

POLICY BRIEFS ON

ECONOMIC IMPACT OF HIV



10.

TRADE-OFFS BETWEEN ALLOCATION TO HEALTH & OTHER SECTORS

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10.

TRADE-OFFS BETWEEN ALLOCATION TO HEALTH & OTHER SECTORS

KEY POINTS

- HIV policies, health policies and policies in other sectors contribute to national development and well-being, but their contributions are different in kind. Budget allocations describe choices and reflect priorities across these contributions.
- High-level policy documents like National Development Plans position health policy and interpret its contributions to the national development agenda, in terms of health outcomes in their own right, the socio-economic consequences, and contributions to economic development. Such policy documents offer a template for highlighting not only the contribution of HIV and health spending to health outcomes, but also the effects on economic growth, social equity and other development objectives.
- Benefit-cost analysis translates the health gains – as well as outcomes of other policies like education – into an economic value. In this form, the returns to investment in health and HIV can be compared with the returns on alternative non-health investments.

Choices between allocating resources to HIV, health and/or other sectors involve comparisons of outcomes that are different (e.g., outcomes regarding health, education, social equity, infrastructure or security). Policymakers have preferences across different types of outcomes, and they allocate funding accordingly. Common health economic approaches, such as estimating life years gained or the contribution to reducing child mortality, can be effective in a health context to standardise outcomes and inform policymakers on the most effective methods to improve the state of population health.

However, the focus on health outcomes may be ineffective when making decisions that cut across sectors, e.g., when the government is prioritising GDP growth as a precondition of broader gains, including in health. Positioning health and HIV policies as contributors to economic development – perhaps as described in the National Development Plan or other high-level policy documents – and in terms of their value for generating resources in addition to attaining health gains,

can make a more compelling case for funding. For example, the UNAIDS investment framework (Schwartländer et al., 2011) complements its advocacy for investments in the global HIV response and the focus on the most effective programme components with pointers to the “substantial economic gains [...] as people stay healthy and productive.”

The alternative to estimating various types of economic gains alongside health gains is to translate the health gains into an economic valuation. This way, the outcomes of investments in health and HIV can be measured against investments in education, infrastructure or any other policies geared towards achieving economic growth. The application of this approach – benefit-cost analysis – in global health has been described by Robinson et al. (2019a), and underlies estimates of gains from investments in health adopted by the Lancet Commission on Investing in Health (Jamison et al., 2013) and, specifically with regard to HIV, UNAIDS (2015), Lamontagne et al. (2019) and Forsythe et al. (2019).

Contribution of the HIV response and health to the national development agenda

The HIV/AIDS response contributes to national development objectives in numerous ways - most directly through improved health outcomes, but also through implications for social equity and the economic outlook, among other factors.

Funding decisions on HIV, health and across sectors reflect the government's policy objectives. To support effective funding decisions on HIV, or for advocacy, it is important to understand these policy objectives, and how HIV policies contribute to attaining them.

Policy documents such as National Development Plans (NDPs), which spell out these objectives, offer points of reference for defining the contributions of HIV policies in several ways:

- Do HIV policies and HIV-related targets appear in the NDP or similar documents directly, e.g., in the form of targets on treatment coverage, mortality or HIV incidence?

- Do HIV policies affect objectives spelled out in the NDP – not only health-related ones, but also social and economic outcomes? And how can HIV policies be designed to best contribute to the NDP's policy objectives, while serving immediate objectives such as "ending AIDS"?
- Does the NDP include objectives (e.g., improving access to education for girls) which also contribute to HIV policies?

At the same time, NDPs are also the outcome of a process of deliberation, and engagement on the role of health and HIV in the NDP helps position HIV as a development challenge.

Table 10.1: Contribution of HIV and health to national development agendas

Kenya Vision 2030 (2007)

- Central objective of transforming "country into a rapidly industrialising middle-income nation".
- HIV principal cause of divergence from peer countries in terms of health outcomes.
- Human resources critical in improving competitiveness, but focus on skills and education rather than health.
- Good health contributes to poverty reduction and economic growth.
- Aims to "improve access and equity in the availability of essential health care"; emphasis on preventive services as well as local delivery.

South Africa National Development Plan 2030 (2011)

- Emphasis on growing an inclusive economy and redressing inequities.
- "Health outcomes are shaped by factors largely outside the health system"; "good health is essential for a productive and fulfilling life".
- High-quality free or low-cost health care is a contributor to reducing cost of living for low-income households.
- HIV has had major impact on life expectancy, resulted in higher dependency rates and exacerbated existing discrepancies between population groups. Continuing challenge for at least another generation.

Zambia Seventh National Development Plan 2017-2021 (2017)

- "Guide towards Zambia's aspirations of being a developed middle-income nation". Focus on economic development.
- "Human development involves [...] freedoms to live long, healthy and creative lives", and contributes to employment and socio-economic growth.
- HIV recognised as key cross-cutting issue but addressed largely in line with other health challenges.
- HIV and lack of health cover as contributors to poverty and vulnerability.

Sources: GoK (2007); NPC (2011); MNDP (2017).

Most NDPs focus on economic growth and catching up with hitherto more successful countries (see Table 10.1 for a sample). The extent to which NDPs address economic inequalities differs. In this regard, South Africa's NDP is relatively explicit, with a focus on an inclusive economy and redressing past and current inequities. Health (and – in high-burden countries – HIV) appears directly in NDPs. For example, Kenya's "Vision 2030" benchmarks indicators such as child mortality or life expectancy against levels in middle-income peer countries which Kenya aspires to catch up with. The role of health as a contributor to economic growth is often recognised, sometimes in passing, as a constituent of human capital. Health objectives also mirror concerns on social equity overall, with an emphasis on improving access to high-quality health services and prioritising services which benefit the poor.

Consequently, NDPs or other high-level statements of national policy direction offer multiple points of intersection with health policy and the response to HIV/AIDS, and opportunities to widen policy engagement. These opportunities are reflected in some of the briefs in this series, including Briefs #3 to #7 (on the impacts of HIV on economic growth), Briefs #8 and #9 (on equity aspects of the impact of and response to HIV), and Brief #2 (on health outcomes). The method of informing budget allocations across sectors by reference to national development is an informal one that is highly context-specific and does not deliver clear-cut rankings across interventions. However, it relies on criteria which are explicitly endorsed by the government and other stakeholders, and it offers pointers for the design of HIV programmes which serve policy objectives beyond HIV-specific outcomes (e.g., on social equity) and thus strengthen political support.

Benefit-cost analysis and "full income"

Benefit-cost analysis transforms health gains into economic valuations, allowing comparisons between health gains and policy outcomes in other sectors based on their monetary equivalents.

Benefit-cost analysis (BCA) usefully complements engagement on budget allocations for health and other purposes based on projected health outcomes and their links to the government's policy agenda. Concrete expected health gains are powerful arguments for proposed budget allocations on health. BCA contributes in two ways. First, by transforming returns to health into an economic value, it allows direct comparison of the returns to investments in health with other types of investments. Second, BCA – like the human-capital approach (Brief #2) – emphasises and values that health gains, and in particular improved survival, yield economic benefits which extend over the lifetime of beneficiaries and are not captured well by the immediate effects of an intervention on economic activity (e.g., as captured by GDP growth).

In the sphere of HIV, BCA links to estimates of the direct health effects of a policy, as the estimated benefits are typically dominated by the estimated value of the health gains. In practice, BCA is closely linked to evaluations of cost-effectiveness in terms of achieving concrete health outcomes. While BCA draws on various sources for imputing valuations of health, effective policy support requires that valuations reflect the government's valuations of health outcomes.

At the core of this method is the "value of statistical life" (VSL). This value reflects an estimate of the valuation of health, typically obtained from estimates of the willingness to pay for

reductions in mortality or for improved health, derived from private spending data or policy decisions, or by comparing wages between employments that are characterised by different health risks but which are otherwise similar. Such estimates of the value or costs of a small change in mortality (and, less frequently, morbidity) are then normalised to yield the equivalent value of one life-year gained, or of one death averted. One extension to this approach that is sometimes used in policy analysis is the idea of "full income," adding the value of health gains to output gains from improved productivity or achieved by economic growth. This approach was pioneered by Nordhaus (2003), finding that health gains contributed about as much to improved living standards as economic growth. Bourguignon and Morrisson (2002), using a similar approach, emphasise the disproportionate role of health gains in less developed countries, which have contributed to reducing global inequity in living standards (measured by lifetime income).

Perhaps the greatest challenge in applying estimates of the VSL in low- and middle-income countries is the paucity of empirical evidence from those countries – almost all studies are from high-income countries and a few middle-income countries. Estimates of the VSL are therefore typically anchored by an estimate for high-income countries (typically in the range of 100 to 160 times GDP per capita, see Robinson et al., 2019b), combined with a parameter (the "elasticity") that determines how the VSL changes with income. For example, for an elasticity of 1, the VSL is proportional to income, while if the elasticity is 1.5, a 1-percent drop in income is associated with a decline in the VSL of 1.5 percent (for further discussion of these parameters and methods, see

Robinson et al., 2019b). Because of large differences in GDP per capita across countries, assumptions on elasticity have major implications for the valuation of the life gains in low-income countries. For example, if a VSL of 160 times GDP is assumed for the United States (with GDP per capita around US\$ 65,000, this implies a VSL of about US\$ 10 million) where there is considerable evidence on the VSL, then the VSL for a country with GDP per capita of US\$ 1,000 is US\$ 160,000 if an elasticity of 1 is applied, but only US\$ 20,000 when an elasticity of 1.5 is used in the extrapolation from the US value to the country with lower GDP per capita.

Estimates of the VSL and projected “full-income” gains have been used widely in advocating for increased spending on health or specifically for HIV. The Lancet Commission on Investing in Health stated that “there is an enormous payoff from investing in health” across low- and middle-income countries, including the contributions of health to economic growth (see Briefs #3 to #7) but predominantly reflecting the value of longer lives. Based on these two factors, the authors estimated that “over the period 2015–35 these benefits would exceed costs by a factor of about 9–20, making the investment highly attractive” (Jamison et al., 2013). UNAIDS (2015) argued that investing an additional US\$ 176 billion

in the global AIDS response would yield US\$ 2.6 trillion in benefits, exceeding costs by a factor of 14 (UNAIDS, 2015). A more recent UNAIDS-funded study estimated the value of reduced mortality at 6.4 times the costs (Lamontagne et al., 2019).

The magnitude of these estimates is significant from a macroeconomic perspective, when the contributions of changes in life expectancy are added to the contribution of economic growth to give “full income”. HIV has been a dominant driver of changes in full income since 1985 in high-prevalence countries, arguably more important than either growth of GDP per capita or gains in life expectancy from any other sources (Table 10.2). For example, in 1985–2000, living standards (as measured by full income) declined in Botswana, largely as a result of HIV and AIDS; the negative impact of HIV/AIDS offset nearly all gains in life expectancy from other sources in Malawi; and the adverse impacts of HIV were larger than the contributions from economic growth in Uganda. Conversely, the gains in life expectancy owing to the scaling-up of antiretroviral therapy accounted for most of the gains in “full income” in Botswana, and about one-half in Malawi and Uganda.

Table 10.2: Contributions to Full-Income Growth, 1985–2018

	Guyana	Botswana	Malawi	Uganda
1985–2000				
Growth of “full income”	3.0	-2.4	0.3	1.5
Growth of real GDP per capita	2.3	3.7	0.0	2.2
Contribution from life expectancy	0.6	-6.2	0.3	-0.8
of which: HIV/AIDS	-0.08	-7.5	-4.8	-3.2
2000–2018				
Growth of “full income”	3.1	9.1	8.3	5.9
Growth of real GDP per capita	2.6	2.2	1.8	2.5
Contribution from life expectancy	0.5	6.8	6.4	3.4
of which: HIV/AIDS	0.03	5.6	4.1	2.5
Memorandum items:				
HIV prevalence, ages 15–49 (2018)	1.5	20.3	9.2	5.8
Treatment coverage, % of PLHIV (2018)	67	85	79	73

Source: IMF (2019) for GDP per capita, UNAIDS (2019) for life expectancy. See Haacker (2016, chapter 4) for a discussion on methods.

Note: PLHIV = People living with HIV

For policy design, there are several potential insights from this and similar analyses. Do investments in HIV or in other health programmes improve living standards, as measured by “full income,” once the resource costs are taken into account, and in which ways? While “full income” provides a summary estimate of the gains, the composition is also important – output gains can be used more concretely for refinancing

the costs of a policy. And it is also important to bear in mind that the bulk of “full-income” gains from investments in health often comes from increased life expectancy. In this sense, and other than gains in GDP per capita, “full-income” gains are not additional to health gains, but represent a specific economic perspective on health gains.

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