

HIV Impacts

References:

AIDS was first recognized as a disease in 1981. The year 2003 is the twentieth anniversary of the discovery of HIV as the cause of AIDS (1983).

References

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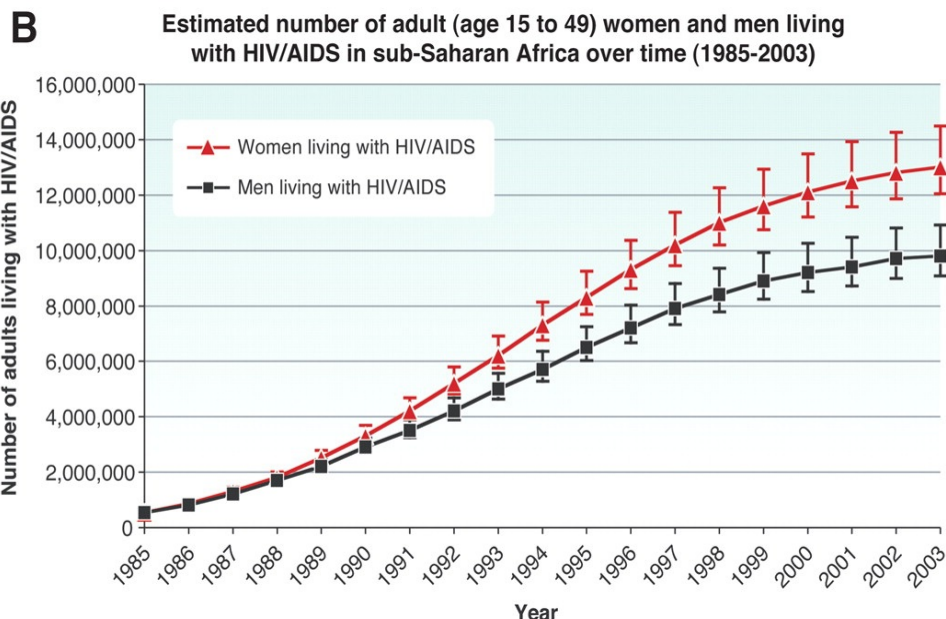
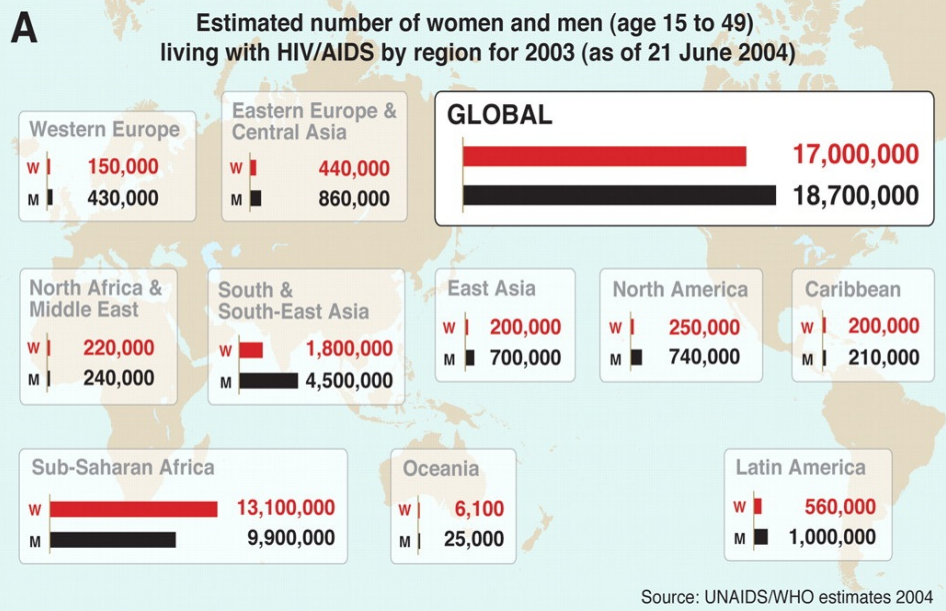
In the 20th century, there were two unexpected outbreaks of virally-caused disease. The influenza A pandemic of the winter of 1918-1919 was caused by the re-emergence of an old virus, and was responsible for the death of over 25 million people worldwide, including 550,000 in the US. The world first became aware of another disease outbreak in 1981, the acquired immunodeficiency syndrome (AIDS). The catastrophic potential of this new virally-caused disease may still not have been fully realized.

The human immunodeficiency virus (HIV) is now known to have originated from chimpanzees. Transmission from chimps to humans probably occurred while animals were butchered for food in sub-Saharan Africa, with animal blood contaminating wounds of humans. The transmission likely passed unnoticed for a long period of time, but in the last half of the 20th century, accompanied social upheavals led to the outbreak of AIDS. The conditions in Africa that favored transmission included a massive migration from rural areas to urban areas, the breakup of family units due to the human migrations, and changes that favored commercial sex. Increased sexual freedoms, coupled with increased global travel, facilitated the spread of HIV into developed countries. New data suggest that the virus in chimpanzees resulted from a recombination between two simian immunodeficiency viruses, SIV_{rcm} from red-capped mangabeys and SIV_{gsn} from greater spot-nosed monkeys. Both of these primate species are preyed on by chimpanzees.

E. Hooper in a book called, The River, suggested that early polio vaccines produced in cultures of primate cells could have been the original source of HIV. This suggestion has made several countries wary of using polio vaccines, limiting efforts to eradicate polio. New studies now show that chimpanzees in the area that were used for early polio vaccines do not contain viruses related to HIV. In addition, the sequence studies of virus indicate that HIV originated at least 30 years before the first polio vaccines were used. Scientists regard these results as conclusive proof that polio vaccines could not be a source of HIV.

Scope of the epidemic

People living and infected with HIV



"Over the 20 years since it was first identified, the HIV/AIDS epidemic has continued to exceed all expectations in the severity and scale of its impact. In 1991, the then Global Programme on AIDS at the World Health Organization forecast that by 2000 the cumulative global total of HIV infections in men, women, and children would be 40 million. In reality, this prediction has proved a serious underestimate. An estimated 40 million people worldwide are currently living with HIV, and some 20 million have died, giving a cumulative total number of 60 million."

In the North America, an estimated 940,000 people are infected with HIV. Through 1998, there have been 688,200 cumulative cases of AIDS and 410,800 deaths. There are an estimated 40,000 new HIV infections per year. Between 1985 and 1998, the proportion of AIDS reported among women and adolescent girls tripled in the US, from 7% to 23%.

Facts about AIDS

- In some of the worst-affected countries, 2 or more out of 5 pregnant women in urban areas are infected with HIV.
- By the end of 1997, 8.2 million children had lost their mother to AIDS before they turned 15.
- More than 4 million children under the age of 15 have been infected. HIV infection in children progresses more quickly to AIDS, leading to death.
- The vulnerability of girls to HIV infection is exacerbated by denial or neglect of their recognized human rights, including gender discrimination, resulting in inadequate control over their exposure to sexual HIV transmission and poor access to socioeconomic opportunities.
- Around 1/3 of the 36 million people living with HIV in the world at the end of 1998 are young people aged 15-24.
- In 2000, 5 million people became infected with the virus - more than seven men and women every minute of the day (14,000/day).
- In societies where the epidemic is heterosexually driven, young women have a higher risk for exposure to HIV than young men, for both physiological and societal reasons. This is especially true for women dependent upon sexual relationships with men for socioeconomic survival.
- Between 1999 and 2003, AIDS cases increased 15% for women and 1% for men in the U.S.
- Young women, either through behavior or maybe because of physiological properties of an immature genital tract have an increased risk of HIV infection.
- By the time a woman in South Africa reaches the age of 22, she has a 1 in 4 chance of being HIV infected.
- Where they have access to appropriate knowledge, skills, and means, today's young people show a remarkable propensity to adopt safer behaviors - better than previous generations or older adults.
- In Western Europe, some 60% of young people now use condoms the very first time they have sex.
- A study of young gay men in metropolitan areas of the U.S. found an HIV incidence of 7.2%. Less than 20% of those infected knew of their infection. 41% practiced unsafe sex.
- Australia introduced needle and syringe exchange programs and supported changed behavioral norms on needle sharing. HIV prevalence has been less than 0.5% in both men and women who identified themselves as injecting drug users at metropolitan sexual health centers. The corresponding groups in Chicago and New York showed an 18-24% incidence.
- In sub-Saharan Africa, the average prevalence is 8.8% of the population between 15-49 years old.
- Education has been very effective in some countries. In Zambia, HIV prevalence for women under 20 attending antenatal clinics in Lusaka declined from 27% in 1993 to 17% by 1999.

- Life expectancy in Africa rose from 44 years in 1950 to 59 years by the late 80s, and is now expected to return to under 45 years.
- Interventions need to be guided by evidence rather than ideology. This is nowhere more evident than in relation to sex education for children. Evidence indicates that far from encouraging sexual activity, childhood sex education results in higher levels of risk reduction, such as delaying the onset of sexual activity, and higher levels of condom use. Equally, a pragmatic response to reduce disease for injecting drug users needs to attend to the increasing evidence that needle and syringe exchange is effective in preventing HIV transmission, and has no other harmful effects.
- In the United States, as many as 50% of patients receiving antiretroviral therapy are infected with viruses that express resistance to at least one of the available antiretroviral drugs (*New England Journal of Medicine* 350, 1023 (2004)).

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HIV/AIDS

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June 21, 2004

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