

Toronto 2006: time to deliver on HIV/AIDS

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KEYWORDS Anti-retroviral therapy, health personnel, HIV/AIDS, male circumcision, microbicides, mother-to-child transmission, opt-out HIV testing

LIST OF ABBREVIATIONS Anti-retroviral therapy (ART), human papilloma virus (HPV), International Monetary Fund (IMF), pre-exposure prophylaxis (PREP), tuberculosis (TB), Joint United Nations Programme on HIV/AIDS (UNAIDS), World Health Organisation (WHO)

DECLARATION OF INTERESTS No conflict of interests declared.

Published online October 2006

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A reality check

'Bright spots but lost chances', commented the *Toronto Star* on the sixteenth International HIV/AIDS conference hosted by Canada. One lost chance was the failure to attract either the Canadian Prime Minister or any African leader, leaving non-Africans to talk about Africa's plight. The largest ever AIDS conference with 30,000 delegates (more than the number of health workers in South Africa) took place in Toronto in August this year and hosted five tracks, multiple workshops, satellites, and a kaleidoscope of global village activities. The theme 'Time to Deliver' suggested both urgency and frustration at the slow pace of progress, but what has actually happened? Another was that twenty-five years into the epidemic, we are losing the struggle; every year an additional 4 million people become infected and 3 million die. The total number of people living with HIV/AIDS is 38.6 million, 25.4 million of those in Sub-Saharan Africa.

At times, the meeting felt disengaged from a global predicament of such historic proportions; listening to speaker after speaker, I reflected on rural AIDS clinics in Zambia and wondered 'will any of this be affordable or able to be implemented there?' The conference was the first major meeting since the UN member countries committed themselves to 'universal access to comprehensive prevention, treatment and care by 2010'. This will be difficult to achieve while 90% of the epidemic is in the poor South, but 90% of the drugs are in the rich North.

The World Health Organisation's push for '3 million on anti-AIDS drugs by 2005' in resource limited settings has achieved moderate success: 5% of those who need ART are now able to access it (1.5 million out of the estimated 6 million). But the drugs are not reaching children: 380,000 infected children are dying annually as a result of having no access to treatment. It is especially sad that ante-natal prevention is offered to only 9% of pregnant

African women, while mother-to-baby transmission has almost disappeared in industrialised countries.

The price of 'first-line' drugs in resource limited countries has reduced to about US \$130 per patient per year, but 'second-line' therapy will soon be needed by millions, at six times the cost. Malawi is currently using the bulk of its health budget on first-line drugs alone. Furthermore, WHO released new guidelines' for adults on first-line therapy substituting tenofovir for stavudine-based combinations which cause painful peripheral neuropathy and lactic acidosis, but this change may be unaffordable.

'We are on the cusp of a huge financing gap' said Peter Piot, Executive Director of UNAIDS, as the G8 renege on their financial promises. Fifteen billion US dollars are needed for HIV/AIDS next year, of which \$8 billion has been raised, and \$50 billion is needed by 2010 for the universal access promised at Gleneagles.

Thirty per cent of all new infections outside Africa are due to intravenous drug use. China's infection rate hovers around 0.05% but this translates into 650,000 infected people. Explosive epidemics are being seen in Russia and ex-Soviet republics, especially in the Ukraine, driven by a huge rise in heroin addiction, punitive approaches to intravenous drug use, including prison sentencing, and limited use of harm reduction. Only in the Caribbean has prevalence dropped, while there is evidence that a change in social attitudes and improved prevention programmes in India have had some success. No-one knows why, but in one area of Uganda, the HIV incidence is rising again (to 6.5% from 5%); some blame donor insistence on abstinence programmes which has resulted in a reduction of condom supply and of sex education in schools.

Successful treatment but limited access

Several presentations reported favourable outcomes for infected children receiving ART. One study from Zambia² showed a vigorous increase in CD4 cell count in 1,319

children attending 13 clinics who were treated with D4T or zidovudine plus 3TC or nevirapine. Mortality was 8.7/100 children years which compares favourably to 16.1 mortality rate in adults on ART. But, sadly, access to paediatric HIV care and treatment in most resource limited settings remains grossly inadequate (about 8% of those who need it), with few programmes meeting the WHO target that 10% of those receiving ART should be children. Doubts about adherence in Africa has not been confirmed. E Mills presented the results of a meta-analysis, recently published in *JAMA*,³ that adequate adherence was observed in 77% of patients in Africa and 55% of patients in North America. Nonetheless, there was a call for drug regimes to get even simpler ('one tablet a day') to ensure long-term adherence.

Known risk factors but little action

AIDS could be controlled immediately if known risks were addressed. S Lewis, UN Special Envoy for HIV/AIDS, called for urgent action on gender inequality. 'It is the one area which leaves me feeling most helpless and enraged', he said. 'Gender inequality is driving the epidemic and we will never subdue the gruesome forces of AIDS till women's rights (legal, sexual, social) become paramount'.

Harm reduction regimes (methadone replacement and needle exchange) for drug users could save millions of lives but countries such as the USA will not implement them. African condom provision remains low at an average of three condoms per man per year. It seems incredible that 90% of Africans still do not know their status; testing must be scaled up and made more accessible as effective treatment has reduced the stigma. A stormy debate ranged around the 'normalisation' of HIV testing. Is time-consuming counselling an outdated fashion or an essential human rights tool? Dr S Tlou (Minister of Health, Botswana) presented a clear case for routine 'opt-out testing'. Botswana increased testing uptake to 48% of the population and reduced the mother- to-child transmission rates to 6% from 30%, and ensured that 70% of those who need ART received it. But aggressive training is required so that patients understand their right to opt-out. The concern is that women suffer physical abuse if found to be positive.

What's new?

A randomised controlled study⁴ has shown that male circumcision can reduce sexual transmission of HIV from female to male by 60% (32–76%; CI 95%). Eleven prospective studies are now underway and, if confirmed, there will be pressure to scale up male circumcision, though religious and cultural acceptability may be difficult. A vaccine to prevent AIDS is unlikely to be available for at least ten years. Microbicide research (gels, films and sponges that help prevent the sexual transmission of HIV and other infections) is promising,⁵ though several obstacles remain before they can reach the market. The new integrase-

inhibitor drugs also promise much.⁶ Daily use of other anti-HIV drugs by high risk HIV-negative individuals might prevent infection (pre-exposure prophylaxis, or 'PREP') with tenofovir as a candidate because of its potency, its high barrier to resistance, its favourable side-effect profile and because it stays in the body for a long time.

Some drugs from the protease inhibitor class could also be an effective treatment for cervical cell abnormalities caused by cancer-causing types of HPV. Investigators found that the protease inhibitors lopinavir and indinavir killed cultured HPV-infected cells from the cervix. They are now looking to develop a topical treatment that can be applied to HPV-affected areas of the cervix. Herpes simplex virus-2 (HSV-2) has been linked in epidemiological and biological studies to HIV transmission. Two studies presented have shown daily treatment with the anti-herpes drug valaciclovir leads to a significant reduction in genital shedding of HIV and plasma HIV viral load amongst women not taking anti-HIV therapy.

The healthwork crisis

Kenya has been unable to employ many of its trained nurses because of IMF-imposed wage ceilings for public sector workers. The Clinton Foundation has stepped in to employ them temporarily and prevent further health worker migration. Several sessions were interrupted by noisy lobbying demanding increased wages for nurses. The Commission for Africa suggested that the African workforce should be tripled through the training of one million extra health workers over a decade, and their pay significantly increased. One presenter said that a two-day halt in the military spend in Iraq and Afghanistan would release the necessary funding for this. Health system development has also to be part of ART scale-up to ensure long-term adherence and provide comprehensive primary care and treatment of TB (especially with the appearance of new extremely resistant TB), and to ensure adequate food supply.

The Future

Integrase-inhibitors, vaccines, virucides and PREP are all welcome scientific advances, but history will judge us by what we do with them over the next 25 years. At the end of this conference, I was still unclear if the huge resources poured into HIV/AIDs are effectively targeted, where exactly the successes and failures occur, and who is accountable. R Horton, *Lancet* Editor, called for a global accountability mechanism to chart success in individual countries and identify catalysts for change or obstacles to underlying failure. 'Future conferences', he said, 'should focus on individual countries in detail, and compose a tool kit for best practice'.⁷ This meeting (costing approximately £30 million) was too huge and too unfocused to achieve that.

Dr Logie was funded in part by a Myre Sim grant to attend this conference.

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