MODULE 9: IMPLICATIONS OF HIV AND AIDS

Introduction:

In this session, we shall discuss the impact caused by HIV and AIDS. The medical facts are clear enough about the effects of HIV infection on the individual. It destroys the immune system, resulting in defenselessness that is fatal. But the impact of HIV and AIDS is not restricted to the field of medicine. It has much more serious socio-economic and demographic implications. By conducting the following activities we shall try to understand all the implications.

Activity 1: HIV and AIDS: Socio- Economic and Demographic Impact

Learning objectives:

At the end of the session, the learners will be able to:

• Understand the impact of HIV and AIDS on socio-economic and demographic aspects of the country.

Time required: 45 minutes

Materials required: Fact sheets, Chalk/ Marker, Flip chart/ Board

Notes for the facilitator:

• This activity will be conducted with focus on the implication of HIV and AIDS on the demographic situations and socio-economic development.

• Read out each situation to the learners and initiate a discussion on each.

• Do not spend more than 10 minutes on each situation.

• Situations to be given:

  o **Educational Impact**: In Zambia, personal illness or taking care of family members account for over 60% of teacher absenteeism. A survey carried out among teachers found that a five percent increase in a teacher’s rate of absence, reduced students’ average gains in learning by four to eight percent per year.

  o **Socio- economic Impact**: HIV and AIDS has raised costs for businesses through absenteeism due to the ill health of a worker or a member of the worker’s family; higher medical care and benefit costs; funerals costs for employees; employee attrition due to illness of death; and additional efforts needed to recruit new staff.

  o **Demographic Impact**: Mortality has been increasing in the developing countries highly affected by HIV and AIDS. HIV causes more deaths than most infectious disease in the world and it is the major cause of deaths in Sub-Saharan Africa. There is also evidence that HIV has increased overall mortality in Asia and the Caribbean.
• Questions for reflection and discussion:
  1. What is the impact of HIV and AIDS on individuals that you observed in the situation?
  2. What impact would each of the situations have on the society and country at large?
  3. How do you think these problems can be addressed?
• End the session by summing up the points that come up during the discussion keeping the following points in mind

I: Issues related to impact on individuals and households
   How do HIV and AIDS impact:
   (i) Individuals and households of the low, middle and high income groups?
   (ii) Families with HIV infected member(s)?
   (iii) Children of HIV infected parents?
   (iv) Health and education sectors of the country?

II: Issues related to economic development
   How do HIV and AIDS impact:
   (i) The work force in public and private sectors?
   (ii) The agriculture and food security?
   (iii) The economic growth in the country?

III: Issues related to Impact on the demographic profile of the country
   How do HIV and AIDS impact:
   (i) The population structure of the country?
   (ii) The mortality rates, life expectancy and fertility rates?
   (iii) The ratio of women to men and age structure of the population?
   (iv) The population growth in the country?

Summing Up:

• HIV/AIDS has greater multi-sectoral impact in comparison to other epidemics like diarrhea/malaria, so is a great burden on the nation as a whole.
• Not only the individual concerned but the family is affected.
• HIV affects both the demand for (the number of students) and supply of (the number of teachers)
• HIV has the potential to impact the structure of the country or region’s population.
• Damage to the economy due to reduction in the human capital is far more serious.
FACT SHEET

HIV and AIDS: Socio-economic and Demographic Implication

HIV and AIDS cannot be compared with diseases such as cholera and malaria, which currently claim the lives of more people. The repercussions of HIV and AIDS are much more critical. It has emerged as the single most challenge to public health, human rights and human development and imperiled the very fabric of human society as no disease has done in human history before. It has ravaged families and communities and, in the hardest-hit countries, has reversed the decades of progress in public health in terms of IMR, MMR, education, economic and social development and food security.

What does HIV do in the human body?

- Immune System: The combination of body mechanisms that provides organisms with the ability to protect themselves from infection by germs. This is an essential requirement for survival. The immunity of animals including humans is due to impervious skin, secretion of mucus and acids, activity of germ engulfing cell in the blood and most importantly chemical defence by special antibodies and antitoxins.

- HIV causes damage to the immune system. The immune system is the means by which the body protects itself from infection and disease. The skin serves as a physical barrier and the white cells in our blood deal with potentially harmful organisms such as viruses and bacteria. It is noteworthy that all bacteria are not harmful. HIV is attracted to white blood cells. These cells are extremely important for the working of the body's immune system, as they regulate the immune response of the body in case of an infection.

- After being infected with HIV, the body produces the antibodies to HIV in an effort to protect itself. But these antibodies are not powerful enough to neutralize the virus. HIV immediately attaches to and integrates itself into the genetic material of some white blood cells. It is ready to reproduce itself and starts multiplying within four hours of invasion of the body. It can remain in the cells for a long period before destroying them. The body eventually becomes susceptible to all kinds of infections.

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Note: In the context of socio-economic and demographic implications, the data given in the following pages belong mostly to African countries and a few Asian countries. But these may help in understanding the implications in respect of India also.
Why do HIV and AIDS have a multi-sectoral impact?

There are several aspects of HIV which contribute to or exacerbate its potential to have wider-ranging, societal impacts compared to many other infectious diseases that also affect developing countries. These include:

- HIV is essentially fatal. There is currently no cure for HIV, and an effective vaccine is likely years away. The treatments that are available, while critical for extending the longevity and quality of life for people with HIV, are not cures. Some other infectious diseases that significantly affect the developing world are curable, with appropriate access to existing treatments.

- HIV primarily affects young adults. Unlike many other infectious diseases which tend to have their biggest impacts on the very young or very old, HIV primarily affects adults in their most sexually active years which coincide with their most economically productive and reproductive years.
  - Both the peak age of HIV infection and the greatest mortality are among those between the ages of 20 and about 40
  - Of the estimated 2.9 million deaths due to AIDS in 2006, most (90%) were among adults, aged 15 and over
  - Under normal circumstances, this is a population group that is less likely to be ill or die compared to other age groups

- HIV has a very long incubation period, during which few, if any, symptoms are evident. The lag time between infection with HIV and the onset of symptoms may be many years; the average time between infection and development of AIDS, the most advanced stage of disease, is between 9 and 11 years in the absence of treatment and, as a result, the epidemic continues to spread unknowingly. It is estimated that 8 in 10 people with HIV globally do not know they are infected.

- There is significant stigma related to HIV disease. Due to stigma, people may not see themselves at risk, may not get tested and, if infected, may not seek treatment or if they do, face barriers to accessing needed services all of which exacerbate the epidemic.

Impact on Individuals and Households:

The impact of HIV and AIDS is felt most directly and deeply at the individual and household levels; the worst impact is felt by the poorest populations. For a person living with HIV and AIDS, there are obvious clinical and medical consequences. Due to the morbidity of HIV and AIDS, an individual’s ability to work and generate income is affected. The combination of higher expenses and reduced income threatens the livelihood of a family, their ability to secure food, pay for education, and save and invest. Research has shown:
• In South Africa, a study conducted in Free State Province found that affected households had lower monthly incomes compared with non-affected households.
• Medical expenses related to HIV and AIDS in poor South African households consume up to a third of income whereas the national average household expenditure on health care was four percent per year.
• Funeral costs, on average, were four times the monthly income of households surveyed in South Africa.
• Two-thirds of South African households surveyed experienced decreases in income and 40% reported that the primary caregiver had taken time off from formal or informal employment or schooling to take care of an infected individual adding to the loss of household income, as well as under-schooling of children.
• In Thailand, 35% of households with an AIDS death felt a serious impact on agricultural production, leading to an almost 50% reduction in family income.
• In India, research indicates that average monthly expenditures exceeded the income of families with a member living with HIV partly due to doubling in purchases of medicine.
• Also in India, a study of HIV-affected households found that 43% had to borrow or liquidate assets to cope after a family member was detected to be HIV positive. Research has also found that among HIV-affected households in New Delhi, many children were removed from school as a way to cope with decreasing incomes and increasing expenditures and that 17% of these children took up jobs to contribute to family incomes.
• In general, studies have found that the epidemic tends to increase the number of female-headed households and the number of households in which grandparents are caring for children. There are already an estimated 15 million children under 18 who have lost one or both parents to AIDS.

**Impact on the Health Sector:**

The sector most directly affected by HIV and AIDS is the health sector, both public and private. HIV/AIDS increases the number of people seeking services, the costs of health care for patients, and the need for health care workers. People living with HIV and AIDS need a wide range of health care services, often for many years. This increased demand is putting pressure on the limited health resources in many developing countries. Research has shown:

• In some Sub-Saharan countries, people with HIV-related illnesses occupy more than half of all hospital beds.
• A study in South Africa found that 28% of patients served in public and private health facilities in four country provinces were HIV positive; the figure was higher in public hospitals (46%). Patients with HIV stayed longer in hospitals than patients without HIV (nearly 14 and 8 days, respectively).
• In one hospital in Nairobi, Kenya, HIV prevalence among patients rose from 19% in 1988/89 to 40% in 1997; hospital bed occupancy rose from 100 to 190%.
• In Rwanda, a study found that HIV positive patients visited health facilities 11 times on average in one year as opposed to 0.3 times for the general population.
• In South Africa, a study estimated that nearly 16% of health workers in both public and private facilities in four provinces were living with HIV/AIDS in 2002; among younger health workers (18 - 25), prevalence was estimated at 20%.
In Lusaka, Zambia, HIV prevalence was 39% among midwives and 44% among nurses in the early 1990s.

Botswana, a country with one of the highest HIV prevalence rates in the world, lost approximately 17% of its health care workforce due to AIDS between 1999 and 2005.

In many southern African countries, death from AIDS is the largest reason for exiting the health workforce. Those who remain experience increased workloads, which can lead to burnout and absenteeism.

While access to antiretroviral treatment is expanding in many hard hit countries, the labour and resources needed to deliver treatment may put additional pressure on the health system.

**Impact on Education:**

Education is critical for development and the generation of human capital. However, HIV has affected both the demand for (number of students) and supply of (number of teachers) education, and this is particularly the case in some African and Asian countries that already face significant challenges in their educational systems. Ultimately, the quality of education may be compromised. Research has shown:

- Deaths of children born with HIV and the removal from school of AIDS orphans and other children affected by the epidemic, result in smaller numbers of children needing education. In Swaziland by 2016, it is projected that there will be a 30% reduction in the size of the primary school population for each grade.
- In India, children aged 6-18 living in households with an ill family member were more likely than children in households without HIV patients, to drop out of school in order to get a job or take care of younger siblings and other household work.
- The epidemic has also created a population of children with new special needs (orphans, children living with HIV, children taking care of parents with HIV and AIDS).
- In South Africa, 21% of teachers aged 25-34 and 13% of those aged 35-44 are estimated to be infected.
- In Zambia, personal illness or taking care of family members account for over 60% of teacher absences. A survey carried out among teachers found that a five percent increase in a teacher’s rate of absence, reduced students’ average gains in learning by four to eight percent per year.
- Tanzania estimated that 45000 additional teachers are needed to make up for those who have died or left system because of AIDS.
- At a time when teacher resources are declining, there are reports that the number of teachers being trained is not enough to fill the gaps in South Africa.
- The average age, and therefore the level of training of teachers, is also expected to fall, which will mean that teachers may be less experienced.

**Impact on Firms and the Private Sector:**

By affecting adults during their prime working years, HIV and AIDS has the potential to impact the labour supply and therefore, businesses and firms in the private sector. AIDS-related illness and death among employees may increase costs, reduce productivity and change a firm’s
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operating environment. Higher costs have significant implications for businesses, such as effects on profitability and competitiveness.

Research has shown:

- HIV and AIDS has raised costs for businesses through: absenteeism due to the ill health of a worker or a member of the worker’s family; higher medical care and benefit costs; funerals costs for employees; employee attrition due to illness of death; and additional efforts needed to recruit new staff.
- Almost 10% of companies surveyed in South African indicated that HIV and AIDS has already had a significant adverse impact on their business; more than 40% predicted a significant negative impact over the five years following the survey.
- In Kenya, a study of a tea estate found that HIV positive workers produced lower output in terms of kilograms of tea plucked and used more leave time compared to non-infected workers.
- The impact of HIV on the consumer base also stands to affect business and markets. Some private sector entities in Africa, in examining potential effects, have claimed that consumption patterns could change due to the demographic impact of HIV and AIDS, potentially necessitating strategic repositioning.
- Beyond impacts in the “formal” sector made up of larger business and enterprises, most developing countries have a vast “informal” sector of small, self-run businesses (often accounting for significant shares of GDP). While less research has been done in this area, a recent study focusing on South Africa’s informal sector, which accounts for 50% of total employment and 30% of its GDP, found that poor health was significantly associated with business closure. While the study did not focus on HIV and AIDS, the researchers write that the findings underscore the vulnerability of small businesses to HIV and AIDS.
- Ultimately, the magnitude of the impact over time will depend on the extent to which the labor force is affected. The International Labour Organization (ILO) estimates that global labour force losses due to HIV could reach 45 million by 2010, and top 64 million by 2015, without increased access to antiretroviral therapy.

**Impact on Governments and the Public Sector:**

Governments face some of the same issues as the private sector - illness and death of workers increases costs and reduces productivity. HIV and AIDS also pose special challenges for governments and the public sector. The epidemic increases demands on government and public services at a time when both human and financial resources may be compromised. HIV may also erode the revenue (tax) base of government by increasing mortality among adults in their prime productive years; revenue may be reduced further as the private sector - a key source of tax revenue - is impacted by the epidemic.

**Impact on Agriculture and Food Security:**

The majority of people in countries most affected by HIV live in rural areas, with many relying on farming and other rural occupations for subsistence and income. In fact, the agriculture sector
is often the single largest source of employment in developing countries. Given agriculture’s reliance on labour, illness and death directly affect productivity and, therefore, affect crop yields, the types of crops being cultivated, income, and, ultimately, food security. This sector already faces many challenges like drought, existing food shortages, and the extreme poverty of farmers, all of which are worsened by HIV and AIDS. Food insecurity is a particular challenge in the context of HIV - it is both exacerbated by and contributes to the epidemic’s effect in hard hit areas that also suffer from food shortages. While the deepest impact is felt at the household level, there is some evidence of wider impact as well. Research has shown:

- By 2000, the agricultural workforces in high-prevalence African countries were between 03% to 13% smaller than they would have been in the absence of AIDS. By 2020, the loss could be 10% in some counties and over 20% in hard hit countries like Botswana, Mozambique, Namibia, and Zimbabwe.
- A study in Zimbabwe found that agricultural output declined by nearly 50% in HIV-affected households.
- In Lesotho, a lack of labour due to HIV has resulted in some agricultural fields being left idle.
- A survey in Kenya found that poor households in rural areas do not recover quickly when the head of household dies; reduced crop production and income due to the death did not return to pre-death levels after three years following the death.
- A study in Thailand showed that the loss of labour due to HIV and AIDS contributed to a shift away from labour-intensive crops like rice and chili to crops that need less labour like soya and onions.
- A study in some of the most affected countries in Africa showed that slow growth in agricultural productivity and the overall economy resulted in growing food insecurity. For example, in Tanzania, grain production in 2010 is projected to be 34% less than the amount needed.
- Food insecurity can heighten susceptibility to HIV exposure and infection and, for people living with HIV and AIDS, illness can be worsened by poor nutrition.

**Impact on Economic Growth:**

The potential impact of HIV and AIDS on economic growth is a critical area to examine, yet difficult to measure. Economic growth is tied to job creation, higher living standards, and the resources governments have available - all of which have implications for overall development. Studies in this area have also looked at broader social development and welfare factors, such as human capital to assess the potential impacts. Research has shown:

- Most recent studies have indicated that AIDS has had some impact on the economic growth of some of the worst-affected countries, finding that their Gross Domestic Product (GDP - a commonly used measure of economic growth) grew more slowly than it would have without AIDS.
- A preliminary analysis of South Africa’s economy indicated that the country’s GDP could be 17% lower by 2010.
- A study in Botswana indicated that the country’s economy could be 24-38 % less by 2021.
• Studies of potential impacts in Jamaica and Trinidad and Tobago have estimated that these two nations could lose 4-6 % of their respective GDPs annually.
• In Ukraine, it is projected that the country could experience a 1-6 % reduction in GDP by 2014 due to the effects of HIV and AIDS.
• Researchers suggest that the long-run economic costs of AIDS could be much higher than predicted to date, largely due to the destruction of human capital directly and through the weakening of mechanisms used to generate human capital (investment, income, education, knowledge transfers across generations).

Impact on Population Structure and Demographics:

HIV has the potential to impact the structure of a country or region’s population. It is unusual for a disease to have such dramatic impacts on the demographics of a society. These demographic effects can be seen most clearly on mortality rates and life expectancy which, in turn, can affect the ratio of men to women, fertility rates, age structure, and overall population growth. Research has shown:

• Mortality has been increasing in the developing countries highly affected by HIV and AIDS. HIV causes more deaths than most infectious disease in the world and it is the major cause of deaths in Sub-Saharan Africa. There is also evidence that HIV has increased overall mortality in Asia and the Caribbean.
• The shift in Sub-Saharan Africa is significant. Whereas prior to the epidemic, those aged 20-49 accounted for 20% of the region’s overall deaths, they now account for 60% of deaths, largely due to AIDS.
• Prior to the onset of the AIDS epidemic, many developing countries were experiencing significant gains in life expectancy. But estimates in many of the hardest hit countries indicate that those gains have slowed or even reversed in some cases due to HIV. Life expectancy in southern Africa as a whole has fallen from 61 to 49 in the last 20 years. In Botswana, life expectancy dropped from nearly 65 years in the period of 1985-1990 to 47 years in the 2000-2005 period. South Africa, Swaziland, Zambia, and Zimbabwe have also seen drops in life expectancy. Even in countries where prevalence rates are lower - Cambodia, Ukraine, Dominican Republic, Russia, and India - HIV and AIDS has slowed down increases in life expectancy.
• There is the potential for HIV to alter the ratio of women to men since so many affected by HIV are women. Women account for almost half (48 %) of all adults living with HIV and AIDS globally; they account for 59 % of adults living with HIV and AIDS in Sub-Saharan Africa. HIV infection rates typically peak among women 5 to 10 years earlier than men and women with HIV also tend to die earlier than men.
• Because fertility tends to be lower for women with HIV than uninfected women, fertility rates are expected to decline; also, HIV- positive children born to infected mothers are not as likely to reach childbearing age.
• AIDS related mortality and its impact on the potential number of births may reshape the age structure in highly affected countries. In South Africa, certain age groups are predicted to account for smaller shares of the population than they would in the absence of AIDS by 2015; the adult population could be 16 % smaller.
• Research has indicated that HIV is affecting population growth. Earlier studies found that some countries could experience zero or even negative population growth rates due to HIV. More recent studies still predict slower growth rates, but indicate that increased access to antiretroviral therapy and lower prevalence rates of HIV may mitigate the impact.

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