

Crunch time for funding of universal access to antiretroviral treatment for people with HIV infection

The tremendous progress in expanding global access to antiretroviral treatment for people with HIV infection is threatened by faltering funding commitments

The HIV epidemic is a leading global health challenge. While controversy has surrounded the best HIV prevention strategy, remarkable consensus has supported the campaign for universal access to antiretroviral therapy (ART) for people with HIV infection. As a necessary humane response to the epidemic, the moral imperative to provide ART to people with HIV infection has struck a chord of global solidarity. Much of the funding mobilised for the global response to HIV has supported successful expansion in ART access. Funding is now at a critical juncture as the global financial crisis bites and funders hesitate. Providing universal ART access is a steep hill only half climbed – faltering at this point risks rapid loss of recent gains, and the need to begin again an even steeper climb in future just to regain our current incomplete and perilous position. Against the background of overall efforts to roll back the HIV epidemic, we consider the implications of faltering finances for universal ART access and argue for additional funding, used efficiently. Progress towards universal ART access has individual and also potential community benefits. Although we focus mainly on sub-Saharan Africa as the region most badly affected by HIV and with the least resources to respond, other regions face similar issues.

Progress in rolling back HIV

The seemingly inexorable rise in global HIV incidence during the first 30 years of the epidemic peaked towards the end of the 1990s. However, global HIV prevalence and deaths still remain at crisis levels, with 33.4 million people living with HIV and 2 million deaths in 2008 (1). The region most severely affected is sub-Saharan Africa, with 67% of HIV infections and 72% of HIV-related deaths worldwide in 2008 (1). Changing the course of an epidemic of a primarily sexually transmitted infection by changing sexual behaviour is difficult – ‘king sex is an unruly monarch’. Demonstrating effectiveness and impact of behaviour change interventions has been difficult and there is little agreement on

which specific interventions most effectively change behaviour. Male circumcision is one of few interventions shown in randomised trials to be effective in decreasing HIV transmission risk (2–4), but programmatic delivery is limited and long-term results are awaited.

Thirty years’ advances in HIV virology and immunology have been a tremendous scientific success, but have not yet resulted in widely available HIV prevention technologies. The high variability of HIV envelope glycoproteins has frustrated attempts to develop an effective vaccine. After nearly 2 decades of research which failed to find an effective vaginal microbicide (5), the recent finding that tenofovir gel decreases risk of HIV acquisition by 39% is promising (6). Scientific advances have, however, resulted in widely applied HIV diagnosis and treatment technologies. Diagnostic HIV tests are widely available, rapid, easy-to-use, accurate and relatively cheap. Antiretroviral (ARV) drugs can effectively contain HIV even if a

cure is not yet possible. Prolongation of life by ART – a tribute to science and technology – has transformed the previously bleak outlook for people with HIV infection. The impact of improved ART access on HIV-related mortality at the population level has been shown in countries with high income, e.g. UK (7) and low income, e.g. Malawi (8).

Progress towards universal ART access

The 10-fold expansion in access to ART in low- and middle-income countries over the 5 years up to 2007 is a tremendous achievement (9). However, the uphill task is not even half completed. The five million adults and children with HIV infection in low- and middle-income countries receiving ART by the end of 2009 represented only 36% of those in need

(based on 2010 WHO guidelines) (9). This progress demonstrates proof of principle – that with political and financial commitment universal access to ART is possible – but an unfinished agenda remains.

The impact of faltering finances on ART access

Faltering political and financial commitment threatens to stall progress towards universal ART access. Starting in 2008 the shock waves of the global financial crisis emanated quickly from the USA around the world. The myriad effects of the crisis include threats in developing countries to health services, including ART provision (much of which is funded by donors). The health infrastructure which has been painstakingly built up for ART provision can be easily dismantled in a funding downturn.

Developed nations have responded to the 'credit crunch' and the collapse of banking systems by allocating vast national resources to bail out financial institutions and industries while their economies contract. Under domestic pressure to curb spending, donor governments are cutting back on development assistance, which may account for a significant proportion of health service expenditure in developing countries. Developing country governments under fiscal constraint may also squeeze health sector expenditure. The global economic downturn therefore compounds the problems of diseases of poverty (e.g. HIV, tuberculosis and malaria) by a double whammy – as socioeconomic conditions which favour the spread of these diseases deteriorate, funds for the health sector response are restricted (10).

After substantial yearly increases since 2002 in support for ART access, the USA and other donors have stalled in their funding commitments, with disbursements decreased for 2009 (11). Already by 2009 UNAIDS reported an adverse effect of the economic crisis on ART programmes (12). The Global Fund replenishment pledges for 2011–2013 reached \$11.7 billion, far short of the \$20 billion needed to expand programmes and even short of the \$13 billion needed to keep existing programmes running (13). Although the latest WHO guidelines recommend a CD4 cell count of 350 cells/ μ l as a starting threshold for ART (14), many centres in Africa continue to use a threshold of 200 CD4 cells/ μ l because of insufficient ARV supply (15). Medecins sans Frontieres have reported ART rationing to the sickest patients in developing countries, directly contradicting the evidence of benefits of earlier treatment and WHO guidelines (16). Consequences of failure to maintain even the existing ARV drug supply include: more HIV-related diseases and deaths that could have been

prevented; without treatment people becoming more infectious, with increased risk of transmission; and increased drug resistance generated by treatment interruption, necessitating more expensive second-line therapies to prevent HIV progression. Financially squeezed ART programmes may further compromise the quality of ART provision in Africa, where mortality is high in the first year of ART because of health systems delays in ART initiation and the quality of care (17).

The benefits of additional investment towards universal ART access

The funds invested in achieving the current level of ART access are a platform for further progress. Additional investment in progress towards universal ART access benefits people with HIV infection, and also potentially the community through improved HIV prevention and improved health systems. Early ART initiation improves patient outcomes and also reduces HIV infectiousness (18) and transmission (19,20), with the potential for 'treatment as prevention' (21). Early ART with cessation of viral replication and subsequent immune restoration has benefits for the individual (less risk of HIV-related disease) and also potentially for public health (improved HIV prevention) and for society (increased productivity and decreased costs of HIV-related care) (22). The strategy of universal voluntary testing with immediate ART, which in a mathematical model could eliminate HIV transmission (23), needs evaluation in practice (24).

Achieving universal ART access is easier if HIV incidence decreases. This is urgent as the rate of new HIV infections is greater than the rate that people with HIV start ART. Additional investments in implementing combined prevention interventions will decrease HIV incidence, thus facilitating ART provision. Progress towards universal and early ART access could become a virtuous cycle, as the more (and the earlier) that people start ART, the greater is the potential impact in decreasing transmission, with fewer incident cases and fewer people needing ART.

Progress in ART provision requires investment in strengthened health systems as well as in the health system elements most directly involved in ART provision. The reasons why HIV has had a much greater impact in Africa than other regions include deficiencies in the region's health systems. Such deficiencies lead to failure to recognise emerging health problems, diagnose cases, provide quality care, manage surveillance, promote a safe healthcare environment and gain public confidence. Lack of preparedness increases vulnerability to future emerging health problems, unless health systems are strengthened

The choice is stark – to build on progress by mobilising the necessary funds and implementing efficiency measures or to risk unravelling the progress made so far and embracing the consequences of failure

using adequate resources. Investing in ART provision while strengthening health systems is a win-win situation for people with HIV infection and the community.

Using funds efficiently

Additional funding generated for improved ART access must be used more efficiently (25). In developing countries, a built-in cost-efficiency is that ARV drug costs fall as coverage increases. Proposals for maximising cost-efficiencies include a cross-cutting agenda for global health to meet the challenges of the financial crisis (26). Disease-specific health initiatives and funding programmes should agree on a cross-cutting agenda to reform the global health architecture and maximise cost-efficiencies, instead of advocating and competing for their own stake in the limited and diminishing pool of donor funds. At country level, greater integration of HIV and other programme activities, e.g. tuberculosis, could improve efficiency and strengthen health systems (27). Scaling-up home-based ART (28) and clinically driven rather than routine laboratory monitoring of ART side-effects (29) can improve ART programme efficiency. 'How to do more with less' is a research priority for extending ART access in low-resource settings (30). Finding efficiencies in healthcare delivery is important but does not replace sufficient, predictable financing by donors and domestic funding from low- and middle-income countries.

Measures to ensure the lowest possible ARV drug prices facilitate cost-efficiencies. Changes in wealthy nations' trade policies are urgently needed to avoid creating new barriers for generic drugs. Generic competition has been critical to lowering drug costs and will be critical to also lower the prices of newer drugs needed for long-term survival (31). The free trade agreement with India pursued by the European Union, for example, will further increase monopoly protection, although India has already changed its patent law in compliance with World Trade Organization agreements (32). Donor countries' support for policies to contain ARV drug costs should complement their commitment to fund ART provision.

Conclusion

Achieving universal access to ART is an uphill task but feasible if funding is increased and used effi-

ciently. The choice is stark – to build on progress or to embrace defeat and consign the global movement for universal access to the fate of Sisyphus (33).

Note: The views expressed by Dermot Maher are not necessarily those of the Medical Research Council (UK).

Acknowledgements

We thank Brian Williams for his encouragement – "The struggle itself towards the heights is enough to fill a man's heart" (Camus).

Provenance

DM is a clinical epidemiologist and researcher with extensive experience of the global HIV epidemic as a clinician, public health expert and field researcher. TvS-A has extensive experience of the global HIV epidemic and is a leading advocate on behalf of Médecins sans Frontières for universal access to HIV prevention and treatment. JC has extensive experience of HIV/AIDS policy and advises the Médecins sans Frontières Campaign for Access to Essential Medicines. DM had the idea for the article which he developed in discussion with TvS-A and JC. DM took the lead in drafting the article and all authors contributed to the development of successive iterations. The sources of information for the article were relevant papers from the peer-reviewed literature. DM is guarantor for the article.

Disclosure

TvS-A is employed by, and JC is a policy adviser to, the Médecins sans Frontières Campaign for Access to Essential Medicines, which advocates for universal access to HIV prevention and treatment.

D. Maher,^{1,2} T. von Schoen-Angerer,³ J. Cohn^{3,4}
¹MRC/UVRI Uganda Research Unit on AIDS, Entebbe, Uganda
²London School of Hygiene and Tropical Medicine, London, UK
³Médecins sans Frontières, Geneva, Switzerland
⁴Division of Infectious Diseases, University of Pennsylvania, Philadelphia, PA, USA
 Email: dermatmaher1@yahoo.com

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