

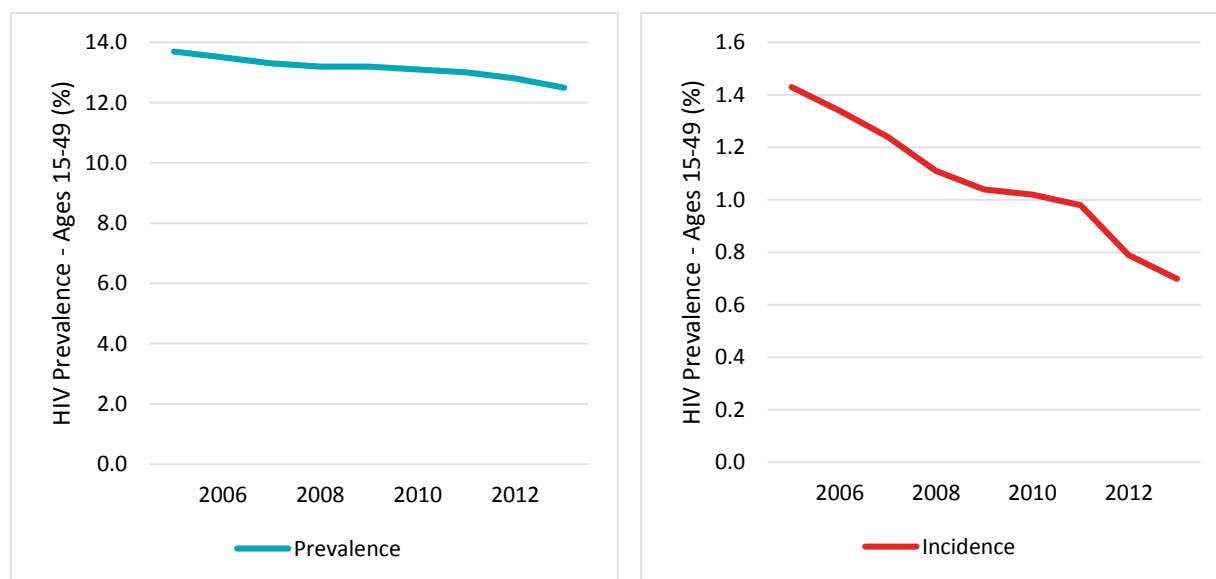
## Zambia Costing and Efficiency Brief

### Meeting of the ERG Technical Working Group on HIV Costing & Technical Efficiency Seattle, November 6-7

#### Background

Zambia has one of the most severe HIV epidemics in the world, with 12.5% adult prevalence and 1.1 million people living with HIV (PLHIV)<sup>1</sup>. However, significant progress has been made in combatting the epidemic in recent years. A 2013 review of Zambia's 2011-15 National AIDS Strategic Framework (NASF) showed that the rate of mother-to-child transmission (MTCT) has decreased from 24% in 2009 to 12% in 2013<sup>2</sup>, and incidence has dropped from 1.6% in 2009 to 0.8% in 2012<sup>1</sup>. Prevalence has also steadily decreased in Zambia, from 15.3% in 2000. Figure 1 shows recent trends in incidence and prevalence.

**Figure 1: HIV Adult Prevalence and Incidence Trends in Zambia, 2005-2013**



Source: UNAIDS aidsinfoonline database

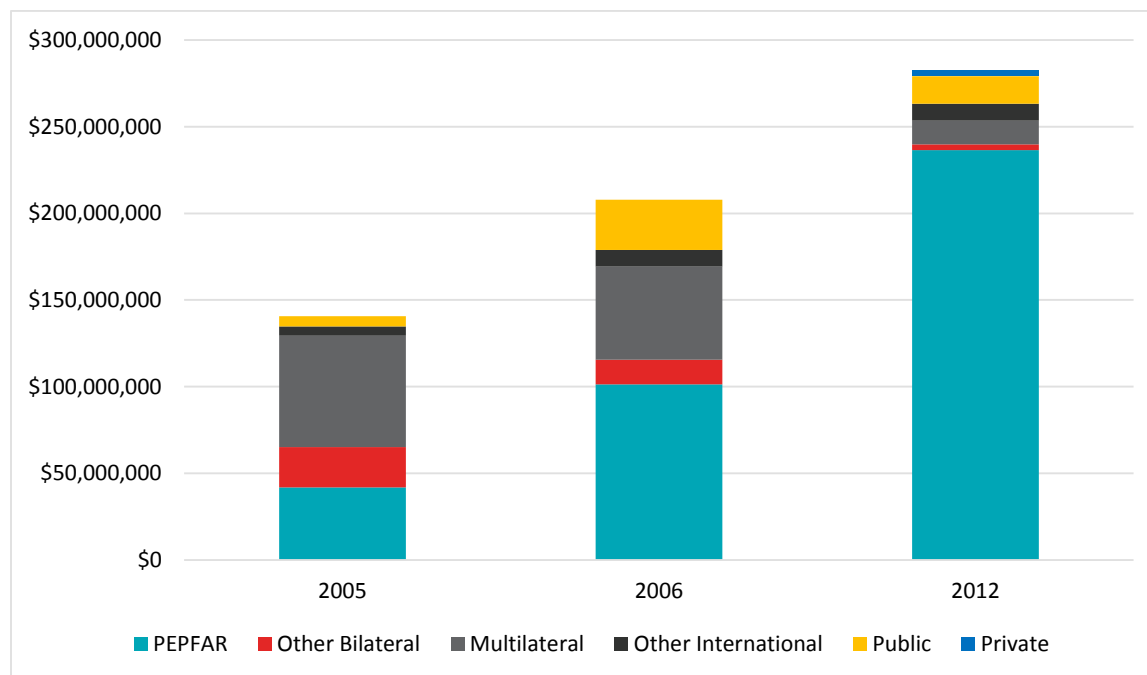
Zambia's 2014 National AIDS Spending Assessment (NASA) shows that funding has also increased, from \$208 million in 2006, the latest result from previous spending assessments, to \$282 million in 2012<sup>3</sup>. This increase is almost entirely due to PEPFAR, while funding from public sources, other bilaterals, and multilaterals has decreased since 2006. These funding trends are shown in Figure 2.

<sup>1</sup> UNAIDS aidsinfoonline database

<sup>2</sup> <http://blog.nastad.org/2014/01/nastad-helps-strengthen-zambias-national-hiv-aids-strategic-framework/>

<sup>3</sup> Zambia National AIDS Spending Assessment, 2014

**Figure 2: Total Spending on HIV and AIDS in Zambia, 2005-06 and 2012**



Source: Zambia 2014 National AIDS Spending Assessment

### Ongoing Costing and Efficiency Data Needs

The NASF review recommended that the current NASF be revised, in line with a changing HIV funding environment, programmatic achievements, and the observation that particular areas could benefit from additional funding and expansion, including treatment and prevention service provision as well as program coordination at multiple levels. In particular, the review found that a shortage of trained human resources and a fragmented approach were major obstacles to prevention efforts, while obstacles to successful treatment programs included a shortage of HIV Testing and Counselling (HTC) facilities for TB patients, a limited number of health centers providing ART in rural areas, shortages of ARV drugs, and policies preventing nurses from prescribing drugs.

In addition to revising its NASF, Zambia is also developing an Investment Case for HIV for its next Global Fund application.

### Ongoing Costing and Efficiency Studies

At the same time that Zambia is conducting revisions to its NASF, a number of costing and technical efficiency studies are ongoing or have recently been completed in Zambia. The results of these studies will fill outstanding costing and technical efficiency data gaps and will help the

government of Zambia with the ongoing revisions of its NASF as well as the preparation of its HIV Investment Case submission to the Global Fund. These studies are described in more detail in the table below.

**Table 1: Ongoing and Recently Completed Costing and Technical Efficiency Studies in Zambia**

<b>National HIV Program Efficiency Study</b>	
<b>Organizations</b>	The World Bank, Mexican National Institute of Public Health, Zambian National AIDS Control Council, Zambian Ministry of Health, CDC, CHAI, UNAIDS, United Nations Joint Team
<b>Summary</b>	The National HIV Program Efficiency Study in Zambia seeks to answer the question “How can the Government of Zambia deliver the national HIV program and selected HIV services most efficiently?” This study was specifically designed to inform the NASF review and will make recommendations on areas for efficiency improvement at multiple levels (service provider, district, provincial, national). It will do this by examining multiple HIV service delivery models and investigating how implementation processes could be streamlined under each, how the models could be better geographically and epidemiologically targeted, variation in quality and how quality could be improved under each model, and how much each model costs (and how that cost could be lowered). Results of the study will be presented to the Government of Zambia in December.
<b>ORPHEA: Optimizing the Response to Prevention: HIV Efficiency in Africa</b>	
<b>Organizations</b>	Mexican National Institute of Public Health, CISIDAT, UNAIDS, the World Bank, BMGF, PEPFAR
<b>Summary</b>	ORPHEA analyzes the technical efficiency of three HIV prevention interventions (HTC, PMTCT, and MMC) in Zambia, Kenya, Rwanda, and South Africa. The goal of ORPHEA is to address knowledge gaps stemming from limited evidence on the efficiency of HIV prevention interventions. The study estimates total and average costs per output and levels and determinants of efficiency, which will enable recommendations to be drawn to develop management interventions and/or regulation or incentive mechanisms. Some results have been presented to the Government of Zambia, a working group of Zambian stakeholders, and at the 2014 AIDS Conference in Melbourne. The authors are now in the process of finalizing the report.

<b>ABCE Project: Access, Bottlenecks, Costs, and Equity</b>	
<b>Organizations</b>	IHME, BMGF, Country partners
<b>Summary</b>	The ABCE study aims to broaden the evidence base for improving the cost-effectiveness and equity of treatment and facility-based prevention for HIV, as well as other non-HIV health interventions, in Zambia and three other countries. ABCE collects facility-level data on expenditure, outputs, personnel, and more, with a focus on four components that contribute to optimal service delivery: access, bottlenecks, cost, and equity. Findings will support country decision-making to achieve improved and more equitable outcomes. Some results have been presented in-country, and a report is currently being finalized. Eventually, four to six papers will be published for each country.
<b>MATCH: Multi-Country Analysis of Treatment Costs for HIV/AIDS</b>	
<b>Organizations</b>	CHAI, BMGF, CGD, CDC/USAID, Country partners
<b>Summary</b>	Using a top-down approach, MATCH seeks to generate unit costs for ART at the facility level in Zambia, Ethiopia, Malawi, Rwanda, and South Africa. The study will also examine drivers of cost variation and patient outcomes and assess lessons learned from these drivers to improve the efficiency of AIDS treatment. Preliminary results from MATCH are available, and additional data collection will be occurring in additional facilities. An important preliminary finding is that the cost of treatment in Zambia and other low- and lower-middle-income countries is already lower than previously thought, meaning that savings opportunities are limited and efforts to generate savings should focus on optimization efforts of non-facility treatment and other program costs.
<b>Costs and Outcomes of HIV/AIDS Treatment and PMTCT in Zambia</b>	
<b>Organizations</b>	Boston University, CDC
<b>Summary</b>	Boston University has a number of ongoing or recently completed studies on HIV costing and cost-effectiveness in Zambia. The “Costs and Outcomes” study measured the economic implications of the switch from D4T to TDF and re-costed three sites previously costed in 2006 for D4T with TDF costing. Analysis of pediatric treatment sites and consequences of other guideline changes are ongoing. Work is also beginning on the cost-effectiveness of alternative drug regimens and delivery approaches for PMTCT. In addition to this study, other ongoing Boston University studies in Zambia are analyzing retention in care; resource utilization and costs for adults receiving ART; uptakes, outcomes, and costs of antenatal, well-baby, and PMTCT services; outcomes and outpatients costs of pediatric ART; and outcomes and outpatients costs of different models of AIDS treatment delivery.

Health Policy Initiative Costing Task Order Studies	
<b>Organizations</b>	Futures Institute, Futures Group, USAID
<b>Summary</b>	Various costing studies conducted in Zambia and seven other countries were completed in 2013. Two studies were completed in Zambia: one on the incremental costs of providing pediatric ART and the other on the incremental costs of providing key PMTCT services. The studies were intended to provide information on the resource needs of meeting Zambia's targets of universal access to ART by 2015 and full coverage of PMTCT services by 2015. Results include unit costs, broken down by components, for all PMTCT facilities, PMTCT/Pediatric ART facilities, and PMTCT-only facilities, and for pediatric ART services in hospitals, rural health centers, urban health centers, and overall. Final reports are available on the HPI Costing Task Order website.
Safe Love Campaign Cost Effectiveness Analysis	
<b>Organizations</b>	USAID, Chemonics, ICF, Manoff
<b>Summary</b>	The Zambia Safe Love campaign targets three domains of behavior change: increasing condom use, decreasing multiple concurrent partnerships, and increasing voluntary male circumcision. This study will assess financial costs of Safe Love campaign (both start-up and ongoing) and evaluate the cost-effectiveness, measured in terms of the cost per HIV infection averted and cost per life-year saved. The study is currently ongoing, and is slated to complete in December 2014, with results to follow.

## Related Efforts

In addition to these ongoing costing and technical efficiency studies, the Bill and Melinda Gates Foundation is funding a resource mapping project in Zambia that is designed to assist the Government of Zambia in decision-making by adding information on resource flows to the expanding costing and technical efficiency evidence base. A detailed resource mapping exercise that can be institutionalized as part of the Government's routine planning and budgeting processes has been identified as a key component to increasing efficiency of HIV resources in the country. The goals of the mapping exercise are for it to provide the Zambian Ministry of Health with "evidence to guide annual HIV planning decisions, resource allocation, funding applications, and negotiations with partners and stakeholders". Multiple resource tracking tools are being reviewed for their fit within the Zambian context and the needs of this project. Following the identification and adaptation (or development) of a resource mapping tool, partners will work with the Government to set up systems for the resource mapping tool and eventually build a team within the Ministry of Health to lead the resource mapping work. Another key objective of the project is to review previous and ongoing HIV costing and expenditure analyses, in order to incorporate findings into the resource mapping work and resulting decision-making processes.

## **Conclusion**

An abundance of data points, findings, and recommendations are being supplied by various partners from costing and technical efficiency studies in Zambia. At the same time, this type of information is in demand for a number of ongoing processes, including the revision of the NASF, the development of the Investment Case, and the decision-making activities resulting from the resource mapping work. Many of the studies involve government participation and presentations to the government and in-country stakeholders, and many actors providing information in this space are working with each other across multiple projects. Going forward, it will be important to continue to ensure that analyses are matched with needs identified by the government, and that results are being synthesized in a systematic way for use in actual decision-making.