

HIV: the past, the present, and the future

In 2000 world leaders made a commitment to eradicate extreme poverty and improve the health and welfare of the world's poorest people by the year 2015. To this effect, eight 'Millennium Development Goals'¹ were adopted to strengthen efforts to fight poverty in order to improve the health of populations across the world. These goals further assisted in guiding the policies of low- and middle-income countries as well as international developmental agencies. Although one Millennium Development Goal specifically addresses HIV, an effective HIV response would yield benefits that span across all the eight goals.

The Joint United Nations Programme on HIV/AIDS (UNAIDS)², estimates that there were 2.7 million people newly infected with HIV in 2007 and 2.0 million AIDS deaths worldwide. UNAIDS also estimated that by 2007 there were about 33 million people living with HIV across the world. In addition, sub-Saharan Africa is home to 67% of all people living with HIV, 75% of AIDS deaths and 90% of all children living with HIV. These (UNAIDS) figures do not imply that the HIV epidemic in Africa is homogeneous. In fact, there are many HIV epidemics in Africa because of the substantial inter-country (even intra-country) variation in the scope and scale of the HIV epidemic in the continent. Adult HIV prevalence ranges from less than 2% in several countries of West and Central Africa to more than 15% in most of southern Africa.

UNAIDS figures indicate that in countries most heavily affected, HIV has reduced life expectancy by more than 20 years, slowed economic growth and deepened household poverty. In southern Africa, for example, the average life expectancy at birth is estimated to have declined to levels last experienced more than 50 years ago. In South Africa, all-cause mortality increased by 87% between 1997 and 2005. HIV has also already orphaned nearly 12 million children younger than 18 years in sub-Saharan Africa. In addition, the natural age distribution in many sub-Saharan African countries has been dramatically skewed by HIV, with potentially damaging consequences for the transfer of knowledge and values from one generation to another.

Even though the prevalence remains high, the HIV epidemic in southern Africa appears to have stabilised. The number of people receiving antiretroviral drugs in low- and middle-income countries increased to three million by the end of 2007. In some countries, the increase in coverage for antiretroviral therapy has been nothing less than spectacular. For example, in Namibia, where treatment coverage was less than a percentage in 2003, 88% of the people in need were on antiretroviral drugs by the end of 2007. The rapid expansion of treatment access in southern Africa and elsewhere is saving lives and transforming households, communities and ultimately, entire societies.

A few years ago, when antiretroviral drugs were contributing to sharp declines in AIDS deaths in Europe and America, it was widely assumed that these life-preserving medications would remain unaffordable and thus unavailable in low-income countries for decades. This sentiment was changed using strong political commitment, ferocious HIV activism and various global initiatives aimed at increasing treatment access. Despite efforts to make antiretroviral therapy accessible, only 31% of those who need these medications are currently receiving treatment. The complexity, weaknesses, and wanton political interference in the health-care systems of most low- and middle-income countries are contributing to the slow roll-out of HIV treatment programmes. Given the acute shortage of physicians in the most heavily affected countries and the urgent need for HIV treatment scale-up, it is imperative to find out whether we can effectively and safely shift HIV management from highly specialised physicians to nurses and other less specialised health workers.

Whatever success there is with access to HIV treatment care and support, the future of an effective HIV response lies with how best we can prevent new HIV infections. UNAIDS figures suggest that for every two people who start taking antiretroviral drugs, another five become newly

infected with HIV. Young people aged 15–24 account for 45% of all new HIV infections in adults, while many young men and women still lack accurate information on how to avoid exposure to the virus. As Dr Peter Piot notes in the forward to the UNAIDS Global Report for 2008: “Unless we take urgent steps to intensify HIV prevention we will fail to sustain the gains of the past few years and universal access will simply be a noble aspiration.”

Preventing new HIV infections is not easy, and never will be an easy task. Preventing HIV infections would require a combination of various interventions and strategies at both an individual as well as a population level. Effective or potentially effective behavioural interventions for reducing the risk of HIV infection include correct and consistent use of male condoms, abstinence/delay in onset of first intercourse, and by reducing the number of (concurrent) sexual partners. So far, male circumcision is the only biomedical intervention which randomised controlled trials have shown to reduce the risk of HIV infection. Research continues on the effects of vaccines, microbicides, female condoms, and other biomedical interventions for preventing HIV infections. In addition to addressing behavioural and biomedical factors, comprehensive HIV prevention programming also needs to address social, economic, political and environmental factors that influence the vulnerability to HIV infection globally. Given the wide variation in HIV epidemics between and within countries, there is no foolproof recipe for effective HIV prevention programming. Each country, province, district, municipality and community needs to know its own HIV epidemic and use the information to inform the targeting, selection, financing and delivery of effective prevention interventions; because when it comes to HIV prevention programming, *no one size will fit all.*