UNIT 1  GLOBAL AND NATIONAL  
SCENARIO OF HIV AND AIDS  

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1.1 INTRODUCTION  
AIDS, which is one of the most dreaded diseases of humanity, has spread to every part of the world, threatening people from all spheres of life. The first case of HIV infection was reported in 1981 among the homosexuals in the United States of America. In India, HIV was first reported in 1986 among commercial sex workers from Chennai. The widespread prevalence of HIV and AIDS has to be seriously considered for any type of public health programme. In this section we shall analyze the prevalence of HIV and AIDS at the Global, National and Regional levels together with its impact on socio-economic development.

1.2 OBJECTIVES  
In our country, HIV appeared much later than in other parts of the world. However, this killer disease is spreading rapidly and has now emerged as a serious social, economic and public health problem. AIDS does not differentiate between age, sex, profession and religions. It cuts across all social, political, economic, and cultural boundaries. The tragedy of AIDS in the worst affected countries of Africa and the West is likely to repeat itself in India in the next few years unless measures are taken in time to counter it.

While offering vaccines to prevent spread of HIV and final cure to AIDS patients seems to be a distant reality Evolving strategies to prevent and control the unabated spread of this disease is desirable and possible. There is an urgent need for timely intervention in the area of treatment of opportunistic diseases, advocating healthy lifestyles and providing an enabling environment for those in need of care and support. After studying this unit you will be in a position to:

- understand the global scenario of HIV and AIDS;
- analyze the situation of HIV and AIDS in different regions of the world and the major initiatives from different governments in these regions;
- understand the problem of HIV and AIDS in India; and
- perceive the impact of the problem of HIV and AIDS in socio-economic development.
1.3 GLOBAL SCENARIO OF HIV AND AIDS

The epidemic of HIV infection is extremely dynamic, growing and virtually no country in the world scenario is unaffected.

According to the World Health Organization and UNAIDS, a total of 40.3 million men, women and children worldwide are living with HIV/AIDS in 2005.

Number of people living with HIV in 2005: Total 40.3 million (36.7-45.3 million)
- Adults 38.0 million (34.5-42.6 million)
- Women 17.5 million (16.2-19.3 million)
- Children under 15 years 2.3 million (2.1-2.8 million)

People newly infected with HIV in 2005: Total 4.9 million (4.3-6.4 million)
- Adults 4.2 million (3.6-5.8 million)
- Children under 15 years 700 000 (630 000-820 000)

AIDS deaths in 2005: Total 3.1 million (2.8-3.6 million)
- Adults 2.6 million (2.3-2.9 million)
- Children under 15 years 570 000 (510 000-670 000)

In the 1990, AIDS became an issue of global concern. In 1992, in Europe, most of the cases were reported from France, Italy, Spain, Germany and the United Kingdom, with lowest levels in the Nordic Countries of Norway, Sweden and Finland. In the American continents, the U.S.A., Brazil and Mexico have the largest epidemics, besides the Caribbean islands, Bermuda and Barbados which have reported even higher rates.

Sub Saharan Africa remains hardest-hit and is home to 25.8 million (23.8-28.9 million) people living with HIV. Two-thirds of all people living with HIV are in sub-Saharan Africa, as are 77% of all women with HIV. An estimated 2.4 million (2.1-2.7 million) people died of HIV related illnesses in this region in 2005, while a further 3.2 million (2.8-3.9 million) become infected with HIV. Beyond sub-Saharan Africa, more recent epidemics continue to grow in some Asian countries and Eastern Europe. In Asia, Thailand has experienced the epidemic early and severely. The large populous countries of China, India, and Indonesia are of particular concern though they have a low to moderate level epidemic. In spite of effective prevention programmes, HIV epidemic is growing the world over.

The ranges around the estimates in the table 1.1 define the boundaries within which the actual numbers lie based on the best available information. These ranges are more precise than those of previous years, and work is under way to increase even further the precision of the estimates.

The report of the UNAIDS shows that an overwhelming majority of people with HIV (some 95 per cent of the global total) - live in the developing world. The report also affirms that HIV is still a challenge in industrialized countries due to the unsafe sexual behaviour of gay men and intravenous drug use. There has been a steep rise in HIV incidence in Eastern Europe and Central Asia due to increasing intravenous drug abuse. The same reason has been reported in the Middle East, though AIDS cases are still relatively low there.
### Table 1.1

#### Regional HIV and AIDS statistics and features, 2003 and 2005

<table>
<thead>
<tr>
<th>Sub-Saharan Africa</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>25.8 million [23.8-28.9 million]</td>
<td>3.2 million [2.4-3.9 million]</td>
<td>7.2 [6.6-8.0]</td>
<td>2.4 million [2.1-2.7 million]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>North Africa and Middle East</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>510 000 [230 000-1.4 million]</td>
<td>67 000 [35 000-200 000]</td>
<td>0.2 [0.1-0.7]</td>
<td>58 000 [25 000-145 000]</td>
</tr>
<tr>
<td>2003</td>
<td>500 000 [200 000-1.4 million]</td>
<td>62 000 [31 000-200 000]</td>
<td>0.2 [0.1-0.7]</td>
<td>55 000 [22 000-140 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>South and South-East Asia</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>7.4 million [4.5-11.0 million]</td>
<td>990 000 [480 000-2.4 million]</td>
<td>0.7 [0.4-1.0]</td>
<td>480 000 [290 000-740 000]</td>
</tr>
<tr>
<td>2003</td>
<td>6.5 million [4.0-9.7 million]</td>
<td>840 000 [410 000-2.0 million]</td>
<td>0.6 [0.4-0.9]</td>
<td>390 000 [240 000-590 000]</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>East Asia</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>870 000 [440 000-1.4 million]</td>
<td>140 000 [42 000-390 000]</td>
<td>0.1 [0.05-0.2]</td>
<td>41 000 [20 000-68 000]</td>
</tr>
<tr>
<td>2003</td>
<td>690 000 [350 000-1.1 million]</td>
<td>100 000 [33 000-300 000]</td>
<td>0.1 [0.04-0.1]</td>
<td>22 000 [11 000-37 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oceania</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>74 000 [45 000-120 000]</td>
<td>8200 [2400-25 000]</td>
<td>0.5 [0.2-0.7]</td>
<td>3600 [1700-8200]</td>
</tr>
<tr>
<td>2003</td>
<td>63 000 [38 000-99 000]</td>
<td>8900 [2600-27 000]</td>
<td>0.4 [0.2-0.6]</td>
<td>9000 [910-4900]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latin America</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.8 million [1.4-2.4 million]</td>
<td>200 000 [130 000-360 000]</td>
<td>0.6 [0.5-0.8]</td>
<td>66 000 [52 000-86 000]</td>
</tr>
<tr>
<td>2003</td>
<td>1.6 million [1.2-2.1 million]</td>
<td>170 000 [120 000-310 000]</td>
<td>0.6 [0.4-0.8]</td>
<td>59 000 [46 000-77 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caribbean</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>300 000 [200 000-510 000]</td>
<td>30 000 [17 000-71 000]</td>
<td>0.6 [1.1-2.7]</td>
<td>24 000 [16 000-40 000]</td>
</tr>
<tr>
<td>2003</td>
<td>300 000 [200 000-510 000]</td>
<td>29 000 [17 000-68 000]</td>
<td>1.6 [1.1-2.7]</td>
<td>24 000 [16 000-40 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eastern Europe and Central Asia</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.6 million [0.9]</td>
<td>270 000 [140 000-610 000]</td>
<td>0.9 [0.6-1.3]</td>
<td>62 000 [39 000-91 000]</td>
</tr>
<tr>
<td>2003</td>
<td>1.2 million [0.7]</td>
<td>270 000 [120 000-680 000]</td>
<td>0.7 [0.4-1.0]</td>
<td>36 000 [24 000-52 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Western and Central Europe</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>720 000 [570 000-890 000]</td>
<td>22 000 [11 000-39 000]</td>
<td>0.3 [0.2-0.4]</td>
<td>12 000 [9 000-20 000]</td>
</tr>
<tr>
<td>2003</td>
<td>700 000 [550 000-870 000]</td>
<td>20 000 [13000-37 000]</td>
<td>0.3 [0.2-0.4]</td>
<td>&lt;15000 [&lt;15000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>North America</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.2 million [0.7]</td>
<td>43 000 [15 000-120 000]</td>
<td>0.7 [0.4-1.1]</td>
<td>18 000 [9 000-30 000]</td>
</tr>
<tr>
<td>2003</td>
<td>1.1 million [0.7]</td>
<td>43 000 [15 000-120 000]</td>
<td>0.7 [0.3-1.1]</td>
<td>18 000 [9 000-30 000]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>Adults and children living with HIV</th>
<th>Adults and children newly infected with HIV</th>
<th>Adult prevalence (%)</th>
<th>Adult and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>40.3 million [36.7-45.3 million]</td>
<td>4.9 million [4.3-6.6 million]</td>
<td>1.1 [1.0-1.3]</td>
<td>3.1 million [2.8-3.6 million]</td>
</tr>
<tr>
<td>2003</td>
<td>37.5 million [34.0-41.9 million]</td>
<td>4.6 million [4.0-6.0 million]</td>
<td>1.1 [1.0-1.2]</td>
<td>2.8 million [2.5-3.1 million]</td>
</tr>
</tbody>
</table>

Source: WHO/UNAIDS, 2005
### Table 1.2

<table>
<thead>
<tr>
<th>Region</th>
<th>Adults and children living with HIV/AIDS</th>
<th>Adults and children newly infected with HIV</th>
<th>Adults prevalence (%)*</th>
<th>Adults and child deaths due to AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>25.0-28.2 million</td>
<td>3.0-3.4 million</td>
<td>7.5-8.5</td>
<td>2.2-2.4 million</td>
</tr>
<tr>
<td>North Africa &amp; Middle East</td>
<td>470000-730000</td>
<td>430000-67000</td>
<td>0.2-0.4</td>
<td>3500-50000</td>
</tr>
<tr>
<td>South &amp; South East Asia</td>
<td>4.6-8.2 million</td>
<td>610000-1.1 million</td>
<td>0.4-0.8</td>
<td>330000-590000</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>700000-1.3 million</td>
<td>150000-270000</td>
<td>0.1-0.1</td>
<td>32000-58000</td>
</tr>
<tr>
<td>Latin America</td>
<td>1.3-1.9 million</td>
<td>1200000-180000</td>
<td>0.5-0.7</td>
<td>490000-70000</td>
</tr>
<tr>
<td>Caribbean</td>
<td>350000-590000</td>
<td>450000-80000</td>
<td>1.9-3.1</td>
<td>30000-50000</td>
</tr>
<tr>
<td>Eastern Europe &amp; Central Asia</td>
<td>1.2-1.8 million</td>
<td>1800000-280000</td>
<td>0.5-0.9</td>
<td>230000-37000</td>
</tr>
<tr>
<td>Western Europe</td>
<td>520000-680000</td>
<td>3000000-54000</td>
<td>0.5-0.7</td>
<td>120000-18000</td>
</tr>
<tr>
<td>North America</td>
<td>7900000-1.2 million</td>
<td>360000-54000</td>
<td>0.5-0.7</td>
<td>120000-18000</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>120000-18000</td>
<td>700-1000</td>
<td>0.1-0.1</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Total</td>
<td><strong>40 Million</strong></td>
<td><strong>5 million</strong></td>
<td><strong>1.1%</strong></td>
<td><strong>3 million</strong></td>
</tr>
<tr>
<td></td>
<td><strong>(34-46 million)</strong></td>
<td><strong>(4.2-5.8 million)</strong></td>
<td><strong>(0.9-1.3%)</strong></td>
<td><strong>(2.5-3.5 million)</strong></td>
</tr>
</tbody>
</table>

* The proportion of adults (15 to 49 years of age) living with HIV/AIDS in 2003, using 2003 population numbers.
1.4 REGIONAL SCENARIO OF HIV AND AIDS

In this section we shall focus on situation of HIV and AIDS with specific references to the various international regions. These include Sub Saharan Africa, Eastern Europe and Central Asia, Asia and the Pacific, Latin America and the Caribbean, Middle East and North Africa and High-income countries.

Sub-Saharan Africa

Ten per cent of the world population lives in Sub Saharan Africa. With rates of adults infected with HIV ranging from 5-30% in various countries in this region, it is a home for 60 percent of HIV infected people in the world. Southern Africa is home to about 30% of people living with HIV and AIDS world wide, yet this region has less than 2% of the world’s population. In 2005, an estimated 3.2 million people in the region became newly infected. Although the prevalence rates of the disease have stabilized over the years, yet, Madagascar and Swaziland have shown an increasing incidence. Uganda has shown a decreasing prevalence. This may be due to the effective preventive measures that have been used as well as due to increased death rate.

HIV in Africa has become a generalized epidemic. It is no longer confined to high risk groups. Factors responsible for high prevalence rate in the region include poverty and social instability, high prevalence of sexually transmitted diseases, social violence and migratory labour systems. Also, the pandemic is full blown here and the African women are 1.2 times more infected with HIV than men.

Oceania

In Oceania an estimated 74,000 people (45,000- 120,000) are living with HIV. Although less than 4,000 people are believed to have died of AIDS in 2005, about 8200 persons are thought to have become newly infected with HIV. The disease is predominantly seen among men who have sex with men. HIV drug users comprise a small percentage of those who are HIV infected. Heterosexual mode of transmission is rare. Same situation prevails in New Zealand also. Papa New Guinea has the highest incidence of HIV in the Oceania region. Here the disease is spread through heterosexual route. Rest of the Oceania region has a low incidence of HIV but there is an increasing incidence of STD infection in the community.

Eastern Europe and Central Asia

Diverse HIV epidemics are under way in Eastern Europe and Central Asia. About 1.6 million people (range: 920,000-2.1 million) were living with HIV at the end of
Basics of HIV and AIDS

2005, compared to about 160,000 in 1995. During 2005, an estimated 270,000 people (range: 140,000-610,000) in the region became newly infected, while 62,000 (range: 39,000-91,000) died of AIDS. Among young people aged 15-24, 0.6% of women (range: 0.4-0.8%) and 1.3% of men (range: 0.9-1.8%) were living with HIV by the end of 2003.

The main driving force behind epidemics across the region is injecting drug use—an activity that has spread explosively in the years of turbulent change since the demise of the Soviet regime. A striking feature is the low age of those infected. More than 80% of HIV-positive people in this region are under 30 years of age. By contrast, in North America and Western Europe, only 30% of infected people are less than 30 years of age.

North Africa and the Middle East

With the exception of a few countries, systematic surveillance of the epidemic is not well developed in North Africa and the Middle East. The advance of AIDS in the Middle East and the North Africa has continued with latest estimates showing that 67,000 (35,000 – 200,000) people became infected with HIV in 2005. It is estimated that approximately 510,000 (230,000-1.4 million) people are living with HIV in this region and an estimated 58,000 (25,000-145,000) adults and children in 2005 died of AIDS related conditions. Furthermore, there is inadequate monitoring of the situation among populations at higher risk of HIV exposure, such as sex workers, injecting drug users and men who have sex with men. This means that potential epidemics in these populations are being overlooked. In many countries, available information is based only on case representation and suggests that around 600,000 people are living with HIV. Sudan is by far the worst affected country in the region.

Latin America

Around 1.8 million people (range: 1.4-2.4 million) are living with HIV in Latin America. In 2005, around 66,000 people (range: 52,000-86,000) died of AIDS, and 200,000 (range: 130,000-360,000) were newly infected.

Among young people 15-24 years of age, 0.4% of women and 0.6% of men (range: 0.6-0.9%) were living with HIV in 2005 which was transmitted heterosexually. In Central America, injecting drug use plays less of a role, and the virus is spread predominantly through sex. A recent international study shows that HIV prevalence among female sex workers ranges from less than 1% in Nicaragua, 2% in Panama, 4% in El Salvador and 5% in Guatemala, to over 10% in Honduras. Levels of HIV infection among men who have sex with men appear to be uniformly high. Sex between men is the predominant mode of transmission in several countries, notably Colombia and Peru. However, conditions appear ripe for the virus to spread more widely, as large numbers of infected men pass the virus on to the women.

Caribbean

A total of 300,000 people are living with HIV in the Caribbean including the 30,000 people who became infected in 2005. Among young people 15-24 years of age, 2.9% of women (range: 2.4-5.8%) and 1.2% of men (range: 1.0-2.2%) were living with HIV by the end of 2003. Of the seven countries in the Caribbean region, three have national HIV prevalence levels of at least 3%: the Bahamas, Haiti and Trinidad and Tobago. Barbados is at 1.5% (range: 0.4-5.4%) and Cuba’s prevalence is well below 1%. The Caribbean epidemic is predominantly heterosexual, and is concentrated among sex workers in many places. But the virus is also spreading in the general population. The worst-affected country is Haiti, where national prevalence is around 5.6% (range: 2.5-11.9%). However, HIV spread
is uneven: sentinel surveillance reveals prevalence ranging from 13% in the north-west of the country, to 2-3% in the south.

Dominican Republic also has a serious HIV epidemic. However, in the Dominican Republic, previously high prevalence has declined, due to effective prevention efforts.

High-income countries

An estimated 1.9 million people (range: 1.3-2.6 million) were living with HIV in these countries in 2005. Around 65,000 had acquired HIV in the past year. Among young people, 15-24 years of age, 0.1% of women (range: 0.1-0.2%) and 0.2% of men (range: 0.2-0.3%) were living with HIV by the end of 2003. In high-income countries, unlike elsewhere, the great majority of people who need antiretroviral treatment do have access to it. This means that they are staying healthy and surviving a few years longer than infected people elsewhere. In the U.S.A., there were 16,371 reported deaths in 2002, down from 19,005 in 1998. In Western Europe, the number of reported deaths among AIDS patients also continued to decline—from 3,373 in 2001 to 3,101 in 2002.

In the United States, about half of newly reported infections in recent years have been among African Americans. They represent 12% of the population, but their HIV prevalence is 11 times higher than among whites.

In many high-income countries, sex between men plays an important role in the epidemic. For example, it is the most common route of infection in Australia, Canada, Denmark, Germany, Greece, New Zealand and the United States.

In recent years, heterosexual transmission in the industrialized world has sharply increased. In several western European countries, including Belgium, Norway and the United Kingdom, the increase in heterosexual transmission is dominated by people from countries with generalized epidemics, predominantly sub-Saharan Africa and Eastern Europe. Because the countries with the largest epidemics in Western Europe (Italy and Spain) do not yet have national HIV-reporting systems, it is unclear whether this trend is occurring in other regions of Western Europe.

Drug injecting behaviour plays a varying role in spreading HIV in high-income countries. In 2002, it accounted for more than 10% of all reported HIV infections in Western Europe (in Portugal it was responsible for over 50% of cases). In Canada and the United States, about 25% of HIV infections are attributed to injectable drug use. Infections transmitted through contaminated injecting equipment are particularly frequent among indigenous people, who are often among the poorest and most marginalized inhabitants of the industrialized world.

Situation of HIV and AIDS in South and East Asia

Latest estimates of Asia are that about 8.3 million (5.4-12 million) people were living with HIV in 2005, including the 1.1 million people who became newly infected in the past year. Around 520,000 (range: 330,000-740,000) are believed to have died of AIDS in 2005. Among young people 15-24 years of age, 0.3% of women (range: 0.2-0.3%) and 0.4% of men (range: 0.3-0.5%) were living with HIV by the end of 2003. Epidemics in this region remain largely concentrated among injecting drug users, men who have sex with men, sex workers, clients of sex workers and their sexual partners. It is predicted that in China, 10 million people may be infected with HIV by 2010 unless effective action is taken. The epidemic in China is fuelled by injection drug usage. In the earlier stage of the epidemic HIV infection was seen mainly among professional blood donors.
In parts of Asia that have a low prevalence rate e.g. Bangladesh, the risk behaviour to acquire HIV infection is increasing, with more men indulging in sex with commercial sex workers. Intravenous drug use is also increasing. A similar situation also prevails in Pakistan.

In the Southeast Asia three countries- Cambodia, Thailand and Myanmar have particularly high incidence. Cambodia has the highest incidence in Asia. The incidence of HIV among commercial sex workers and their clients has decreased over a period. In Thailand, the face of the epidemic has changed. Though there has been a decline in the incidence of HIV, it is seen in the spouses of clients and in the partners of sex workers, HIV drug users as well as among the migrant populations.

New epidemics are emerging in Vietnam and Indonesia. They are different in different parts of the country. These epidemics are largely driven by IV drug use as well as unsafe sex.

**China**

Estimates show that in China, 10 million people may be infected with HIV by 2010 unless effective action is taken. The virus has spread to all 31 provinces, autonomous regions and municipalities, yet each area has its own distinctive epidemic pattern. In some, injecting drug use is fuelling HIV spread. Among injecting drug users, HIV prevalence is 35-80% in Xingjian, and 20% in Guangdong. In other areas, such as Anhui, Henan, and Shandong, HIV gained a foothold in the early 1990s among rural people who were selling blood plasma to supplement their meager farm incomes. Infection levels of 10-20% have been found, rising to 60% in certain communities. As a result, many people have already died of AIDS.

**Cambodia**

In Cambodia national HIV prevalence is around 3%—the highest recorded in Asia. Data suggest that there have been some dramatic changes in the shape of Cambodia’s epidemic. The incidence of new infection among both brothel based and non-brothel based sex workers as well as their clients showed a decrease by half between 1999 and 2002 and HIV prevalence among the former dropped from 43.1% in 1998 to 21% in 2003.

**Thailand**

In Thailand, the number of new infections has fallen from a peak of around 140,000 a year in 1991, to around 21,000 in 2003. This remarkable achievement came about mainly because men used condoms more, and also reduced their visit to brothels. However, Thailand’s epidemic has been changing over the years. There is mounting evidence that HIV is now spreading largely among the spouses and partners of clients of sex workers and among marginalized sections of the population, such as injecting drug users and migrants. Despite Thailand’s indisputable success, coverage of prevention activities is inadequate. This is especially the case among men who have sex with men, and injecting drug users; their infection levels remain high. In Bangkok, over 15% of men who have sex with men who were tested in a 2003 study were HIV-positive, and 21% had not used a condom with their last casual partner. Many young Thai men avoid brothels because they are afraid of contracting HIV. However, the drop in commercial sex patronage appears to have been accompanied by an increase in extramarital and casual sex. Young Thai women also appear more likely to engage in premarital sexual relationships than earlier generations.

**Vietnam**

One of the newest epidemics in the region is in Vietnam. National prevalence is still well below 1%, but, in many provinces, sentinel surveillance has revealed
HIV levels of 20% among injecting drug users. Use of contaminated drug injecting equipment is believed to be responsible for two-thirds of HIV infections, but unsafe sex is also a matter of concern in Vietnam.

**Indonesia**

Indonesia's epidemic is currently unevenly distributed across this archipelago nation of 210 million people; six of the 31 provinces are particularly badly affected. The country's epidemic is driven largely by the use of contaminated needles and syringes for drug injection. HIV prevalence among its 125,000-196,000 injecting drug users has increased threefold—from 16% to 48% between 1999 and 2003. In 2002 and 2003, among Indonesia's more than 200,000 female sex workers, HIV prevalence varies widely. In many areas, recent sero surveillance shows that HIV infection in this population group is still not of a significant magnitude.

**Bangladesh**

In Bangladesh, the national adult prevalence is less than 0.1%, but there are significant levels of risk behaviour. Large numbers of men continue to buy sex in greater proportions than elsewhere in Asia.

Drug use in south-east Bangladesh appears to be on the rise. It needs to be highlighted that surveys conducted show that only about 65% of young people, fewer than 20% of married women, and just 33% of married men have even heard of AIDS.

**Pakistan**

In Pakistan, 2001 country-level studies of populations more likely to be exposed to HIV revealed very low prevalence. Pakistan has an estimated adult HIV prevalence of 0.1%. It also has about three million heroin users, many of whom started injecting drugs in the 1990s.

**Impact of HIV and AIDS**

In both low and high-prevalence settings, HIV and AIDS hinder human development. Consequently, the epidemic's dynamics needs to be explored in human development terms. Globally, the epidemic continues to exact a devastating toll on individuals and families. In the hardest-hit countries, it is erasing decades of health, economic and social progress, reducing life expectancy by decades, slowing economic growth, deepening poverty, and contributing to an exacerbating chronic food shortages. In high-prevalence countries in sub-Saharan Africa, the epidemic has a serious impact on households and communities. Most studies indicate a seemingly modest macroeconomic impact, with these countries losing on an average between 1% and 2% of their annual economic growth. But the resulting effects on government revenue and expenditure will significantly weaken their capacity to mount an effective response, or indeed make progress towards the Millennium Development Goals.

Southern African countries are facing a growing human-capacity crisis. They are already losing skilled staff essential for governments to deliver vital public services, and AIDS is exacerbating this crisis. Increasingly, countries cannot meet existing social service commitments, let alone mobilize the necessary staff and resources to respond effectively.

**Impact on population and population structure**

According to the Population Division of the United Nations, life expectancy at birth in Southern Africa was 59 years in the 1990's. It is set to recede to just 45 years between 2005 and 2010—its lowest level in half a century. Sub-Saharan Africa
Basics of HIV and AIDS

has the world’s highest HIV prevalence and faces the greatest demographic impact. In the worst-affected countries of Eastern and Southern Africa, the probability of a 15-year-old dying before reaching age 60 has risen dramatically.

HIV’s impact on adult mortality is greatest on people in their twenties and thirties, and is proportionately larger for women than men. In low and middle income countries, mortality rates for 15-49 year olds living with HIV are now up to 20 times greater than death rates for people living with HIV in industrialized countries. This reflects the stark differences in access to antiretroviral therapy.

Until recently, low and middle income countries had extended life expectancy significantly. However, since 1999, primarily as a result of AIDS, average life expectancy has declined in 38 countries. In seven African countries where HIV prevalence exceeds 20%, the average life expectancy of a person born between 1995 and 2000 is now 49 years—13 years less than in the absence of AIDS.

HIV is not evenly distributed throughout populations. Instead, it primarily affects young adults, particularly women. This means the epidemic is dramatically altering heavily affected countries’ demographic and household structures. Normally, national populations can be graphically depicted as pyramids. As epidemics mature in high prevalence countries, new patterns emerge. For example, if South Africa’s epidemic remains the same, its population structure will distort; there will be far fewer people in mid-adult years, and fewer women than men aged 30-50.

Impact on women

The epidemic’s impact on women and girls is especially marked. Most women in the hardest-hit countries face heavy economic, legal, cultural and social disadvantages which increase their vulnerability to the epidemic’s impact. In many countries, women are the care givers, producers and guardians of family life. This means they bear the largest AIDS burden. Families may withdraw young girls from school to care for family members infected with HIV. Older women often shoulder the burden of care when their adult children fall ill. Later they may become surrogate parents to their bereaved grandchildren. Young women widowed by AIDS may lose their land and property after their husband’s death. Widows are often responsible for producing their families’ food and may be unable to manage alone. As a result, some may be driven to transactional sex in exchange for food and other commodities. When the male head of a household becomes ill, women invariably take on the additional care duties. Providing care to an AIDS patient is arduous and time-consuming; even more so when it is done on top of other household duties. In the context of HIV, stigma has concrete repercussions for people. Family support and solidarity cannot be assumed. A woman who discloses her HIV status may be stigmatized and rejected by her family. Suffering from AIDS, she may be abandoned and left with no care and support.

The impact of AIDS on poverty and hunger

In some of the worst-affected countries, before the AIDS epidemic even started having an adverse economic impact, the living standards of the poor were already deteriorating markedly. These are the households that are driven to destitution. For example, in Zambia’s per capita Gross Domestic Product shrank by more than 20% between 1980 and 1999 (from US$ 505 to US$ 370). Over the same period, average daily calorie intake per person fell from 2273 to 1933 (UNCTAD, 2002). Amid such “steady impoverishment, a poor household has limited abilities to overcome new adversities.

In such a situation, the entry of AIDS devastates households and communities. In countries such as sub-Saharan Africa, life-threatening diseases other than AIDS,
such as tuberculosis and malaria, are on the rise. In this deteriorating context, poor households and communities are struggling to cope with the epidemic. With income and formal employment becoming insecure, treatments for ailments less affordable, the future for those infected and affected are bleak, unless and until these nations rise up to the challenge of AIDS.

How do households feel the impact of HIV and AIDS

- AIDS causes the loss of income and production of an HIV infected household member. If the infected individual is the sole breadwinner, the impact is especially severe.
- AIDS creates extraordinary care needs that must be met (usually by withdrawing other household members from school or work to care for the sick).
- AIDS causes household expenditures to rise as a result of medical and related costs, as well as funeral and memorial costs.
- Poor households are particularly in danger of losing their economic and social viability, and of eventually being forced to dissolve, with the children migrating elsewhere. AIDS-affected households also appear more likely to suffer severe poverty than non-affected households, and older parents who lose adult children to AIDS are exceptionally prone to destitution.

In South Africa and Zambia, studies of AIDS affected households—most of them already poor found monthly income fell by 66 %-80% due to coping with AIDS-related illness. In Thailand, a 1997 study showed when a person with steady employment died of AIDS, the household’s lifetime income loss was more than 20% greater than a household with non-AIDS related deaths.

Impact on education

The epidemic’s impact on education has far reaching implications for long-term development. Globally, AIDS is a significant obstacle to children achieving universal access to primary education by 2015.

In severely affected societies the epidemic weakens the quality of training and education, which means fewer people benefit from good standard school and university education. It also accelerates the impact of a pre-existing professional ‘brain drain’. In Africa, teachers and lecturers belong to the most HIV affected age group. Female teachers have infection rates similar to those of the general population—about 19% for males and 28% for females.

Many AIDS affected families may withdraw children from school to compensate for labour losses, increased care activities and competing expenses. If the mother is dying or has died, children, particularly girls, are needed for household duties. If the father dies, children may be likely to stop their schooling because of inability to meet expenses.

Children orphaned or otherwise made vulnerable by AIDS may not attend school because they have to look after the household chores, care for younger siblings, or simply because they cannot afford the fees. The impact of AIDS on education needs to be tackled in a social and economic development context. Poverty reduction efforts are critical because macroeconomic factors are as likely as the AIDS epidemic to reduce a family’s ability to keep children in school. Education quality may also suffer as more teachers succumb to the disease.
This is because more inexperienced and under-qualified teachers reduce quality of education. In rural areas, where schools are dependent on only one or two teachers, a teacher's illness or death is especially devastating. However, there are subtler reasons why education may suffer, including the lack of motivation or ability to teach and learn because of ‘AIDS in the family’ or among colleagues (Harris and Schubert, 2001).

Impact on industry

UNDP’s comprehensive study, The impact of HIV/AIDS on human resources in the Malawi public sector, showed the country’s annual loss of governmental staff rose to almost six fold between 1990 and 2000, primarily due to premature AIDS deaths in this country with a severe HIV epidemic (UNDP, 2002). Furthermore, some other South African countries’ key ministries report half or more of their posts unfilled. AIDS threatens economic security and development because it primarily strikes the working-age population. This has implications for survival of enterprises, as well as long-term maintenance of productive capacity. In such hard-hit countries the epidemic erodes economic growth through its impact on labour supply and productivity, savings, and the delivery of essential services. Individuals living with HIV lose jobs, incomes and cannot save. The workplace—farms, factories, market stalls or government offices—becomes less productive or sometimes fail, reducing output, profits, tax revenue and investment.

In hard-hit countries, AIDS is likely to reduce the labour force’s growth rate. The International Labour Organization (ILO) projects that the labour force in 38 countries (all but four in Africa) will be between 5% and 35% smaller by 2020 because of AIDS. At the same time, the loss of teachers and trainers results in future generations with lower skill levels. AIDS reduces output by squeezing productivity, adding costs, diverting productive resources, depleting skills and distorting the labour market. For employers, employee health expenses and funeral costs are rising as productivity and profits decline. The epidemic increases absenteeism, organizational disruption, and the loss of skills and ‘organizational memory’. The loss of supervisory workers can have an especially harsh impact, since their acquired knowledge and skills are seldom replaced simply by hiring others. In hard-hit areas, the general shortage of skilled workers and management-level staff can mean positions stay vacant for months or even years—at a significant cost to productivity. The effects can be even harsher for small businesses and the informal economy—both sources of work for most women and men in low and middle-income countries. Almost invariably, workers in the informal economy lack health insurance or access to medical facilities at their workplaces, and their livelihoods are heavily reliant on their labour and skills. Moreover workers in the informal economy also have little access to AIDS workplace programmes.

1.5 SITUATION OF HIV AND AIDS IN INDIA

In India, the HIV/AIDS epidemic is about twenty years old and is considered to be one of the most serious public health problems. While the first AIDS case in India was reported in May 1986, 61,000 cases of AIDS have been reported to the Ministry of Health and Family Welfare from 32 states and Union Territories till 31st December 2003 as per NACO.

Epidemiology of HIV in India

On the whole, there is progression of the HIV epidemic in the country, with unequal regional rates of HIV prevalence, India continues to be in the category of low prevalence countries with overall prevalence of less than 1%. 
The 4.58 million HIV infections estimated in 2002 saw an increase of 6.1 lakh HIV infections over those estimated in 2001 (3.97 million). In the year 2003 there is an increase of 5.3 lakhs HIV infections (5.1 million - 4.58 million), over those of the previous year. This demonstrates that while the spread of HIV continues, there is no significant upsurge in the number of new infections, and in fact the rate of growth of HIV has registered a slowing down. This trend has continued since then.

HIV Estimates: India 1981 to 2003

Characterisation of HIV prevalence in the Country

Based on the prevalence of HIV sentinel surveillance data, the country is divided into various categories.

High prevalence states

High prevalence States are those that have a HIV prevalence rate exceeding 5 percent among high-risk groups and which exceeds 1 percent among antenatal women. In all, 45 districts in the high prevalence states of Maharashtra, Tamil Nadu, Manipur, Andhra Pradesh, Karnataka and Nagaland have been identified as high prevalence districts. These have shown consistently high prevalence levels of HIV in the three most recent rounds of HIV Sentinel Surveillance.

Moderate prevalence states

Moderate prevalence states are the states that have a HIV prevalence rate exceeding 5 percent among high-risk groups but less than 1 percent among antenatal women. The states of Gujarat, Goa and Pondicherry which share geographical borders with the high prevalence states report high prevalence among the highly vulnerable groups. Four districts in these states have been identified as high prevalence districts, based on the consistently high prevalence levels of HIV detected by the three most recent rounds of HIV Sentinel Surveillance.

Low prevalence states (Highly vulnerable states)

Low prevalence states have prevalence rate which is less than 5 percent among the high risk groups, and less than 1 percent among antenatal women.

Apart from the six high prevalence and three moderate prevalence states, the remaining states and union territories fall into the low prevalence category. This category has been changed into highly vulnerable states because interventions in these states can prevent the HIV from rising.
According to NACO's 2004 report, sexually active and economically productive age group (15-50 years) accounted for majority of AIDS cases (85%). If we split the age factor into further divisions, 30-45 years age constitutes 45 per cent, 15-29 years age group 44 per cent, 46 and above, 7 per cent and 0-14 years 4 per cent of the AIDS cases. In the HIV sentinel surveillance, 2003, males account for 73.5% of AIDS cases and females 26.5%. The ratio being 3:1. However, recent trends show that percentage of women infected is steadily increasing.

Another area of great concern is the rise of pediatric AIDS. About half of the cases are recorded within six months of age and die within five years. The main mode of transmission of HIV to children is from mother to child. In some slums of Mumbai, the prevalence is as high as 6 per cent among women who attend Antenatal clinic (ANC). After having realized the severity of the problem, NACO has started a prevention programme for prevention of pediatric AIDS through AZT prophylaxis on experimental basis from 1998-1999. Tamil Nadu has shown a decrease in the incidence of HIV infection among antenatal mothers but the infection rate is still more than 1% in the community surveys.

**Mode of Transmission**

The predominant mode of transmission of infection in the AIDS patients is through heterosexual contact (85.7%), followed by Injecting drug use (2.2%), blood transfusion and blood product infusion (2.6%), prenatal transmission as 2.7% and others as 6.8%. Sexual transmission is thus the predominant mode of HIV transmission in India. The predominant mode of transmission is heterosexual. There is a small percentage of transmission among men having sex with men. Over the years the proportion of HIV transmission through blood transfusions and intravenous drug use has decreased.

**Check Your Progress**

**Notes:**

a) Use the space provided for your answer.

b) Check your answers with those provided at the end of this unit.

2. Briefly describe the situation of HIV/AIDS in India.
3. How are the states in India classified according to the HIV status?

1.6 LET US SUM UP

HIV and AIDS has entered every part of the world, posing a threat to people from all walks of life. In this unit we have discussed the global scenario of HIV/AIDS. We have also tried to get a picture of the problem in different regions of the world and the associated social development problems in different countries. It is evident that no country in the world can deny the prevalence of HIV/AIDS and if it denies, it affirms the fact that there is no proper surveillance system there.

A detailed analysis of the problem in India shows that how it has become a serious public health problem in India in general and different states in particular. Though sexual contact is the main mode of transmission in India, other modes like intravenous drug use, blood transmission, and mother to foetus transmission are also commonly observed. NACO has initiated various programmes to control this epidemic.

HIV/AIDS is not a health problem alone. It is also a socio-economic problem. We have also analysed how it poses a threat to the economy and other social institutions. Inter-sectoral co-ordination is a must in controlling this problem. NACO has taken a lead role in co-coordinating other Government departments, NGOs and corporate sectors to participate in its various programmes. However, we still have a long way to go in ensuring the participation of different agencies to prevent and control HIV/AIDS in India.

1.7 UNIT-END EXERCISE

1. Analyze the situation of HIV/AIDS in different regions of the world and major initiatives from different governments in these regions. Suggest ways in which situation can be handled in India.

1.8 SUGGESTED READINGS


1.9 ANSWERS TO CHECK YOUR PROGRESS

1. The epidemic of HIV infection scenario is extremely dynamic, growing and virtually no country in the world is unaffected. By the end of 2005, 40.3 million (Range 36.7-45.3 million) people are living with HIV. HIV/AIDS epidemic has killed over 20 million since the first case of AIDS was identified in 1981. In 2005 alone 4.9 million (4.3-6.6 million) people became newly infected with HIV and approximately there were 3.1 million (2.8 to 3.6 million) deaths due to AIDS.

2. India continues to be in the category of low prevalence countries with overall prevalence of less than 1%. The HIV estimates for 2003 which was 5.1 million include an estimation of the HIV infections among children and among some high-risk groups like female sex workers, not previously attempted. The 4.58 million HIV infections estimated in 2002 saw an increase of 6.1 lakh HIV infections over those estimated in 2001 (3.97 million).

3. Based on the prevalence of HIV sentinel survey data, the country is divided into various categories.

**High prevalence states**

High prevalence States are states that have a HIV prevalence rates exceed 5 percent among high-risk groups and exceed 1 percent among antenatal women. For example, Maharashtra, Tamil Nadu, Manipur, Andhra Pradesh, Karnataka and Nagaland.

**Moderate prevalence states**

Moderate prevalent states are states that have a HIV prevalence exceeding 5 percent among high-risk groups but less than 1 percent among antenatal women. For example, Gujarat, Goa, Pondicherry.

**Low prevalence states (Highly vulnerable states)**

Low prevalence states have prevalence rate which is less than 5 percent in high risk groups, and less than 1 percent among antenatal women. For example, Uttar Pradesh, Madhya Pradesh, Rajasthan etc.