STRIVE
Tackling the structural drivers of HIV

IMPACT CASE STUDY

Co-financing: Costing structural interventions in the South African investment case

Author: Michelle Remme, Annie Holmes, Gesine Meyer-Rath

What is the issue?

The UNAIDS HIV strategic investment framework[1] of 2011 categorised structural interventions among social and programme enablers – important, even critical, but additional to "basic" programme activities, those that contribute to HIV related outcomes. Since that point in the epidemic, it has become even more clear that the promise of biomedical prevention can only be fulfilled if we overcome the structural barriers hampering uptake and adherence, particularly by the most vulnerable populations.[2] However, established frameworks for modelling HIV outcomes and cost-effectiveness continue to apply cost effectiveness criteria related to single outcomes. On the basis of HIV endpoints alone, structural programmes – for example, to keep girls in school or empower sex workers to use condoms – may not be cost effective.

Summary

The HIV field has, by and large, acknowledged the necessity of addressing the structural barriers to effective HIV prevention and treatment. The question remains, however: how to pay for these efforts?

Examining synergies between the structural drivers of HIV and broader health and development goals, STRIVE researchers developed a co-financing mechanism to assess the cost-effectiveness of interventions that generate benefits across several sectors, and dividing the costs accordingly.

The Health Economics and Epidemiology Research Office (HE²RO) at the University of the Witwatersrand – commissioned to lead the modelling and costing of the South African HIV Investment Case – took up the co-financing approach and applied it in their modelling. Subsequently, the country's National Strategic Plan (NSP) included exploring cross-department co-financing as an innovative financing strategy.

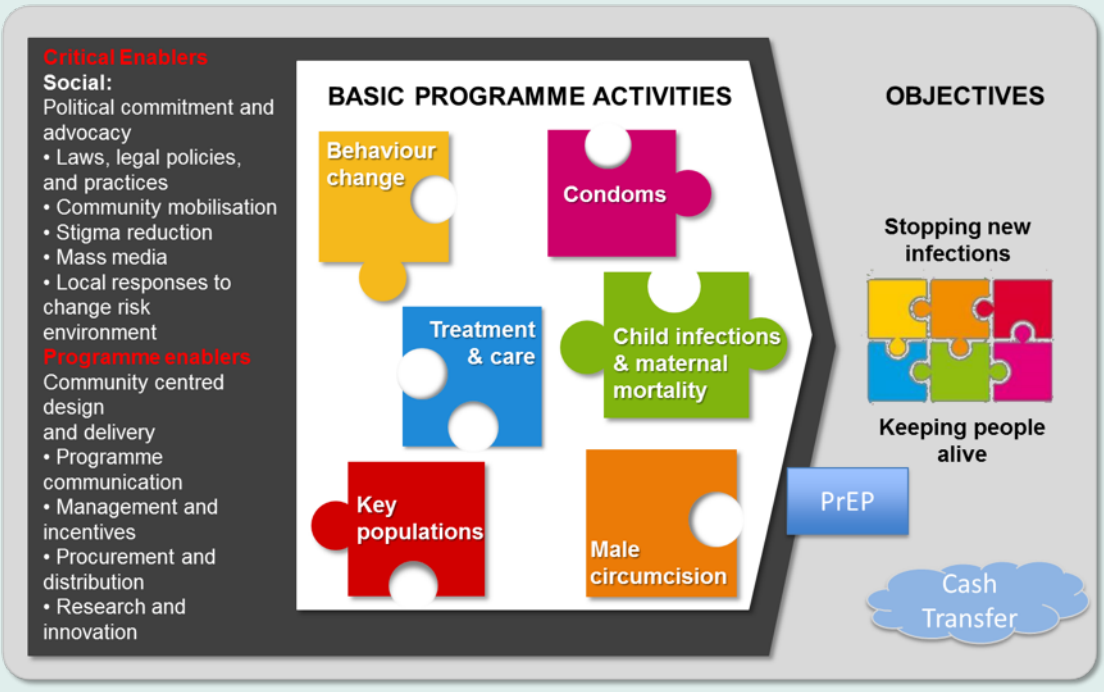


Figure 1: The UNAIDS HIV strategic investment framework to increase resource allocation

What did STRIVE research contribute?

Confronting this core challenge – how to pay for structural interventions – STRIVE researchers and health economists developed a new analytic approach with a mechanism to share financing between sectors for interventions that yield multiple benefits. We refer to this approach as the co-financing model. (It is defined and explained in the journal publications in the table.)

Analysing findings from a study in Zomba, Malawi (Figure 2), STRIVE focused on the multiple benefits that the intervention achieved: cash transfers to keep girls in school reduced HIV by 64%, but also reduced school dropout, teen pregnancy, early marriage and HSV2 risk.[3] Such a programme, they argued, could be prioritised and funded if each sector paid a proportion of the costs commensurate with the benefit it derives – for instance, co-financing by education, sexual and reproductive health and maternal and child health programmes, for instance, as well as the HIV programme.

How did STRIVE research achieve impact?

The co-financing mechanism proposed a timely and innovative answer to a problem – how to fund structural interventions – that continues to be pressing for the STRIVE project, the HIV field and the implementation of the SDGs.

Early publications on the approach sparked interest in the field, paving the way towards conceptual credibility. For instance, Remme et al (2014) Financing structural interventions: going beyond HIV-only value for money assessments was:

- cited by several experts in the field of social protection and food security
- cited in several UN documents to help make the case for greater cross-sectoral investment
- incorporated into public health M.Sc. courses at LSHTM and the University of California, Berkley's School of Public Health

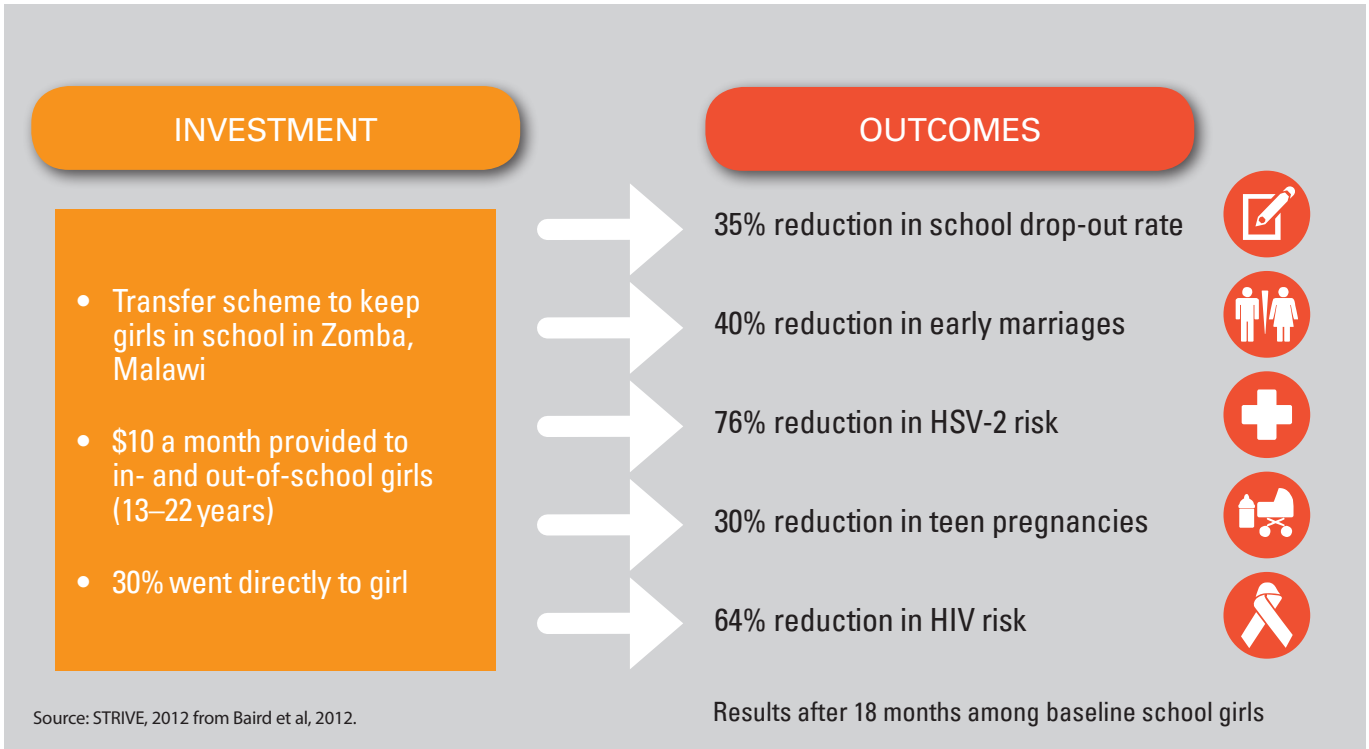
STRIVE was invited to present the co-financing model on an increasing number and range of influential platforms, many of which spanned theory and practice (see Table 1 for examples). The experience, reputation and networks of lead researchers were contributory factors here.

Impact

Among many other colleagues reading and reviewing STRIVE's co-financing model were those from the Health Economics and Epidemiology Research Office (HE^{2}RO) at the University of the Witwatersrand and Boston University. The approach and thinking in STRIVE's model contributed in part to HE2RO's innovative work in developing South Africa's HIV investment case in 2014-2016.

Tasked by the South African Department of Health and the South African National AIDS Commission (SANAC) to develop the country's investment case for HIV, and funded in part by UNAIDS and USAID, a team of HE^{2}RO analysts collected cost data, reviewed effectiveness data and added novel optimisation methodology to turn the Thembisa transmission model into an economic optimisation model.

Figure 2: Multiple outcomes of the Zomba cash transfer to keep girls in school



Source: STRIVE, 2012 from Baird et al, 2012.

Table 1: Presentations on influential platforms

2014–15	Two high-level meetings on structural drivers and HIV co-sponsored by the World Bank, UNICEF, UNDP, and Housing Works, in Washington, DC.
2015–16	■ International Health Economics Association World Congress: cost and value of programming to prevent gender-based violence ■ TB Modelling and Analysis Consortium (TB-MAC): co-financing for socio-economic interventions ■ UNAIDS/World Bank Economic Reference Group's Sustainable Financing Technical Working Group: presentation on domestic financing and fiscal space ■ UNICEF Innocenti workshop on Social Protection Plus for Adolescents: add-on to cash transfers for broader health and education benefits ■ Inter-Agency Task Team on Social Protection, Care and Support Meeting (UNICEF/UNAIDS/World Bank): co-financing for development synergies ■ UNDP expert meeting: Reducing Gender-based Violence to Achieve the Sustainable Development Goals
2016–17	■ International AIDS Economics Network conference: realising synergies; fiscal space for HIV from domestic financing in 14 sub-Saharan African countries; potential efficiency gains from health systems and food security investments. ■ STRIVE expert consultation: Incorporating Structural Interventions in Country HIV Programme Planning and Resource Allocation ■ International Assessment Committee panel on innovative financing, 2016 ■ American Society of Tropical Medicine and Hygiene (ASTMH) 2017 conference, Wilton Park
2018–19	■ Training course with UNDP in South Africa, 2018 ■ UN Women and United Nations University (UNU) expert meeting on financing gender equality for HIV response

Starting with a stakeholder workshop, they invited submissions of effective interventions to be included in the model– including on structural enablers and development synergies – from NGOs, researchers and implementers (including STRIVE colleagues Sinéad Delany-Moretlwe and Anne Stangl). They then reviewed the submitted evidence on the effectiveness of these interventions, and their costs. In their investment case modelling, they assumed that these social enabler interventions would be co-financed by the Health Department together with other departments in the social sector, mirroring current practice in South Africa for those interventions already implemented. Given that they would only be partly paid by the HIV budget, their cost-effectiveness from the perspective of the Health Department increased. (At an expert consultation convened in December 2016 by STRIVE and the HIV Modelling Consortium with support from the Global Fund to Fight AIDS, Tuberculosis and Malaria, Dr Gesine Meyer-Rath described these steps in more technical terms and detail.[4])

Dr Meyer-Rath reflected in 2019, with her colleague Lise Jamieson, on the impact of STRIVE's co-financing model on HE²RO's much-lauded work on the South African investment case:

> "It did improve cost effectiveness of these enablers to split costs across departments. Michelle (Remme)'s papers led the way in this."
>
> GISINE MEYER-RATH

Four key messages emerged from HE²RO's perspective, from the process of costing and modelling structural interventions for potential inclusion in the investment case.

1. A great many analysts said, "there is no evidence" on structural interventions and social enablers, but we found lots.

2. We however did not find a lot of evidence of effectiveness – for example, of cash transfers – on HIV endpoints, including HIV incidence, mortality, sexual behaviour, or uptake of HIV services. More trials might be needed.

3. Cost effectiveness of enablers was improved by assumptions about splitting costs between HIV and non-HIV budgets, and between health and non-health budgets.

4. Despite this, very few enablers were able to compete with medical or behavioural interventions (such as mass media social and behaviour change communication interventions) in terms of cost effectiveness against HIV endpoints. Most enablers for which we found evidence for HIV endpoints that we could model had cost effectiveness one or two orders of magnitude worse (ie, $10,000-100,000 per life year saved) than those interventions, and would not be a good use of South Africa's limited HIV budget.

In conclusion, they referred to the historical over-dependence on HIV funding of many health ministries in low and middle income countries, as for some years this was the only fresh development funding available. This is no longer the case – quite the reverse.

> "The truth is that in South Africa it's clear that we need all these things [biomedical, behavioural and structural interventions] at the same time, and available to everyone. We need all the interventions and probably all enablers if we are to get to 90–90–90. But we also need to have conversations about how much more we are ready to spend on interventions that will not, or only marginally, affect HIV endpoints – and from which budget."
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> GISINE MEYER-RATH

REFERENCES

1. Schwartlander B, Stover J, Hallett T, Atun R, Avila C, Gouws E, et al. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet. 2011;377(9782):2031-41.
2. For instance: "Structural factors are increasingly recognised as key to the AIDS response." Page 180 in Piot, P. et al (2015), Defeating AIDS—advancing global health, The UNAIDS and Lancet Commission, Lancet, Volume 386, Issue 9989, 11–17 July 2015, Pages 171-218
3. Remme M., Siapka M., Vassall A., Heise L., Jacobi J., Ahumada C., Gay J., Watts C. (2014), The cost and cost-effectiveness of gender-responsive interventions for HIV: a systematic review, *Journal of the International AIDS Society*, http://www.jiasociety.org/index.php/jias/article/view/19228 and Remme M., Vassall A., Lutz B., Luna J., Watts C. (2014), Financing structural interventions: going beyond HIV-only value for money assessments, *AIDS*, http://journals.lww.com/aidsonline/Abstract/publishahead/Financing_structural_interventions___going_beyond.98482.aspx
4. Holly Prudden. "Incorporating Structural Interventions in Country HIV Programme Planning and Resource Allocation: Report from an expert consultation convened by STRIVE and the HIV Modelling Consortium with support from the Global Fund to Fight AIDS, Tuberculosis and Malaria. 12 and 13 December 2016." London School of Hygiene & Tropical Medicine, 2017. http://strive.lshtm.ac.uk/resources/incorporating-structural-interventions-country-hiv-programme-planning-and-resource

JOURNAL PUBLICATIONS

- Remme M., Vassall A., Watts C., Lutz B. (2012), Paying girls to stay in school: a good return on HIV investment? The Lancet http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2812%2960944-1/fulltext
- Vassall A., Remme M., Watts C. et al. (2013), Financing Essential HIV Services: A New Economic Agenda, PLOS Medicine http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001567
- Remme M., Vassall A., Lutz B., Luna J., Watts C. (2014), Financing structural interventions: going beyond HIV-only value for money assessments, AIDS http://journals.lww.com/aidsonline/Abstract/publishahead/Financing_structural_interventions___going_beyond.98482.aspx
- Michelle Remme, Charlotte Watts, Lori Heise, Anna Vassall (2015), Secondary schooling might be as good an HIV investment as male circumcision, The Lancet Global Health http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(15)00167-9/abstract
- Michelle Remme, Mariana Siapka, Olivier Sterck, Mthuli Ncube, Charlotte Watts, Anna Vassall (2016), Financing the HIV response in sub-Saharan Africa from domestic sources: Moving beyond a normative approach, Social Science and Medicine https://www.ncbi.nlm.nih.gov/pubmed/27693973
- Michelle Remme, Melisa Martinez-Alvarez, Anna Vassall (2017), Cost-Effectiveness Thresholds in Global Health: Taking a Multisectoral Perspective, Value in Health http://www.sciencedirect.com/science/article/pii/S1098301516341171
- Michelle Remme, Finn McGuire; Teresa Guthrie, Pallavi Yagnik, Roy Small; Douglas Webb, Steven Arquitt: (2019) Financing across sectors for sustainable development: Guidance Note; UNDP and STRIVE https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/financing-across-sectors-for-sustainable-development.html

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STRIVE research consortium

A DFID-funded research programme consortium, STRIVE is led by the London School of Hygiene & Tropical Medicine, with six key research partners in Tanzania, South Africa, India and the USA. STRIVE provides new insights and evidence into how different structural factors – including gender inequality and violence, poor livelihood options, stigma, and problematic alcohol use – influence HIV vulnerability and undermine the effectiveness of the HIV response.