The U.S. President's Emergency Plan for AIDS Relief

Report on Pilot Expenditure Analysis of PEPFAR Programs in Six Countries

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Version 260712

Foreward

PEPFAR programs have resulted in millions of lives saved and wide-ranging economic, workforce, societal and national security benefits. I believe all of these have been important to the program's continued strong bipartisan support in Congress, and from Presidents Bush and Obama.

The global economic crisis has forced all partners to do more to meet unmet needs with finite resources. In recent years PEPFAR has intensified its efforts to implement an evidence-based program, in the most efficient way possible. Those efforts led to PEPFAR's Impact and Efficiency Acceleration Plan, which includes improving the collection and use of economic and financial data, increasing the efficiency of HIV/AIDS program implementation, and collaborating with governments and multilateral organizations to maximize the impact of the resources provided by the United States.

PEPFAR is not a static organization. Our programs adapt and respond to changes in the epidemic in order to maximize impact. To have an efficient response, we need timely economic information about our programs. In order to have an effective response, we need to continually evaluate our programs and allocate resources where they have the most impact. We will do this through greater transparency, rigorous independent evaluation, and a continued unrelenting focus on results. We will use every tool at our disposal to improve the quality of services delivered, achieve greater efficiencies, accelerate innovation, and fully leverage the resources of other funders and programs. Expenditure Analysis is such a tool; we have pioneered to make our programs more efficient, impactful and accountable.

I am pleased to share this report of the pilot of the PEPFAR Expenditure Analysis Initiative that illustrates how this information will inform our programs to stretch each dollar through smart investments. However, PEPFAR is only one piece of the puzzle. If we truly want to maximize impact and find efficiency, we need to and will work with partner governments and other multilateral and bilateral external development partners to generate a full picture of the resources supporting national HIV responses. As the global community comes together to use all the information in hand, including expenditures, to make smart investments, we can save even more lives.

~Ambassador Eric Goosby MD
United States Global AIDS Coordinator
U.S. Department of State

The PEPFAR Finance and Economics Work Group would like to acknowledge the USG PEPFAR Country Teams and PEPFAR Implementing Partners for their participation and contribution to the PEPFAR Expenditure Analysis Initiative.

PEPFAR Finance and Economics Work Group (FEWG)

Amy DuBois, Office of the U.S. Global AIDS Coordinator (Co-chair)
Nalinee Sangrujee, U.S. Centers for Disease Control and Prevention (Co-chair)
Elan Reuben, U.S. Agency for International Development (Co-chair)
John Blandford, U.S. Centers for Disease Control and Prevention
Charles Holmes, Office of the U.S. Global AIDS Coordinator
Mark Brown, Office of the U.S. Global AIDS Coordinator
Paul Bouey, Office of the U.S. Global AIDS Coordinator
Don Bunn, Office of the U.S. Global AIDS Coordinator
Tyler Smith, Office of the U.S. Global AIDS Coordinator
Adam Ross, Office of Management and Budget
Jin Park, U.S. Department of Health and Human Services, Office of Global Health Affairs
Kata Chillag, U.S. Department of Health and Human Services, Office of Global Health Affairs
Daniel Trone, U.S. Department of Defense, HIV/AIDS Prevention Program
Scott Stewart, U.S. Agency for International Development

Acronyms and Abbreviations

ARVs	Antiretroviral drugs
ART	Antiretroviral Therapy
BCC	Behavior Change and Communication
BP	Behavioral Prevention
CBCTS	Community-based Care, Treatment and Support
COP	Country Operational Plan
EA	Expenditure Analysis
FEWG	Finance and Economics Working Group
FBCTS	Facility-based Care, Treatment and Support
HSS	Health System Strengthening
HTC	HIV Testing and Counseling
IP	Implementing Partner
M&E	Monitoring and Evaluation
MMC	Medical Male Circumcision
OVC	Orphans and Vulnerable Children
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PMTCT	Prevention of Mother-to-Child Transmission
PM	Program Management
SAG	Government of the Republic of South Africa
UE	Unit Expenditure
USG	United States Government

PEPFAR Expenditure Analysis Initiative

Expenditure analysis is an important tool for better understanding where resources are going and what outputs are produced by these investments. The data can be used in a variety of ways at various levels of management within HIV/AIDS. As PEPFAR begins routine collection of these data from its country programs, the analyses will fall under three main categories:

1. **Internal PEPFAR partner management.** EA results can help PEPFAR country teams to better understand the cost structures within their programs and to identify program outliers. This understanding provides tools to ensure more efficient program implementation, identify efficient program models and broaden these successes. EA is best evaluated in the country context, with knowledge of quality benchmarks and specifics of the local HIV epidemic and health system.

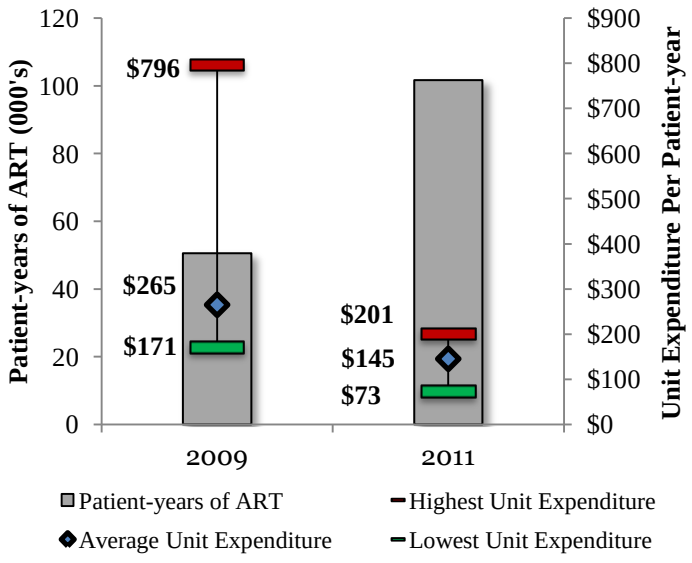
2. **PEPFAR Portfolio allocations and budget projections.** EA results can help PEPFAR understand cost structures on a global scale across its countries, as well as provide decision-makers data on which interventions provide the greatest value-for-money in terms of impacting the epidemic. These data provide evidence to underlie the longer-term budget projections often sought by policy makers and help PEPFAR ensure that gains against HIV are sustainable even in uncertain fiscal times. As PEPFAR transitions from direct service provision to more technical assistance, routine reporting for PEPFAR expenditures can track shifts in PEPFAR support and plan accordingly.

3. **Country-level harmonization of expenditure tracking for governments.** Realistic and strategic planning of a national HIV/AIDS response requires solid fiscal data on the interventions proposed. For countries where there is a complex mix of donors, just documenting national expenditures and understanding public sector spending can be a challenge. PEPFAR has worked extensively with multiple global stakeholders on aligning definitions and expenditure categories with the goal of having a minimum data set that could capture all expenditures regardless of source and could sit within the central government. This endeavor will require extensive coordination and collaboration between bilateral and multilateral entities and foundations, and coordinated technical assistance with partner governments on developing or linking financial tracking systems that can capture these data. While the task is daunting, the rewards for this collaboration will be increased transparency of donor and partner nation funding; better data for financial planning and evaluation of programs, and a stronger, more data-driven national approach to combating HIV/AIDS.

Using Expenditure Analysis to Document Efficiency Gains

Mozambique is the first country to have longitudinal PEPFAR expenditure data. Expenditure Analysis was pioneered in 2009 as a means to rapidly assess PEPFAR costs in country and was repeated in 2011. Results from the longitudinal analysis show that even with a doubling of the number on treatment, the average PEPFAR expenditure per patient-year declined by 45%. Moreover, the variation of the unit expenditure among the same five implementing partners narrowed. PEPFAR's emphasis on efficient delivery of services, economies of scale and program maturity are some of the likely reasons for a decline in PEPFAR unit expenditures.

PEPFAR Expenditure Analysis Pilot in Mozambique in 2009 and 2011: Mean and Range Non-ARV Unit Expenditure Per Patient-Year



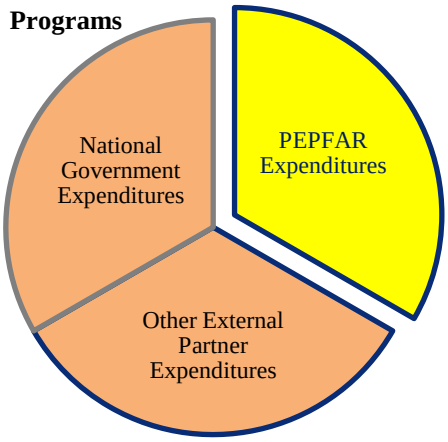
Background

PEPFAR has led global efforts to better understand the cost of delivering care, treatment, prevention, and support services to those infected and affected by HIV in resource-poor settings. As partner countries take on greater ownership of the HIV response and PEPFAR support moves toward strengthening systems and local capacity to provide quality services, characterizing the PEPFAR costs to support HIV/AIDS programs will be a critical part of measuring PEPFAR performance. Detailed evaluations have provided a wealth of knowledge on cost drivers in many core HIV intervention areas and helped to benchmark unit costs for measuring efficiency gains; however, these studies have typically taken a year or longer to complete. The PEPFAR Expenditure Analysis (EA) Initiative evolved from the recognized need for timely cost data to improve management and increase efficient operations of PEPFAR programs. As a lynchpin of PEPFAR's Impact and Efficiency Acceleration Plan[1], EA was designed with two central principles in mind: timeliness and usability. By employing tools such as EA to quantify programs, improve accountability, and maximize smart investments, PEPFAR is achieving more with finite resources and taking greater strides towards an AIDS-Free Generation.

Methods

The PEPFAR EA Initiative collects data on actual expenditures within a country portfolio and aligns the expenditure data to achievements reported through the PEPFAR annual and semiannual progress reporting (S/APR) cycles. EA provides estimates of the mean and variability of the USG expenditure per beneficiary across a range of interventions, and further disaggregates these estimates by region, cost category and other key parameters. These financial indicators assist in identifying cost outliers and efficient program models, and allow tracking of increased efficiencies over time within the PEPFAR portfolio.

Figure 1. Understanding the Full Cost to Support National HIV/AIDS Programs



EA provides routine, timely financial indicators for program management with sufficient detail to highlight trends and areas for further analysis. This methodology is meant to complement more detailed and intensive cost studies that provide in-depth information to explain certain trends or questions about program costs that cannot be answered through expenditure tracking.

USG country teams can use results from the EA to inform portfolio reviews, partner management and program planning. At the headquarters level, the results help to inform global budgeting and resource allocation by estimating the PEPFAR costs to support HIV/AIDS programs. These data can also be shared with the partner governments to strengthen coordination of resources to enhance HIV/AIDS programming within countries (Figure 1).

From 2009 to 2012, PEPFAR has conducted Expenditure Analyses in eight countries: Mozambique, Guyana, Democratic Republic of Congo, Nigeria, Uganda, Zambia, Republic of South Africa and Vietnam. Over the course of the three years, the program scope grew from a handful of clinical services to the whole PEPFAR portfolio in country. Each of these analyses provided valuable insight on methods to conduct a rapid assessment of expenditures and link those expenditures to HIV/AIDS program results. This report summarizes the principal lessons learned and provides a set of country examples that highlight particular dimensions of the use of EA results in program planning.

[1] http://www.pepfar.gov/smart/index.htm

Lessons Learned

Expenditure Analysis is a useful tool for program planning through concrete, evidence-based understanding of PEPFAR costs. There were key lessons learned throughout the execution of an Expenditure Analysis. A participatory and consultative planning process led to a successful implementation in the pilot countries. During implementation, intensive technical assistance to IPs, who were responsible for reporting the data, was found to greatly improve data quality. When the results were available, an understanding of the program context was important in order to interpret the results. Drawing conclusions and identifying efficiencies is challenging when intervention outputs are not readily quantifiable, e.g., for health systems strengthening activities or when the operational definitions of programs are not easily standardized. In summary, it is important to remember that understanding the EA results requires a nuanced interpretation of PEPFAR costs and programs; one cannot conclude that these results on PEPFAR unit expenditures define the full program cost.

The Way Forward

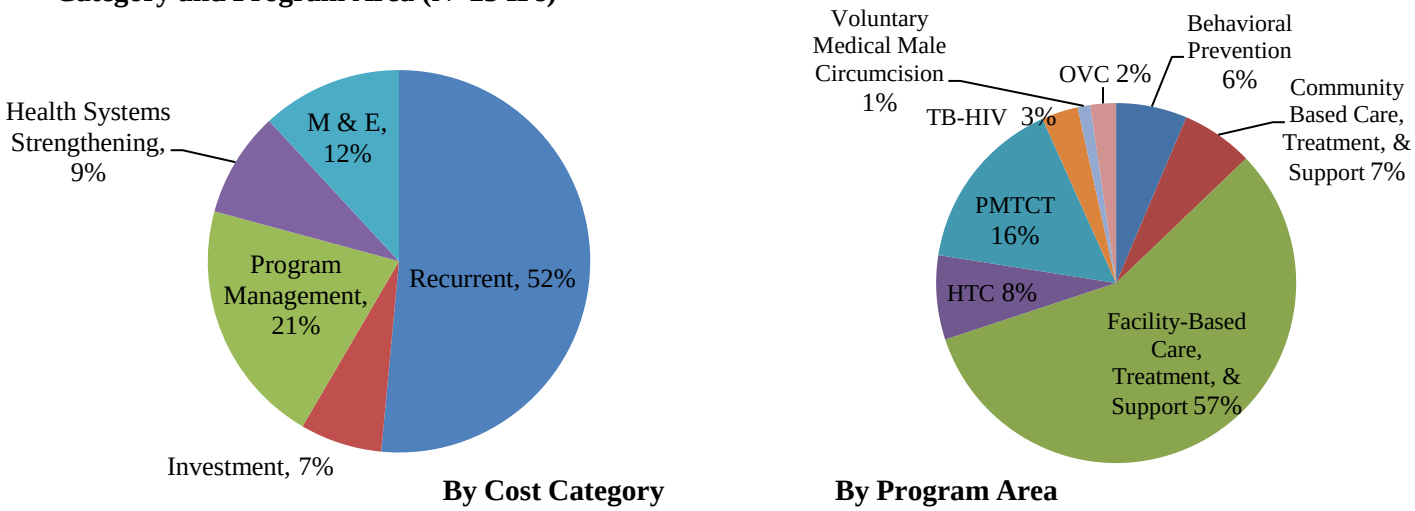
PEPFAR will begin institutionalization of expenditure analysis into routine annual reporting with a phased roll-out to country and regional programs beginning in November 2012. Having incorporated the lessons learned from the pilot to develop a standardized tool, the Finance and Economics Work Group will integrate reporting of expenditures by program area with the PEPFAR Annual Progress Reporting cycle. Linking to the PEPFAR strategic information systems is the first step to having a fully integrated reporting system that can produce timely program data for the country teams during their planning cycle. Through the development of an integrated expenditure reporting system tied to program achievements, PEPFAR has gained valuable insight into the challenges of a developing standardized routine reporting system across all program areas. This knowledge will assist PEPFAR in developing useful and timely information in a program environment that can remain flexible to PEPFAR's adapting response to the epidemic. Expenditure Analysis is also part of the PEPFAR's efforts towards transitioning to country ownership by facilitating joint resource planning through the harmonization of expenditure tracking methods with partner governments. PEPFAR is coordinating with national and multilateral partners in order to create a harmonized global practice of expenditure tracking.

Examples of PEPFAR Expenditure Analysis Results

South Africa has only 0.7% of the world's population, yet has the largest HIV burden on Earth with 17% of global cases and 17.8% national adult prevalence. As an upper middle-income country, South Africa provides the majority of the funds for its national response but still requires donor augmentation due to the magnitude of its unmet need. In this context, the South Africa PEPFAR team is actively engaged with the government in a strategically planned transition of clinical service provision and support from PEPFAR to the South African Government. Expenditure Analysis completed in 2011 is providing key data for the discussions with the South African Government (SAG).[2] By tracking expenditures, PEPFAR can align its funding with the South African Government's National Strategy Plan Objectives (Table 1). In addition, the data are also disaggregated by province in order to facilitate planning discussions at the provincial level. Moreover, the SAG and USG must understand how PEPFAR support is distributed across program areas and major cost categories in order to make concrete budgets and plans for transitioning program responsibility. Figure 2 shows the distribution of the PEPFAR Expenditures from the pilot by program area and by cost category.

Table 1. South Africa Expenditure Analysis Pilot, 2011: Distribution of PEPFAR Expenditures by South Africa's National Strategic Plan Objectives[3]	
HIV and TB screening, diagnosis, care and treatment	40.97%
Systems strengthening, lab systems and other priorities covered under other national health strategies	20.94%
Mitigate impact on orphans, vulnerable children and youth	8.60%
Social and behavioural change communications, with a particular focus on key populations	7.72%
Sexual and reproductive health services	7.00%
Prevention of Mother-to-Child Transmission	5.27%
HIV testing and TB screening, and links to services	4.24%
Address social, economic and behavioural drivers of HIV, STIs, and TB	1.95%
Address gender inequities and gender-based violence	1.74%
Prevent TB infection and disease	0.69%
Efforts aimed at poverty alleviation and food security	0.66%
Retention within the health care system and adherence	0.22%

Figure 2: South Africa Expenditure Analysis Pilot, 2011: Distribution of PEPFAR Expenditures by Cost Category and Program Area (N=23 IPs)



By Cost Category **By Program Area**

[2] Total expenditures were matched with the total number of beneficiaries reached over a one-year period covering USG fiscal years 2010 and 2011 and for a convenience sample of 23 implementing partners with an oversample of clinical partners.
[3] National Strategic Plan on HIV, STIs and TB, 2012-2016. South African National AIDS Council, 2011

Zambia

Shift in PEPFAR ART Support from Service Delivery to Systems Support

Zambia has a generalized HIV epidemic with 14.3% of adults or 1.1 million people living with HIV. The Zambia PEPFAR team implemented Expenditure Analysis to better characterize its portfolio, which provides most of its support through technical assistance rather than service delivery.[4] From the sampled partners, $5.9M was spent to support Facility Based Care, Treatment and Support Services. Of that a majority of the expenditures went to support program management, which includes expenditures to support the program that are not allocated to one specific site (e.g, supportive supervision, project coordination, administration, etc). (Figure 3). This allocation differs from other countries with service delivery-dominated portfolios where Program Management was less than 10% of the total expenditures. As PEPFAR transitions in other countries from direct service into technical assistance and support, PEPFAR spending distributions will shift away from recurrent costs; the FEWG is working to adapt the expenditure analysis in order to track financial indicators on this different type of portfolio.

The Program Management data can be disaggregated by broad cost category (i.e. personnel, travel/transport, and other general/administrative) and where the resources are consumed (i.e. provincial level, national level, and above the national level). Defining standard sub-categories under general and administrative expenditures will be key to understanding Program Management costs, evaluating effectiveness and finding efficiencies above the service provision level. Figure 4 illustrates the distribution of Program Management expenditures for Facility Based Care, Treatment and Support Services by geography (defined as where the resources were consumed) and by cost category. As PEPFAR transitions to country ownership and supporting locally based organizations, the percent of expenditures to support program management is expected to shift.

Figure 3. Zambia Expenditure Analysis Pilot, 2011: PEPFAR (non-ARV) Expenditure Per Patient by Treatment Eligibility and Cost Category

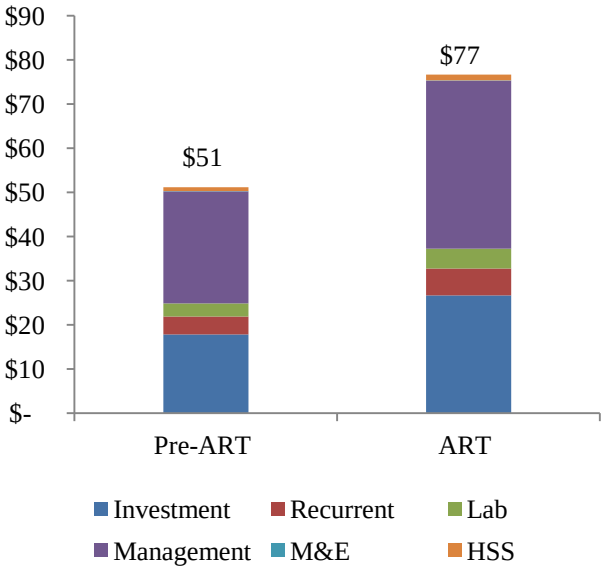
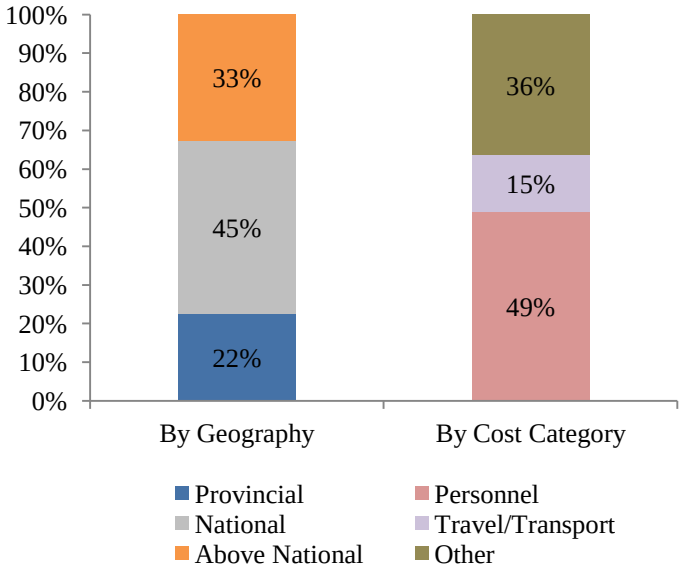


Figure 4. Zambia Expenditure Analysis Pilot, 2011: Distribution of ART Program Management Expenditures by Geography and Cost Category



[4] The Zambia PEPFAR Expenditure Analysis Pilot surveyed 9 IPs expenditures over the period April 1, 2010 to March 31 2011 in most program areas

Mozambique

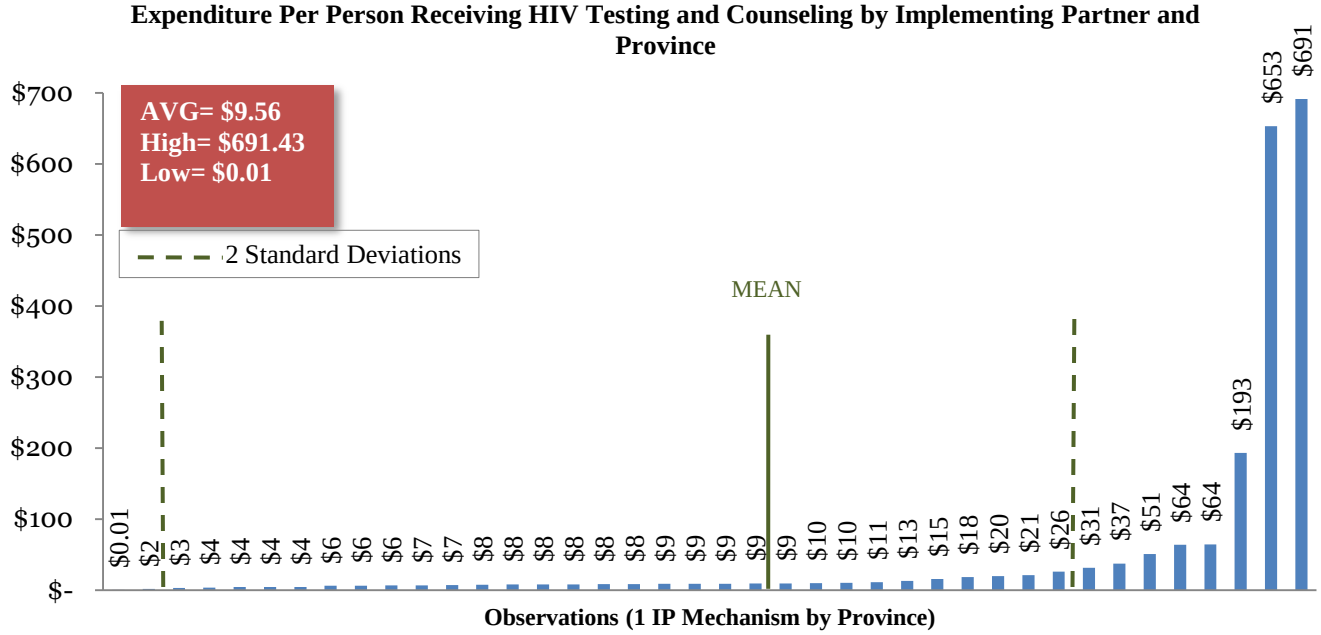
Using EA Results to Inform PEPFAR Planning for HIV Counseling and Testing

Mozambique has a generalized HIV epidemic with a prevalence of 11.5% in the adult population age 15-49 years. The estimated 1.4 million persons with HIV place an enormous strain on an already fragile and under-developed health system. The Partnership Framework between the Government of Mozambique and USG focuses on prevention, capacity-building, and health systems strengthening.

PEPFAR Mozambique was the first country to pilot and also do a second round of EA and pioneered the use of outlier analysis to monitor partner performance, budget strategically, and document declining unit costs while maintaining overall scale up of life-saving services.[5] The PEPFAR team used the EA data to increase allocative efficiency in HIV Counseling and Testing. Three modalities are used to delivery HTC: Provider Initiated Testing and Counseling, Voluntary Counseling and Testing, and Community Counseling and Testing. Examining the EA data, past programmatic achievements, past programmatic performance and percent of positives identified by HTC modality, the PEPFAR team readjusted their strategy to increase investments to target groups and modalities with the highest probability of identifying HIV positive people. As a result, targets for Provider Initiated Testing and Counseling increased while becoming more strategic in the targeting of Community Based HIV Testing and Counseling.

In order to balance the competing priorities of immediate unmet need for HIV treatment with the dire need for human resources and health infrastructure, the PEPFAR Mozambique team sought objective criteria to assist in portfolio and partner management. PEPFAR Mozambique and the FEWG developed policies on the use of EA data to inform partner management and identify potential sources of efficiency gains. The team set a policy that any unit expenditure results that were outside of two standard deviations from the mean required further investigation and a change in programming (either through reduction in costs or increase in targets). Figure 5 presents the range of the observations in HIV Counseling and Testing across IPs by province and the number of observations both above and below two standard deviations. Possible reasons for the deviations were due to data quality, program start up, program scope, delivery of services in hard-to-reach areas, and possible inefficiencies.

Figure 5. Mozambique Expenditure Analysis Pilot 2011: Distribution of USG Unit Expenditure Per Person Receiving HIV Testing and Counseling by Implementing Partner and Province



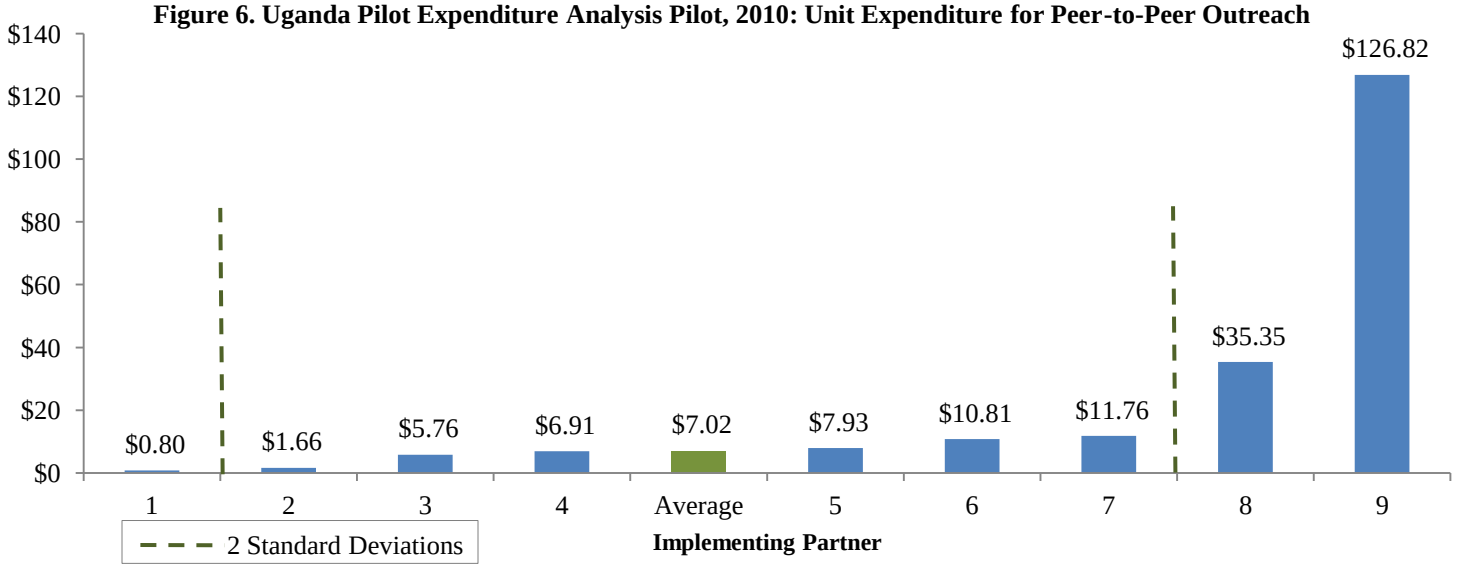
[5] The first pilot surveyed 8 IPs in the areas of Facility Based Care and Treatment, Community Based Care, PMTCT, Lab, TB-HIV and HIV Counseling and Testing. The second pilot surveyed 19 IPs covering 12 program areas over the period April 1, 2010-March 31, 2011.

Uganda, with an adult prevalence of 7.3%, focuses its prevention portfolio on sexual transmission of HIV. The PEPFAR Uganda team was the first pilot country to capture expenditures on non-biomedical prevention interventions.[6] Behavioral prevention programs emphasize "personalized risk" and PEPFAR seeks to overcome barriers to condom use by supporting procurement, distribution, and social marketing. PEPFAR is also increasing access to HIV counseling and testing for couples and key populations such as female sex workers. Prevention programs are a critical area where even detailed cost studies have still provided very little actionable information for financial tracking or measuring efficiency and effectiveness. Expenditure analyses may be valuable in characterizing how prevention portfolios might be tracked over time. The pilot identified key methodological challenges to develop standard operational definitions and indicators for behavioral prevention interventions. Table 2 summarizes the EA results by prevention intervention approach. Figure 6 shows the distribution of the unit expenditures across IPs who deliver peer-to-peer outreach services, along with the weighted mean and marking of those outside of 2 standard deviations of the mean.

Table 2: Uganda Expenditure Analysis Pilot, 2010: Mean and Range of Unit Expenditures by Intervention Approach and Volume of Services[7]

Model Intervention	Volume of Services	Average Unit Expenditure	Highest Unit Expenditure	Lowest Unit Expenditure
Mass Media	2,112,000	$0.03	$0.03	$0.03
Community Outreach	620,845	$5.47	$41.61	$0.84
Peer-to-Peer Outreach	385,417	$7.02	$126.82	$0.80
Facility Based BCC	123,402	$6.87	$23.83	$2.06
Condom Services	4,606,196	$0.12	$27.52	$0.12
STI Rx	10,094	$22.73	$41.52	$0.48
Community Empowerment	40,667	$13.17	$319.50	$0.09
HIV Testing and Counseling	1,566,428	$11.45	$25.13	$7.57

Figure 6. Uganda Pilot Expenditure Analysis Pilot, 2010: Unit Expenditure for Peer-to-Peer Outreach

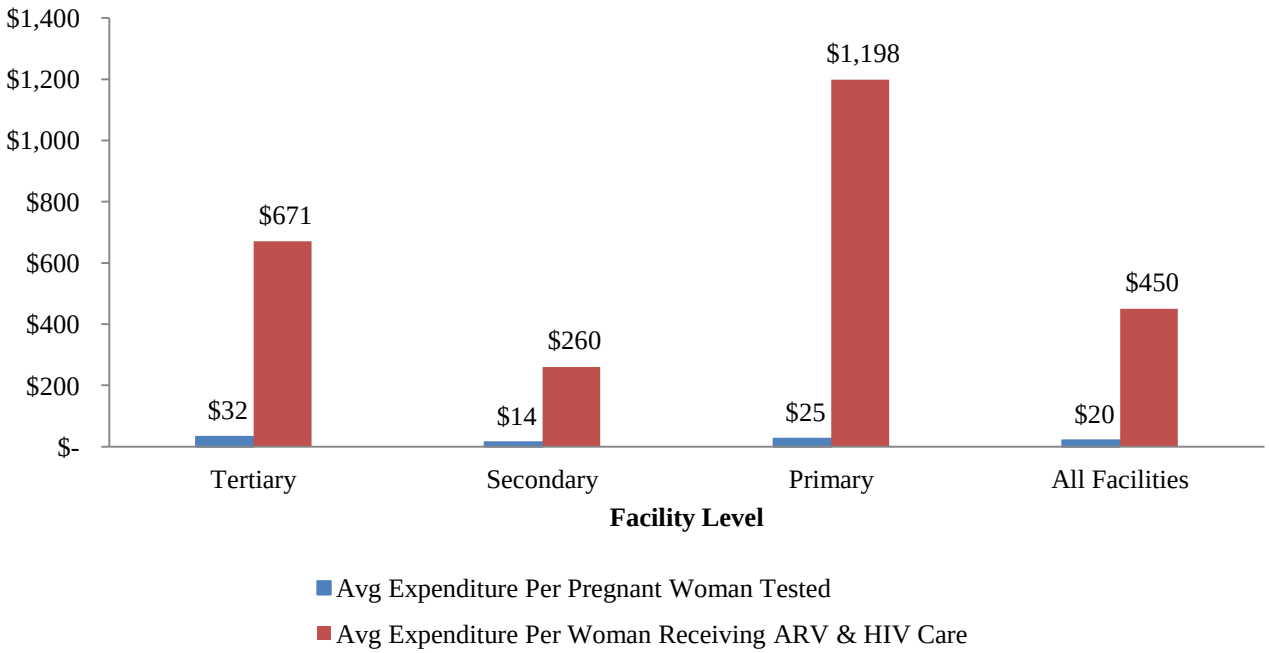


[6] The Uganda Pilot Expenditure Analysis surveyed 19 IPs Expenditure from October 1, 2009 to September 30, 2010 and covered most Service Delivery Program Areas

[7] 14 IPs reported. Systems Strengthening and M&E expenditures excluded in this analysis.

Nigeria has a mixed epidemic with an adult prevalence of 3.6%—a total of nearly 3 million HIV positive individuals (the second largest burden of HIV/AIDS care and treatment in the world). The Nigeria PEPFAR Team conducted a Pilot Expenditure Analysis specifically examining PEPFAR PMTCT Expenditures.[8] As Nigeria looks to expand the delivery of PMTCT services as part of the National Scale Up Plan Towards Elimination of Mother to Child Transmission of HIV, they propose to increase access of HTC for pregnant women from 13% to 90% and access of ARV prophylaxis from 12% to 90%[9]. Estimates of resource needs based on actual expenditure data will have important implications and impact decisions on approach to scale up, degree of decentralization, etc. In Figure 7[10] the expenditure per pregnant woman tested was lower in primary care facilities where there are fewer resources required, but the expenditures per woman receiving HIV care and ART varied widely. One possible reason for the higher unit expenditure per HIV+ pregnant woman on care in primary health care facilities is that this includes facilities that are in lower prevalence regions. In addition, the roll out of ART services in primary health care facilities required more investment expenditures at the outset. The lower average expenditure per woman in care at tertiary facilities may have reflected economies of scale at these high volume sites. These variations can provide important information regarding program cost when planning service expansion at different levels of the health care system.

Figure 7. Nigeria Pilot Expenditure Analysis, 2010: Average Unit Expenditure per Pregnant Woman Tested and Receiving Care by Type of Facility Level[8]



[8] The Nigeria PEPFAR Expenditure Analysis surveyed 14 IPs expenditures for the period from October 1 2009 to September 30 2010 for PMTCT

[9] National Scale Up Plan Towards Elimination of Mother to Child Transmission of HIV in Nigeria, 2010 – 2015, http://www.zero-hiv.dreamhosters.com/wp-content/uploads/2012/05/NATIONAL-PMTCT-SCALE-UP-PLAN-TOWARDS-ELIMINATION-2010-2015_Nigeria.pdf, accessed 17 July 2012

[10] 14 IPs providing data, from 631 sites, testing 600,629 women and care for 21,218 HIV-positive women

Guyana has an adult HIV prevalence rate of 1.2% which is largely concentrated in most-at-risk populations. These populations, which include commercial sex workers, men who have sex with men, and mobile workers such as miners or loggers, receive counseling and testing, treatment and other services through targeted outreach. PEPFAR programming has shifted from service delivery to capacity-building. The PEPFAR program works closely with the MOH and is guided by the overall goal of Guyana's National Strategic Plan for HIV/AIDS. The program is supported by government and donor funds, with the largest external contributors being PEPFAR and the Global Fund. Guyana was an early pilot country for expenditure analysis and the Government of Guyana wanted a full accounting of expenditures from all sources for facility based care and treatment (Figure 8).[11,12] This EA exercise, the only one to include non-PEPFAR expenditures, illustrated the challenges in tracking expenditures through a Ministry of Health accounting system. In particular, multiple government agencies tracked financial flows related to care and treatment, making tracking extremely difficult. Furthermore, parsing out expenditures disaggregated down to the site level using the current accounting system is challenging since most accounting systems track cost items, such as personnel, but not whether those personnel work at the facility or in program management or systems strengthening. The experience led the EA team to begin developing ways to align expenditure tracking and assist partner governments in tracking their total expenditures. With expenditures tracked from all funding sources, results presented in Figure 9 shows how PEPFAR funding is distributed across cost categories and where it is complementary to national and Global Fund support.

Figure 8. Guyana Expenditure Analysis, Pilot 2009: Distribution of ART Expenditures by Major Funding Source

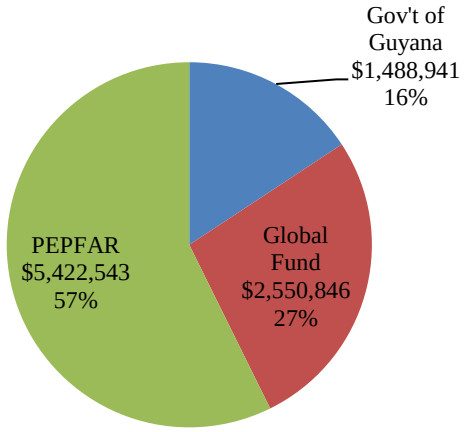
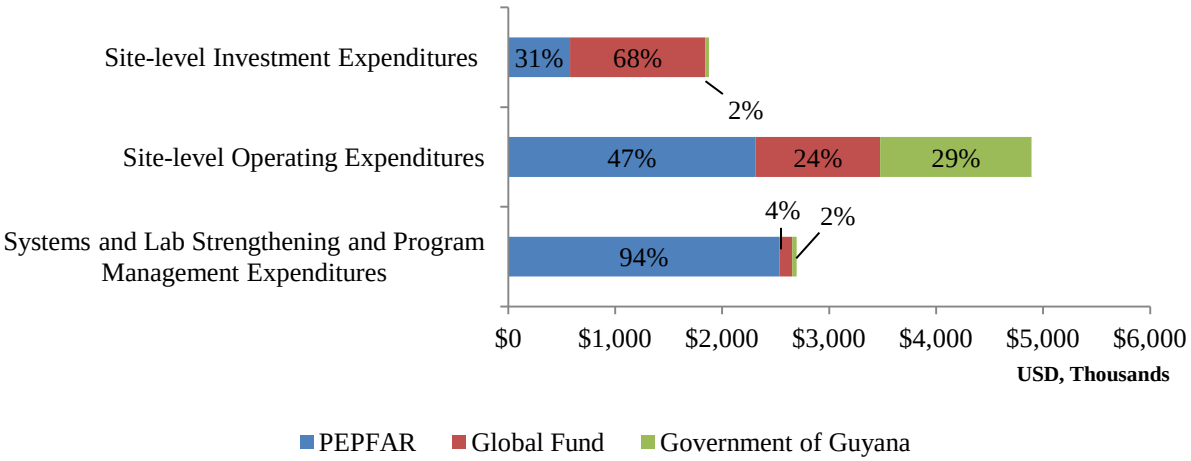


Figure 9. Guyana Expenditure Analysis Pilot, 2009: Total Facility-based Care and Treatment Expenditures, Disaggregated by Funding Source and Major Cost Category (2009 USD, Thousands)



[11] This expenditure analysis was conducted with the full support and collaboration of the Government of Guyana although the Ministry of Health has not yet disseminated the final report.
[12] The Guyana Pilot Expenditure Analysis surveyed 8 IPs on ART expenditures from January 1st, 2009 – December 31st 2009

For further information on PEPFAR's efforts to increase impact and efficiency, see http://www.pepfar.gov/smart/index.htm