

THE COST-EFFECTIVENESS OF HIV CONTROL: GETTING THE PRIORITIES RIGHT

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A growing body of international and local evidence shows that infectious disease control and HIV prevention and treatment are the most efficient ways for governments to spend their money to improve the lot of their citizens, in both developed and developing countries.

Apart from overwhelming mortality figures, economic arguments exist for keeping up, if not accelerating, the pace of antiretroviral therapy (ART) provision in South Africa and elsewhere. In June 2006, the Copenhagen Consensus re-emphasised the importance of HIV and infectious disease control. The authors called for its prioritisation ahead of a multitude of other worthy causes – based not on the need of people, but on the cost-effectiveness of interventions to remedy this plight.

The Copenhagen Consensus, set up in 2004 by the Danish environmentalist Bjorn Lomborg, works to answer a single question: What are the most cost-effective ways for a government to improve or save its citizens' lives? The novelty of this approach is to draw on experts, findings and methods from a large variety of scientific areas, while forcing a consolidation of results to a single common denominator for better comparison: the quality-adjusted life-year, or QALY.¹ For the first time interventions as diverse as combating climate change and combating malaria could be compared in respect of their outcome in a meaningful way.

The process lists 40 interventions tackling 10 areas of global concern (including communicable diseases, sanitation and water, education, malnutrition and hunger, subsidies and trade barriers, education, corruption, conflicts, and financial instability), which are being ranked in order of priority. In the first round in 2004, a group of academically acclaimed economists reviewed the papers summarising the evidence on each of these interventions and ranked them accordingly. Back then, HIV prevention and treatment was awarded the highest priority among the 40 interventions, being judged to be able to save the most lives at the lowest cost (Fig. 1).

Project rating	Challenge	Opportunity
Very good	1 Diseases	Control of HIV/AIDS
	2 Malnutrition	Providing micronutrients
	3 Subsidies and trade	Trade liberalisation
	4 Diseases	Control of malaria
Good	5 Malnutrition	Development of new agricultural technologies
	6 Sanitation and water	Small-scale water technology for livelihoods
	7 Sanitation and water	Community-managed water supply and sanitation
	8 Sanitation and water	Research on water productivity in food production
	9 Government	Lowering the cost of starting a new business
Fair	10 Migration	Lowering barriers to migration for skilled workers
	11 Malnutrition	Improving infant and child nutrition
	12 Malnutrition	Reducing the prevalence of low birth weight
	13 Diseases	Scaled-up basic health services
Bad	14 Migration	Guest worker programmes for the unskilled
	15 Climate	Optimal carbon tax
	16 Climate	The Kyoto Protocol
	17 Climate	Value-at-risk carbon tax

Fig. 1. Outcome of ranking exercise during the Copenhagen Consensus 2004 (for more information see www.copenhagenconsensus.com).

In June last year, the process was repeated as a ranking exercise among UN diplomats from China, India, Pakistan, Tanzania, Thailand, the USA, Vietnam and Zambia. In a slightly different take on the original task, the ambassadors listened to presentations from experts on each problem and were then confronted with the question: How would you spend

US\$50 billion to make the world a better place? This time, scaling up basic health services was awarded top priority, with HIV control coming sixth (Fig. 2).

CHALLENGE	OPPORTUNITY
1 Communicable diseases	Scaled-up basic health services
2 Sanitation and water	Community-managed water supply and sanitation
3 Education	Physical expansion
4 Malnutrition and hunger	Improving infant and child nutrition
5 Malnutrition and hunger	Investment in technology in developing country agriculture
6 Communicable diseases	Control of HIV/AIDS
7 Communicable diseases	Control of malaria
8 Malnutrition and hunger	Reducing micronutrient deficiencies
9 Subsidies and trade barriers	Optimistic Doha: 50% liberalisation
10 Education	Improve quality/systemic reforms

Fig. 2. Outcome of ranking exercise during the Copenhagen Consensus 2006: a United Nations perspective (for more information see www.copenhagenconsensus.com).

The results of the Copenhagen Consensus process mirror the conclusion of the Commission for Macroeconomics and Health, set up by the World Health Organization in 2001, that 'as with the economic well-being of individual households, good population health is a critical input into poverty reduction, economic growth, and long-term economic development at the scale of whole societies.'²

As with every other science, many of the results of economic analyses, and the advice to policy-makers based on them, depend on having asked the right question, and pursuing answers with the right tools. The Copenhagen Consensus process, particularly in its second version, depends extensively on the quality of the evidence presented. In 2004 assessment of interventions against HIV and AIDS was based, in the absence of large-scale public sector ART programmes in low-income countries, on the hundredfold higher costs of programmes in industrialised countries at that time. Despite these much higher costs, ART was still highly recommended on the basis of cost-effectiveness alone.

From a large body of research in industrialised countries, and increasingly from non-industrialised ones, we know the reasons for the striking cost-effectiveness of ART: In delaying the onset of opportunistic infections and the costly hospitalisations they necessitate, ART defers resource use and costs for the health system and adds not only length but also quality to a patient's life.³⁻⁵ In a cost-effectiveness analysis that takes all three factors into account (costs, life expectancy and quality of life), these benefits are large enough to offset the additional costs of the drugs, and of the systems that have to be put in place to reliably provide them.

A number of local economic analyses and modelling exercises has shown that this cost-effectiveness can be achieved in

South Africa as well. One of these used data on costs and outcomes of ART provision at the MSF-led HIV clinics in Khayelitsha, showing that in this setting providing ART was more cost-effective than HIV care without ART.⁶ MSF (Médecins Sans Frontières) is a non-governmental organisation dedicated to improving health care and access to essential medicines in emergency and low-income settings. Providing ART in this setting cost R13.754 per QALY versus R14.189 per QALY for patients who did not receive ART, in 2002 South African rands.

An analysis of ART provision in a standard public-sector clinic would probably yield even more favourable results, as the staffing levels at Khayelitsha are higher than in a public sector clinic, and ARV drug costs were significantly higher at the time of the study. Overall, there is a scarcity of economic analyses of ART provision in low-income settings that use data from real-world settings to analyse cost factors and advise on the efficiency of public sector roll-out programmes.

In South Africa, despite the significant political progress of the last few months and the latest figures for patients initiated on ART showing that South Africa has the largest ART programme in the world in terms of absolute numbers, there remains a need for massive upscaling of ART provision. This will continue for quite some time – a time in which the deadly toll from AIDS is set to continue to rise.

It is high time for governments to invest accordingly. Governments in southern Africa need to support the enormous task of providing HIV care financially and politically. The hierarchy of cost-effective interventions noted by the Copenhagen Consensus can guide governments towards effective spending across all sectors, not just health. For South Africa this means maintaining the collaborative spirit shown in setting up the Inter-Ministerial Working Committee on HIV and AIDS and revamping the South African AIDS Council, while continuing to support the efforts of health-care professionals and volunteers who refuse to be intimidated by the enormous scale of the task. After all, a cost-effective medical intervention offers the best of two worlds, saving lives as well as money.

I am grateful to Dr Catherine McPhail for comments on an earlier draft of this article.

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