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AIDS is not over

Corbis

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Optimism and momentum has been building around the real possibility that an AIDS-free generation is imminent. Public enthusiasm is fuelled by news about the rapid scale-up of antiretroviral therapy, evidence that HIV treatment can prevent new infections, and expanded coverage of programmes to prevent mother-to-child transmission of HIV. Yet, the most recent estimates of HIV prevalence and incidence and of AIDS-related mortality released by UNAIDS[1], together with data from the Global Burden of Disease Study 2010 in *The Lancet*,[2,3] make it clear that AIDS is not over.

The estimates from the Global Burden of Disease Study 2010 confirm that HIV/AIDS remained a leading cause of disease burden and death in 2010.[3] It was ranked 33rd in 1990, but its burden had moved up to fifth by 2004[4] and remained there in 2010, despite major declines in AIDS-related mortality as a result of fewer new infections and the increased availability of antiretroviral therapy, care, and support. Looking at the most common causes of death globally, HIV/AIDS ranked sixth in 2004[4] and held the same position in 2010.[2] The Global Burden of Disease Study 2010 estimates 1·5 million AIDS-related deaths in 2010,[2] whereas UNAIDS data show 1·8 (range 1·6–2·0) million AIDS-related deaths.[1] Both estimates highlight a persistent, significant, and egregious burden of avoidable death.

Worldwide AIDS-related deaths increased dramatically during the late 1980s and peaked in 2005–06, followed by a steep decline to 2010–11. Yet, despite substantial reductions in AIDS mortality rates in many countries, AIDS remains the leading cause of death in southern and eastern Africa, and ranks number three in eastern Europe.[2] Furthermore, AIDS continues to affect young people disproportionately. In 2010, AIDS was the leading cause of death in women aged 15–49 years (14·4%) and the second most common cause of death for men aged 15–49 years (10·7%).[2]

UNAIDS estimated that 34 (range 31·4–35·9) million people lived with HIV in 2011,[1] with substantial geographical variations. Adult prevalence remains highest in sub-Saharan Africa at 4·9% (range 4·6–5·1%).[1]The good news is that since 2001, annual HIV incidence has fallen in 38 countries, most of them in sub-Saharan Africa. However, new infections are on the rise in some countries in eastern Europe, central Asia, the Middle East, and north Africa. It is a cause for concern that 2·5 (range 2·2-2·8) million people were newly infected with HIV in 2011.[1]

One of the great global health achievements of the past decade has been the scale-up of HIV treatment. In 2011, more than 8 million people living with HIV in low-income and middle-income countries received antiretroviral treatment.[1] Largely because of this unprecedented scale-up, supplemented by expanded HIV prevention services, the numbers of AIDS-related deaths and incidence rates worldwide have steadily decreased.[1]

To consolidate and intensify the accomplishments of the past decade, and to save millions of lives now in jeopardy, we must confront four realities. First, it will be impossible to sustain current efforts to tackle HIV and AIDS with current levels of funding. In 2015, when resource needs are expected to peak, an estimated US$22–24 billion per year will be needed,[5] but international AIDS funding has been stagnant since 2009 at about $8·2 billion per year. Many countries have increased their domestic funding for HIV, notably Benin, China, and South Africa, and they are to be supported and further encouraged. However, global solidarity remains essential to sustain HIV efforts in many of the poorest and most affected African countries. Moreover, international resources are critical to support programmes for marginalised populations in many countries. As treatment is scaled up, disability-adjusted

life years (DALYs) attributable to HIV/AIDS will eventually fall, but investments will need to be maintained—and even increased—during a transition period, to meet the costs of treating people for life.

Second, there is an urgent need to approach investments in a more strategic manner. The Investment Framework[6] to achieve maximum effectiveness in HIV responses proposes prioritising six basic programme activities: reaching key populations at increased risk; elimination of new HIV infections in children; behavioural change; condom promotion and distribution; treatment, care, and support for people living with HIV; and voluntary medical male circumcision. Yet in many countries, scale-up and access to basic programmes is dependent on addressing critical social and programmatic enablers, such as repealing punitive laws, enhancing gender equality, and identifying synergies with other development sectors, including social protection and education.[7] Currently, at least 29 countries have started to apply investment thinking to the way they allocate resources for HIV.[8]

Third, synergies within the health sector must be aggressively pursued. A range of opportunities for integration present themselves: for example, links between programmes for the prevention of mother-to-child transmission of HIV and those for antenatal care can be effectively strengthened, as we have seen in Kenya,[9] Malawi,[10] Rwanda, Swaziland, and Tanzania. Some countries have successfully integrated HIV and tuberculosis service delivery, including the Democratic Republic of the Congo, Malawi, Uganda, and Zambia.[11–14] There is a growing imperative to integrate care and treatment for HIV with that for non-communicable diseases (NCDs) at the primary care level. Such integration is driven by several factors: the progression of HIV to a chronic condition, the chronic conditions that arise from prolonged antiretroviral treatment, the rapid increase in NCDs in low-income and middle-income countries, as outlined by Global Burden of Disease Study 2010,[15] and the high frequency of comorbidities in people living with HIV. Some pioneering efforts, such as Pink Ribbon Red Ribbon, deserve to be emulated, and lessons can be drawn from positive experiences in Cambodia, Ethiopia, Kenya, and Zambia.[16–18]

Such integration strengthens health systems and promotes universal health coverage and access. In light of human resources shortages and already overburdened health-care professionals, innovation is urgently needed to identify the most cost-effective approaches to HIV in the context of more people-centred solutions. Many people at high risk of HIV infection, such as injecting drug users, sex workers and their clients, and men who have sex with men, will require dedicated HIV prevention and treatment programmes where they face discrimination and exclusion from regular health services.

Fourth, we need to recognise that the nature and methods of community mobilisation and political leadership, which are so critical to the success of the AIDS response, have changed. A new generation of social activism, closely connected to social media, is emerging. We need to engage with young people in fundamentally different ways, as reflected by UNAIDS' use of crowdsourcing for its strategy on young people and HIV. A new generation of political leadership is also emerging that embraces shared responsibility and global solidarity; this is strongly evident in the African Union's newly adopted Roadmap on AIDS, tuberculosis and malaria.[19] Today's leadership must develop more people-centred approaches to global health that focus on both innovation and the democratisation of opportunity. Thus, while much progress has been made in treatment and prevention, the persistent and substantial global burden associated with HIV and AIDS compels us to do more—and do better—to achieve the AIDS-free generation the world is waiting for.

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Should the GBD risk factor rankings be used to guide policy?

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The Global Burden of Disease Study 2010 (GBD 2010) estimates provide important new insights. Alongside estimates of health burden attributable to 291 diseases and injuries,[1] Stephen Lim and colleagues[2] estimate the health burden associated with 67 risk factors, organised into a hierarchy of clusters. So as to distinguish real changes in global burden and risk factors from changes in methods, they not only estimated the burden and risk factor ranking for 2010, but also recalculated estimates for 1990. This study represents the work of several expert working groups, who led systematic reviews of the health effects and prevalence of each risk factor.

In such a complex and ambitious exercise, trade-offs between rigour and policy relevance are inevitable. Judgment calls have to be made when data are not reliable or consistent, and these will sometimes be contentious. In the long term, the work's value will depend on whether the findings are internally consistent, complete, and supported by scientific consensus.

Although many of the rankings of disease burden and risk factors are internally consistent, discrepancies exist because of the incompleteness of risk factors analysed. For example, diarrhoea and HIV/AIDS are leading causes of global disability-adjusted life years (DALYs), but their associated risk factors do not feature strongly (figure). For diarrhoea, in 2010 the associated risk factors of sanitation and unsafe water only ranked 26 and 33, respectively, and estimates for poor hygiene were not included.[2] For HIV, unsafe sex was not included as a risk factor, by contrast with the previous Global Burden of Disease analysis (GBD 2006).[3]

More generally, the 1990–2010 comparison of risk factors suggests that alcohol, tobacco smoking, and several dietary factors have moved up the rankings, whereas others, such as being underweight, suboptimal breastfeeding, poor sanitation, vitamin A deficiency, zinc deficiency, and unsafe water, have decreased in importance.[2] These changes portray real demographic

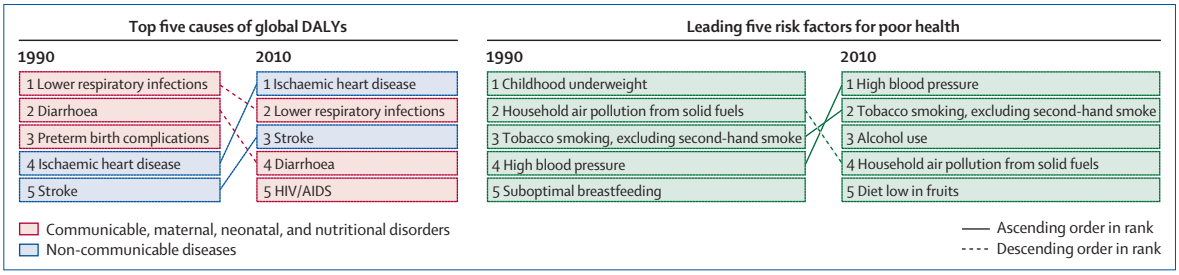

Figure: **Main causes of global DALYs and top five risk factors for poor health in 1990 and 2010**
Data from Murray and colleagues[1] and Lim and colleagues.[2] DALYs=disability-adjusted life years.