

Inequalities in health: access to treatment for HIV/AIDS

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Summary. The HIV infection represents a very clear example of the inequalities in access to health care between rich and poor countries: AIDS is a disease that the western world can treat and the resource-limited countries cannot. In the world scenario a total of 5 million patients with HIV/AIDS who need treatment have no access to therapy: the estimated treatment coverage is 28% in Sub-Saharan Africa, 19% in Asia and only 14% in low and middle-income countries of Eastern Europe and Central Asia. A broad, multisectorial response at national and international levels is required to guarantee access to antiretroviral drugs for all people with HIV/AIDS who need them.

Key words: HIV, highly active antiretroviral therapy, access to health care, developing countries.

Riassunto (*Diseguaglianze nella salute: l'accesso al trattamento per l'HIV/AIDS*). Uno degli esempi più visibili di diseguaglianze nell'accesso alle cure tra paesi ricchi e paesi poveri è rappresentato dall'infezione da HIV: l'AIDS è una malattia che può essere curata nei paesi occidentali ma non nei paesi con risorse limitate. Nel mondo ci sono 5 milioni di persone con HIV/AIDS che avrebbero bisogno di una terapia antiretrovirale e non possono riceverla: il 28% dei pazienti ha accesso alle cure nell'Africa Sub-Sahariana, il 19% in Asia e solo il 14% nei paesi a basso e medio reddito dell'Europa Orientale e dell'Asia Centrale. Assicurare l'accesso ai farmaci antiretrovirali a tutte le persone che ne hanno bisogno rappresenta un imperativo morale e richiede una risposta multisettoriale a livello nazionale e internazionale.

Parole chiave: HIV, antivirali, accessibilità ai servizi sanitari, paesi in via di sviluppo.

BACKGROUND

Addressing the dramatic inequalities between rich and poor countries in access to health care is one of the biggest challenges of this century. The HIV infection represents a very clear example of these inequalities: AIDS is a disease that the rich can treat and the poor cannot.

From its first appearance in 1981 the HIV/AIDS epidemics continues to grow largely unabated: at the end of 2006 it has been estimated that 39.5 million people worldwide live with the infection, and that in the last year 4 million became newly infected and about 3 million lost their lives to AIDS [1]. HIV/AIDS kills more people than any other infectious disease and is the fourth leading cause of death worldwide.

The 25-year history of the epidemics is summarized in *Figure 1*. The first phase of this history (the beginning of the '80s) was characterized by critical scientific breakthroughs (the identification of the virus, the first diagnostic tests, the first prevention measures) but also by denial and social discrimination towards the HIV-positive subjects. In the next few years important successes were attained: the new antiretroviral drugs started to show clinical efficacy prolonging life expectancies of HIV positive people [2] and pediatric cases strongly decreased where the antiretroviral

prophylaxis was introduced [3]. Greater awareness of the disease among risk groups in the industrialized countries led to the adoption of preventive measures and thus to a reduction of the number of new infections. However, at the same time, in many poor countries the epidemics continued to spread reaching levels of prevalence higher than expected, particularly in Sub-Saharan Africa. In the most recent part of the history, starting in 1997 and lasting until nowadays, in rich countries, the clinical course of the disease has completely changed since the use of highly active antiretroviral therapy (HAART) has become standard of care and has effectively reduced HIV-related morbidity and mortality [4]. On the other hand, in the poor countries, the impact of the epidemics has continued to be extremely high with prevalence of the infection that in some countries has approached 30% of adult populations, and where a growing number of infected persons progress to full-blown AIDS with no access to antiretroviral drugs or to adequate social and medical care.

The dramatic rate of mortality of AIDS has devastating effects on many communities. In countries with high HIV prevalence (e.g., South Africa, Zimbabwe or Botswana) life expectancy has progressively decreased, starting the mid '80s, from 60 years down to less than 40

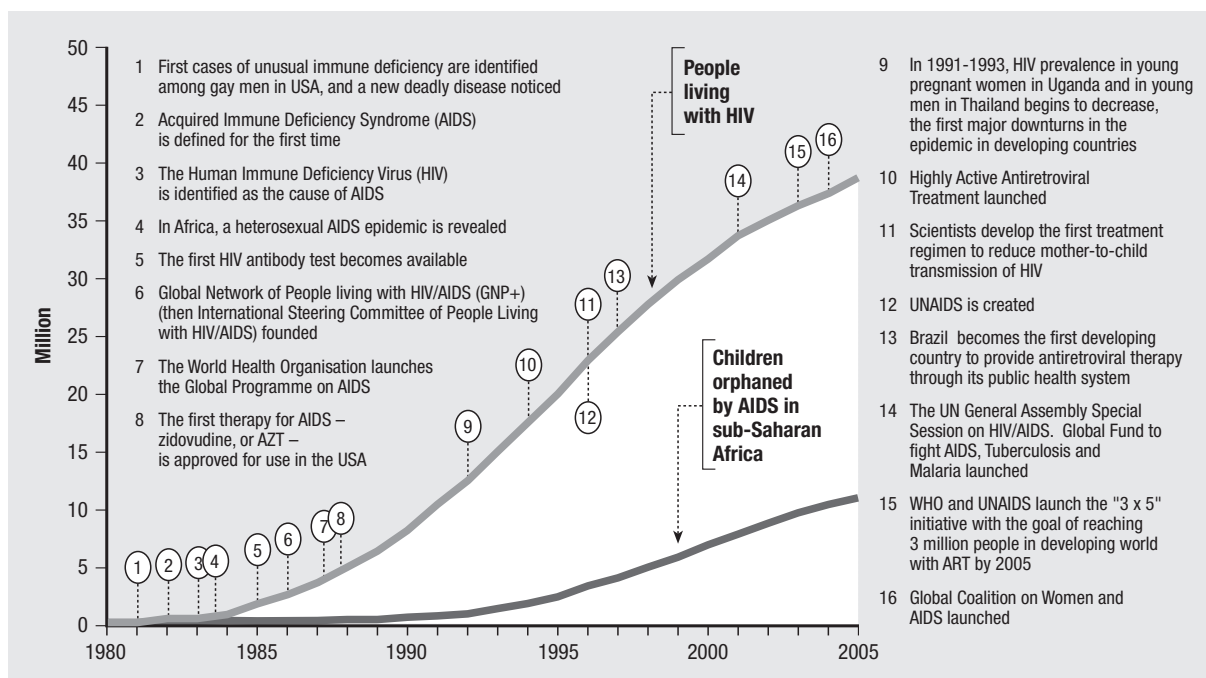


Fig. 1 | Twenty-five years of the HIV/AIDS epidemic. Reproduced with kind permission from UNAIDS, *Report on global AIDS epidemics 2006*.

years due to the impact of AIDS (Figure 2), whereas in countries with low HIV prevalence life expectancy continue to rise. In a high-burden country like Botswana mortality attributable to AIDS has been estimated to be 83% of all deaths.

Women and children are the more neglected victims of AIDS. Three quarters of all women living with HIV are in Sub-Saharan Africa and in most of the region women are disproportionally affected by AIDS (on average 3 women are HIV-infected for every 2 men), expression of the often highly inequal socio-economic status of women and men. Children

are affected twice, directly by the disease and indirectly by their parents' illness and death (maternal HIV status is a strong predictor of child survival, regardless of child's HIV status).

AIDS is considered a serious obstacle, in many countries, to the progress to Millennium Development Goals promoted by the United Nations [5]. Among these, AIDS has a negative impact on reduction of poverty, promotion of equality, reduction of infant mortality and women health. Furthermore AIDS, having the greatest impact on the most productive age group of the population, has a direct negative

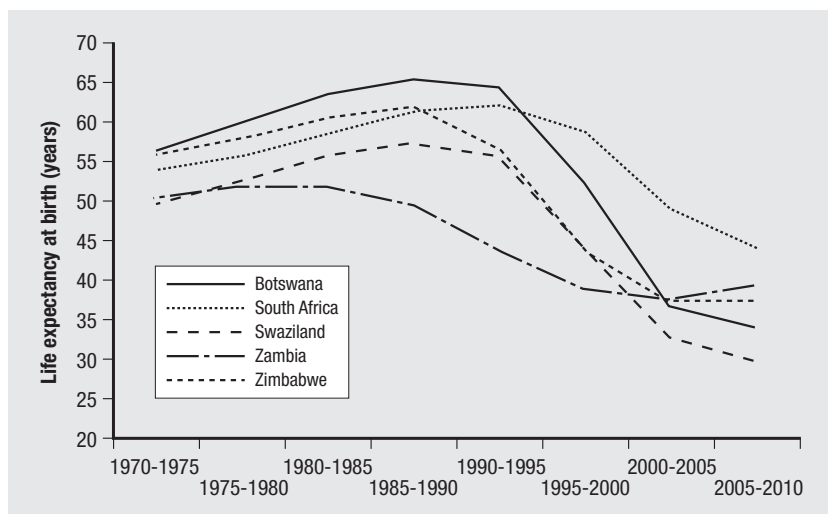


Fig. 2 | Impact of AIDS on life expectancy in five African countries, 1970-2010. Reproduced with kind permission from UNAIDS, *Report on global AIDS epidemics 2006*.

impact on all economic, social and educational development indexes. A recent analysis of household data from Botswana suggested that HIV/AIDS can be expected to lower average income *per capita* by 10% over the next 10 years with the greatest impact on the poorest households [6].

POLITICAL COMMITMENT

The global community has put forth numerous commitments to promote access to antiretroviral treatment for the HIV-infected individuals in the resource-limited countries. In 2001 AIDS was the subject of a special session of the United Nations General Assembly and in the final declaration AIDS was recognized not only as a health problem but as a social, economic, political and safety problem at national and international level. At the same session it was agreed that access to medications constituted an integral part of the right of everyone to achieve the highest attainable standard of health. As a result, a special fund (The Global Fund) for AIDS, tuberculosis and malaria was created in 2002 to attract resources (through public and private donations) to fight these diseases and to direct these resources to the areas of greatest need. The reasoning behind the creation of the Global Fund was that good health was fundamental to economic growth and poverty reduction and viceversa.

In 2003 President George Bush dedicated 15 billion dollars for the fight against AIDS, and the World Health Organization (WHO) launched the 3 x 5 initiative aimed to deliver antiretroviral treatment to 3 million people in low and middle-income countries in 2005.

In 2006 at the high-level meeting on AIDS held in New York on June 2, the United Nations General Assembly set a new objective: universal access to prevention programmes, treatment, care and support by 2010.

However, despite this global commitment to the provision of antiretroviral therapy its availability, at present, is still much less than the need.

As of December 2006, an estimated 2 million people were receiving antiretroviral therapy in low- and middle-income countries, representing 28% of the estimated 7.1 million people in need. In Sub-Saharan Africa 1.3 million people were receiving antiretroviral treatment at the end of 2006; although this is a relevant increase compared with just 100 000 on treatment and 2% coverage three years earlier, this number represents only 28% of those in need in the region [7]. Estimated treatment coverage is 19% in Asia (representing a four-fold increase in comparison with the end of 2003) and 14% in the low- and middle-income countries of Eastern Europe and Central Asia. Coverage for children and for pregnant women is especially low. No more than 8% of HIV-positive children estimated to be in need of antiretroviral drugs have access to them and only one in ten pregnant women with HIV receive antiretroviral prophylaxis to prevent mother-to-child transmission of the virus in low- and middle-income countries.

CHALLENGES AHEAD

There are many significant obstacles to overcome to achieve the goal of universal access to treatment in the resource-limited countries:

- the cost of the drugs;
- the possible conflicts with the other health emergencies;
- the lack of adequate health infrastructures;
- the lack of training of health care providers;
- the complexity of HIV treatment;
- the issue of stigma and discrimination.

However, we can and must find solutions to any of these problems.

Drug manufacturers have started negotiating price discounts for resource-limited countries. The prices of most first-line antiretroviral drugs decreased by between 37% and 53% in low- and middle-income countries from 2003 to 2006 and this has contributed significantly to the wider availability of treatment. Also, the production of generic drugs can be implemented making use of the flexibilities built into the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights. Examples are represented by the use of "voluntary licenses" (agreement negotiated with the patent's owner for manufacturing and marketing of generic drugs) or of the "compulsory drug licenses" (the possibility that generic firms have to legally copy patented drugs for export to the least developed countries which lack domestic manufacturing capability).

In order not to overlook the other health emergencies, funding necessary to provide therapy against HIV can offer the opportunity to strengthen also the other sectors of the health systems. Effective interventions could create positive synergies to contribute to build strong, integrated public health systems for the delivery of comprehensive primary health care. The strengthening of the health systems is essential to guarantee to individuals a life-long therapy even in the rural areas where the majority of people in the need of treatment live.

Also, we should not think of directly translating our medicine to the South of the world where doctors are few and have little experience with HIV treatment, laboratory infrastructure is inadequate and the procurement and supply-chain management is fragile. In this sense, the World Health Organization based treatment guidelines for the resource-limited settings [8] on standardised regimens with simplified formularies, and a simplified clinical decision-making process in order to support efficient implementation.

Further, the concern that if medical doctors were not well trained, patients did not strictly adhere to therapy, and provision of therapy to the developing world could end with an epidemics of resistant HIV, was shown to be untrue. Instead, a growing amount of information is being collected that show that adherence to treatment in the developing countries is equal or better than in western countries [9]. Last, universal access to HAART has been demonstrated

to be one of the most powerful intervention to reduce stigma and discrimination since it shows that AIDS from a fatal disease can become a chronic and manageable condition [10].

LESSONS FROM DIFFERENT CONTEXTS

Poverty and marginalisation are affecting access to treatment also in the industrialized countries. Several studies, in the US and in Spain have shown that over the last 10 years (and also considering only the period after the introduction of HAART) AIDS mortality inequalities by socio-economic groups remained stable [11, 12], with disadvantaged socio-economic groups having higher mortality than the more advantaged ones. That these inequalities are related to the access to HAART therapy has also been shown in a study performed in San Francisco [13] where persons living in poor areas were less likely to have undergone HAART at any time in the past compared with persons living in other areas of the city, leading to differences in survival. A very recent report showed that in the US racial/ethnic minorities had more years of life lost (an average of 1.5 years) compared to whites mainly due to late initiation of HAART [14]. In a French study HAART treatment failure was associated with being non-native French and being female. The authors suggested that this

association was due to the poor living conditions of non-native French and among them of the female population and that poverty produced barriers to information and access to health care and lead in the end to treatment failure [15].

The basic lesson that we have learned from these studies is therefore that AIDS cannot be defeated without a general improvement of the socio-economic conditions of the more hardly hit communities.

CONCLUSIONS

Reducing inequity is a global responsibility. The Joint United Nations Programme on HIV and AIDS (UNAIDS) has estimated that \$ 10 billion will be available for HIV-related programmes in low- and middle-income countries in 2007, representing only slightly more than half of what is estimated to be needed, and that more will be needed for 2008. The international community has an obligation to mobilize resources to support the low-income nations of the world and fill the gap, and the civil society has the task to ensure that scientific, social and political leaders fulfill their commitments on a local, regional, and global basis.

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