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COSTING OF COMMUNITY-LEVEL HIV SERVICES IN BARBADOS: FINAL REPORT

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The Health Finance and Governance Project

USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The six-year, \$209 million global project is intended to increase the use of both primary and priority health services, including HIV and AIDS, tuberculosis, malaria, and reproductive health services. Designed to fundamentally strengthen health systems, HFG supports countries as they navigate the economic transitions needed to achieve universal health care.

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DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

ART	antiretroviral treatment
BD	Barbados dollar
BFPA	Barbados Family Planning Association
CEED	Community Education Empowerment and Development
CSO	civil society organization
DIC	drop-in center
FSW	female sex worker
HIV/AIDS	human immunodeficiency virus/acquired immunodeficiency syndrome
LGBTQI	lesbian, gay, bisexual, transgender, queer, and intersex
LINKAGES	Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV
LRU	Ladymeade Reference Unit
MHW	Ministry of Health and Wellness
MSM	men who have sex with men
MSM&TG	men who have sex with men and transgender
PEPFAR	President's Emergency Plan for AIDS Relief
PLHIV	persons living with HIV
SP	service provision
STI	sexually transmitted infection
USAID	United States Agency for International Development

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I. BACKGROUND AND RATIONALE

I.1 Problem Statement

Barbados is a small island nation in the Caribbean, with a land size of approximately 166 square miles. It is one of the most populous islands, with an estimated population of 275,400 (Ministry of Finance and Economic Affairs, 2017). Barbados has been classified by the World Bank as a high-income country, and has a well-developed, mixed economy. The residents of Barbados have enjoyed political, economic, and social stability, and a relatively high standard of living. According to the 2016 Human Development Report, Barbados is ranked 54 of 188 countries, placing it in the high human development category (UNDP report, 2016).

Since the first diagnosis of HIV in 1983, the Barbados National HIV Programme has made several significant achievements, particularly in increasing access to prevention, care, and treatment (Landis et al, 2013). In 2001, the national response to HIV in Barbados was expanded to become a robust, multi-sectoral program designed to mitigate the impact of HIV, coordinated by the HIV Programme Management Unit of the Ministry of Health and Wellness (MHW). As part of the government's response to the HIV epidemic, the Ladymeade Reference Unit (LRU) was established in 2002 as the national HIV treatment center in Barbados. The LRU consists of a clinic, pharmacy, and internationally accredited laboratory. The response from the government of Barbados also included universal access to antiretroviral therapy. Following this response, in 2006, the sexually transmitted infections (STIs) program in Barbados was revamped and incorporated into the national HIV and AIDS one to better address the population's health needs.

The prevalence of HIV among the general population is estimated to be 1.6 percent as of the end of 2016 (Ministry of health report, 2017). However, prevalence of HIV in some key populations, including men who have sex with men (MSM) and female sex workers (FSW), is higher than that. For example, a recently concluded behavioral survey among MSM in Barbados has revealed an HIV prevalence rate of 11.8 percent (Hope-Franklyn et al, 2017).

Barbados is currently experiencing tight fiscal constraints due to the slowdown of economic growth coupled with the fact that as a high-income country, it now no longer qualifies for concessional loan arrangements and grants from development partners. The President's Emergency Plan for AIDS Relief (PEPFAR) has indicated a plan to reduce, and eventually cease, funding for HIV programs in Barbados, within the next two years. Given the current funding environment, the MHW is looking for ways to continue financing the program through improved efficiency and by making evidence-based investments into cost-effective interventions. The MHW is also seeking to identify new approaches to financing, which will allow continued health coverage and maintain the gains seen in the sector.

Civil society organizations (CSOs) funded by USAID through the Linkages Across the Continuum of HIV Services for Key Populations Affected by HIV (LINKAGES) project and the government of Barbados began offering community-level HIV interventions in 2017, including testing, treatment, and social support to key populations such as MSM, commercial sex workers, and youth. Some of these populations are highly stigmatized, so community outreach is perceived as necessary. Community-based services are expected to result in improved outcomes for these populations (e.g., reduced loss to

follow-up and higher retention in care, improved adherence to treatment). This outreach could be particularly valuable in supporting the government's adoption of the WHO-recommended Treat All strategy by helping to link persons living with HIV (PLHIV) to treatment and promote adherence.

With funding from USAID, the Health Finance and Governance project was tasked with conducting a study to assess the cost of HIV-related services provision at the CSO level. This study should benefit both the CSOs themselves and the government of Barbados. The government will be able to consider the results in deciding whether or how to allocate funds to CSOs to enable the CSOs to provide some key services when PEPFAR funding ceases. This study is one of several HFG activities implemented in four countries in the Caribbean to prepare the countries for donor transition.

1.2 Background on Barbados's Civil Society Organizations

1.2.1 LINKAGES

LINKAGES is a USAID-funded five-year program to assist the national HIV responses in the Eastern Caribbean countries of Barbados, Suriname, and Trinidad and Tobago. The project seeks to reduce HIV transmission among key populations, specifically MSM; transgender persons; and FSW; and improve the quality of life of the HIV-infected persons who fall into these key populations.

LINKAGES sought to build on the existing community services and works in collaboration with existing CSOs and the MHW to develop and implement a community-based service delivery model for high-quality, client-friendly, and responsive HIV care. This model was piloted at the Barbados Family Planning Association (BFPA) and when that pilot ended, the model was later expanded to EQUALS and Community Education Empowerment and Development (CEED). EQUALS and CEED are the local CSOs currently implementing the activities under the program through a LINKAGES grant.

LINKAGES also provides technical assistance to these CSOs to strengthen their capacity in an effort to sustain their service provision after the project lifespan as well as to introduce additional services—e.g., the provision of HIV treatment at these sites—which will better serve their communities.

1.2.2 BFPA

The BFPA is an autonomous organization working in collaboration with the Ministry of Health. Since its establishment in 1954, this organization has worked to provide the residents of Barbados with sexual reproductive health information, education, and clinical services. It has worked to ensure that reproductive health resources are easily accessible by all. The BFPA also provides community outreach services, which have grown to encompass the lesbian, gay, bisexual, transgender community and FSWs.

To achieve its mission of serving people and empowering them with their sexual and reproductive rights, the BFPA runs a clinic from its centrally located main office. Services include contraceptive services, pregnancy tests, HIV and STI screening and treatment, gynecological care, antenatal care, fertility treatment, gender-based violence screening, urological care (males), and same-day surgeries.

Given the longstanding work the BFPA has done in the community around sexual and reproductive health, the organization seemed a natural choice for the expansion of HIV services at the community level. The MHW has been decentralizing HIV services from the lone HIV specialty clinic on the island, LRU, and the BFPA has been the first nongovernment community clinic to be used in this initiative. The BFPA was the first CSO to receive a Fixed Amount Award grant under the LINKAGES project to

implement activities directly targeted toward key populations, but it no longer receives USAID grant funding. BPPA still works in close collaboration with the other two CSOs, EQUALS and CEED.

1.2.3 EQUALS

Since registering as a nongovernmental organization in 2013, EQUALS has worked with and for the Lesbian, Gay, Bisexual, Transgender, Queer, and Intersex (LGBTQI) community to promote human rights and sexual and reproductive health, strengthen community engagement, and build the capacity of the members of the LGBTQI community.

The organization aims to improve the quality of everyday life of LGBTQI persons and other marginalized populations through education, rights-based advocacy, and developing and sustaining hassle-free access to services. The specific objectives of the organization include:

1. Promoting the health of key populations through education for prevention, skills building, and navigation of care
2. Facilitating advocacy on human rights violations
3. Engaging in public education to sensitize the public and put a human face on issues facing key populations
4. Advocating for policy and legal reform to promote equality
5. Building support networks for key populations
6. Creating a safe space for community members

Currently, EQUALS fulfills these objectives through a drop-in center (DIC), which serves as a safe space for all community members. EQUALS operates from the DIC, which also serves as an office space, a location to provide the many services offered to the community, and a venue for socializing.

EQUALS has additionally leveraged its relationship with the community and established a safe space in collaboration with the MHW to provide HIV and syphilis testing to MSM and FSW.

1.2.4 CEED

The CEED organization was born out of a needs assessment conducted by the National HIV/AIDS Commission. The assessment showed that members of the lesbian, gay, bisexual, and transgender community placed a high priority on personal development, health and wellness, community and education, skills building, and training. It recommended the development of lesbian, gay, bisexual, and transgender-friendly interventions. To meet this need, CEED was developed in 2013, and soon thereafter it extended its scope to include all marginalized groups in Barbados, including persons with physical disabilities, the impoverished and HIV-positive persons. Although motivated by the results of a government-sponsored study, the organization itself is nongovernmental. The organization's intention is to move marginalized groups in Barbados from beyond societal, social, and political boundaries to assist with the overall development of their communities.

CEED has three ongoing projects:

1. The Community Education Empowerment Project 2, which uses the second round of funding by the Maria Holder Trust. The objective of this project to conduct skills-building activities for marginalized groups to encourage entrepreneurship.

2. LINKAGES, which aims to strengthen the national HIV response by increasing accessibility of services to key populations.
3. The Transformation Empowerment Project, which is funded through the National HIV/AIDS commission, of which a key component is a chat room forum called “Chatting with Us and About Us.”

Under the LINKAGES project, the organization uses a peer outreach model to offer STI testing including HIV testing; sexual and reproductive health; psychosocial care and support; and support for and prevention of gender-based violence. CEED works with other organizations to provide other types of services (education, training, etc.)

HIV testing is offered in collaboration with the MHW on site and at health fairs conducted once a month. Syphilis testing is offered in conjunction with the HIV test as per the MHW’s protocol.

1.3 Study Objectives

The primary purpose of this study is to understand the costs, for the CSOs, of delivering HIV and related support services to key populations, to identify the major costs components, and to inform stakeholders on the potential costs for different scenarios of service delivery. We will also briefly analyze the potential financial gap in the absence of LINKAGES funding for the two CSOs.

In particular, this study aims to assess for both EQUALS and CEED:

- The current cost of providing HIV and related services to key populations
- The potential cost of providing those services under a different scenario of service delivery
- The potential cost of expanding HIV services to antiretroviral treatment (ART) care

2. STUDY METHODS

2.1 Study Design

As seen above, the sample constituted two CSOs (EQUALS and CEED) working with key populations and currently receiving grants from the LINKAGES project to implement their activities. The BFPA also works with key populations and has benefited from LINKAGES grants in the past to provide HIV-related services, especially ART. The BFPA experience will be used to estimate the potential cost of offering ART at the CSO level.

This costing is from the CSO perspective, and therefore patient payments, including out-of-pocket payments at point-of-service and costs for accessing services (such as payments for transportation), were not included. Moreover, services at CEED and EQUALS are currently free at point-of-service, and beneficiaries get reimbursed for transportation when accessing some services.

The costing information to be considered for the CSOs concerns the period May 2017–May 2018.



This study obtained Institutional Review Board clearance from Abt Associates and from the University of West Indies faculty of medical sciences in Barbados. Individual patients were not interviewed or contacted as part of this study.

2.2 Services to Be Costed

Both EQUALS and CEED currently provide HIV testing and counseling to key populations with support from LRU health professionals. This study also includes other related services provided by these organizations that also benefited key populations (Table 1). Costs, to the extent possible, were inclusive of all the inputs used (e.g., clinical, overhead, staff) to deliver services at the CSO level.

EQUALS

EQUALS offers several services at its DIC, and also in the community and through outreach. The services focus on two groups of key populations: men who have sex with men and transgender (MSM&TG) and FSW. EQUALS has formed two groups, each comprising two outreach workers and a peer navigator, with each group focusing on one of the above key populations.

- The MSM&TG outreach group offers HIV testing services (in conjunction with syphilis testing) at the EQUALS DIC weekly. It organizes one MSM support group and one transgender support group once a month at the DIC, and a monthly social activity for all (game night, movie night, etc.)
- The FSW group offers testing monthly at the BFPA during a “night clinic” and also organizes a monthly support group there. The group also offers testing monthly at nightclubs to reach more FSWs.

For testing services, the teams are accompanied by two MHW employees who work with the National HIV/STI Programme. One of the MHW employees offers pre- and post-test counseling, which includes disclosing the result of the HIV rapid test, and the other conducts the HIV rapid testing. The MHW employees are also responsible for following up with the patient on test results.

Other non-testing services are available through appointments. Psychological support is offered at the DIC by a part-time psychologist one day per week. There is a legal clinic at the DIC where a lawyer is available once a month to offer legal advice. Emergency housing aid is available for members of the key population in need, with contributions of up to 200 Barbados dollars (BD; USD 100) per week towards rent.

CEED

CEED uses a peer outreach model to offer STI testing including HIV testing, support groups around sexual and reproductive health, prevention of gender-based violence, and psychosocial care and support.

HIV testing (in conjunction with syphilis testing) is offered through collaboration with the MHW on site or at health fairs once a month. The collaboration with MHW staff for testing is the same as described for EQUALS above.

The support groups for the MSM and transgender communities are organized at the CEED location once a month. Psychosocial support is also offered by a psychologist through appointment.

Table 1: List of Services Costed

EQUALS		CEED	
Services	Planned frequency	Services	Planned frequency
HIV testing services			
F5W testing at BFPA “night clinics”	Monthly	Testing at health fairs	Monthly
F5W testing at night clubs	Monthly	Testing at CEED	Monthly
MSM&TG testing at EQUALS	Weekly		
Support groups services			
MSM&TG support groups at EQUALS	Monthly	Support groups for MSM&TG	Monthly
F5W support groups at BFPA	Monthly		
Social activities at EQUALS (movie night, game night, etc.)	Monthly		
Other related services			
Psychosocial support	Once a week or by appointment	Psychosocial support	By appointment
Legal support	Once a month or by appointment	Outreach support	Not defined
Housing support	On demand		
Outreach support	Not defined		

The planned frequency of activities does not correspond to the actual number of activities implemented. For different reasons (scheduling conflicts, no availability of beneficiaries, etc.) there were fewer testing events and support groups organized during the study period than had been planned. The activity numbers will be described later in the results section.

The MHW team provided all testing supplies, including HIV rapid tests, blood vials and phlebotomy tools, sharps and biohazard containers, and gloves and any other consumables. The MHW team travels with all items necessary to provide testing, and removes all materials (including biohazard waste) at the end of the event. EQUALS and CEED provide other equipment for setting up the testing space, which includes tables, chairs, desk lights, and tents for nightclub testing and health fairs. EQUALS and CEED also provide a 100 BD (USD 50) stipend to MHW staff for each testing event.

2.3 Data and Costs Included

A local consultant in Barbados collected the data. The information collected included activity and utilization data from the CSOs. Financial records were also collected and interviews were conducted with the CSOs' managers to better understand the data.

The data on activity and utilization included number of activities per type (testing events, support groups events, etc.) as well as the number of people reached for each activity, when that was available.

The direct costs associated with a service are costs that can be directly traced to that activity: for example, the salary of the FSW team at EQUALS can directly be traced to the FSW activities. Direct costs of services provided at the CSO level are mainly composed of human resources, given that all medications and/or medical consumables are provided (and paid for) by the government and laboratory tests are performed at the Best-Dos Santos Government Laboratory free of charge to the CSO or the patient.

The human resources costs for staff working directly in the CSO providing the service were based on the payroll review and on interviews with the manager to estimate the amount of time staff spend working on different activities. Costs for human resources were inclusive of salary and any other incentives paid to staff.

However, not all staff costs are direct, because the administrative staff of these CSOs contribute to all services provided; hence they are shared (indirect) costs. Indirect costs are not attributable to a single activity type and need to be allocated to different activities. An example would be allocating the electricity bill between FSW and MSM&TG activities at the DIC for EQUALS. For this study, indirect costs include: costs related to overheads (repairs and maintenance, rent or estimated cost of rent for the building, printing and stationary, operations, utilities, equipment depreciation, etc.) and costs related to service provision (staff training, transportation, cellphones, etc.).

2.4 Analysis

All of the services are provided with common resources, and one important aspect of this study is to estimate the level of resources used for each type of service. All inputs used in providing the services and paid for by the CSOs were accounted for. Tests kits, consumables costs, and laboratory tests costs are provided by the government and thus were excluded from this costing given that this study was done from the perspective of the CSOs.

The costing uses a top-down approach. This approach allows the ultimate total and unit costs to include all costs incurred in the provision of services including the relevant overheads costs allocated to the provision of each type of service.

2.4.1 The Costing Approach

The CSOs provide targeted services to a target population, so are less complex in terms of costs than hospitals or other health care providers. This meant that using the traditional distinction between direct and indirect costs was not very suitable for the interpretation of results. As discussed in the data collection section above, the only direct cost is the staff cost; all the remaining costs are indirect.

To better categorize costs and help decision-making related to realizing potential efficiency gains, we categorized the data into variable and fixed costs. In the short term, fixed costs are costs that do not change with the volume of services, while variable costs increase or decrease with the volume of services.

Table 2: Categories of Costs and Examples of Costs Inside Those Categories

Category of Costs	Comments
Payroll costs	Costs related to personnel working for the CSOs. Considered as fixed, because they do not necessarily increase with activity in the short term.
Direct payroll	Costs of staff directly involved in services (for example, outreach workers).
Indirect payroll	Costs of administrative and support staff.
Overhead costs	Costs related to day-to-day functioning of the CSOs. Considered as fixed, because they do not necessarily increase with activity in the short term.
Building rental	Rent for the building occupied by the CSOs.
Utilities	Electricity, water, etc.
Fixed service provision costs	Costs related to providing the services offered by the CSOs. Considered as fixed because they do not necessarily increase with activity in the short term.
Other staff costs	Continuous capacity building for the team mainly through LINKAGES training workshops. Cost of consultants or staff, not currently on the payroll, who supported service provision at any time during the study period.

Category of Costs	Comments
Telecommunication	Staff phone lines provided to them for outreach work,
Variable service provision costs	Costs related to providing the services offered by the CSOs. Considered as variable because they increase with activity in the short term.
Support groups	Costs of refreshment during support groups.
HIV testing services	Costs of operations for the testing events both on and off site.

For each CSO and for each type of services (as defined in Table I), we obtained the total costs, disaggregated by fixed and variable.

The cost of staff directly involved in service provision was calculated based on payroll data and on assumptions about their time allocation provided by the CSOs’ managers. For each type of service, the dedicated staff salaries were aggregated to determine the personnel cost and then further allocated among the different services they provide. For example, the direct personnel costs for EQUALS services to FSWs were obtained by aggregating the salaries of the two outreach workers and one peer navigator working in the FSW team. Then we assume that half of their time is used for outreach in the community and the other half for other activities. The half going to other activities was equally distributed among the three activities for the FSW team (support groups, testing at BFPA, and testing at night clubs). All other costs (including annual equipment depreciation, indirect payroll, rent, telecommunications, transportation, etc.) were allocated among the different services “top down,” using one of the following allocation criteria, depending on the nature of the costs: number of staff, hours worked, number of beneficiaries (people tested/counseled), and number of events (testing events/support groups).

Using the planned activity level (number of services planned in the study period) and the actual numbers of services realized, along with the number of beneficiaries of those services (when available), we calculated unit costs for services and beneficiaries.

The focus on key populations in a relatively small country like Barbados means a low volume of services; hence, unit costs will be naturally high, and should be interpreted with caution. Instead, interpretation should focus on total costs of providing the services disaggregated by type (e.g., testing event, outreach, support groups).

Due to the small sample size of this study, there will be no statistical analysis on the costing results (no reporting of ranges or standard errors, etc.).

2.4.2 Scenario Estimations

Following the estimation of current costs (for the study period), we re-estimated costs for several scenarios discussed with the CSOs' managers. The managers at EQUALS provided us with some potential changes they were considering: stopping services offered to FSW, and changing staffing levels to help achieve some efficiency gains by lowering costs. At CEED, the managers did not propose changes to the current level of services or inputs in the short term.

Both CSOs were interested in adding ART provision to their services, so we estimated the incremental costs of ART using the BFPA model of community service provision. More details on the BFPA model of providing ART can be found in the shared care protocol document in the Annexes.

Table 3 below describes the scenarios.

Table 3: Scenario Estimation

Scenario	Description	Comments
EQUALS		
I	No more FSW services. This will mean changes to the personnel costs as well as to service provision-related costs.	The FSW services will be transferred to a different organization more focused on that key population.
	Reduce the MSM team from three to two people and increase the psychologist's time from one day a week to two days a week.	These are changes in addition to not having an FSW team anymore.
II	Given Scenario I, use the BFPA experience to estimate the costs of adding HIV treatment to the services provided.	Information related to ART services was provided by BFPA staff.
CEED		
I	There were no estimations of Scenario I for CEED.	From conversation with CEED managers, they did not propose changes to any inputs at the moment.
II	Use the BFPA experience to estimate the costs of adding HIV treatment to the services provided.	BFPA provided information related to ART services.

The main additional resource for adding ART provision, compared to only doing HIV testing, is the medical staff to care for patients. Below is a list of assumptions derived from the BFPA model and used to estimate additional costs of ART provision for EQUALS and CEED.

- A clinical supervisor will oversee the clinical services provided in key population clinics (level of effort: 1 day per month).
- A nurse will provide health services to key populations the equivalent of five days' level of effort per month.
- A medical consultant will provide expert advice and training related to clinical services on HIV and other STIs.
- Supplies for treatment were estimated at 30 BD per person per visit. The estimation will be based on 10 PLHIV treated with an average of 3 visits a year.
- Vouchers for quarterly laboratory services (CD4 and viral load, kidney, liver, cholesterol, etc.) are estimated at 100 BD (USD 50) per person. The estimation will be based on 10 PLHIV treated.
- Additional overhead costs (we will consider 10 percent additional overhead costs, except rent, for the new services).
- Additional transportation if the beneficiaries will be reimbursed for transport for accessing the service.

One option for better coordination of treatment and care and a more efficient use of personnel among the CSOs would be for them to share the medical staff (the clinical supervisor and nurse) on a part-time basis. Those people would then benefit from LINKAGES trainings (and from the ongoing capacity-building process).

2.4.3 Sources of Revenues Analysis

Given the current costs of providing services and the costs for Scenario 1 (inputs changes to reduce costs), we conducted a rapid analysis of the sources of revenue for EQUALS and CEED to assess their dependence on LINKAGES funding and the gap to be filled in the absence of such funding.

3. STUDY RESULTS

The results are presented for both EQUALS and CEED under each sub-section. All costs are in BD.

3.1 Total Costs of Services

The total cost of providing services for the study period was 342,321 BD for EQUALS and 190,704 BD for CEED. See Figures 1 and 2 for detailed breakdowns of costs.

Figure 1: Total Costs Distribution for EQUALS

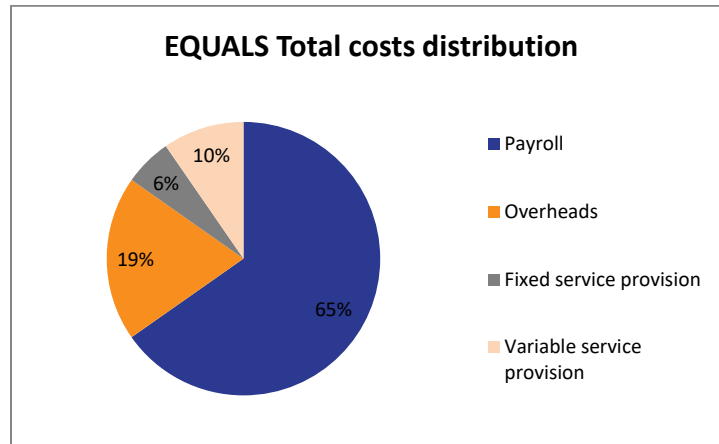
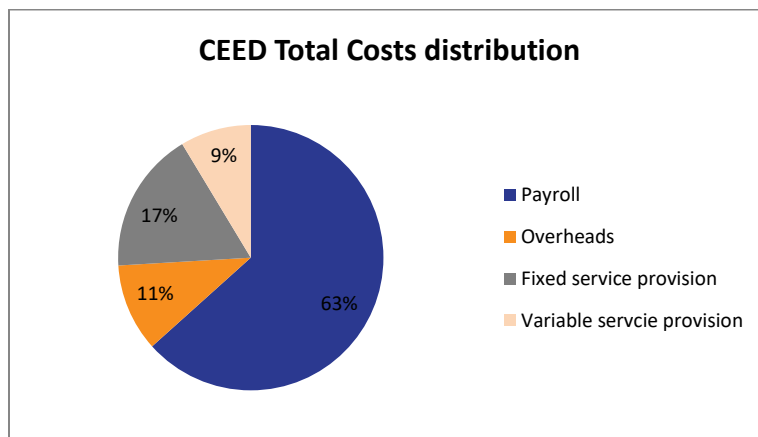


Figure 2: Total Costs Distribution for CEED



Payroll constituted the majority of costs for CSOs, constituting 65 percent of all costs for EQUALS and 63 percent of all costs for CEED (Figures 1 and 2). Overheads are the next biggest category for EQUALS (19 percent; almost half of overhead costs is for rent), followed by variable service provision

(10 percent) and fixed service provision (6 percent). For CEED, fixed service provision is the second largest category (17 percent), followed by overheads (11 percent) and variable service provision (9 percent).

Tables 4 and 5 present the total costs for the different services offered, broken down by cost categories: payroll, overheads, and fixed and variable service provision (SP) for the two CSOs.

Table 4: Total Costs per Service and per Cost Category for EQUALS (BD)

Services	Total Payroll	Overhead Costs	Fixed SP Cost	Variable SP Cost	Total Costs	Percentage of Total Costs
FSW support groups at BFPA	14,994	2,667	4,229	1,810	23,700	7 percent
FSW testing at BFPA night clinics	14,994	2,667	4,229	3,866	25,756	8 percent
FSW testing at night clubs	14,994	2,667	4,229	4,676	26,566	8 percent
FSW services	44,983	8,001	12,687	10,352	76,022	22 percent
MSM&TG support groups in DIC	21,160	11,429	956	3,918	37,463	11 percent
Social activities at the DIC (movie night, game night, etc.)	10,580	5,715	736	4,802	21,832	6 percent
MSM&TG testing in the DIC	42,320	22,859	1,395	4,212	70,785	21 percent
MSM&TG services	74,060	40,003	3,087	12,932	130,081	38 percent
Psychosocial support	14,995	6,154	237	665	22,051	6 percent
Legal support	2,249	1,539	59	112	3,959	1 percent
Housing support	4,398	3,077	118	3,020	10,613	3 percent
Other services	21,642	10,770	414	3,796	36,622	11 percent
Outreach support	82,696	8,001	3,076	5,824	99,597	29 percent
Total	223,380	66,774	19,263	32,904	342,321	100 percent

At EQUALS, MSM&TG services constitute the largest component of total costs (38 percent), followed by outreach support (29 percent) and FSW services (22 percent). This is explained by the fact that most MSM&TG services take place at the DIC (hence use more overhead costs).

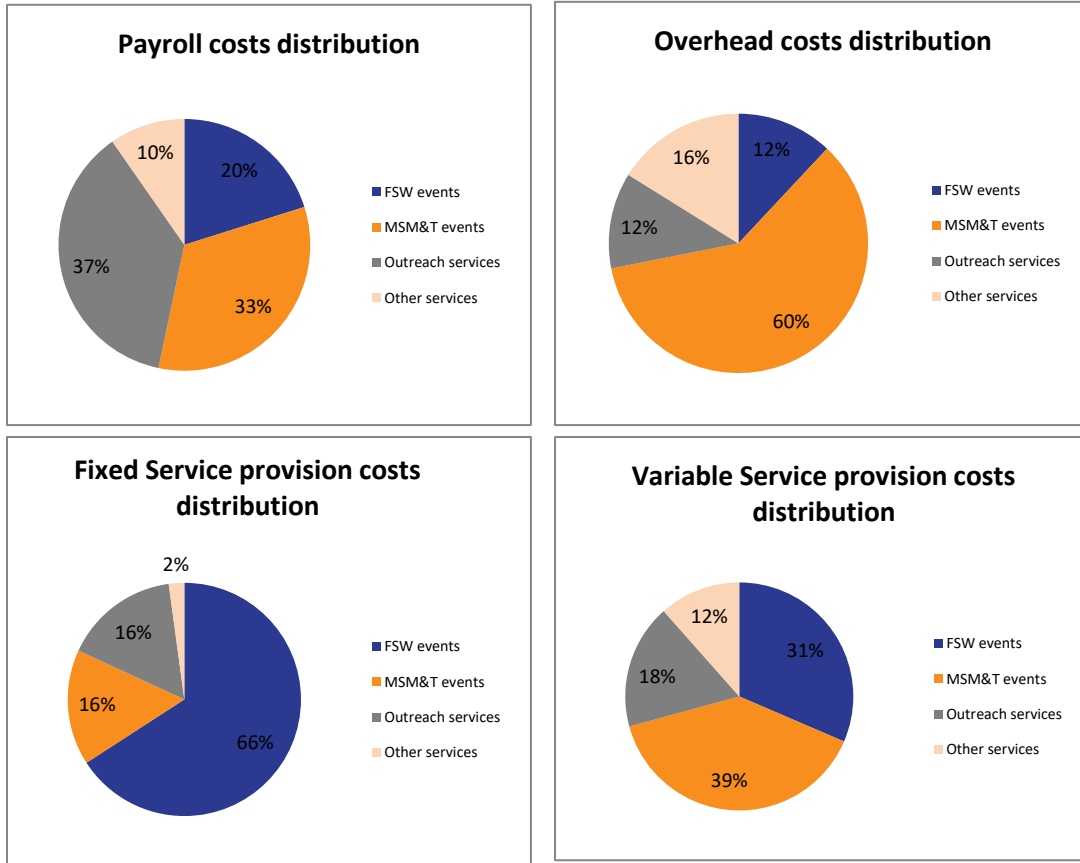
Among FSW events, testing at night clubs and testing at BFPA have a similar level of costs, while among the MSM&TG events, the testing events at the DIC are the most costly because of their frequency (weekly). Psychosocial services are the most costly of the “other services,” partly because they include PLHIV support groups (with refreshment and transport costs for participants).

Table 5: Total Costs per Service and per Costs Category for CEED (BD)

Services	Total Payroll	Overhead Costs	Fixed SP Cost	Variable SP Cost	Total Costs	Percentage of Total Costs
Support groups	26,377	5,284	9,558	5,814	47,034	25 percent
Testing at health fairs	8,330	1,057	9,558	3,075	22,020	12 percent
Testing at CEED location	52,755	10,568	10,379	6,150	79,852	42 percent
Psychosocial support	24,296	2,114	3,284	1,344	31,038	6 percent
Outreach support	9,044	1,409	219	90	10,762	16 percent
Total	120,802	20,431	32,998	16,474	190,704	100 percent

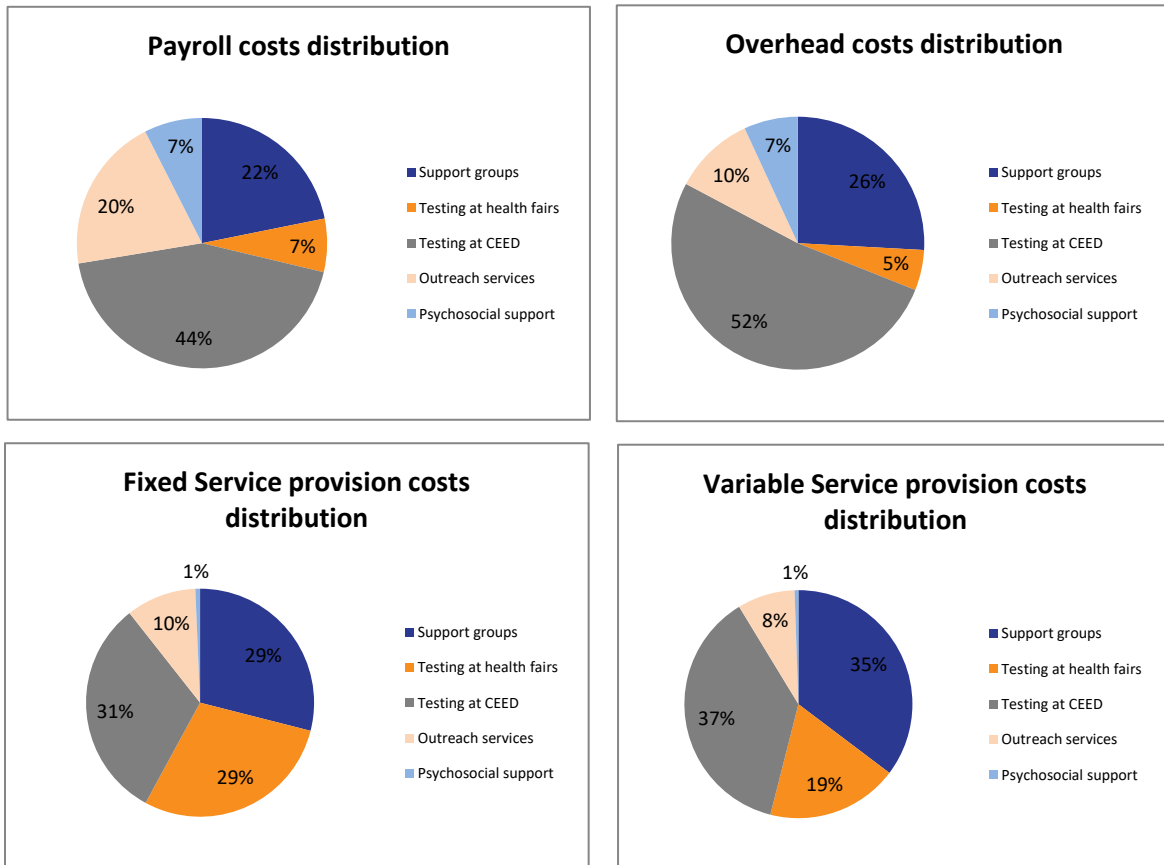
For CEED, all of the services offered under the LINKAGES program are focusing on the MSM&TG population. Testing at the CEED location has the highest share of total costs (42 percent), followed by support group meetings (25 percent). This is because they are occurring at the CEED location, hence using many of the resources needed to run the program. The cost of outreach support was the third largest cost category (16 percent), followed by testing at health fairs (12 percent), and psychosocial support (6 percent).

Figure 3: Distribution of Costs Categories across Services Types for EQUALS



At EQUALS, outreach services have the highest share of payroll costs (37 percent) and the direct staff spends more of their time in the community doing outreach as compared to doing planned events (Graph 3). MSM&TG services had the second highest share of payroll costs (33 percent). Overhead costs are dominated by services that mostly happen at the DIC (MSM&TG events and other services). Fixed service provision costs are dominated by the FSW events (66 percent) because of the FSW consultant helping the team (in addition to the normal FSW staff). MSM&TG events comprised the largest share (39 percent) of variable service provision costs because of higher number of MSM&TG events (support groups and testing events) than for other services.

Figure 4: Distribution of Costs Categories across Services Types for CEED



For CEED, testing services and support groups have the first and second highest share of all costs categories across the cost types. Outreach services was the third largest component of payroll costs and overhead costs, while testing at health fairs was the third largest component of costs for both fixed and variable service provision costs.

3.2 Unit Costs of Services

Using the number of events planned and the number of events that happened, we calculated the cost per testing event. We also attempted to calculate the cost per beneficiary. We need to caution that the activity data, although it was obtained from the CSOs, may not be complete, especially for the number of beneficiaries (number of people counseled/tested or attending support groups). Moreover, as stated above, it is anticipated that the narrow definition of these populations makes it unlikely to have large numbers of beneficiaries in a small country like Barbados. Thus, the unit costs will be high, and rather than being interpreted for their absolute value, these unit costs should be used to see whether there are potential efficiency gains to be achieved with changes in service provision for the CSOs.

Table 6: Unit Cost per Testing Event for EQUALS (BD)

Testing Services	Number of Organized Events *	Fixed Cost per Event	Variable Cost per Event	Total Cost per Event	Number of Beneficiaries	Fixed Cost per Beneficiary	Variable Cost per Beneficiary	Total Cost per Beneficiary
FSW testing at BFPA night clinics	10 (11)	2,189	387	2,576	75	292	52	343
FSW testing at night clubs	7 (11)	3,127	668	3,795	96	228	49	277
MSM&TG testing in the DIC	22 (44)	3,026	191	3,218	66	1,009	64	1,073

*Planned events are in parentheses.

Fixed costs represent a much larger share of costs than variable costs for the testing events at both CSOs (Table 6 and Table 7). This indicates that the cost per event can be decreased by increasing the number of events organized (returns to scale). However, there were a relatively low number of beneficiaries for some events (both from EQUALS and CEED), and thus there may be limited value in organizing additional testing events if they attract few or no participants. Thus, both more testing events and more beneficiaries are needed to achieve greater efficiencies in terms of lower cost per event or beneficiary.

For EQUALS in general, the FSW testing events had more beneficiaries than the ones for MSM&TG (possibly because of size of each population). To be able to realize the potential efficiency gains (through returns to scale), the number of MSM&TG beneficiaries of testing sessions should be increased, which requires more outreach to refer more key populations for testing.

Table 7: Unit Cost per Testing Event for CEED (BD)

Testing Services	Number of Organized Events*	Fixed Cost per Event	Variable Cost per Event	Total Cost per Event	Number of Beneficiaries	Fixed Cost per Beneficiary	Variable Cost per Beneficiary	Total Cost per Beneficiary
Testing at health fairs	3 (10)	6,315	1,025	7,340	12	1,579	256	1,835
Testing at CEED location	16 (20)	4,606	384	4,991	24	3,071	256	3,327

*Planned events are in parentheses.

For both EQUALS and CEED, unit cost per beneficiary is highest for testing events happening on site (CEED or EQUALS location), compared to offsite (at health fairs or night clubs), which is logical, given that there are no overheads costs for offsite events.

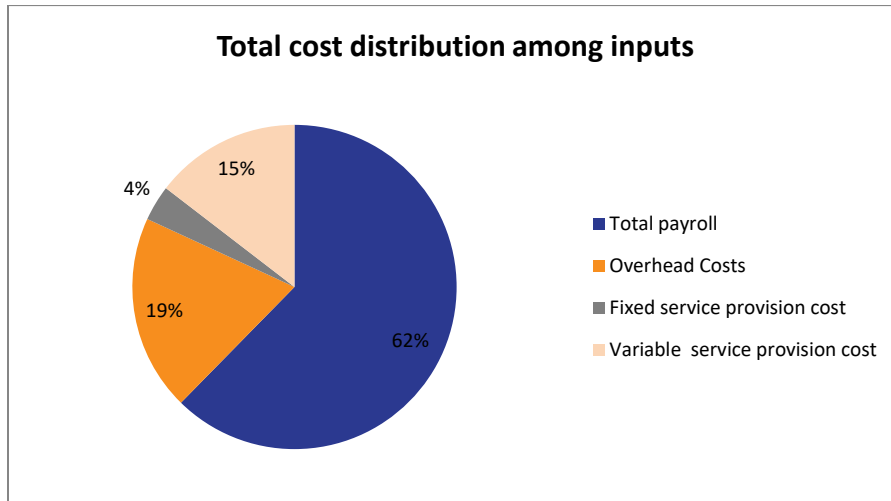
3.3 Scenario Results

3.3.1 Scenario I: Changes in Service Provision

Another option for increasing efficiency would be to decrease the amount of total costs through changes in the service provision inputs. This is explored for EQUALS in Scenario I to cease offering FSW services (described in the methods section).

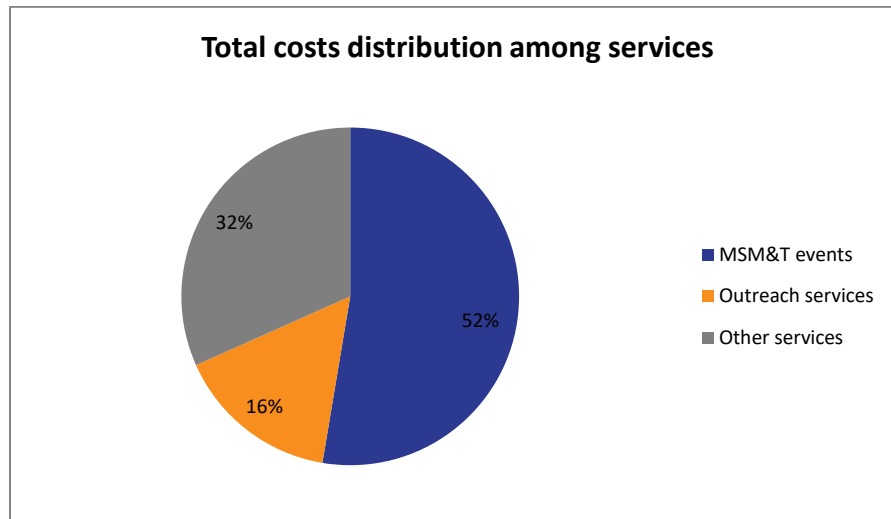
With those described changes to service provision, total costs of services decreases to 272,546 BD for EQUALS, a 20 percent decrease compared to the costs found in our study period (around 70,000 BD saving). Payroll costs would still be the largest share of the total cost despite the substantial reduction in the number of staff (Figure 5).

Figure 5: EQUALS Scenario I: Total costs distribution among inputs



The new distribution of costs among services is: MSM&TG services are the largest component of costs (52 percent), followed by other services (32 percent) and outreach services (16 percent) (Figure 6).

Figure 6: EQUALS Scenario I: Total Costs Distribution among Services Types



3.3.2 Scenario 2: Addition of ART Treatment

For Scenario 2, the cost is based on the expectation that 10 PLHIV will be receiving treatment from each CSO. Each PLHIV needs three visits per year and will be reimbursed for transportation for those visits. They will benefit from laboratory tests for each visit. To care for those PLHIV, one clinical supervisor and one nurse will be hired on a part-time basis. The expanded services will result in a 10 percent increase for overhead costs, excluding rent.

When we consider adding ART services, the incremental total yearly costs for EQUALS is 48,305 BD and for CEED is 47,843 BD (Table 8). The additional costs of ART provision constitute 18 percent and 25 percent more costs, respectively, for CEED and EQUALS, compared to the situation without ART provision.

The additional costs needed at each CSO are very similar, because the assumed inputs needed are similar. The only difference in inputs is the 10 percent overhead costs (in addition to what it is without ART services) that we applied for each CSO. The fact that the final numbers are still close shows that the overhead costs (outside of rent) for the two CSOs are not very different when we consider similar service provision. Recall that in Scenario I, EQUALS would mostly provide services to MSM&TG (the FSW services would be stopped), which is similar to what CEED is currently doing.

The additional costs needed amount to 4,784 BD per patient per year for CEED and 4,830 BD for EQUALS. Here too if the CSOs can enroll more PLHIV, the fixed portion of the costs can be spread out, and unit cost will decrease.

Table 8: Additional Costs Estimation for ART Treatment at EQUALS and CEED (BD)

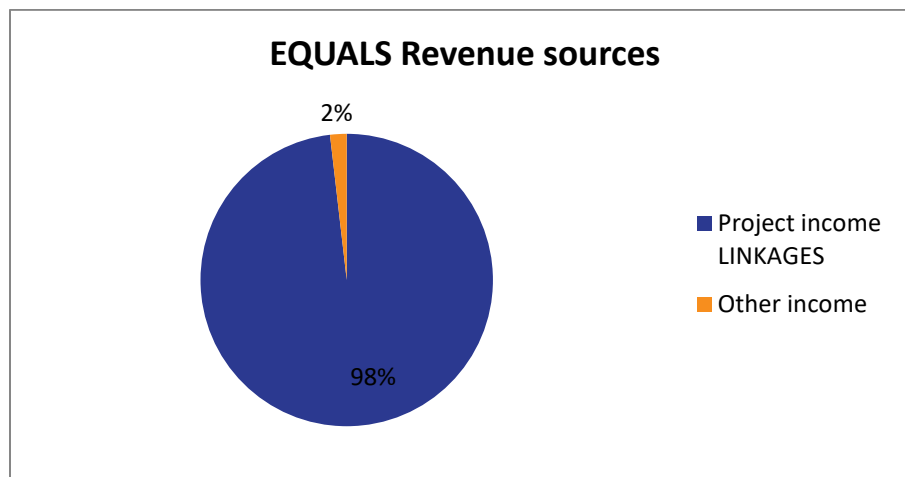
	Yearly Cost EQUALS	Yearly Cost CEED
Payroll costs		
I clinical supervisor	6,000	6,000
I nurse	24,000	24,000
Variables service provision costs		
Medical supplies	900	900
Laboratory	4,000	4,000
Transportation	1,200	1,200
Fixed service provision costs		
I medical consultant	10,000	10,000
Overhead costs		
Consider 10 percent additional costs	2,205	1,743
Total	48,305	47,843

The estimates include a medical consultant to provide expert advice and training related to clinical services on HIV. If EQUALS and CEED can share the same medical personnel (same part-time clinical supervisor and nurse), then the consultant cost can be shared. This would lower the total costs to 42,843 BD for CEED and 43,305 BD for EQUALS. As seen above with Scenario I (stopping FSW services and making some personnel changes), the total costs for EQUALS could be decreased by around 70,000 BD. We calculated that the estimated cost of providing ART would be around 50,000 BD. This indicates that, for EQUALS, implementing Scenario I with ART services provision would cost less than what was incurred during our study period. Thus, some of the resources freed up under Scenario I could be used to provide ART care to MSM&TG and deepen the package of services offered to this population and better serve the key population group that EQUALS focuses on.

3.3.3 Revenue Analysis

Based on revenue information collected from EQUALS, the organization currently heavily depends on LINKAGES funding to offer services to key populations in the community (Figure 7).

Figure 7: EQUALS Revenue Distribution



For our study period, EQUALS had a budget of 346,550 BD, 98 percent of which came from the LINKAGES grant they received. The grant money is used to pay for everything: payroll, overheads, service provision costs, etc., so in the absence of that grant, all EQUALS operations will be affected.

For Scenario 1 (changes in service provision to lower costs), the estimated total yearly cost is 272,546 BD. That represents what will be needed to continue offering services at the level EQUALS is offering now, and the amount of funding that will be needed irrespective of the source. If LINKAGES funding stops or is reduced, the gap will need to be filled by the government or other sources to ensure that the key populations in Barbados continue receiving the care.

Moreover, 80 percent of that yearly total cost is for payroll and overheads, hence mostly fixed in the short term. This would mean at least that much funding (218,034 BD) should be available to maintain operations even if contributions at the point of care from the beneficiaries could be considered (as with the BFP), to help offset some or all of the variable costs.

CEED implements other projects with other funders, in addition to its LINKAGES-funded work, but we received data on the LINKAGES funding only. For example, the Community Education Empowerment Project 2 is funded by the Maria Holder Memorial Trust and Transformation Empowerment Project, which in turn is funded by the National HIV/AIDS commission. CEED uses LINKAGES funding to provide HIV services following the overall strategic framework of the project. The funding is used to pay for direct expenses arising from those activities and also cover a percentage of the shared costs with the other projects they implement. This means that CEED relies less on LINKAGES funding and would not necessarily cease to function in the absence of funding from LINKAGES. However, the organization will not be able to provide the testing and counseling services they currently offer to key populations and PLHIV. For them too, any funding gap (from the 190,704 BD yearly total costs) left by LINKAGES stopping or decreasing funding will need to be covered by the government or others to ensure that service provision continues at its current levels.

4. CONCLUSION

This study estimated the costs of service provision for two CSOs (EQUALS and CEED) offering HIV testing and related services to key populations in Barbados with LINKAGES project funding. We also estimate the cost of adding ART treatment to the services they offer, following the model of another CSO: the BFPA, which had offered these services before with LINKAGES funding.

The yearly total cost of providing services at EQUALS was 342,321 BD, and for CEED it was 190,704 BD. Costs were overwhelmingly dominated by payroll for both CSOs (65 percent for EQUALS, and 63 percent for CEED), followed by overhead costs.

The level of beneficiaries (people tested/counseled) was relatively low in both CSOs, hence the high unit cost per beneficiary: 1,073 BD for testing at the EQUALS location and 3,327 BD for testing at the CEED location. Because fixed costs overwhelmingly dominate variable costs for the testing services, returns to scale could be achieved by increasing the number of beneficiaries of those services, which requires creating more demand for the offered services from key populations.

Under a scenario of stopping services to FSW (to be covered by another organization) and making some personnel changes, EQUALS can decrease its total costs by 20 percent to 272,546 BD per year. If both CSOs want to offer ART treatment following the BFPA model, we estimated that an additional 48,305 BD and 47,843 BD will be needed respectively for EQUALS and CEED.

Looking at the revenue side, we found that EQUALS is more dependent on LINKAGES funding, as all of their operations are funded from that money. CEED has other projects funded through other sources, and so might not stop its operations if LINKAGES funding ends. However, for these HIV-related services to key populations to continue, there will be a need to close any gap caused by a change in LINKAGES funding.

In the context of a donor transition, such information can be useful to the government of Barbados to estimate the funding levels needed to ensure continuity of services for those key populations and assess the potential funding need if more services were to be added to the current packages offered by those two CSOs.

For the CSOs such cost information is also useful to see where efficiency gains can be achieved through decreasing costs or increasing the members of the key population they serve. The information generated from this study can provide the basis for CSO planning for resource mobilization and grant/proposal submission to other donors related to services costed and overheads (though this is not a financial audit). The information can also serve for planning and advocacy with MHW for social contracting, and for planning for subvention support and fundraising activities for these services.

Moreover, the approach used for this costing activity, while designed for Barbados, can be used for other countries to estimate costs of community-led HIV services for the same purposes cited above (social contracting, resource mobilization, fundraising, and social enterprise planning).

The total costs estimates are based on complete financial information collected from the CSOs and can be used to make decisions based on this evidence. However, the activity level (number of services and

number of beneficiaries) collected from the CSOs seemed less complete; hence the unit costs presented could be inflated. Moreover, the focus on key populations in a small country like Barbados already means a relatively low potential number of beneficiaries. The decision to continue providing services should then not be based solely on cost considerations, but should also consider the benefits of avoiding stigma, higher retention, effective follow-up, etc., that key populations receive when they are served in their community.

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6. ANNEXES

Shared Care Protocol (BFPA)

Background

The following is BFPA's understanding of Shared Care. Shared Care allows the management of PLHIV by private providers in conjunction with the practitioners from LRU. It allows patients to have access to antiretroviral drugs and lab services free from the LRU after being assessed by the private practitioner. This model can be applied to those persons being seen under the LINKAGES project and other patients.

Clients can access medical consultation using BFPA's current fee-for-service model, but can also be referred for the abovementioned services (antiretroviral drugs, labs).

Criteria

The criteria to be seen under Shared Care Initiative are:

Uncomplicated patients (no opportunistic infections, etc.) Exceptions may apply for clients insistent that they would prefer to continue care in the BFPA setting and may default from care if referred.

- Virally suppressed on antiretroviral drugs.
- New clients must be registered at the LRU, which can be done by the BFPA clinician via telephone, and assigned a unique identifier code (LRU number). This is not instantaneous. It could take 2–3 weeks because there is a need for a documented positive HIV test result to consider a patient "registerable."
- The LRU must be informed of clients transferring to the BFPA for continued care. Patients for shared care can be jointly decided upon. Some patients may come to BFPA and ask that their HIV be managed there; others may be given that option at LRU.

Clinical guidance can be sought at any time from the BFPA clinician from the LRU staff.

The BFPA physician (Dr. Gill) may be able to check the status of labs and medication pick-ups, if needed, via telephone or in person. Dr. Gill may have controlled access to patient files through the nurse manager at the LRU.

The following documents are also needed:

- HIV management guidelines (in place)
- LRU Standard Operating Procedures (to be acquired)

Newly Diagnosed Clients

- Registration of the client (call with nurse manager)
- Name, date of birth, gender, address, occupation, a contact number, next of kin
- Nurse manager will generate an LRU number (within a week)
- Phlebotomy can be done at BFPA
- Code used should include initials and DOB (NYR, until LRU number is available)
- Baseline bloods as per LRU standard operating procedures Appendix 2, including repeat HIV
- Follow-up of results should occur with clinical medical officer (within two weeks)
- Results and treatment plan should be discussed

LRU Clients for Referral

- Clients desirous of being seen at BFPA should indicate this to the clinical medical officer or nurse manager.
- Client should be assessed to ensure that the criteria stated above are met.
- Once client meets the agreed criteria, a medical summary/referral letter should be prepared (collected within a week).
- Contact should be made with BFPA to facilitate an active referral. This should be facilitated by the nurse manager contacting the BFPA head nurse, sharing client demographics and contact details, and arranging the date of the initial visit.
- ARVs.
- Describe process of prescription being written by medical doctor at BFPA, transported to LRU, filled at LRU, and collected by BFPA driver.



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