POLICY BRIEFS ON

ECONOMIC IMPACT OF HIV

SUMMARY BRIEF #3

HIV: A HEALTH-SECTOR PERSPECTIVE

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This summary brief forms part of a body of work on the Economics of HIV, funded by the Bill & Melinda Gates Foundation (INV-002382). All materials, including two other summary briefs and 17 more detailed policy briefs, can be accessed on https://hivecon.co.za. The authors acknowledge the comments of participants of a webinar in March 2022 on a previous version of this brief and the excellent work of James Baer, Carla Hauptfleisch, and Michael Obst. The findings and conclusions contained within this brief are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation or of the institutions the authors represent.

Recommended citation:

Markus Haacker, Kate L Harris, Tumwebaze L, Gesine Meyer-Rath HIV: A health sector perspective. Summary brief #3 of series "Economic Impact of HIV". Johannesburg, June 2022.

SUMMARY BRIEF **#3**

HIV: A HEALTH-SECTOR PERSPECTIVE

HIV has contributed to the strengthening of health systems overall, and the integration of HIV and other health services has improved the efficiency of both services and helped with managing HIV as a chronic disease. Private-sector providers appear roughly as effective in providing HIV-related services as public services, although they disproportionately serve wealthier populations. Public-private partnerships have played a role especially in capacity-building and technology transfer. Cost-effectiveness analysis can assist in health decision-making, including quantifying trade-offs between HIV and other health interventions, although its use in optimising allocative efficiency is limited by implementation and equity considerations.

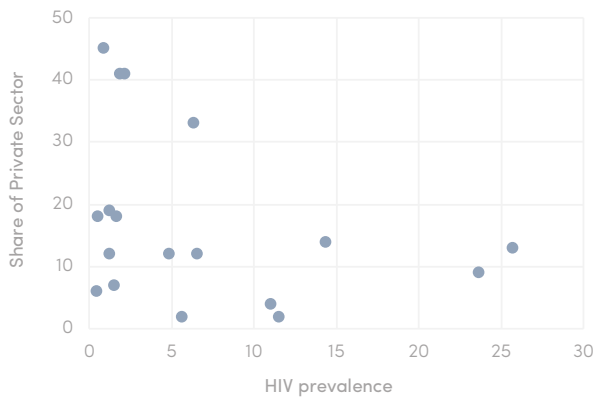
HIV services: Integration, synergies, and public vs private provision

Over the last three decades, HIV services have seen a drastic increase in funding, but this has in turn also helped fund other health services. This is particularly true where HIV services have been integrated into services such as primary healthcare, family planning and other sexual and reproductive health services, and TB services. Integration makes sense for two main reasons: HIV services share target populations both with services geared at sexually active clients, such as family planning and other sexual and reproductive health services, and with non-communicable chronic diseases, given that HIV has become a chronic disease requiring lifelong management. In contrast to the early years of the HIV response, when HIV services were often offered in specialised HIV testing and treatment clinics, they are now also often rendered by the same staff cadres as general primary healthcare services. This integration allows for the provision of more services using the same inputs (economies of scope), which can lower the combined cost of both HIV and non-HIV services.

In the early years of the HIV response, services were often pioneered and funded by private-sector providers (for-profit, not-for-profit and informal providers). They still play a role in particular in lower-prevalence settings (Fig. 1) (Policy brief #15) and in serving populations such as urban working-age men who prefer services that are open outside traditional clinic working hours.

Empirical evidence regarding the role of private-sector service provision is hampered by the great heterogeneity of private health providers. Overall, private-sector providers appear roughly as effective in providing HIV-related services as public services (Basu et al., 2012; Long et al., 2020).

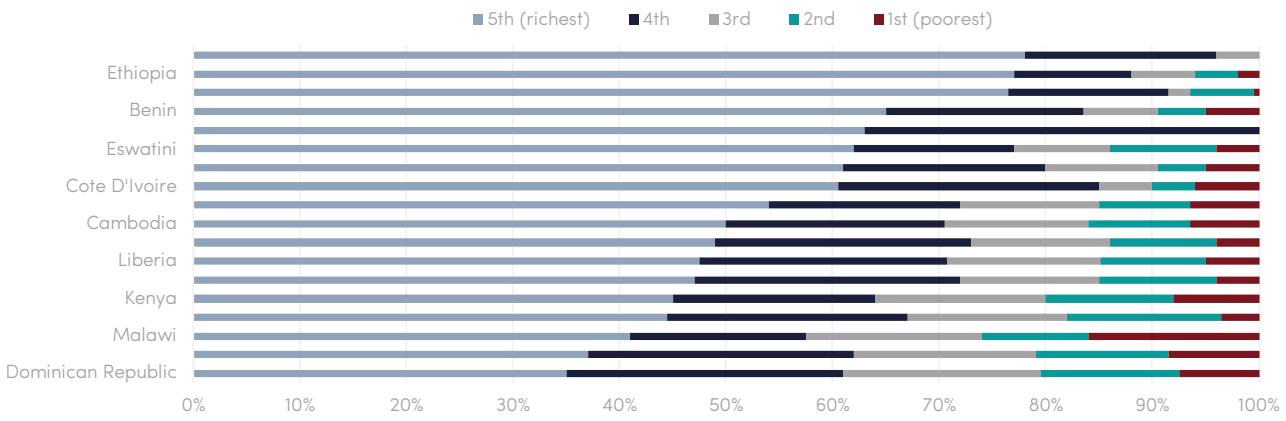
Figure 1: HIV prevalence and private sector share in HIV testing (percent)



Source: Johnson & Cheng (2014).

Additionally, private-sector entities (often non-governmental and civil-society organisations) have been instrumental in extending access to HIV services to key populations, e.g., HIV prevention and support services for sex workers or men who have sex with men, or harm reduction programmes for people who inject drugs. In these cases, non-state organisations complement public HIV services and are considered effective in overcoming barriers related to stigma and criminalisation, and in improving outcomes through peer education and support (Macdonald et al., 2019; Atuhaire et al., 2021) (Policy brief #15). On the other hand, the reach of private providers is often limited because they do not have access to the cheapest drugs (Summary Brief #2) or the most recent diagnostic innovations, and for-profit private health services disproportionately serve wealthier populations (Fig. 2).

Figure 2: Users of private health services by wealth quintile



Source: Johnson & Cheng (2014).

Looking ahead, the roles of private- vs public-sector provision are likely to shift where vertical HIV programmes (dominated by the public sector and various non-profit providers) are integrated into health systems in which private providers play a larger role, for two reasons. First, models of differentiated care offer opportunities to shift some tasks from dedicated providers of HIV services to general providers – including community health workers, but also any private-sector facilities. Second, the lower costs of antiretroviral therapy (ART), reduced HIV incidence and simplified delivery of ART have lowered the bar for including ART in medical-benefit plans offered by private providers and delivered through private facilities. Thus, there is an argument for increased provision of HIV-related services through private providers for patients paying privately (typically through private insurance) for higher-quality packages of care. This might in turn increase inequity in service access, unless it is part of an overall integration of public and private healthcare sectors under universal health coverage (UHC), which can be seen as a method for "harnessing" the private sector's potential for both HIV and other health services (#15).

Making choices between HIV interventions

Investments in the public HIV response involve choices between funding HIV or other objectives, and choices regarding which HIV interventions to fund, from what source, for which population and where. When deciding between HIV and other health objectives, as well as among different HIV interventions, it is helpful to be able to compare the outcomes of different options using a common metric. For this, planners often use some measure of survival and/or quality of life gained per unit of budget spent as a benchmark for identifying the most cost-effective interventions. The most common criteria are the loss of life years as a consequence of a disease (or gain as a result of an intervention), and the health impairment caused by the disease. These criteria are often summarised in the form of disability-adjusted life years (DALYs) or quality-adjusted life years (QALYs) (Policy brief #13). While QALYs assign weights to distinct health states, drawing on patient or population preferences elicited through large-scale surveys, DALYs measure losses in healthy life compared to an ideal state of health, and the disability weights included in DALYs were originally based on surveys of experts but have since been put on a more robust footing (Salomon et al., 2015).

Sometimes, thresholds are used to simplify the question of what is worth funding (Policy brief #13). Such thresholds can be derived from economic criteria – do the health and economic gains expected from the proposed intervention outweigh the costs? – or from the budget context – is there a threshold that divides interventions which are typically funded and those which are not? The first approach, often using income-based categories to delimit interventions worth investing in, offers little guidance on prioritisation, especially in low- and middle-income countries where recommendations based on generic thresholds often exceed available budgets (Griffiths, Legood, Pitt, 2016; Ochalek and others, 2018). The second approach allows the interpretation of findings regarding cost-effectiveness in light of the country-specific economic, fiscal, political and health context (Marseille et al., 2014; Bertram et al., 2016; Leech et al., 2018).

At high levels of HIV prevalence and HIV service coverage, cost-effectiveness can be used to identify the best use of existing HIV budgets across interventions, populations, space and time, using allocative efficiency models (Policy brief #16). The usefulness of these models is limited by implementation, fiscal space and affordability, and considerations beyond cost and effectiveness such as equitable coverage as well as the availability of data in particular for those additional considerations (Policy brief #16). The table below gives an overview of which methods might be most useful for which type of decision problem.

Even though it is tempting to think that adding more-specific optimisations to try to target interventions to specific regions, population groups or time periods, these analyses are hampered by inadequate availability of data, the lack of implementability and by the fungibility of budgets, which means that overreliance on imperfect data might be net harmful to the HIV response (Policy brief #16).

Type of analysis	Results	Setting	Data needs
a) Types of economic evaluation			
Cost analysis	Cost of intervention(s)	Any	Average cost of intervention, target population and target coverage
Cost-minimisation analysis	Cost of interventions with identical outcomes	Any	
Cost-effectiveness analysis	Cost and impact (survival/ incidence etc.)	Any	As above plus impact of intervention on survival/incidence etc.
Cost-utility analysis	Cost and impact (survival/ incidence plus quality of life/levels of disability)	Any	As above plus impact on quality of life/ levels of disability
Cost-benefit analysis	Comparison of costs and (economic and health) benefits	Any	As for cost-effectiveness analysis, plus data on the economic valuation of health outcomes, and economic and fiscal data on costs and consequences supporting a societal perspective.
Multi-criteria decision analysis	Information on how interventions perform towards additional criteria (such as equitable coverage or international targets)	Any HIV prevalence or service coverage	Identification of additional criteria, decision-makers' preferences between these criteria, and each intervention's performance under these
Extended cost-effectiveness analysis	Joint consideration of health and financial consequences	Any HIV prevalence or service coverage, in particular settings with relevant out-of-pocket spending	Data on financial risk protection and distributional consequences of interventions
b) Allocative optimisation methods			
Geospatial optimisation	Information on which regions to target which interventions to	High HIV prevalence, high service coverage	Population size, prevalence, incidence, service coverage and by region, average intervention cost and available budget
Sub-population optimisation	Information on which populations to target which interventions to	High HIV prevalence, high (average) service coverage	Population size, prevalence, incidence, service coverage by population group, average intervention cost and available budget
Temporal optimisation	Information on whether intervention coverage should be changed over time	High HIV prevalence, high service coverage	Population size, prevalence, incidence, service coverage by population group, average intervention cost, available budget by year
Optimisation under other constraints (e.g., health system capacity)	Information on how to best use limited capacity and other constraints (+/- limited budgets)	Settings with relevant health-system constraints	All of above as well as identification and quantification of relevant constraints (e.g., available healthcare staff)

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