a more detailed picture of the crisis can be gained by looking at each state individually. The HIV prevalence data for each state is established through antenatal clinics, where pregnant women are tested. While this means that the data are only directly relevant to sexually active women, they still provide a reasonable indication as to the overall HIV prevalence of each area. ²⁶

The following states have recorded the highest levels of HIV prevalence at antenatal and sexually transmitted disease (STD) clinics over recent years.

Andhra Pradesh

Andhra Pradesh is a Hindu state in the southeast of the country with a total population of around 76 million, of whom 6 million live in or around the city of Hyderabad. The HIV prevalence at antenatal clinics was around 2% in both 2004 and 2005 - higher than in any other state. The vast majority of infections in Andhra Pradesh are believed to result from sexual transmission. HIV prevalence at STD clinics was 22.8% in 2005.

Goa

Goa is a very small state in the southwest of India, and is best known as a tourist destination. Tourism is so prominent that the number of tourists almost equals the resident population, which is about 1.3 million. The HIV prevalence at antenatal clinics was found to be above 1% in both 2002 and 2004, but was 0.5% in 2003 and 0% in 2005. This variation is likely due to the small number of women tested; the 2005 survey included only two antenatal sites. Prevalence at STD clinics was 14% in 2005, indicating that Goa has a serious epidemic of HIV among sexually active people.

Karnataka

Karnataka - a diverse state in the southwest of India - has a population of around 53 million. In Karnataka the average HIV prevalence at antenatal clinics has exceeded 1% in all recent years. Districts with the highest prevalence tend to be located in and around Bangalore in the southern part of the state, or in northern Karnataka's "devadasi belt". Devadasi women are a group of women who have historically been dedicated to the service of gods. These days, this has evolved into sanctioned prostitution, and as a result many women from this part of the country are supplied to the sex trade in big cities such as Mumbai.²⁷ The average HIV prevalence among female sex workers in Karnataka was 18% in 2005.

Maharasthra

Mumbai (Bombay) is the capital city of Maharasthra state and is the most populous city in India, with around 20 million inhabitants. Maharastra is a very large state of three hundred thousand square kilometres, with a total population of around 97 million. The HIV prevalence at antenatal clinics in Maharasthra has exceeded 1% in all recent years, and surveys of female sex workers have found rates of infection above 20%. Very high rates are also found among injecting drug users and men who have sex with men.

Tamil Nadu

When surveillance systems in the southern Indian state of Tamil Nadu, home to some 62 million people, showed that HIV infection rates among pregnant women were rising - tripling to 1.25% between 1995 and 1997 - the State Government acted decisively. Funding for the Tamil Nadu State AIDS Control Society (TANSACS), which had been set up in 1994, was significantly increased. ²⁸ Along with non-governmental organisations and other partners, TANSACS developed an active

AIDS prevention campaign. This included hiring a leading international advertising agency to promote condom use for risky sex in a humorous way, without offending the many people who do not engage in risky behaviour. The campaign also attacked the ignorance and stigma associated with HIV infection.²⁹

The HIV prevalence at antenatal clinics in Tamil Nadu was 0.88% in 2002 and 0.5% in 2005, though several districts still have rates above 1%. Prevalence among injecting drug users was 18% in 2005. Tamil Nadu had reported 52,036 AIDS cases to NACO by July 2005, which is by far the highest number of any state.

Manipur

Manipur is a small state of some 2.2 million people in the northeast of India. The nearness of Manipur to Myanmar (Burma), and therefore to the Golden Triangle drug trail, has made it a major transit route for drug smuggling, with drugs easily available. HIV prevalence among injecting drug users is above 20%, and the virus is no longer confined to this group, but has spread further to the female sexual partners of drug users and their children. ³⁰ The HIV prevalence at antenatal clinics in Manipur has exceeded 1% in all recent years.

Mizoram

The small northeastern state of Mizoram has fewer than a million inhabitants. In 1998, an HIV epidemic took off quickly among the state's male injecting drug users, with some drug clinics registering HIV rates of more than 70% among their patients. ³¹ In recent years the average prevalence among this group has been much lower, at around 5%. HIV prevalence at antenatal clinics has exceeded 1% in most recent years, but was 0.88% in 2005.

Nagaland

Nagaland is another small northeastern state, with a population of two million, where injecting drug use has again been the driving force behind the spread of HIV. In 2005, the HIV prevalence at antenatal clinics was 1.63%, and the rate among injecting drug users was 4.51%.

Who is affected by HIV and AIDS in India?

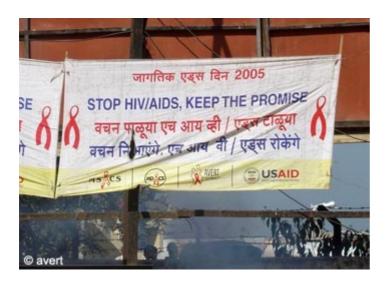
People living with HIV in India come from incredibly diverse backgrounds, cultures and lifestyles. The vast majority of infections occur through heterosexual sex, and most of those who become infected would not fall into the category of 'high-risk groups' - although members of such groups, including sex workers, men who have sex with men, truck drivers and migrant workers, do face a proportionately higher risk of infection. See our page on affected groups in India for more information.

HIV prevention

Educating people about HIV/AIDS and how it can be prevented is complicated in India, as a number of major languages and hundreds of different dialects are spoken within its population. This means that, although some HIV/AIDS prevention and education can be done at the national level, many of the efforts are best carried out at the state and local level.

Each state has its own AIDS Prevention and Control Society, which carries out local initiatives with guidance from NACO. Under the second stage of the government's National AIDS Control

Programme, which finished in March 2006, state AIDS control societies were granted funding for youth campaigns, blood safety checks, and HIV testing among other things. Various public platforms were used to raise awareness of the epidemic - concerts, radio dramas, a voluntary blood donation day and TV spots with a popular Indian film-star. Messages were also conveyed to young people through schools. Teachers and peer educators were trained to teach about the subject, and students were educated through active learning sessions, including debates and role-playing. ³²



AIDS awareness banners in Sangli, India - 2005

The next stage of the National AIDS Control Programme will see US\$2.5 billion spent on fighting HIV and AIDS, most of which will be spent on prevention. Aside from the government, this money will come from non-governmental organisations, companies, and international agencies, such as the World Bank and the Bill and Melinda Gates Foundation.³³

The government has announced that this campaign will place a strong focus on condom promotion. It has already supported the installation of over 11,000 condom vending machines in colleges, roadside restaurants, stations, gas stations and hospitals, and plans to increase this number to 100,000 by the end of 2007. ³⁴ With support from the United States Agency for International Development (USAID), the government has also initiated a campaign called 'Condom Bindas Bol!', which involves advertising, public events and celebrity endorsements. It aims to break the taboo that currently surrounds condom use in India, and to persuade people that they should not be embarrassed to buy them. ³⁵

In one unique scheme, health activists in West Bengal are attempting to promote condom use through kite flying, which is popular before the state's biggest festival, Durga Puja:

"The colourful kites carry the message that using a condom is a simple and instinctive act... they can fly high in the sky and land at distant places where we cannot reach." 36

This initiative is an example of how HIV prevention campaigns in India can be tailored to the situations of different states and areas. In doing so, they can make an important impact, particularly in rural areas where information is often lacking. Small-scale campaigns like this are often run or supported by non-governmental organisations, which play a vital role in preventing infections throughout India, particularly among high-risk groups. In some cases, members of these risk groups have formed their own organisations to respond to the epidemic.

Testing

The general consensus among those fighting AIDS worldwide is that HIV testing should be carried out voluntarily, with the consent of the individual concerned. This view has been supported by the Indian government and NACO, who have helped to establish of hundreds of voluntary counselling and testing (VCT) centres in India. By the end of 2005 there were 873 VCT centres in India, compared to just 62 in 1997.³⁷ These centres tested 225,600 people for HIV during 2005.³⁸



Health Clinic near Sangli, India - 2005

Although voluntary testing is officially supported in India, some states have tried to implement policies that would force people to be tested for HIV against their will. In Goa, the state government recently planned to make HIV tests compulsory before marriage, and in Punjab it has been proposed that all people wishing to obtain or retain a driver's license should be tested for HIV. ³⁹ Neither of these plans has come to pass, but they have concerned activists, who argue that HIV testing should never be imposed on people against their wishes.

Unfortunately, cases of people being tested without their consent or knowledge are common in Indian hospitals. In one 2002 study, it was suggested that over 95% of patients listed for surgical procedures are tested against their will, often resulting in their surgery being cancelled. ⁴⁰ Hospital staff and health professionals, much like the rest of the Indian population, are often unaware of the facts about HIV. This leads to unnecessary fears and, in some cases, causes them to stigmatise HIV positive people and discriminate against them, including testing them without consent.

Treatment for people living with HIV

HAART – a form of treatment involving antiretroviral drugs (ARVs), which significantly delays the progression from HIV to AIDS – has been available in richer countries since 1996. Unfortunately, as in many poorer countries, access to this treatment is severely limited in India, with only about 95,000 people (less than 15% of those in need) receiving ARVs in India by the end of 2006. ⁴¹ Some people manage to access the drugs through private health facilities, which dominate India's healthcare sector, but the vast majority of people cannot afford to buy treatment privately.

While the coverage of treatment remains unacceptably low, improvements are being made. The government has started to expand access to ARVs in a number of areas, and the national number of ARV centres increased from 25 to around 70 in 2005 alone.⁴²

There are also plans to improve the provision of nevirapine to pregnant mothers with HIV, which can significantly reduce the risk that they will pass infection on to their child. It has been reported that, even where treatment to prevent mother-to-child-transmission is available, some women do not request it because of the stigma surrounding HIV.⁴³

The large scale of India's epidemic, the diversity of its spread, and the country's lack of finances and resources all present barriers to India's programme. Ironically, India is a major provider of cheap generic copies of ARVs to countries all over the world.

"It is a sad irony that India is one of the biggest producers of the drugs that have transformed the lives of people with AIDS in wealthy countries. But for millions of Indians, access to these medicines is a distant dream" Joanne Csete, Director of the HIV/AIDS programme at Human Rights Watch.⁴⁴

To read about the challenges faced in increasing access to antiretroviral drugs around the world, see our providing drug treatment for millions page.

Stigma and discrimination in India

In India, as elsewhere, AIDS is often seen as "*someone else's problem*" – as something that effects people living on the margins of society, whose lifestyles are considered immoral. Even as it moves into the general population, the HIV epidemic is misunderstood and stigmatised among the Indian public. People living with HIV have faced violent attacks; been rejected by families, spouses and communities; been refused medical treatment; and even, in some reported cases, denied the last rites before they die. ⁴⁵



A schoolteacher fired after testing HIV-positive is embraced by daughter

As well as adding to the suffering of people living with HIV, this discrimination is hindering efforts to prevent new infections. While such strong reactions to HIV and AIDS exist, it is difficult to educate people about how they can avoid infection. AIDS outreach workers and peer-educators have reported harassment, ⁴⁶ and in schools, teachers sometimes face negative reactions from the parents of children that they teach about AIDS:

"When I discussed with my mother about having an AIDS education program, she said, 'you learn and come home and talk about it in the neighbourhood, they will kick you'. She feels that we should not talk about it." Female student, Chenna⁴⁷ Discrimination is also alarmingly common in the health care sector. Negative attitudes from health care staff have generated anxiety and fear among many people living with HIV and AIDS. As a result, many keep their status secret. It is not surprising that among a majority of HIV positive people, AIDS-related fear and anxiety, and at times denial of their HIV status, can be traced to traumatic experiences in health care settings.

"There is an almost hysterical kind of fear ... at all levels, starting from the humblest, the sweeper or the ward boy, up to the heads of departments, which make them pathologically scared of having to deal with an HIV positive patient. Wherever they have an HIV patient, the responses are shameful." ⁴⁸

A 2006 study found that 25% of people living with HIV in India had been refused medical treatment on the basis of their HIV-positive status. It also found strong evidence of stigma in the workplace, with 74% of employees not disclosing their status to their employees for fear of discrimination. Of the 26% who did disclose their status, 10% reported having faced prejudice as a result. ⁴⁹ People in marginalized groups - female sex workers, hijras (transgender) and gay men - are often stigmatised not only because of their HIV status, but also because they belong to socially excluded groups. ⁵⁰

To learn more about the way that prejudice is hindering the global fight against AIDS, see out Stigma and discrimination page.

The future of HIV and AIDS in India

Various groups have made predictions about the effect that AIDS will have on India in the future, and there has been a lot of dispute about the accuracy of these estimates. For instance, a 2002 report by the CIA's National Intelligence Council predicted 20 million to 25 million AIDS cases in India by 2010 - more than any other country in the world. ⁵¹ Yet the government has claimed that these figures are "completely inaccurate", and has accused those who cite them of "spreading panic". ⁵² The government has also disputed predictions that India's epidemic is "on an African trajectory", although it claims to acknowledge the seriousness of the crisis. ⁵³

Ruben del Prado, deputy UNAIDS country coordinator for India, has predicted that "there is going to be a reversal of the epidemic by 2008 and 2009".⁵⁴

This does not correlate with other UN-related estimates, however, which have suggested that:

- India's adult HIV prevalence will peak at 1.9% in 2019.⁵⁵
- The number of AIDS deaths in India (which was estimated at 2.7 million for the period 1980-2000) will rise to 12.3 million during 2000-15, and to 49.5 million during 2015-50.⁵⁶
- Economic growth in India will slow by almost a percentage point per year as a result of AIDS by 2019.⁵⁷

Whatever the exact figures turn out to be, it is clear that HIV and AIDS will have a devastating effect on India in the future, and that as much as possible needs to be done to minimise this impact.

"The challenges India faces to overcome this epidemic are enormous. Yet India possesses in ample quantities all the resources needed to achieve universal access to HIV prevention and treatment... defeating AIDS will require a significant intensification of our efforts, in India, just as in the rest of the world"

Peter Piot, Director of UNAIDS.⁵⁸

WHERE NEXT ?

100

AVERT.org has more about:

- HIV and AIDS in other countries and regions around the world
- Groups of people that are heavily affected by AIDS in India
- Statistics about HIV and AIDS in India
- The stigma and discrimination surrounding HIV and AIDS

This page was written by Graham Pembrey, based on an original article by Jenni Fredriksson-Bass and Annabel Kanabus.

References

- 1. UNAIDS (2007, July 6th), '2.5 million people in India living with HIV, according to new estimates', press release
- 2. The Lancet (2003) 'Spreading the word about HIV/AIDS in India', Vol.361, May 3
- 3. Bureau of Hygiene & Tropical Diseases (1986) 'AIDS newsletter' Issue 1 January 30th
- 4. Ghosh T.K. (1986), 'AIDS: a serious challenge to public health', Journal of the Indian Medical Association, January;84(1):29-30
- 5. Ghosh T.K. (1986), 'AIDS: a serious challenge to public health', Journal of the Indian Medical Association, January;84(1):29-30
- 6. Kakar D.N. and Kakar S.N. (2001), 'Combating AIDS in the 21st century Issues and Challenges', Sterling Publishers Private Limited, p.31
- 7. Time magazine (1986, 1st September), 'Public health: Nowhere to Run, Nowhere to Hide'
- 8. NACO (2006), 'UNGASS India report: progress report on the declaration of commitment on HIV/AIDS'
- 9. Kakar D.N. and Kakar S.N. (2001), 'Combating AIDS in the 21st century Issues and Challenges', Sterling Publishers Private Limited, p.32
- 10. Panda S. (2002), 'The HIV/AIDS epidemic in India: an overview', in Panda S., Chatterjee A. and Abdul-Quader A.S. (Eds.), 'The epidemic and the response in India', p.20
- Bhupesh M. (1992) 'India Disquiet About AIDS Control', the Lancet, Vol240, No.8834/8835
- 12. NACO website, 'About NACO, National AIDS Control Programme Phase 1 (1992-1999)', accessed 4/7/06
- 13. Kakar D.N. and Kakar S.N. (2001), 'Combating AIDS in the 21st century Issues and Challenges', Sterling Publishers Private Limited, p.32
- 14. Baria F. et al., India Today (15th March 1997), 'AIDS striking home'
- 15. Nath L.M. (1998), 'The epidemic in India: an overview', in Godwin P. (Ed.), 'The looming epidemic', Mosaic books/New Delhi, p.28
- 16. Atal Bihari Vajpayee, speech at the meeting with Chief Ministers of high prevalence states on the issue of control and prevention of HIV/AIDS, New Delhi, May 22, 2001
- 17. NACO, Annual Report 2002-2004
- 18. UNAIDS, 2006 Report on the global AIDS epidemic
- 19. NACO (April 2006), HIV/AIDS epidemiological Surveillance & Estimation report for the year 2005
- 20. UNAIDS (2007, July 6th), '25 million people in India living with HIV, according to new estimates', press release

- 21. NACO, (July 2005), Monthly updates on AIDS
- 22. UNAIDS (2007, July 6th), '25 million people in India living with HIV, according to new estimates', press release
- 23. Kumar R., Jha P. et al. (2006), 'Trends in HIV-1 in young adults in south India from 2000 to 2004: a prevalence study', The Lancet vol. 367:1164-1172
- 24. NACO (April 2006), HIV/AIDS epidemiological Surveillance & Estimation report for the year 2005
- 25. The Guardian (May 2006), 'Doubt over India's HIV claims'
- 26. NACO (April 2006), HIV/AIDS epidemiological Surveillance & Estimation report for the year 2005
- 27. Sivaram S. (2002) 'Integrating income generation and AIDS prevention efforts: lessons from working with devadasi women in rural Karnataka, India', Abstract MoOrF1048, The XIV International AIDS Conference
- 28. Tamil Nadu State AIDS Control Society, official website
- 29. UNAIDS (2000) 'Report on the global HIV/AIDS epidemic 2000'. July p.13
- 30. InfoChange (August 2003) 'HIV/AIDS in Manipur: the need to focus women'
- 31. World Bank 'South Asia Region (SAR)- India' Regional Updates
- 32. NACO website, 'Information, Education, Communication and Social Mobilization', accessed 4/7/06
- 33. Kaisernetwork.org, (September 5th 2004), Daily Report, 'India primarily to promote condom use in its HIV prevention programs, health minister says'
- 34. Ibid.
- 35. The Hindu (September 16th 2006), 'Shhhh not anymore!'
- 36. Agence France Press (September 19th 2006), 'India takes condom campaign to the skies'
- 37. NACO (2006), 'UNGASS India report: progress report on the declaration of commitment on HIV/AIDS'
- 38. NACO (April 2006), HIV/AIDS epidemiological Surveillance & Estimation report for the year 2005
- 39. Human Rights Watch (August 10th 2006), press release, 'AIDS Conference: Drive for HIV Testing Must Respect Rights, WHO, UNAIDS Policies Must Link Testing to Consent, Counseling and Treatment'
- 40. Malavade J.A.B et al. (2002) 'Ethical and legal issues in HIV/AIDS counseling and testing', Abstract ThPeE7902, the XIV International AIDS Conference
- 41. WHO (17th April 2007), 'Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector'
- 42. Ibid.
- 43. UNICEF (28th June 2005), press release, 'Reducing Mother-to-Child Transmission of HIV/AIDS in India'
- 44. Human Rights News (2002), 'AIDS in India: Money won't solve crisis, Rising violence against AIDS-affected people', November 13
- 45. UNDP (2006), The Socio Economic Impact of HIV and AIDS in India
- 46. Human Rights News (2002) 'AIDS in India: Money won't solve crisis, Rising violence against AIDS-affected people', November 13
- 47. ActionAid (2003), 'The sound of silence: difficulties in communicating on HIV/AIDS in schools (experiences from India and Kenya)'
- 48. UNAIDS (2001) 'India: HIV and AIDS-related discrimination, stigmatization and denial'
- 49. UNDP (2006), The Socio Economic Impact of HIV and AIDS in India
- 50. Ibid,
- 51. National Intelligence Council (2002) 'The Next wave of HIV/AIDS: Nigeria, Ethiopia, Russia, India and China', September, p.3
- 52. Time Asia (May 30th 2005), 'When silence kills', Perry A.

- 53. Prasada Rao J.V.R et al. (2004), 'India's response to the AIDS epidemic', The Lancet, vol. 364, no. 9442, October 9-15 2004
- 54. International Herald Tribune (20th July 2006), 'AIDS study warns of impact on India's economy', Gentleman A.
- 55. Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2003) 'World population Prospects: the 2002 revision', Highlights, New York, February, p. 78-90
- 56. Ibid.
- 57. UNDP (2006), The Macro-Economic and Sectoral Impacts of HIV and AIDS in India: A CGE Study
- 58. Peter Piot, speech at the launch of the 2005 AIDS Epidemic Update, New Delhi, 21st November 2005