WORKING PAPER

Rapid Costing Assessment of USAID-Funded Structural and Behavioral HIV Prevention Activities

Part II: Results of a Quantitative Cost Analysis

January 2019 – Redacted Version

USAID FROM THE AMERICAN PEOPLE
PEPFAR
MEASURE Evaluation

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Note on This Redacted Version

This document excludes confidential financial and program data of three implementing partners. The complete report was produced for internal purposes at USAID and PEPFAR.

CONTENTS

ABBREVIATIONS

AGYW	adolescent girls and young women
ART	antiretroviral therapy
AOR	Agreement Officer's Representative
COP	country operational plan
COR	Contract Officer's Representative
CPB	cost per beneficiary
DATIM	Data for Accountability, Transparency and Impact Monitoring
DREAMS	Determined, Resilient, Empowered, AIDS-Free, Mentored, and Safe women
DSD	direct service delivery
EA	Expenditure Analysis
ER	Expenditure Reporting
FSW	female sex workers
HC3	Health Communication Capacity Collaborative Program
HVAB	Sexual Prevention: Abstinence/Be Faithful
HVOP	Sexual Prevention: Other Sexual Prevention
IP	implementing partner
JHU	Johns Hopkins University
KII	key informant interview
KP	key population
M&E	monitoring and evaluation
MER	monitoring, evaluation, and reporting
MSM	men who have sex with men
PE	peer educator
PEPFAR	United States President's Emergency Plan for AIDS Relief
PP	priority population
PrEP	pre-exposure prophylaxis
SBCC	social and behavior change communication
TA	technical assistance
TWG	technical working group
UE	unit expenditure
USAID	United States Agency for International Development
USG	United States Government

INTRODUCTION

The United States President's Emergency Plan for AIDS Relief (PEPFAR) has seen great variation in the unit expenditure data reported from partners implementing behavioral and structural HIV prevention programs, impacting the effective use of resources and challenging accurate budget planning. This activity was developed to help partners better understand the **processes used to report costs** and provide **unit expenditure (UE) estimates of specific behavioral and structural HIV prevention interventions**, with the long-term goal of helping the United States Agency for International Development (USAID) capture the costs of multifaceted HIV prevention programs and improve resource management.

Cost information is difficult to access and quantify, because existing financial systems rarely contain the required cost information. One issue is the lack of systematic collection of cost data. Organizational and governmental finance systems are usually organized in relation to the dual requirement of recording financial transactions and providing budgetary control. It is rare to find sophisticated costing systems geared to providing routine information on the costs of specific activities.

Additionally, few institutions have systems capable of apportioning central costs to local activities or departments. There are also cultural and systematic barriers, which would require that organizations or governments adopt practices whereby staff keep records of time spent on various activities. Unlike health and social care systems in high-income countries, with formal assessment frameworks that incorporate economic evaluations, low- and middle-income country contexts present limitations in conducting and applying economic evaluation results in policymaking. Key challenges are the difficulty in collecting data, lack of trained researchers with the necessary analytical skills, and absence of institutionalized research environment and local methodological guidelines.

In light of these challenges, the USAID- and PEPFAR-funded MEASURE Evaluation project conducted this independent cost study to provide robust cost data and enable comparisons with existing financial reporting information required by PEPFAR.

Study Aims and Objectives

The primary **aims** of the study were to (1) inform the guidance on how to strengthen the collection and use of high-quality prevention-related expenditure data for HIV prevention programs and (2) assess the unit expenditures and the related cost drivers to understand the major components HIV prevention intervention costs.

To achieve these aims the activity was composed of two parts:

> **Part I:** A qualitative exploration of IP experiences with reporting costs for the PEPFAR Expenditure Analysis
>
> **Part II:** A quantitative cost analysis comparing the cost per beneficiary (CPB) across HIV prevention programs

This information will be useful as a supplement to existing PEPFAR Expenditure Analysis (EA) data and forthcoming Expenditure Reporting data, for informing budgeting and planning, for understanding cost drivers, and helping to identify areas where potential efficiency gains can be made. Additionally, more detailed cost information could guide discussions about the most appropriate mix and volume of prevention strategies

and the best way to allocate resources. Part I of this study was completed in 2016 with results and subsequent recommendations reported. This report presents the findings, challenges, and conclusions from Part II.

Study Background

PEPFAR Expenditure Analysis and Reporting

In the *PEPFAR Blueprint: Creating an AIDS-Free Generation*, PEPFAR states that it will increase program efficiency and effectiveness through improved collection and use of financial and economic data.[1] PEPFAR requires an annual report of expenditures at the end of each fiscal year (October 1–September 30) to better understand the costs the United States Government (USG) incurs to provide a broad range of HIV services and support. The information produced through this initiative is used by PEPFAR to improve program planning, portfolio reviews and partner management. From 2009-2017, through the EA Initiative, PEPFAR collected actual program expenditures within a country portfolio and aligned these data with achievements reported by implementing partners (IP) through the PEPFAR semiannual and annual reporting cycles. Outputs provided by the EA included variability and mean of the expenditure per beneficiary across interventions. These estimates were further disaggregated by geographic location, cost category, program area and other key parameters.

Beginning in fiscal year 2018, the structure and content of the EA was changed to reflect PEPFAR's shift from target-based budgeting to program-based budgeting and renamed Expenditure Reporting (ER). Major changes that have occurred under the ER beginning in FY2018 are:

- New Expenditure Classifications: The financial classification structure has been revised by PEPFAR to provide more comprehensive, flexible, and transparent tracking of expenditures. Expenditure classifications will now align with budget classifications, to allow for tracking of resource allocation against budgeted funding allocations. This was a challenge area found in the Expenditure Analysis.
- Simplified Excel Reporting Template: As with the EA, IPs are required to report expenditures using an excel template at the end of each fiscal year. Under the new structure, the excel reporting template has been simplified with reporting at the operating unit level (i.e. not disaggregated by benefiting country or subnational unit) and all subrecipient reporting is now summarized as subrecipient (not cost category).
- Transition from PROMIS to Data for Accountability, Transparency and Impact Monitoring (DATIM): Under the EA, IPs uploaded their excel reporting templates into PROMIS online, however beginning in FY2018 they have transitioned to using DATIM for upload. The timeline follows the same timeline as MER reporting, which is also uploaded into DATIM.

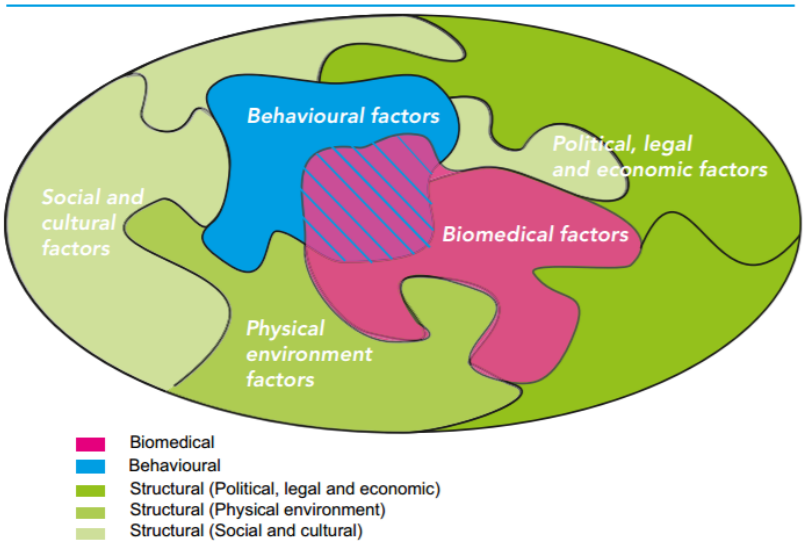
Similar to the EA, the new ER information includes financial indicators that allow for tracking of increased efficiencies over time, calculation of unit expenditures and the identification of cost outliers. The ER results can also help to inform global budgets and resource allocation by estimating the PEPFAR costs in response to HIV/AIDS. The data can be shared back with implementing partners and with partner governments to strengthen the coordination of resources and improve programs.

[1] Office of the Global AIDS Coordinator (OGAC). (2012). PEPFAR blueprint: Creating an AIDS-free generation. Retrieved from http://www.pepfar.gov/documents/organization/201386.pdf

HIV Prevention Approaches

PEPFAR promotes HIV prevention as a crucial part of its strategy, with three primary approaches—biomedical, behavioral, and structural—that are most commonly used in combination to address the overlapping risks faced by those most vulnerable to acquiring HIV (Figure 1).

Figure 1. Interacting causes of HIV risk and vulnerability (UNAIDS)[2]



Biomedical approaches "act directly on the biological systems through which the virus infects a new host." [3]

Behavioral approaches "aim to promote a range of behavioral objectives related to reducing HIV transmission," including abstinence, delay of sexual debut, monogamy, fidelity, and partner reduction.[4] These interventions can be categorized into two broad areas: (A) isolated interventions intended to minimize sexual risk behaviors/increase protective behaviors; (B) integrated interventions that create demand for biomedical services and improve adherence and aftercare.

Structural prevention approaches are activities that "create and support an enabling environment for HIV prevention around biomedical and behavioral interventions." [5] The aim of these programs is to change the larger societal, political, and economic contexts which can contribute to vulnerability and risk.

The relative complexity of programs that use combination HIV prevention makes tracking and aggregating costs into unit expenditures challenging.

[2] UNAIDS. (2010). "Combination HIV Prevention: Tailoring and Coordinating Biomedical, Behavioural and Structural Strategies 10 to Reduce New HIV Infections." Discussion Paper. Retrieved from http://files.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20111110_JC2007_Combination_Prevention_paper_en.pdf.

[3] PEPFAR. (2011). "Guidance for the Prevention of Sexually Transmitted HIV Infections." Guidance, 16. Retrieved from https://www.pepfar.gov/reports/guidance/171094.htm.

[4] PEPFAR, "Guidance," 30.

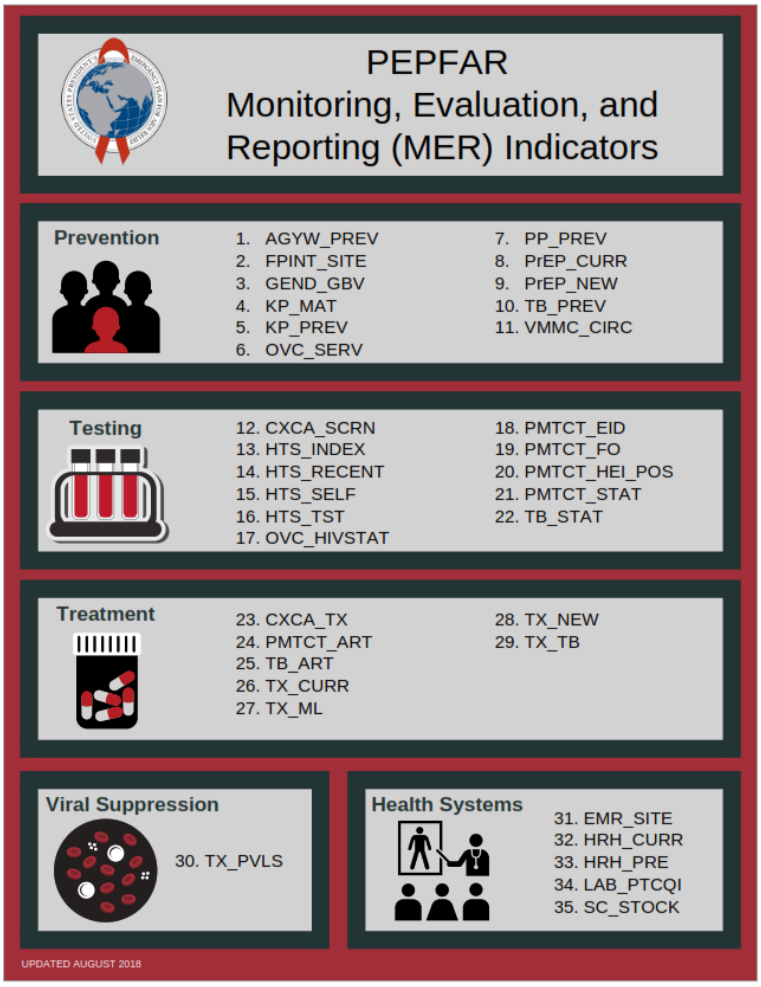
[5] Ibid., 36.

HIV Prevention Indicator Reporting

PEPFAR describes populations in need of HIV prevention interventions as falling into one of two groups, priority populations (PP) and key populations (KP). Within the PEPFAR program, only two indicators are used to monitor structural and behavioral interventions, while four indicators are used to monitor medical interventions designed to prevent HIV. All community, small group, and individual prevention interventions designed to change social norms, beliefs, knowledge, skills, and practices are aggregated and reported underneath two indicators through PEPFAR Monitoring, Evaluation, and Reporting (MER) (Figure 2). Disaggregation by intervention is not requested. The two MER indicators are Key Populations (KP_PREV) and Priority Populations (PP_PREV). According to the MER Indicator Reference Guide, published in September 2018, "Beginning in FY19, PEPFAR program should report on the following standard age groups: <1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, and 50+." The reference guide also continued to mark KP and PP disaggregations as optional, meaning that they should be completed by those programs for which the indicator is useful to determine success or when it is both relevant and safe to enter the data at the site and/or community level.[6]

[6] MER 2.0 Indicator Reference Guide (September 2018), retrieved from https://datim.zendesk.com/hc/en-us/articles/360000084446-MER-2-0-Indicator-Reference-Guide-.

Figure 2. PEPFAR MER indicators (MER 2.0 V. 2.3)



The optional key populations disaggregations are: people who inject drugs, men who have sex with men, transgender people, female sex workers, and people in prison and other closed settings." For the MER 2.0 v 2.3, the denominators for both KP_PREV and PP_PREV have been removed.

The KP_PREV indicator is described as, the number of key populations reached with individual and/or small group-level (less than or equal to 25 individual attendees in one setting) HIV prevention interventions designed for the target population. Generally, a program may count an individual as having received a prevention activity if they have provided, offered, or at least referred to HIV testing services (HTS) and at least one additional prevention activity during the reporting period. If the individual self-identified as HIV-positive, then s/he should receive at least one of the additional prevention activities. These additional activities are as follows:

- Targeted information, education, and communication (IEC)
- Outreach/empowerment
- Condoms
- Lubricant
- Offer to refer to STI screening, prevention, and treatment
- Link or refer to ART

- Offer to refer to prevention, diagnosis, and treatment of TB
- Offer to refer to screening and vaccination of viral hepatitis
- Offer to refer to reproductive health (family planning, PMTCT), if applicable
- Refer to medication-assisted therapy (MAT), if applicable
- Offer to refer to needle syringe program (NSP), if applicable

The PP_PREV indicator is described as the number of priority populations (PP) reached with the standardized, evidence-based intervention(s) that are designed to promote the adoption of HIV prevention behaviors and service uptake. Priority populations vary by country and must have a HIV prevalence or incidence that is greater than that of the general population in order to be identified as a PP (i.e. adolescent girls and young women, mobile populations, displaced persons, clients of sex workers, and non-injection drug users). The PEPFAR country team designs an intervention package for each priority population together with the IP. Like KP_PREV, HTS or referral to HTS is required to be offered at least once during a reporting period, unless the individual self-identified as HIV-positive. Table 1 lists required prevention activities that must be delivered in addition to HTS, depending on age group.

Table 1. PEPFAR HIV prevention indicator requirements for priority populations

Required Interventions for Adult PP	Required Interventions for Youth PP
Promotion of relevant prevention and clinical services and demand creation to increase awareness, acceptability, and uptake of these services.	Promotion of relevant youth-friendly prevention and clinical services and demand creation to increase awareness, acceptability, and uptake of these services.
Information, education and skills development to: reduce HIV risk and vulnerability; correctly identify HIV prevention methods; adopt and sustain positive behavior change; and promote gender equity and supportive norms and stigma reduction.	Information, education and skills development to: reduce HIV risk and vulnerability; correctly identify HIV prevention methods; adopt and sustain positive behavior change; and promote gender equity and supportive norms and stigma reduction.
Referral to HIV testing; facilitated linkage to care and prevention services; and/or support services to promote use of, retention in, and adherence to care.	Referral to HIV testing; facilitated linkage to care and prevention services; and/or support services to promote use of, retention in, and adherence to care.
Condom and lubricant (where feasible) promotion, skills building, and facilitated access to condoms and lubricant (where feasible) through direct provision or linkages to social marketing and/or other service outlets.	Condom and lubricant (where feasible) promotion, skills building, and facilitated access to condoms and lubricant (where feasible) through direct provision or linkages to social marketing and/or other youth-friendly, community-based service outlets.
	Programs targeting adults to raise awareness of HIV risks for young people, promote positive parenting and mentoring practices, and effective adult-child communication about sexuality and sexual risk reduction.

Findings and Recommendations from Part 1 of the Study

Part I of this activity was a qualitative assessment conducted to better understand and document the reporting processes and methods that PEPFAR-funded USAID prevention IPs use for the annual EA exercise. The key research questions for this study were:

- How are prevention implementing partners (i.e. partners receiving Sexual Prevention: Abstinence/Be Faithful (HVAB) or Sexual Prevention: Other Sexual Prevention (HVOP) funding) interpreting the PEPFAR EA guidance and categorizing expenditures?

- What methods/approaches do partners use to allocate shared expenditures?
- How and what do prevention implementing partners report at the above site-level?
- What EA-defined program areas are prevention implementing partners reporting specific activities into?

Throughout this qualitative assessment, MEASURE Evaluation worked with local USAID Missions and a total of 11 prevention implementing partners in three countries: Côte d'Ivoire, Eswatini (formerly Swaziland) and Tanzania to conduct loosely structured, key informant interviews (KIIs) with both USAID Mission staff and prevention IPs identified by the USAID country field teams. A total of 36 KIIs were conducted with key IP program staff and a total of 10 KIIs with USAID/mission key specialists and EA point persons.
Trends and patterns in responses were assessed and used as the basis for formulating recommendations. MEASURE Evaluation identified five key challenges for improving guidance and strengthening the collection and use of high quality prevention-related expenditure data. These challenges are:

1. **Lack of flexibility** with the EA data collection framework and instrument, specifically with regards to the relevance and inclusiveness of EA expenditure categories and confusion amongst IPs around how to report into these program area(s).
2. IPs also reported **difficulty capturing data** due to the nuances of their program packages, which can vary greatly, making it difficult to compare unit expenditures once calculated.
3. There is variation by in the **USAID/Mission level of understanding** (and confidence) of the EA and its functionality, which impacted the technical assistance received by IPs.
4. A major point of frustration from USAID prevention IPs with the EA process across all three countries (and among all IPs interviewed) is the **lack of transparency of EA results** and feedback.
5. IPs reported that they did not receive their EA results from the USAID/Missions, so results **could not be used for any internal decision-making**.

In order to address these challenges MEASURE Evaluation made the following recommendations:

1. **Training and improved/consistent guidance:** There needs to be additional training and improved guidance, at all levels of the EA structure, to help to address challenges around the perceived of lack of flexibility of the EA data collection instrument, difficulty capturing data and variation in USAID/Mission guidance and support. Specific ways in which to accomplish this are:
    a. Provide visual representations of the expenditure categories
    b. Create country-specific prevention addendums to the EA guidance
    c. Implement an annual pre-EA training (country-level) for USAID IPs
    d. Develop a prevention-specific program area (or sub-category) for linkages, referrals, adherence and retention into care
    e. Standardize how EA data are generated by using a consistent enterprise financial system across IPs
2. **Institute a feedback mechanism:** There needs to be improved feedback and data sharing from PEPFAR or the USAID/Mission country field teams back to the IPs, as well as improved communication on how PEPFAR is using EA data to make planning and budgeting decisions, specifically implementing the following data sharing approaches:
    a. An annual post-EA results presentation/partners' meeting (country-level)

b. Individual post-EA meetings of IPs and activity manager/Agreement Officer Representatives (AOR)/Contract Officer Representatives (COR)

3. **Further assessment of capacity of USAID/Mission country field teams:** There is a need to assess staff understanding of the EA, its functionality, and how to assist USAID prevention IPs, to ensure more uniform capacity when providing technical assistance to IPs.

METHODS

MEASURE Evaluation's health economics team worked with USAID Missions and HIV prevention implementing partners in three countries: Côte d'Ivoire, Eswatini, and Tanzania. Data collection took place from May-September 2017. For each program, we sought to assess the costs by intervention type (behavioral, structural, and where provided biomedical), population (KP or PP), and activity (the specific program activity). Costs were also broken down by personnel, operational costs, and other, with specific sub-categories aimed at better illustrating the drivers of cost in each program. We used a mixed-methods approach that had three components: mapping program activities and costs, quantitative data collection, cost analysis, and unit cost calculation.

Component 1: Qualitative Data and Mapping of Activities and Costs

Data from interviews with program and financial staff at the IPs and their sub-partner organizations were used to inform this phase of data collection, define how program expenditures are linked to intervention areas, and fill in any gaps in knowledge or questions around the secondary data that was collected. Information obtained from interviews enabled the researchers to assess inputs, map program activities and costs, and to understand the organizational level at which different costs are incurred.

Component 2: Data Collection

Secondary financial and program data were collected from each IP. Data were collected from existing records with multiple sources: budgets, work plans, expenditure summaries, accounting/financial accounts, and timesheets. This was followed by a step-down costing approach, which took existing, program-wide financial record data and allocated it appropriately to various intervention activities.[7] Costs were collected from both the implementing mechanism and sub-partner levels, with details depending on the structure of each program and its administration.[8] Researchers also worked with program or monitoring and evaluation (M&E) staff to collect beneficiary or service delivery information to calculate the unit expenditure. There were not consistent measures across programs and intervention activities, so the final list of those measures chosen is included in the results section alongside the corresponding cost data.

Component 3: Cost Analysis and Unit Cost Calculation

After data collection, costs were aggregated to get a total cost for each intervention. Allocation methods were used if determined necessary to disperse shared costs to different activities. Output beneficiary measures were reviewed and used to calculate cost per beneficiary.[9]

[7] Conteh, L., and D. Walker. (2004). "Cost and unit cost calculations using step-down accounting." *Health Policy and Planning,* 19 (2): 127–135.

[8] Zimmerman, Jerold L. (2003). Accounting for decision making and control. 4th ed. International Edition. Boston, MA, USA: McGraw-Hill Education, 29-75.

[9] UNAIDS. (2000). *Costing Guidelines for HIV Prevention Strategies.* Key manual. Geneva, Switzerland: UNAIDS.

Capacity Building

As part of our methods, we involved finance, operations, M&E and program staff in the data collection process and trained them on strengthening data use. Our approach included a capacity building component to enhance their understanding of historic spending (disaggregated by specific intervention components); common data inaccuracies and financial monitoring approaches; and how to collect actual cost data to validate budgeting, plan resources, and inform COP planning.

Human Subjects Protection

Research activities for this study adhered strictly to U.S. and international research ethics guidelines, including U.S. Code of Federal Regulations 45 CFR 46 and the Council for International Organizations of Medical Sciences (CIOMS). MEASURE Evaluation maintains a federal-wide assurance of protection for "human subjects" with the U.S Health and Human Services Office of Human Research Protections. Protocol for this research was reviewed and formal human subjects review was determined to be unnecessary.

Sites and Programs

MEASURE Evaluation collaborated with the former USAID PEPFAR Behavioral/Structural Prevention Technical Working Group (TWG) to identify priority countries and IPs with HIV prevention programs focused specifically on community-based prevention among priority and key populations:

1. Tanzania—The Jhpiego SAUTI Program
2. Côte d'Ivoire—The JHU Health Communication Capacity Collaborative Program
3. Eswatini—The JHU Health Communication Capacity Collaborative Program

RESULTS

The cost per beneficiary across the three programs overall varied from US$XX.XX to $XX.XX. This section presents our findings for each program.

Tanzania—The Jhpiego SAUTI Program

Jhpiego, an affiliate program of John's Hopkins University, implements a wide range of health programs in Tanzania. Jhpiego's SAUTI program is a USAID funded activity focused on reducing HIV incidence by providing a core package of combination HIV-prevention, FP services, and linkages to HIV care and treatment. SAUTI targets key and vulnerable populations, including adolescent girls and young women (AGYW) ages 15–24, FSW and their partners, MSM, <15 at risk children, and other at-risk hotspot populations. Children under 10 do not receive sex risk assessment, family planning, STI services or condoms. It is community- and mobile-based and as of FY2017 has been implemented in select communities across thirteen regions. SAUTI also conducts clinician trainings and implements clinician performance management tools, including a daily data system. The main difference between services provided to their priority populations and key populations is that those provided to PP are in group sessions while those to KP are in both group and individual sessions. Main interventions in the SAUTI program are:

- **Peer Education (PE) Group and 1:1 Sessions**, which are SBCC sessions targeting both KP and PPs with key HIV prevention information and skills (funded by HVAB/HVOP), a behavioral intervention
- **WORTH+** is a traditional economic strengthening model for caregivers and women that has been adjusted by SAUTI to be friendlier to AGYW and men and inclusive of not just savings and loans groups but also vocational skills training and linking beneficiaries to job opportunities and agricultural extension officers (funded by DREAMS), considered a structural intervention
- **Cash transfers** in DREAMS districts with the aim to reduce transactional and age-disparate sex (and thus risk for HIV acquisition) (funded by DREAMS), considered a structural intervention
- **People living with HIV (PLHIV) empowerment clubs**, which provide education on retention to treatment, reducing stigma and living a healthy life (funded by HVAB/HVOP), considered a structural intervention
- **Alcohol support groups for KP**, which provide education on reducing alcohol uptake and linkage to biomedical services (funded by HVAB/HVOP), considered a structural intervention
- **SASA!**, which addresses violence against AGYW through drama groups and trainings of community activists and champions which challenge existing gender norms and create demand for SAUTI services (funded by DREAMS), a structural intervention
- **Biomedical interventions** like HIV testing services, pre-exposure prophylaxis (PrEP) for HIV prevention, and linkage to antiretroviral therapy (ART)

For a full outline of SAUTI program interventions, the key components, target population, key indicators measuring success, and funding source, see Appendix A.

SAUTI has a complex and comprehensive program structure with other activity components wrapped into the interventions that are not specifically identified such as demand creation and distribution outlets, population mapping, PrEP service delivery, clinical monitoring, young men-oriented campaigns, AGYW-led empowerment and coordination activities and research.

SAUTI is described as a learning lab or platform that USAID set up for study activities within SAUTI (i.e., formative research; cohort studies) and for other programs (i.e., mapping of key populations and impact evaluations). Because of this, SAUTI receives funding not only from PEPFAR but also from outside sources such as the Elton John AIDS Foundation (EJAF), the Population Council, TIGO, the International Labour Organization, the Bill & Melinda Gates Foundation, and Toms Shoes. This funding mix makes SAUTI unique from a funding perspective. The large number of activities that occur outside of the PEPFAR expenditure reporting structure, including below site-level activities, illustrates the range of costs that are not adequately captured in EA/ER nor are they consistently captured in financial tracking systems across IPs.

For the Jhpiego SAUTI Program in Tanzania, the overall CPB was $XX.XX (Table 2). For those enrolled in savings and loans groups the CPB was $XXX.XX, for those tested for HIV the CPB was $XX.XX, for those key populations who received SBCC education the CPB was $XX.XX, and for those adolescent girls and young women who received SBCC education the CBP was $XX.XX.

Technical staff, travel and indirect costs were the greatest cost drivers of the program overall. These three cost categories remained the drivers of expenditures for all three interventions types, but the proportion of total expenditure for each varied slightly. Because raw data were housed in paper records, some of the expenditures were not able to be linked directly to their cost categories and we had to rely on a host of allocation decisions to get to the final breakdown. Below-site level costs were not able to be disaggregated from the rest of the expenditures for SAUTI and are instead found wrapped into the other cost categories: personnel, trainings, materials, and other direct costs.

Table 2. Full breakdown of Jhpiego SAUTI costs, by intervention type and activity (redacted)

We were able to assess the cost of the SAUTI intervention by proportion of total expenditure, by intervention type (biomedical versus structural versus behavioral), and by population (KP versus PP) (Table 3). Disaggregation of costs by program level are available in the raw data and analysis files but are not summarized in the findings below. Overall, biomedical interventions received 60 percent program funding, compared to 40 percent for structural and behavioral (Table 3). When breaking down the same information by population, you can see that 67 percent of funding goes towards priority populations and 33 percent to key populations.

Table 3. Jhpiego SAUTI proportion of total expenditure, by intervention and population type

Biomedical	59%
Structural	21%
Behavioral	20%
Key Populations	33%
Priority Populations	67%

Côte d'Ivoire—The JHU Health Communication Capacity Collaborative Program

The Health Communication Capacity Collaborative Program (HC3) in Côte d'Ivoire is implemented by the Johns Hopkins University (JHU) Bloomberg School of Public Health Center for Communications Programs. The goal of the program is to reduce vulnerability to HIV/AIDS among higher-risk populations through social and behavior change communication (SBCC) activities. HC3 uses SBCC to promote service uptake, ART

adherence, community-based care/support efforts, healthy social norms, and couple communication. It also has four community-focused activities:

(1) The **SuperGo** program, which promotes HIV testing, safe sex negotiation and delay of sexual debut among young women ages 16–24, is a behavioral HIV intervention
(2) The **Brothers For Life program**, which covers the risks of multiple and concurrent partnerships, gender-based violence, condom use, couple communication, and HIV testing among Ivorian men, is also a behavioral HIV intervention
(3) Testing services offered during Super Go & Brothers for Life education sessions (administered by other organizations), including referrals to ART, are a biomedical HIV intervention
(4) **"Reséaux,"** or "Networks," a TV drama series focused on underlying factors affecting risky adult behavior, is a behavioral HIV program
(5) **Government HIV Capacity Building**, focused on improving government messaging on HIV and developing a HIV National SBCC Strategy is a structural intervention

For a detailed breakdown of the program activities, the population targeted by each and the primary indicators used for measuring impact, see Appendix B.

The CPB for the HC3 Côte d'Ivoire program was $XX.XX, with biomedical interventions ($XX.XX) costing less per person when compared to behavioral interventions ($XX.XX) (Table 4). The behavioral interventions can be further broken out into those targeting priority populations, with the cost of AGYW and men who attended all four sessions of a HIV-related education program costing $XX.XX, while the cost of the television series cost $X,XXX per ministry or partner who received materials for broadcast.

Trainings, contracts to sub awardees, and indirect costs (including HQ costs) were the greatest cost drivers of the program (Table 4). This was reflected in both the behavioral and structural interventions with one exception. For the structural intervention referred to as strategic planning, there were no costs related to contracts to sub awardees. Any below-site level costs can be seen in the cost category of formative research and community engagement ($XX,XXX or 1% of overall program costs). There were also some below-site level costs that were wrapped into the contractors cost category and could not be disaggregated.

Table 4. Full breakdown of JHU HC3 program costs, by intervention type and activity (redacted)

The majority of programming, or 92 percent of the expenditures, went toward priority populations with the remaining 8 percent servicing the general population for the television series. Eighty-six percent of funded intervention activities were behavioral in nature (Table 5).

Table 5. JHU Côte d'Ivoire HC3 expenditure breakdown

Biomedical	8%
Structural	6%
Behavioral	86%
Key populations	0%
General population	8%
Priority populations	92%

Eswatini—The JHU Health Communication Capacity Collaborative Program

The John's Hopkins University (JHU) Health Communication Capacity Collaborative (HC3) in Eswatini promotes social and behavior change communication (SBCC) capacity building in both priority and key populations. Intended to address the country's serious HIV/AIDS epidemic, HC3's five primary activities are:

(1) **Priority Populations HIV Prevention (PPHP)** (formerly known as Model Communities) involves a community engagement process to strengthen community ability to prevent HIV, it is a structural intervention
(2) **Community Leader Engagement** (also called traditional leaders) involves engagement with traditional leaders to support adolescent girls and young women and is a structural intervention
(3) **Young Women Empowerment and Savings Clubs** that focus on topics such as financial literacy, HIV, risk reduction, family planning and pregnancy, gender-based violence, and decision making (also a component of DREAMS). It is also a structural intervention.
(4) **Swazi Men4Health** is a behavior change intervention that engages men to provide them with basic information on HIV, an understanding of their risk, and increase awareness of the HIV services available in their locality/community in which they live
(5) **Game Changer** is a structural intervention which builds local capacity of community systems to respond to HIV and highlights the specific issues surrounding male engagement in their communities.

More details on the specific interventions, populations, and indicators for the HC3 program in Eswatini can be found in Appendix C. Similar to the other programs, we sought to assess the Eswatini program costs across intervention type, population, and intervention.

Through the process mapping that was conducted to understand the individual interventions and tie costs to each process, several challenges were identified:

- For the Tinkhundla program, HC3 was reporting against PP-Prev, but the program was really centered around the work with the Tinkhundla. It would have been ideal to find an outcome to measure here and understand the costs that go into the work with the chiefdom structure and this community engagement process, but we were unable to achieve this within the scope of this activity.
- We also found that in the Game Changer intervention, while M&E data were reporting Action Plans, the program staff reported (during the process mapping exercise) that the outcome of measure should have included men reached.
- HC3 was unable to provide M&E data for the new intervention, Game Changer, so we were unable to provide a cost per beneficiary for that intervention or for the Special Initiative funding source.

In addition to the issues with aligning M&E data, we were unable to collect cost data disaggregated by intervention. This is illustrative of the difficulties of IP financial systems being tailored to feed into PEPFAR financial reporting requirements. The PEPFAR financial reporting initiative is inherently a top-down approach that, at the time of data collection, did not link HIV financial data to program data.

Much effort went into getting program expenditures disaggregated by activities related to strengthening the capacity of local leaders and communities (which were different from HC3's financial accounting categories), through a mapping exercise. These activities spanned all three funding sources.

Because the HC3 financial system was set up to meet the PEPFAR Expenditure Analysis requirements that were in place at the time of data collection, the outputs from that system were not useful in analyzing cost across any of the interventions being implemented, the intervention type (behavioral versus structural), or by the population being served (KK versus PP).

Instead, we were only able to see cost by funding source, with some level of disaggregation within that to display costs for certain activities that spanned all three funding sources.

Table 6 illustrates the summary of costs by intervention for the HC3 Eswatini program. Staff and fringe, materials and supplies, other direct costs, and HQ indirect costs were the greatest cost drivers of the HC3 Eswatini program overall. Cost drivers varied across the interventions within each of the three funding sources:

- DREAMS: Staff & fringe, training of community leaders, other direct costs, and HQ indirect costs
- COP (HVOP/HBHC): Staff and fringe, materials and supplies, other direct costs, and HQ indirect costs
- Special Initiative: Staff & fringe, training of community volunteers, and other direct costs

Table 6. Full breakdown of Eswatini program costs (redacted)

DISCUSSION

Recent efforts have been made to streamline cost data collection to improve accuracy of IP reporting. For example, PEPFAR's revised ER process in DATIM and the institutionalization of tools and processes within country HIV programs. These changes present an opportunity for more routine, high-quality analyses. While these processes are rolled out, the bottom-up costing data collected in this study can be combined with PEPFAR ER data to develop more accurate CPB and total resource requirement estimates. The challenges experienced and identified through the data collection process of parts I and II of this activity also highlight key issues that need be addressed when collecting cost data from PEPFAR HIV prevention programs.

During the part I qualitative assessment, USAID/Mission country field teams interviewed reported that the below site-level activities are an important part of prevention programs and must be conducted, however the costs to PEPFAR associated with them are not captured in a way that highlights this. This difficulty in capturing below site-level expenditures was also expressed by IPs, although not as directly. When looking for these below site-level costs in the second (costing) phase of the study, MEASURE Evaluation was able to explicitly find them at in the financial records of only one of the IPs, HC3 program in Côte d'Ivoire. The expenditures were not large drivers of overall program costs.

Additionally, despite the many benefits of the PEPFAR EA/ER, there are some limitations they share with any standardized system. The EA/ER does not allow for deep-dive, tailored country analyses at the subnational level. As seen in the presented findings, cost analyses provide more robust information on challenges and differences in the efficiency between sites, program management approaches, and service delivery models. However, even in this situation, it was not always possible to fully disaggregate program costs into the intervention types or by activity. This is because of the general limitations of most IP financial systems, as well as the fact that programs often establish their financial and indicator reporting approach to reflect their donor reporting requirements.

Disaggregated indicator data are key to understanding whether PEPFAR-supported services are reaching the intended beneficiaries and locations. PEPFAR prevention programs rely on a strategy of combination prevention, often including biomedical, behavioral, and structural interventions in prevention packages. However, as discussed in the background, only two indicators are used to monitor structural and behavioral interventions, KP_Prev and PP_Prev, indicators which we found insufficient for calculations of CPB.

MEASURE Evaluation also conducted a concurrent "KP_PREV and PP_PREV Indicator Assessment" (data collected in Tanzania, Eswatini, and Côte d'Ivoire in 2017) assessing the need and utility of the indicators, the feasibility of collecting and analyzing data, and whether the indicator reference sheets were fully defined. Through the assessment, MEASURE Evaluation found that it is difficult to both de-duplicate beneficiaries and standardize programs across partners. Current indicators do not showcase prevention efforts funded by PEPFAR such as IEC materials development and distribution and condom distribution. Due to lack of utility of the PEPFAR indicators, many IPs have developed custom indicators and the data are sometimes disaggregated in the IP systems more than what is required by PEPFAR MER. For PP_PREV, there are too many variables included in the reference sheet to consider when determining whether a client has been reached with HIV prevention services.

When conducting the cost assessment, the three leading challenges were (1) the collection and use of program beneficiary data, (2) the attribution of costs to interventions, and (3) the inadequacy of using these two sources of data for assessing cost per beneficiary.

Issue 1: Program Beneficiary and Indicator Data

This issue was consistent across all three programs and the variety of interventions found at each. Differences in how beneficiaries are counted across programs makes comparability difficult: a specific challenge of packaged interventions such as HIV prevention. Additionally, with generic terms such as "behavioral" and "structural" being used to capture a range of interventions and packages, the usefulness of measuring CPB also becomes limited.

Structural intervention measures were particularly challenging to obtain and utilize. The HC3 program in Côte d'Ivoire was unable to provide a viable measure for calculating the CPB for their structural intervention focused on government capacity building. The measures used to calculate CPB for structural interventions in Tanzania were slightly more useful, but the complexity of the programming required to count one beneficiary were not very specific to the individual interventions and had to be grouped together in a way that might mask differences in cost for the various structural interventions the program was engaged in.

Behavioral indicators that were used for CPB calculations were also inadequate. For example, the cost of the TV advertising of Reséaux looks quite expensive. Mass media campaigns are typically inexpensive ways to influence behavior, but because of limitations in the available M&E data from the program, the CPB focuses on the number of ministries and other partners who received, ordered or broadcast (on TV/radio) materials from the program, instead of the number of individuals estimated to have been reached by the programming itself. This leads to a CPB much higher than any other behavioral or structural interventions studied across the three countries. This specific challenge was also noted in the first phase of this study, when IPs requested additional guidance with tracking and reporting costs associated with mass media campaigns. IPs interviewed mentioned that a more appropriate way to track beneficiaries reached by mass media interventions would be to use traditional marketing and communication industry strategies such as exposure to messages and that look at CPB at facility or district level, but that obtaining such data is a real challenge.

One final challenge noted with how programs tracked with beneficiary data, was the focus on counting completion of specific cross-cutting activities instead of having individual measures per intervention. For example, the M&E data provided by Eswatini would not have allowed us to viably calculate a CPB for each intervention. This is largely because the measures used focused on activities being conducted, i.e. the number of traditional leaders that were trained. These activities were often implemented in several of the various interventions without any way to attribute specific trainings to an individual intervention.

Issue 2: Costs by Intervention

An additional challenge faced by all three programs was with disaggregating program costs by intervention. This was markedly true in in Eswatini, where, even through the use of allocation, we were unable to cost out individual the interventions taking place. The results of this research directly supported the qualitative findings from the first phase of this study. HIV structural and behavioral preventions intervention programs are not well served by the cost categories being collected for the EA or the ER. When attempting to collect and disaggregate program costs by the interventions being delivered, we found that the financial management systems were not developed to organize or analyze program costs in such a way. IPs had to expend significant effort to retract and relink individual costs and payments to interventions and were often unable to do so (leading to the development of allocation rules).

Issue 3: Cost per Beneficiary Calculations May Mask Depth or Shallowness of the Intervention

While these programs have discrete activities that they undertake, when you look at them in terms of behavioral versus structural and KP versus PP, it is less clear and there is often overlap in activities. One reason for this is because, based on the definitions of the PP_PREV and KP_PREV indicators, there are a lot of activities that could count towards reaching a beneficiary. Some programs have targeted interventions just to meet the indicator while others have suites of packaged interventions that go beyond the minimum to count towards the indicator. Those packaged interventions also vary widely in what is included in them. As you move from biomedical to behavioral to structural, you find less clarity in the definition of what constitutes each category. Throughout this study, MEASURE Evaluation had difficulty in mapping the interventions to behavioral versus structural, which is problematic for comparisons of CPB across categories and across countries. This is partially because we relied on input from the IPs when determining whether the interventions were behavioral or structural, and their interpretations may not have been consistent.

The above discussion illustrates why these measures should not be taken out of their individual country and program contexts. This study aimed to calculate the unit expenditure of HIV prevention programs and assess these CPB alongside the cost element drivers. While the resulting CPB may be useful to the programs studied and in-country mission staff for the purposes of planning, there are limitations to the generalizability of a CPB to other programs or countries. Additionally, the accuracy of cost assessments relies upon the quality of existing financial records and data—a limitation that will be considered within the context for the CPB of each intervention. Last, it is important to remember that cost analysis findings are only a piece of the puzzle for determining the efficiency of an intervention and are often insufficient for gauging impact or quality.

CHALLENGES AND RECOMMENDATIONS

The following key challenges were in collecting, analyzing, and interpreting cost data in structural and behavioral HIV prevention programs. Big-picture recommendations follow each observed challenge.

A. IPs were consistently challenged as their program financial management systems were largely incapable of tracking expenditures by:

- **a. Intervention (i.e., Brothers for Life)**
- **b. Program activity (i.e., training of traditional leaders)**

To address this, we suggest that programs consider setting up their financial system not to align with PEPFAR reporting requirements (which may change) but to track key activities by the interventions being delivered. This can be done in common financial management systems by creating additional coding systems for assigning costs, similar to what is already done when assigning traditional accounting codes. This would also require mapping potential program costs to interventions.

B. **Inability of both program beneficiary data to adequately calculate CPBs that reflect program impact.**

This was particularly true for structural HIV interventions, mass media campaigns, and other interventions that target general populations whom they were then unable to track data on. Programs were more likely to have indicators that aligned with program activities than program interventions.

To address this, we recommend that HIV prevention programs create a clear definition of service coverage for each intervention type (i.e. what services a person should receive to be counted towards the numerator?). Structural indicators and behavioral indicators related to mass media should be considered carefully.

C. KP and PP-PREV indicators are highly inaccurate for calculating CPB.

We do not recommend using these indicators to determine program success, efficiency, or reach when paired with cost data.

D. Data on cost of the programs, individual interventions, and CPB may be inaccurate (and likely high when IPs are erroneously lumping expenditures).

The above challenge is not unique to this study. It illustrates common challenges in costing any structural or behavioral HIV prevention program or intervention and will also be seen by IPs when conducting the PEPFAR ER process moving forward. Reasons might be whether the program included condom distribution or supply, variation in the package of services being delivered as part of the PP_PREV and KP_PREV interventions, and the usual suspects: data quality, program maturity, scope (DSD/TA), service delivery models, share of PEPFAR versus other funding streams, geography, epidemiology, etc.

Addressing this challenge is best done by improving data quality and reporting capacity of cost data by intervention and through the selection of more useful outcome measures. Ensuring an adequate feedback loop for the Expenditure Reporting initiative and exploring alternative solutions to traditional UEs are important steps to generating high-quality data. The capacity of local IPs to understand the life cycle of cost data and the implications of inaccurate reporting also needs to be improved.

APPENDIX.

A. Tanzania—The Jhpiego SAUTI Program Activity Features

Activity	PE Group Sessions	PE 1:1 Sessions	WORTH +	Cash Transfers	PLHIV & Alcohol Support Groups	SASA!	Biomedical
Intervention	Behavioral		Structural				Biomedical
KP/PP	KP & PP	KP	PP	PP	KP & PP	KP & PP	KP & PP
Components	•Training of PEs •SBCC curriculum	•Training of PEs •SBCC curriculum	•Training of Empowerment Workers •Savings & Loans Groups •ILO-funded entrepreneur start-up loans • WORTH+ group leaders training • Literacy volunteer trainings • Linkages to local opportunities and successful business people • Establishment of IGA's	•Cash Transfers to AGYW	•PLHIV empowerment clubs (Providing education on retention on treatment, reducing stigma and live health life) •Alcohol support groups for KP (Providing education on reducing alcohol uptake and linkage to biomedical services)	•Training to community activist •Training to drama groups •Training community champions •To challenge the existing gender norms, create demand and refine with correct gender norms with respect to SAUTI agenda.	Not the focus of this research activity
Target Populations	•FSW •MSM •AGYW	•FSW •MSM	•AGYW	•AGYW	•FSW •MSM •AGYW	•FSW •MSM •AGYW •PFSW •OHSP	NA
Indicators	•KP that received SBCC training •AGYW that received SBCC training (**PP**)	•KP that received SBCC training	•AGYW/FSW enrolled in savings and loans groups	•AGYW enrolled and received cash transfer	•PLHIV completed training curriculum •Number of KP on Alcohol support groups completed training curriculum	Gender norms	Number of individuals testing for HIV
Funding Source	COP	COP	DREAMS	DREAMS	COP	DREAMS	COP

B. Côte d'Ivoire—The JHU HC3 Program Activity Features

Activity	Super Go	Brothers for Life	Réseaux (TV Series)	Referrals to Testing and ART Services	Strategic Planning
Objective	Raise Understanding of Risk in Priority Populations			Linkages to Healthcare System	Government HIV Capacity Building
Intervention Type	Behavioral	Behavioral	Behavioral	Biomedical	Structural
Components	•Training of facilitators •Development of 4-session curriculum •Implementation of group education sessions	•Training of facilitators •Development of 4-session curriculum •Implementation of group education sessions	•Writing, production, and airing of TV episodes •Production and distribution of information leaflets	•Testing services offered during Super Go & Brothers for Life education sessions (administered by other organizations)	•Messaging Guide for HIV •HIV National BCC Strategy
Target Populations	AGYW (15-24)	Older Men (25+) **previous to FY 2017, target population age was 35+*	PP / General Population	AGYW (15-24) and Older Men (25+)	PP / General Population
Indicators	•Number of AGYW attending all 4 sessions of education program (data is broken into 10-14, 15-19, 20-24, 25-49, and 50+)	•Number of men attending all 4 sessions of the education program (data is broken into 10-14, 15-19, 20-24, 25-49, and 50+)	•Number of ministries and other partners who received, ordered or broadcast (on TV/radio) CCP materials	•Percent of participants (Super Go and BFL programs) who received Testing and Counseling service for HIV and received their test results	None Available
Funding Source	COP	COP	COP	COP	Messaging Guide is paid for by the Institut National pour l'Hygene Publique; the rest is funded by COP

C. Eswatini—The JHU HC3 Program Activity Features

Activity	Traditional Leaders (Tinkhundla)	Young Women Empowerment	Priority Populations HIV Prevention PPHP	Swazi Men4Health	Game Changer
Intervention Type	Structural	Structural	Behavioral	Behavioral	Structural
Objective	• Engage (mobilize) communities to reduce vulnerabilities and increase safety for AGYW	• Reduced vulnerability of young women (20-24) to HIV and GBV through community-based HIV prevention, using combination socio-economic approaches, in five Tinkhundla	• Strengthened capacity of communities in two Tinkhundla to address HIV infection (coined as Priority Population HIV Prevention - PPHP)	•Testing services offered during Super Go & Brothers for Life education sessions (administered by other organizations)	• Community engagement through traditional leadership for an improved local HIV response
Components	• Community Entry • Training of Intervention at Chief Level • Training of Intervention at Inner Council Level • Recruitment of Community Volunteers • Training of Community Volunteers • Community Workshops	• Community Entry • Training of Intervention at Chief Level • Training of Intervention at Inner Council Level • Recruitment of Community Volunteers • Training of Community Volunteers • Community Workshops • Savings and Loans Groups	• Community Entry • Training of Intervention at Chief Level • Training of Intervention at Inner Council Level • Recruitment of Community Volunteers • Training of Community Volunteers Community Workshops	• Community Entry • Training of Intervention at Chief Level • Training of Intervention at Inner Council Level • Recruitment of Community Volunteers • Training of Community Volunteers Community Workshops	• Community Entry • Training of Intervention at Chief Level • Training of Intervention at Inner Council Level • Recruitment of Community Volunteers • Training of Community Volunteers Community Workshops
Target Populations	AGYW	AGYW	PP Men (20-24)	AGYW (20-24) Men (24-49) Women (25-49)	Men (15-49)
Indicators	# people tested # people reached with risk assessment and prevention education				
Funding Source	DREAMS	DREAMS	COP (HVOP/HBHC)	COP (HVOP/HBHC)	Special Initiatives

WORKING PAPER

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