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GLOBAL  
PROGRAMME  
ON AIDS

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CURRENT AND FUTURE DIMENSIONS  
OF THE HIV/AIDS PANDEMIC

A CAPSULE SUMMARY

APRIL 1991



WORLD  
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ORGANIZATION

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## INTRODUCTION

This summary of the current status and future trends of human immunodeficiency virus (HIV) infections and acquired immunodeficiency syndrome (AIDS) cases worldwide was prepared with the most recent information available to the World Health Organization Global Programme on AIDS (WHO/GPA) in April 1991. Minimal use has been made of the data on AIDS cases reported to WHO since, at best, they reflect HIV infections acquired up to a decade or more earlier.

The document will be revised periodically as additional data add to our understanding of this unprecedented pandemic.

Illustrations highlighting various aspects of the current status and future trends of HIV infections and AIDS are provided in the Annex.

## GENERAL

- HIV infection and AIDS (HIV/AIDS) are epidemic worldwide (i.e. pandemic). However, they have not affected the world's population uniformly.
- Extensive spread appears, in retrospect, to have commenced in the late 1970s or early 1980s in populations of: (a) homosexual or bisexual men and injecting drug users in certain urban areas of the Americas, Australasia and Western Europe; and (b) men and women with multiple sexual partners in parts of the Caribbean and East and Central Africa.
- Two serotypes of HIV are recognized, HIV-1 and HIV-2. Worldwide, the predominant virus is HIV-1. Extensive spread of HIV-2 occurred through the 1980s, principally in West Africa. Although the transmissibility and pathogenicity of HIV-1 and HIV-2 appear to differ, their modes of transmission are similar, and AIDS cases resulting from HIV-1 or HIV-2 infections appear to be clinically indistinguishable. In this document, the abbreviation HIV will be used when referring to HIV-1.
- The HIV/AIDS pandemic consists of many separate epidemics (in some cases even within a single country). Each epidemic has its own starting point and involves different types and frequency of risk behaviours and practices (e.g. having multiple sexual partners or sharing drug injection equipment).
- Studies to date indicate that about 50% of adults infected with HIV-1 will develop AIDS within 10 years of infection. Few data are available beyond 10 years, but it is expected that the vast majority of HIV-1 infected persons will develop AIDS eventually.
- Less is known of the natural history of HIV-2 infections; the evidence to date suggests a rate of progression from HIV-2 infection to AIDS that is considerably slower than that for HIV-1 infections.
- No major differences have so far been found in the rate of progression from HIV-1 to AIDS among middle-aged adults by geographical area, sex or race. In infants born infected with HIV-1, the progression to AIDS is more rapid than in adults.
- Virtually all persons diagnosed as having AIDS die within a few years. Survival after diagnosis has been increasing in developed countries from an average of less than 1 year to about 1-2 years at present. However, survival time for AIDS cases in developing countries remains short - an estimated 6 months or less. Longer survival appears to be directly related to routine use of antiviral drugs, the use of prophylactic drugs for some opportunistic infections (e.g. pneumocystis pneumonia), and to a better overall quality of health care.
- By April 1991, more than 345 000 AIDS cases had been reported to WHO, but WHO estimates that, when under-diagnosis, under-reporting and delays in reporting are taken into account, more than one million AIDS cases may have occurred in adults worldwide to date. In addition, it is estimated that by early 1991 more than 500 000 paediatric AIDS cases resulting from perinatal transmission may have occurred, with more than 90% of this total in sub-Saharan Africa. Thus, WHO estimates that the cumulative global total of AIDS cases by early 1991 stands at more than 1.5 million.
- As of April 1991, at least 8-10 million HIV infections are estimated to have occurred in adults since the beginning of the pandemic, and about one million children are estimated to have been born infected with HIV.

- Potential interactions between HIV and other infectious agents have been of great public health concern. The only significant interaction identified so far is with *Mycobacterium tuberculosis* infection. Tuberculin-positive persons who are also infected with HIV develop clinical tuberculosis more rapidly than persons without HIV infection. WHO estimates that, by early 1991, 3 million or more adults worldwide will have been infected with both HIV and *Mycobacterium tuberculosis*, the vast majority being in sub-Saharan Africa.
- Studies have continued to document only three major modes of HIV transmission: (a) unprotected vaginal or anal sexual intercourse between men and women or between men and other men; (b) exposure to infected blood, blood products, organs or semen (such exposure principally involves the reuse of inadequately sterilized needles, syringes or other skin-piercing instruments, and transfusion of infected blood); and (c) transmission from an infected mother to her fetus or infant (perinatal transmission).
- HIV transmission through HIV-infected blood or blood products has now been virtually eliminated in the industrialized countries through routine screening of donated blood. This problem is being increasingly addressed in most developing countries.
- Although there has been concern about the possibility that mosquitos and other biting insects may spread HIV, all laboratory and epidemiological studies show that they are incapable of transmitting HIV infection.
- As of 1991, about 70% of all global HIV infections are estimated to have been spread by vaginal intercourse; the relative proportion of HIV infections resulting from heterosexual as compared with homosexual intercourse varies markedly in different areas of the world.
- The predominant modes of HIV transmission in Australasia, North America and Western Europe during the 1980s were: (a) unprotected sexual intercourse among homosexual men with multiple sexual partners; and (b) the exposure of injecting drug users to HIV-infected blood through shared and inadequately sterilized injection equipment.
- In sub-Saharan Africa, the predominant mode of transmission has been unprotected sexual intercourse among heterosexuals who have or whose partners have multiple sexual partners. With high numbers of women becoming infected, perinatal transmission is an increasing problem.
- In Latin America, HIV transmission is increasing among heterosexuals, with a concomitant increase in perinatal transmission.
- In several countries in South and South-East Asia, there was a rapid spread of HIV during the late 1980s among injecting drug users and heterosexuals with multiple sexual partners.
- In other areas of the world, such as East Asia and the Pacific, Eastern Europe and the USSR, North Africa and the Middle East, predominant modes of HIV transmission have yet to emerge fully because of the relatively recent (mid to late 1980s) introduction of HIV into these regions.
- In 1987, in recognition of these broad epidemiological patterns of HIV/AIDS, WHO developed an epidemiological classification of HIV infection and AIDS cases worldwide, according to: (a) when epidemic spread into the continent or region started; and (b) the predominant modes of HIV transmission (see box).

**Pattern I** - Extensive spread of HIV began in the late 1970s or early 1980s. Homosexual males and injecting drug users have been the predominantly affected populations, but heterosexual transmission is increasing.

**Pattern II** - Extensive spread of HIV began in the late 1970s or early 1980s. HIV transmission has been and continues to be predominantly heterosexual.

**Pattern I/II** - Extensive spread of HIV began in the late 1970s or early 1980s. Initially, those affected were mostly homosexual men and injecting drug users but, from the mid to late 1980s, a large and significant proportion of new HIV infections has been due to heterosexual transmission.

**Pattern III** - Introduction or extensive spread of HIV did not begin until the mid to late 1980s. For the present, overall HIV prevalence continues to remain relatively low in most populations in Pattern III areas.

- While these epidemiological patterns were useful during the 1980s for general classification of a country or region, it was recognized from the beginning that they were not uniform and would change over time. During the latter half of the 1980s, with the continued extensive spread of HIV, the distinctiveness of these epidemiological patterns has become increasingly blurred. In this document, therefore, the current status of the HIV/AIDS pandemic will be described by sections that broadly group together those geographical regions which currently have a more or less similar distribution and spread of HIV/AIDS today.

## AUSTRALASIA, NORTH AMERICA AND WESTERN EUROPE

- In the industrialized countries of Australasia, North America and Western Europe, HIV infections began to spread extensively in the late 1970s or early 1980s. The population groups predominantly affected have remained homosexual or bisexual men and injecting drug users.
- Marked differences continue to exist in the relative proportions of AIDS cases among homosexual men and injecting drug users. For example, on the west coast of the USA about 90% of AIDS cases have been diagnosed in homosexual men, while on the east coast only about 60% of AIDS cases have been in homosexual men. The situation is similarly varied in Western Europe - in Scandinavia the vast majority of AIDS cases have occurred in homosexual men, while in Spain and Italy less than half of the AIDS cases reported have come from this group.
- The incidence of HIV infection among homosexual men appears to have decreased markedly since the mid 1980s. However, large numbers of uninfected injecting drug users remain in many areas and an explosive spread might occur in these populations in the future if they continue to share injection equipment. Heterosexual transmission has been increasing slowly but steadily during the latter half of the 1980s, especially in urban populations with high rates of injecting drug use or sexually transmitted diseases (STDs). Of all reported AIDS cases in the USA, about 3% were due to heterosexual transmission in 1985. In each succeeding year heterosexual cases increased gradually, so that by 1988 they constituted about 5% of total cases and in the first half of 1990 they approached 8%.
- By early 1991, an estimated 1.5 million HIV infections may have occurred in Australasia, North America and Western Europe, about two-thirds of these (or one million infections) in the USA. Over 200 000 AIDS cases have been reported from Australasia, North America and Western Europe, but 250 000 or more cases may have occurred by early 1991.
- Perinatal transmission was not considered a major problem during the 1980s, but is increasing as the number of HIV-infected women has grown. It is estimated that up to 20 000 infants may have been born in the USA to HIV-infected women from the start of the epidemic up to 1990.

- In many large cities in Australasia, North America and Western Europe, AIDS has become a major cause of death in young adults aged 20-40 years. During the 1990s, HIV-related death will become one of the leading causes, if not the leading cause, of death in this age group. As early as 1988, AIDS was the leading cause of death in both men and women aged 25-34 in New York City.
- Through the 1990s, homosexual men and injecting drug users will continue to be the population groups most affected by AIDS in these countries, but it is expected that HIV incidence will shift, with new infections occurring predominantly in heterosexuals with multiple sex partners.
- Health care costs for HIV-related illnesses in these countries during the early 1990s may amount to several thousand million US dollars or more annually. These costs may rise further as newer and more effective but more expensive treatments become available and as the numbers of illnesses due to HIV infection increase.
- Almost all of the estimated direct medical care costs for AIDS treatment up to the mid-1990s will be incurred regardless of how successful programmes for HIV/AIDS prevention and control may be, since about 90% of the AIDS cases expected over the next 4-5 years will occur in persons already infected with HIV.

## LATIN AMERICA AND THE CARIBBEAN

- The epidemiological pattern in Latin America has evolved rapidly, and in addition to the groups of HIV-infected homosexual or bisexual men, there is increasing heterosexual transmission. HIV transmission among injecting drug users also appears to be a growing problem in some countries; 20% or more of injecting drug users in some areas of Argentina, Brazil and Uruguay have been found to be infected with HIV.
- Extensive spread of HIV began in the early 1980s. In the beginning, the population groups predominantly affected were homosexual or bisexual men and injecting drug users residing in large cities, a pattern which continues to be seen in Australasia, North America and Western Europe.
- Since the mid-1980s, in many countries of the region, heterosexual transmission of HIV has increased to become a major, if not the predominant, mode of HIV spread, principally occurring between bisexual males and their heterosexual partners, and female prostitutes and their contacts.
- In 1989, a study in Honduras in several hundred prostitutes reported an HIV prevalence of close to 20%; in 1990, another study in a similar group showed an HIV prevalence of about 35%.
- In Central America, there has been a 40-fold increase in the rates of reported clinical AIDS cases in women in the last four years. In a study in Haiti, about one in ten pregnant women was found to be HIV-infected. Infection rates in pregnant women are increasing in Brazil and the Caribbean. The increasing prevalence of HIV infection among women of childbearing age will mean a corresponding rise in HIV transmission to the fetus and newborn. According to recent analyses, 10 000 children in Latin America have already been born with HIV infection.
- Estimates of total HIV infections are difficult to make for Latin America and the Caribbean because of the relatively limited data available, but by early 1991 the cumulative total is estimated to be close to one million. The total number of adult AIDS cases is estimated to be slightly over 100 000.
- The potential health care needs of the projected hundreds of thousands of AIDS cases will constitute an immense challenge to those countries in the region that already have a less than adequate health care infrastructure, and will prove a heavy economic burden. For example, it is estimated that treatment of AIDS in Latin America and the Caribbean with appropriate drugs such as zidovudine (AZT) would have cost at least US\$ 32 million in 1990, a sum well beyond the financial means of most of the countries in these areas.

## SUB-SAHARAN AFRICA

- Most of the available epidemiological and clinical data indicate that extensive spread of HIV did not start in sub-Saharan Africa until the late 1970s, although some evidence suggests that HIV infection was present in some parts of Africa several decades earlier. Heterosexual transmission of HIV continues to be the predominant mode of spread.
- In these countries, transmission through HIV-infected blood continues to be a relatively small but nevertheless important public health problem, probably accounting for less than 10% of all infections. The problem is declining as routine HIV screening of blood donated for transfusions is implemented more widely.
- Such practices as male or female circumcision, ritual scarification, and the use of inadequately sterilized needles and syringes are believed to account for only a small proportion of total HIV infections in sub-Saharan Africa.
- High rates for other STDs, especially those which cause ulcerative lesions such as chancroid and syphilis, are believed to be important factors that have facilitated heterosexual transmission of HIV in this region.
- Because heterosexual transmission is predominant, the numbers of HIV infections in men and women are more or less equal. As with other sexually transmitted diseases, there is a slight excess of women infected with HIV, for a variety of sociological and biological reasons; the male to female ratio is approximately 1:1.2.
- Many women of childbearing age are infected, and HIV transmission from an infected mother to her fetus or infant before, during or shortly after birth (perinatal transmission) is a widespread and increasing problem in sub-Saharan Africa.
- Most African countries did not begin routine reporting of AIDS to WHO until 1987; since 1989, AIDS case reporting has improved markedly. By April 1991, more than 86 000 AIDS cases had been reported.
- Taking into account extensive under-diagnosis, under-reporting and reporting delays, WHO estimates that, by early 1991, about 800 000 adult AIDS cases had probably occurred in sub-Saharan Africa, or around two-thirds of the estimated global total.
- WHO estimates that by 1987 about 2.5 million HIV infections had occurred in sub-Saharan Africa. As of early 1991, the cumulative total in adults may conservatively be estimated at close to 6 million.
- In 1987 about two-thirds of the HIV infections were found in nine countries of East and Central Africa, representing only about one-sixth of the total population of sub-Saharan Africa. Today, the main focus of infection remains East and Central Africa.
- In 1987 most infections were concentrated in urban populations. Today, epidemic spread of HIV is increasingly being documented in the rural areas, where the majority of the population lives.

- In East and Central Africa, between one-quarter and one-third of all adults aged 15-49 living in some large urban centres had been infected with HIV by early 1991. On the basis of a large community-based survey, it is estimated that there were over 750 000 HIV-infected adults in Uganda alone by late 1988.
- In West Africa, in addition to moderate HIV-2 prevalences, many countries have experienced marked increases in HIV-1 infections. For example, in Abidjan, Côte d'Ivoire, HIV-1 prevalence in adults has risen from around 1% to over 7% in the past four years. During the late 1980s, reported AIDS cases from West Africa increased steadily: by April 1991 close to 7 000 AIDS cases had been reported from Côte d'Ivoire alone.
- It is estimated that about 900 000 HIV-infected infants will have been born in Africa by early 1991, and the projected total by the end of the 1990s is 10 million or more.
- The projections for HIV-infected infants are based on a perinatal transmission rate of about 30%. This rate may increase with time, but it nevertheless suggests that up to 70% of infants of HIV-infected mothers will be born uninfected. These uninfected infants will constitute a growing group of potential orphans, since most of their HIV-infected mothers will die of AIDS within 5-10 years of their birth. More than 10 million children of less than 10 years of age may be orphaned as a result of maternal AIDS in the region during the 1990s.
- Projected infant and child deaths from AIDS may increase child mortality rates by as much as 50% in much of sub-Saharan Africa during the 1990s. In many countries this would wipe out the gains in child survival achieved over the past two decades.
- During the 1990s, the impact of AIDS will be greatest in large urban areas of sub-Saharan Africa, especially in East and Central Africa. In such cities, AIDS deaths in young children and in those aged 15-49 may well reduce expected population growth by more than 30%. The adult mortality rate may more than triple. However, the population in these countries is expected to continue growing during the 1990s.
- The economic and social impact of a disease that kills people in their most productive years will be immense. The selective impact on young and middle-aged adults, who include members of social, economic and political elites, could lead to economic and even political destabilization.
- The health and social support infrastructure in the region may be inadequate to cope with the clinical burden of HIV-related disease. AIDS patients already comprise 20-40% of all hospitalized patients in most large urban hospitals in Central and East Africa.
- An adequate response to this unprecedented epidemic will continue to require substantial resources so that countries in sub-Saharan Africa can continue to strengthen HIV/AIDS prevention and control programmes, as well as to care for the ever-increasing numbers of AIDS patients.

## SOUTH AND SOUTH-EAST ASIA

- Although extensive spread of HIV began only in the mid-1980s or later, the spread of infection has been rapid in some population groups practising high-risk behaviour for acquiring or transmitting HIV infection.
  - In South-East Asia, HIV transmission was initially predominant among injecting drug users, with HIV prevalence rates in certain groups of about 50% in Bangkok, Thailand, 30% in Yangon, Myanmar, and 10% in Yunnan Province, China. Prevalence rates of at least 10% have also been noted in a few studies in neighbouring regions. However, heterosexual transmission has been increasing rapidly in persons with multiple sex partners, and since 1989 this appears to be the predominant mode of spread of HIV.
  - In South Asia, the predominant mode of transmission is heterosexual. In the past two years, available evidence suggests that up to 250 000 individuals have been infected with HIV in several of the larger cities. About 20% or more of the estimated 100 000-300 000 prostitutes in the Bombay area are now thought to be HIV-infected. High-risk populations in Madras and Pune also appear to have significant, though still lower, levels of HIV infection. In addition, there is some transmission through drug injecting; HIV prevalence rates of over 50% have recently been found in injecting drug users in Manipur, northeastern India.
  - In early 1990, the Government of Thailand, in collaboration with WHO, estimated that at least 50 000 HIV-infected persons were then present in Thailand. One year later, it is likely that this number has exceeded 100 000. This latter estimate is three to four times larger than the number estimated for the United Kingdom, a country which has a population of approximately the same size. More than 10 000 AIDS cases are projected to occur in Thailand before 1995, although less than 100 have been reported to date.
  - The pandemic in this region is thus still at an early stage, but indications are that it is growing quickly. Based on data 6-12 months old, a conservative estimate of HIV infections in South and South-East Asia is approximately half a million, the vast majority of them in India and Thailand. More recent anecdotal reports of HIV infections in certain population groups suggest that the total number of infections may be as much as two to three times higher.
  - There is concern that the pandemic in South and South-East Asia may be growing at a pace reminiscent of that in sub-Saharan Africa in the early 1980s, but may have an even greater potential for spread, given the adult population of nearly 500 million as compared with 225 million in sub-Saharan Africa.
- \* \* \*
- The predominant modes of transmission in the rest of the world are not as yet fully established, because of the relatively recent introduction of HIV. However, significant foci of HIV transmission have been reported from several areas since the mid-1980s.

## EAST ASIA AND THE PACIFIC

- The limited data available indicate that the less than 500 AIDS cases reported to date represent reasonably accurately the current status of AIDS in East Asia and the Pacific. A large proportion of these AIDS cases are in persons with haemophilia transfused with HIV-infected blood products in the early to mid 1980s. However, the numbers of HIV-infected persons are estimated to be at least in the tens of thousands, and the numbers of AIDS cases are thus expected to increase markedly during the 1990s.
- Yunnan Province, China, is geographically contiguous with South-East Asia, and the epidemic of HIV infections among injecting drug users in that province may be considered part of the epidemic in South-East Asia. However, the outbreak in Yunnan is also an important reminder that if high-risk behaviours exist, regions relatively spared by the pandemic to date may experience a precipitous change in their status.

## EASTERN EUROPE AND THE USSR

- In two countries, Romania and the USSR, localized outbreaks of HIV infection have occurred in infants and young children as a result of inappropriate medical practices - the use of inadequately sterilized parenteral injection equipment, or the inappropriate use of blood and blood products which had not been screened for HIV antibody. In the USSR outbreak, several hundred children were infected; in the Romanian outbreak, it is believed that the number of children infected with HIV may be as high as 1000-2000.
- An HIV prevalence among injecting drug users of about 10% was reported in Poland in 1989. Few other epidemiological studies of injecting drug users have been reported, and the potential magnitude of the HIV/AIDS problem in these groups in Eastern Europe and the USSR remains poorly defined.
- It remains to be seen whether or not the recent far-reaching social and political changes in Eastern Europe and the USSR will lead to changes in the epidemiology of HIV/AIDS in this region. Careful monitoring of the situation will be needed.
- HIV/AIDS prevention and control programmes in these countries will continue to require strengthening over the next few years. In addition to developing educational programmes on HIV/AIDS for health care providers and the general public, high priority must be given to improving medical care procedures to avoid further outbreaks from bloodborne infectious agents such as HIV.

## NORTH AFRICA AND THE MIDDLE EAST

- Although data from only a few studies are available to WHO, they suggest that extensive spread of HIV has already commenced in some parts of North Africa and the Middle East.
- An HIV prevalence of more than 1% was found among female prostitutes in one North African country in 1989. A prevalence of about 14% was reported among injecting drug users known to authorities in one Gulf state in 1989.
- Little information is available regarding the extent of high-risk behaviours in North Africa and the Middle East except indirectly. For example, penicillin-resistant *Neisseria gonorrhoeae* has been isolated on the Arabian Peninsula, and reports have suggested substantial numbers of cases of STDs in this region. Substantial trade in addictive drugs such as heroin also appears to occur in some parts of the region.

## ESTIMATES AND PROJECTIONS OF HIV INFECTIONS AND AIDS

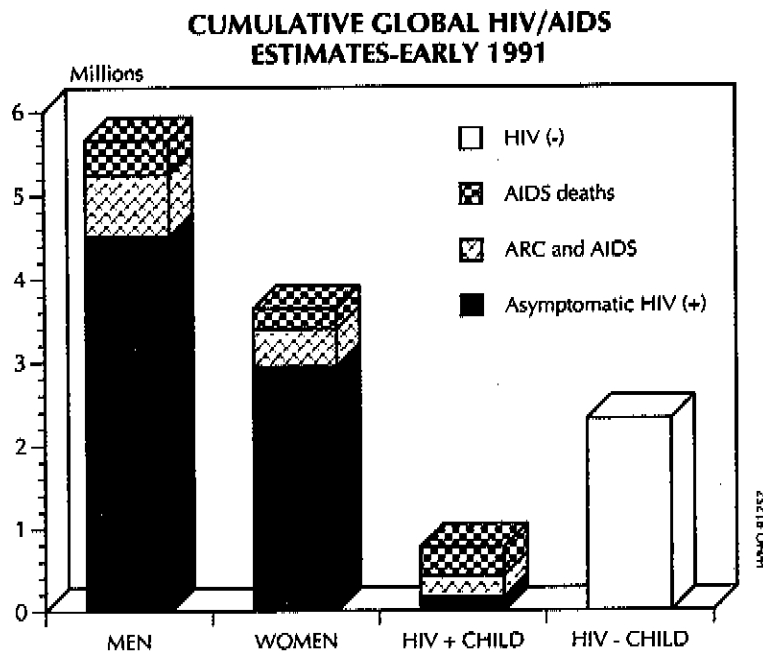
- Uncertainties about the potential for the spread of HIV and the ultimate dimensions of the HIV/AIDS pandemic have existed since initial recognition of AIDS in the early 1980s.
- The major uncertainties include: (a) when, and at what level, HIV prevalence will peak in different populations at risk in the various geographical areas; and (b) the precise proportion and rate at which HIV-infected children and adults will ultimately develop AIDS and die. Despite these uncertainties, a variety of methods and models have been developed to make estimates and projections of the HIV/AIDS pandemic.
- In countries where reporting of AIDS is relatively reliable and timely, short-term (less than 3 years) AIDS projections can be made with reasonable accuracy by extrapolation from trends in reported AIDS cases, after correction for reporting errors.
- WHO has developed a simple model to make short-term (less than 5 years) AIDS projections using: (a) an estimate of HIV prevalence for a given year; (b) an estimate as to the year when extensive epidemic spread of HIV began; and (c) estimated annual progression rates from HIV infection to AIDS. This model is especially useful for countries where AIDS reporting is relatively incomplete.
- WHO has used estimates of HIV prevalence made by national authorities or, if unavailable, those made by WHO. The lower range of HIV prevalence estimates has been used for projection purposes, and thus the results of AIDS modelling by WHO should be considered conservative.
- It is difficult to develop reliable methods or models to project HIV incidence into the short-term or longer-term future. Nevertheless, forecasts of future HIV trends and prevalence have been attempted.
- The "Delphi" survey method was used by WHO in late 1988 to forecast global HIV infections by the year 2000. The Delphi survey participants, a selected group of experts in HIV/AIDS epidemiology, predicted that there might be a cumulative total of 15-20 million adult HIV infections worldwide by the year 2000.
- Since 1988, data indicative of substantial increases in HIV prevalence in sub-Saharan Africa and in South and South-East Asia have accumulated, and suggest that the Delphi results may be very conservative. Recent information indicates that there have been about 3 million new HIV infections over the past three years, most of them in these two regions. The Delphi projection of 15-20 million cumulative HIV infections in adults may well be reached by the mid to late 1990s, if the currently estimated incidence of HIV in developing countries is sustained.
- Even though the ultimate longer-term dimensions of the HIV/AIDS pandemic cannot yet be forecast with any degree of confidence, a plausible range of estimates for new HIV infections during the 1990s can be inferred from available data on the current global status of the pandemic. Such information suggests that during the 1990s, 10-20 million new HIV infections may be expected in adults, mostly in developing countries. During the same decade, WHO projects that 10 million or more children will have been born with HIV, the majority of them in sub-Saharan Africa.
- For the year 2000, WHO's current projection is that there will be a cumulative total of about 40 million HIV infections in men, women and children, of which more than 90% will be in the developing countries. The projected cumulative total of adult AIDS cases is close to 10 million, of which almost 90% will be in the developing countries.

## SUMMARY AND CONCLUSIONS

- Educational strategies which modify or eliminate risk behaviours continue to be the primary interventions available to prevent and control the continuing spread of HIV.
- The HIV pandemic is dynamic, and has evolved markedly during its first decade. In Australasia, North America and Western Europe, HIV incidence, i.e. the rate of new infections, is decreasing, while in many developing countries incidence has continued to increase.
- During the next 10 years, AIDS will have a very selective and severe impact on mortality rates of young and middle-aged adults in both industrialized countries and many developing countries. It is likely that increases in child mortality due to HIV/AIDS will more than offset the gains achieved over the past two decades by child survival programmes in many developing countries.
- After the first decade of experience with HIV/AIDS, it can be seen that what appeared at first to be an epidemic more or less confined to homosexual men and injecting drug users in industrialized countries has evolved into a pandemic affecting increasing numbers of heterosexual men and women in the developing world.

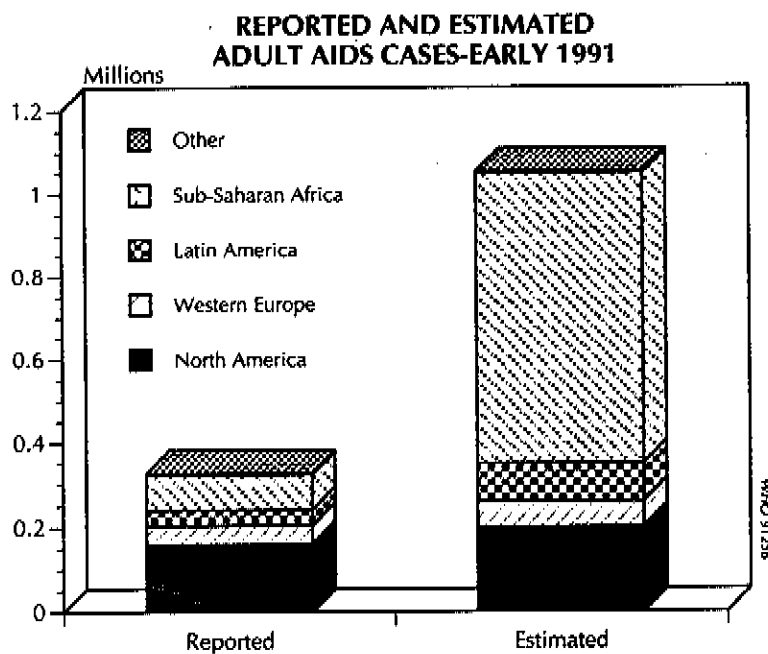
## ANNEX

Figure 1



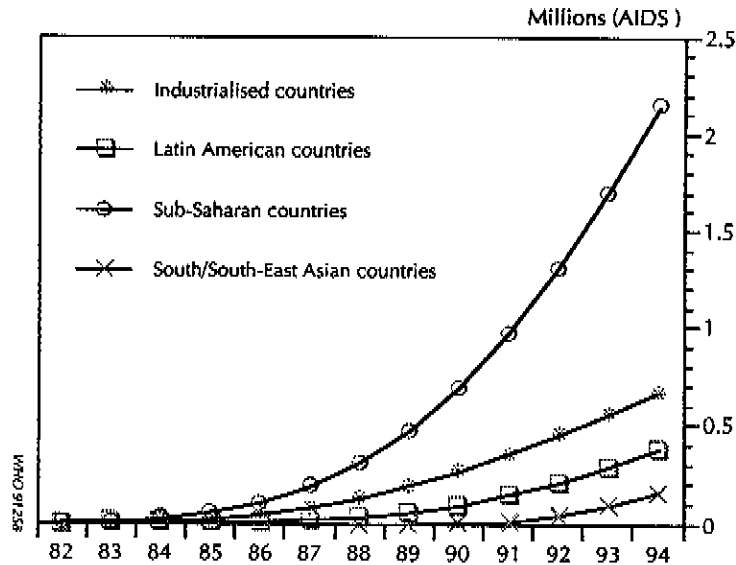
The stacked columns show the status in early 1991 of the men, women and children estimated to have been infected with HIV, and the estimated numbers of HIV-negative children born to infected women.

Figure 2



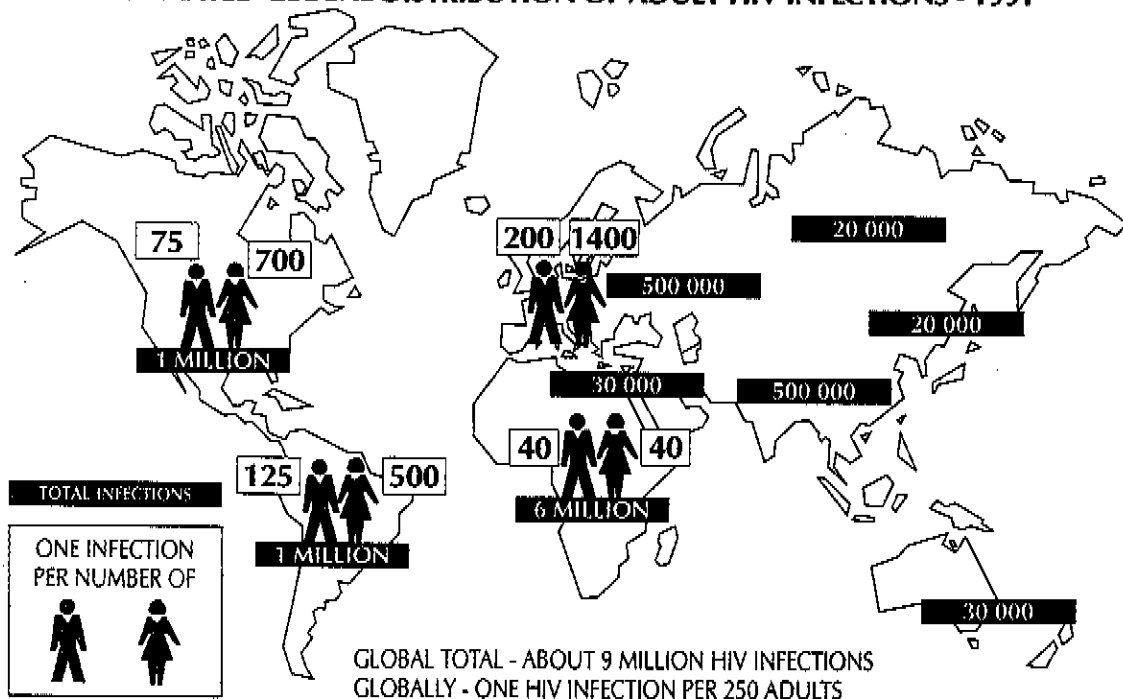
The stacked column on the left shows the distribution of the 350 000 AIDS cases that have been reported to WHO as of April 1991 in different regions of the world; that on the right shows the distribution of the 1 million adult AIDS cases estimated to have occurred in those regions.

**Figure 3**  
**CUMULATIVE ESTIMATES/PROJECTIONS**  
**OF ADULT AIDS**



These estimates and projections of adult AIDS cases have been derived from estimated HIV prevalence rates for 1990, using a WHO model for short-term projection of AIDS. The cumulative global projections for the mid-1990s total about 4 million adult AIDS cases.

**Figure 4**  
**ESTIMATED GLOBAL DISTRIBUTION OF ADULT HIV INFECTIONS - 1991**



The estimated cumulative global total of HIV-infected adults in 1991 is about 9 million, which means that, for the world population, 1 in every 250 adults is infected with HIV. Infection rates vary widely in different regions of the world. The highest rates are in sub-Saharan Africa, where 1 in 40 men and 1 in 40 women are estimated to be infected, with an estimated cumulative total of close to 6 million.

