EVALUATION

USAID Ghana's Strengthening the Care Continuum Project

Midterm Assessment

August 2019

USAID FROM THE AMERICAN PEOPLE

PEPFAR

MEASURE Evaluation

ABSTRACT

This study was a midterm performance assessment of the United States Agency for International Development (USAID Strengthening the Care Continuum Project in Ghana. This project is designed to provide and scale up accessible, high-quality HIV services to Ghana's key populations (KPs)—men who have sex with men, female sex workers, and transgender people—and promote transition of service provision to the Government of Ghana. The study used primary and secondary data collection: reviews of program data, client and provider surveys, focus group discussions with service providers, and key informant interviews with stakeholders at the national and local service-delivery levels. It also drew on chart abstraction data for KPs enrolled in case management services, as well as costing data for the service delivery modalities undertaken by the Care Continuum project. The study found that the Care Continuum project is well regarded by clients, providers, and stakeholders for the services it provides. The study also noted the project's contributions to a policy environment more favorable to high-quality HIV service delivery for KPs. Chart abstraction and program data reveal that retention of KPs in care and treatment programs is a challenge in Ghana. Gender could be better integrated in services for KPs, who are highly vulnerable to gender-based violence. Finally, costs per beneficiary of the "new" intervention modalities, case management, and the healthy living platform are high, in part, because of the recent rollout of these interventions. As these modalities scale up and serve more people, costs per beneficiary should decrease—a clear benefit, especially if scale-up brings improvements in retention in care and treatment of HIV-positive KPs.

EVALUATION

USAID Ghana's Strengthening the Care Continuum Project

Midterm Assessment

Elizabeth Sutherland, PhD, MEASURE Evaluation (team leader)
Abby Cannon, MPH, MSW, MEASURE Evaluation
Samuel Dery, PhD, University of Ghana School of Public Health
Justice Nonvignon, PhD, University of Ghana School of Public Health
Shaylen Foley, MPH, MEASURE Evaluation, Palladium
Brittany Schriver Iskarpatyoti, MPH, MEASURE Evaluation
Kwasi Torpey, MD, PhD, MPH, University of Ghana School of Public Health

August 2019

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 W. Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350
measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government. This report was prepared independently by Elizabeth Sutherland, MEASURE Evaluation (team leader), Abby Cannon, MEASURE Evaluation, Samuel Dery, University of Ghana School of Public Health, Justice Nonvignon, University of Ghana School of Public Health, Shaylen Foley, MEASURE Evaluation, Palladium, Brittany Schriver Iskarpatyoti, MEASURE Evaluation, and Kwasi Torpey, University of Ghana School of Public Health TRE-18-016

ISBN: 978-1-64232-105-0

USAID FROM THE AMERICAN PEOPLE

PEPFAR

MEASURE Evaluation

ACKNOWLEDGMENTS

The authors of this study gratefully acknowledge the support of the study participants, and especially the participation of the Care Continuum project, in the implementation of this assessment.

We thank USAID and the United States President's Emergency Plan for AIDS Relief (PEPFAR) for their support of this research.

We thank Lily Asrat and Kristen Wares, of USAID, for their thoughtful feedback as this study moved ahead.

We acknowledge Becky Wilkes, Veronica Varela, and Lauren Hart, of the USAID- and PEPFAR-funded MEASURE Evaluation project, for their contributions to this document.

We thank MEASURE Evaluation's knowledge management team for editorial, design, and production services.

CONTENTS

Figures 7
Tables 7
Abbreviations 8
Executive Summary 9
Introduction 12
Study Objective and Research Questions 13
Methods 14
Sampling 14
Data Collection Procedures 14
Analysis 15
Cost Analysis 16
Ethics 17
Results 18
Service Accessibility and Quality 18
Project Implementation 18
Linkage to ART for HIV-Positive KPs Enrolled in Case Management 22
Quality of KP HIV Services 27
Areas for improvement 31
Scale-Up and Transition 36
Affecting KP Service Delivery at the National Level 36
Scale-Up/Transition of KP Models 37
Client and IP Perspective on Scale-Up and Transition 37
Cost Analysis Results 39
Discussion 44
Recommendations 48
Conclusion 50
References 51
Appendix A. Research Methods 52
Data Collection Techniques, Recruitment (Incentives), Client Contact, Duration, and Privacy 52
Data Collection Stream 1 52
Data Collection Stream 2 52
Data Collection Stream 3 53
Data Collection Stream 4 53
Sampling Process 53
Ethical Considerations 53

Data Collection 54
Data Management and Storage 54
Quantitative Analysis 54
Interview Surveys 54
Cascade Data 54
Qualitative Analysis 55
Cost Analysis 55
Collation of Data, Dealing with Missing Information, Other Decisions 55
Categorization of Costs 56
Appendix B. Data Collection Tools 57
Appendix C. Resources 98
Appendix D. Roles and Biographies of Study Authors 99
Appendix E. Conflict of Interest 101
Appendix F. Scope of Work 102

FIGURES

Figure 1. Cascade of treatment 18
Figure 2. Treatment and suppression cascades, by total KPs and overall 23
Figure 3. Suppression cascades, by percentage of those tested 26
Figure 4. Treatment and suppression cascades, by KP and district 27
Figure 5. Total cost of each intervention, by key elements 40

TABLES

Table 1. Demographic characteristics of clients interviewed 20
Table 2. Demographic characteristics of providers interviewed 21
Table 3. Services provided to clients by providers 22
Table 4. Time to initiation of treatment after testing 23
Table 5. Time of retention or most recent treatment 23
Table 6. Retention rates for HIV-positive KPs enrolled in case management 25
Table 7. Overall quality of care reported by case management and HLP clients interviewed 27
Table 8. Provider training 30
Table 9. Total cost and unit cost, by intervention model 40
Table 10. Cost of case management 41
Table 11. Cost of healthy living platform 42
Table 12. Cost of core services 42
Table A1. CSO included in the cost assessment 55

ABBREVIATIONS

ART	antiretroviral therapy
ARV	antiretroviral drug
CSO	community service organization
FGD	focus group discussion
FSW	female sex worker
GAC	Ghana AIDS Commission
GBV	gender-based violence
GHS	Ghana Health Service
HLP	healthy living platform
IP	implementing partner
JSI	John Snow Research & Training Institute
KP	key population
LOE	level of effort
M&E	monitoring and evaluation
MSM	men who have sex with men
NACP	National AIDS Control Program
PEPFAR	United States President's Emergency Plan for AIDS Relief
STI	sexually transmitted infection
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Purpose

This was a midterm assessment and qualifies as a performance evaluation according to the evaluation policy of the United States Agency for International Development (USAID). The study aimed to provide feedback to stakeholders and to the Strengthening the Care Continuum project on progress toward meeting certain project objectives as well as the costs incurred in achieving them. The goal of this assessment was to provide information to improve program performance for the remaining project implementation period.

Background

MEASURE Evaluation—funded by USAID and the United States President's Emergency Plan for AIDS Relief (PEPFAR)—was asked by USAID/Ghana to perform a midterm performance evaluation or assessment of USAID's Care Continuum project, which is a five-year (2016–2021) project to promote HIV service delivery to key populations (KPs) in priority districts in Ghana. This work is part of a larger effort to support the Government of Ghana and partners to deliver better quality and comprehensive HIV services for KPs and people living with HIV. In support of this effort, the Care Continuum project seeks to promote local leadership and strengthen the capacity of stakeholders to meet community HIV prevention and treatment needs. It intends to address structural factors that affect access and use of services by KPs. As part of the midterm assessment, MEASURE Evaluation was asked to address the following study questions:

Service Accessibility and Quality

1. What Care Continuum project KP models have been implemented to increase access to and retention in the quality HIV service cascade for KPs, and what are the scope and reach of those service interventions in the priority districts?
2. What is the quality of KP HIV service interventions implemented by the Care Continuum project and implementing partners (IPs) receiving project support? What are the areas of relative strength and quality that could benefit from greater improvement?
3. How have the Care Continuum project activities at the national level (under other USAID intermediate results) affected service delivery for KPs (e.g., have Care Continuum project activities supported positive change in the quality of service delivery guidelines and other national-level policies affecting service delivery for KPs)?

Scale-Up/Transition of KP Models

4. What are the percentages of eligible clients who enroll through the KP models under review? What percentages are successfully followed up for three months and six months? What factors do clients cite in their decision to enroll in a specified model? What are the clinical profiles of clients?
5. To what extent has the Care Continuum project been successful in scaling up and transitioning KP models? What are the factors that hinder or facilitate scale-up/transition of KP models?

Cost

6. What are the per-beneficiary (KP reached) operating costs of the Care Continuum project KP HIV intervention models?

Methods

We conducted the study using a cross-sectional nonexperimental design with quantitative and qualitative methods. A mixed-methods approach was best suited to answer the above-mentioned research questions. We approached this performance evaluation through the use of the following data collection activities:

- Client interviews with case management and Healthy Living Platform (HLP) clients in a sample of 6 of 11 priority districts
- Provider interviews in all 11 priority districts
- Focus group discussions (FGDs) with providers in all priority districts
- Key informant interviews with national-level stakeholders
- Key informant interviews with the prime implementing partner of the Care Continuum project and corresponding subimplementing partners
- Document review of workplans, monitoring and evaluation (M&E) plans, training materials, routine reporting, and other documents shared by the Care Continuum project and USAID
- Care Continuum project case management program data, along with enrolled client health facility record review, to track client cascade data
- Cost records and reporting for John Snow Research and Training, Inc. (JSI) as prime partner, as well as subawardees implementing Care Continuum project interventions and service delivery

Details on methods and the four data streams are in Appendix A.

Findings

The USAID-funded Care Continuum project is in its third year and has made significant progress in service provision for KPs in Ghana, both at the national and local levels. Results indicate that the Care Continuum project has been successful in scaling up best practices regarding case management and peer education, as it set out to do. Subimplementing partners spoke highly of the Care Continuum project's technical and organizational support, particularly when they received embedded support. National-level stakeholders similarly agreed that community service organization (CSO) capacity has been strengthened and simultaneous gains have been made through national support from the Care Continuum project. Although significant progress has been made, the final years of the project will provide opportunities to focus on preparing for transition to the Government of Ghana, advocating policy changes and financial support, and continuing to focus on high-quality service provision.

The cost assessment found that the largest proportion of spending goes toward the Core Services, but because of the large number of individuals reached, it also had the lowest cost per beneficiary of the three intervention models assessed. The average cost found for the core IP services aligns with previous research on similar CSO-delivered HIV-prevention services, in which unit costs ranged from USD $20–$214 for individual CSOs targeting female sex workers (FSWs) and men who have sex with men (MSM) (Gobin & Foley, 2019). The HLP, although the least expensive intervention by total cost, had the highest cost per beneficiary. Case management costs also were less expensive in total but more expensive when measured by average cost per beneficiary reached.

Conclusions

The findings of this study note the progress the Care Continuum project has made during its first phase of implementation. However, they also note areas of improvement for continued consideration by programmers and policymakers. They include the universal difficulty that the Care Continuum project CSOs and their sister Ghana Health Service (GHS) facilities face in retaining KPs in care and treatment after they have been identified as HIV positive and started on antiretroviral drugs (ARVs). Further analysis

of the treatment cascade indicates that these struggles exist for both MSM and FSW populations, although some variability occurs by region. National-level stakeholders, including representatives of the GHS, recognize the work that remains to be done in GHS facilities to maintain KP-friendly HIV services and promote retention. The same stakeholders also note the Care Continuum project's contributions to the policy environment in Ghana, which may help promote more KP-friendly policies in the country.

Although it was not a focus of this evaluation, providers and clients recognize that gender is a core issue in providing quality HIV KP services, and work remains to be done in better integrating gender-sensitive programming into HIV KP services to meet the needs of KPs who are victims of gender-based violence (GBV) and promote health in their relationships and communities. Therefore, where gender-related matters were addressed in provider and client interviews or raised in key informant interviews, that data is also presented. Gender did arise as a dominant theme in qualitative interviews.

Finally, costs must be considered when determining which intervention packages to implement. Although start-up and maintenance costs are provided for HLP and case management services, recalculating the cost per beneficiary once these new service modalities have had time to be fully established might provide a more accurate cost per beneficiary calculation than the one that could be provided at the time of this study.

INTRODUCTION

USAID/Ghana asked the USAID- and PEPFAR-funded MEASURE Evaluation project to perform a midterm performance evaluation or assessment of USAID's Strengthening the Care Continuum project. It is a five-year (2016–2021) project to promote HIV service delivery to KPs in 11 districts in Ghana. This work is part of a larger effort to support the Government of Ghana and partners in delivering quality and comprehensive HIV services for KPs and people living with HIV. In support of this effort, the Care Continuum project seeks to promote local leadership and strengthen the capacity of stakeholders to meet community HIV prevention and treatment needs. It also intends to address structural factors that impact access and use of services by KPs.

The Care Continuum project works closely with the Government of Ghana; local IPs; the Global Fund to Fight AIDS, Tuberculosis and Malaria; civil society; and other stakeholders to deliver services and build capacity for KP-appropriate HIV programming. The Care Continuum project is a new mechanism that follows several previous projects—Linkages, Strengthening HIV/AIDS Response Partnership and Evidenced-Based Results,[1] and Strengthening HIV and AIDS Response Program[2]—to deliver services to KPs. One of the Care Continuum project's main objectives is to engage in implementing effective and innovative service delivery models while simultaneously working to improve the capabilities and leadership of Ghanaian stakeholders at the community, district, and national levels to scale up evidence-based activities focused on KPs. Previous projects have focused on direct service delivery and left a legacy of peer education, mobile outreach, and drop-in centers for KPs in target districts. The Care Continuum project added to that core of direct services by creating a healthy living mobile technology platform to engage with KPs at risk of HIV and those who are HIV positive and enrolled in care. The Care Continuum project is also adding a case management element to direct service provision to promote adherence to antiretroviral therapy (ART) among HIV-positive KPs enrolled in treatment. In addition, the Care Continuum project is charged with integrating gender-sensitive programming and GBV services throughout its support of direct service provision. Finally, the Care Continuum project further supports the quality of direct service provision to KPs through its work at the national level to promote service guidelines and policies that support the ability of KPs to access quality HIV services.

The Care Continuum project's goals are well aligned with PEPFAR recommendations for countries with generalized epidemics, such as Ghana, to move to scaled-up, government-owned, and locally implemented services to support KPs and people living with HIV. This PEPFAR goal is also aligned with USAID's journey to self-reliance principles, which promotes accelerated transitions to in-country leadership.

More importantly, the goals of the Care Continuum project support the vision of the Government of Ghana in supplying HIV services to all individuals regardless of key population status. In a recent study of the drop-in center model and the Government of Ghana's vision for the future of KP HIV services in Ghana, key informants noted that a top priority of the GHS and the Ghana AIDS Commission (GAC) was to streamline KP HIV services and include them under the umbrella of the GHS. Additionally, although the cost of delivering KP HIV services has been assessed before in Ghana, no prior assessments have looked at the cost of case management and the HLP.

MEASURE Evaluation was asked to conduct a midterm assessment of the Care Continuum project's work on increasing access to and quality of HIV services for KPs in 11 districts in Ghana and its work with the Government of Ghana to transfer service implementation into the government's care. This study will help

[1] https://www.fhi360.org/projects/strengthening-hivaids-response-partnership-evidenced-based-results-sharper

[2] https://govtribe.com/opportunity/federal-contract-opportunity/strategic-hiv-and-aids-response-program-sharp-nigeria-sol62016000014

the Care Continuum project make targeted adjustments to program activities and expenditure decisions, and inform all stakeholders about progress toward a shared vision of epidemic control in Ghana.

Study Objective and Research Questions

The overall study objective is to assess the Care Continuum project's progress in scaling up and transitioning effective KP models to ensure the sustainability of HIV/AIDS services to KPs in Ghana. The three KP intervention models follow: (1) the HLP, a unstructured supplementary service data (USSD) based self-subscription platform with an integrated helpline that connects KPs to critical healthy living information and counselling services; (2) case management, which involves case managers hired by both Care Continuum project headquarters and the CSOs to promote ART adherence for those individuals identified as HIV positive; and (3) the core package of services, also referred to as "core services," offered through the CSOs and including activities such as peer education, drop-in centers, and a variety of different outreach activities and HIV testing services targeted to specific KP subpopulations, such as MSM and FSWs.

The study also aims to assess and document the ongoing implementation, quality, and accessibility of service delivery supported by the Care Continuum project. The assessment will also be used to identify areas of strength and those where additional technical support may be needed to improve the quality of the direct HIV service interventions being implemented by the Care Continuum project and ultimately the Government of Ghana. The costing component aims to assess the unit cost of KP HIV interventions delivered through the Care Continuum project to improve the understanding of activity expenditures and facilitate resource allocation and program decision making.

Service Accessibility and Quality:

1. What Care Continuum project KP models have been implemented to increase access to and retention in the quality HIV service cascade for KPs, and what are the scope and reach of those service interventions in the priority sites?
2. What is the quality of KP HIV service interventions implemented by the Care Continuum project and IPs receiving Care Continuum project support? What are the areas of relative strength and quality that could benefit from greater improvement?
3. How have Care Continuum project activities at the national level (under other IRs) affected service delivery for KPs (e.g., have Care Continuum project activities supported positive change in the quality of service delivery guidelines and other national-level policies affecting service delivery for KP)?

Scale-Up/Transition of KP Models:

4. What are the percentages of eligible clients who enroll through the KP models under review? What percentages are successfully followed up for three months and six months? What factors do clients cite in their decision to enroll in a specified model? What are the clinical profiles of clients?
5. To what extent has the Care Continuum project been successful in scaling up and transitioning KP models? What are the factors that hinder or facilitate scale-up/transition of KP models?

Cost

6. What are the per-beneficiary (KP reached) operating costs of the Care Continuum project KP HIV intervention models?

METHODS

We conducted the study using a cross-sectional nonexperimental design with quantitative and qualitative methods. A mixed-methods approach was best suited to answer the above-mentioned research questions. We approached this performance evaluation through the use of the following data collection activities:

- Client interviews with case management and HLP clients in a sample of six 11 priority districts
- Provider interviews in a sample of all 11 priority districts
- FGDs with providers in six priority districts
- Key informant interviews with national-level stakeholders
- Key informant interviews with the Care Continuum project's prime implementing partner and corresponding subimplementing partners
- Document review of workplans, M&E plans, training materials, routine reporting, and other documents shared by the Care Continuum project and USAID
- Care Continuum project case management program data, along with enrolled client health facility record review, to track client cascade data
- Cost records and reporting for JSI as prime partner as well as subawardees implementing the Care Continuum project interventions and service delivery

Further details on methodology and detailed description of the four data streams are available in Appendix A. Research Methods.

Sampling

Case management clients were selected across the 11 priority districts, weighted proportionally to the size of the number of case management clients reached from October 1, 2017 to September 30, 2018. We included records in the associated ART facility record review for all clients who tested HIV positive during this time and consented to enroll in case management, to document linkage from the community to the facility for treatment. All ART case management clients who were included in this part of the study remained eligible to also participate in client interviews.

We included all HLP clients who indicated their willingness through verbal consent to participate in the study, as well as all providers offering services at the time of the study. These providers fell into four categories: HLP providers, case management providers, and mobile outreach and peer education providers (includes both professional and lay providers). Again, every provider affiliated with the Care Continuum project were asked to participate in client interviews. In six districts (drawn from the different regions and representing both MSM and FSW providers) clients were invited to also participate in focus group discussions. We selected key stakeholders purposively for participation in national-level key informant interviews, including all subimplementing partners who were also key informants and the chief of party of the Care Continuum project. This convenience sample was drawn in order to feasibly collect client data from the widest sample of clients (Peer Education and Case Management for both FSW and MSM) across geography (districts drawn from each of the geographic regions where Care Continuum Project works)

Data Collection Procedures

All data collectors were trained in the procedures for collection of qualitative and quantitative data, ethics, confidentiality, gender sensitivity, and appropriate handling and storage of data. Field supervisors monitored the exercise to check data quality issues and provide technical backstopping in the data collection throughout. Four teams were deployed to the Greater Accra, Ashanti, Western, and Brong

Ahafo regions. The HLP team conducted the telephone interviews from the Ghana School of Public Health. The final team conducted the national-level stakeholder interviews in Accra. Data collection took place over a three-month period between September and November 2018.

The questionnaires used for the study were structured with closed- and open-ended questions. The structured questionnaires were transformed using a mobile application (REDCap) for the data collection. Data quality issues in data collection were identified in real time, and data cleaning occurred simultaneously with the collection. The open-ended questions were transcribed for qualitative analysis.

Health facility staff physically reviewed the clients' clinical records to abstract the date of initiation of HIV treatment, viral load results, and the date of the most recent visit. The linkage rate from subimplementing partner to health facility and retention in treatment after enrollment was determined.

Analysis

Quantitative Analysis

Interview Surveys

For the purposes of this analysis, we obtained a final sample size of 788 case management clients, 208 HLP clients, and 90 providers, and performed descriptive analyses for all three interview types.

Cascade Data

An HIV cascade looks at the % of individuals tested who test positive, go on to initiate treatment, and remain on treatment becoming virally suppressed. The original data set on the treatment cascade for HIV+ individuals tested by the Care Continuum Project contained 1,503 cases. After the data cleaning, the final sample size was 1,389 cases. We did descriptive analyses for all cases in the final sample and analyzed the time to treatment from a client being tested to initiation of treatment. To obtain the length of time between a case testing positive for HIV and initiating treatment, we subtracted the date a case was tested from the date that case initiated treatment. We obtained the length of time on treatment by subtracting a case's date of treatment initiation from the date of recent treatment. We excluded cases that had dates of most recent treatment equal to their date of initiation of treatment from the analysis of time to recent treatment. A case was considered eligible for a viral load test when a patient had been on ART for six or more consecutive months. We extracted viral load data, together with treatment dates, from patient records at treatment facilities.

We calculated retention rates at three, six, and nine months by using a cohort approach. The first cohort of patients initiated treatment between October 1 and December 1, 2017. We then determined their retention at the intervals described above. A second cohort of patients started treatment from January 1 to March 31, 2018; we calculated their retention in care at three months and six months. A third cohort included patients that initiated treatment after March 31, 2018; we could calculate only three-month retention rates for this cohort. We used a cohort approach as opposed to a crude retention rate based on the exact date of enrollment because facilities report data on quarterly cohorts in Ghana, so our method replicates those used for reporting. Because treatment cascades were being calculated for all HIV-positive KPs (rather than all KPs tested for HIV) and included both retention and suppression data in one—all cascade calculations—we used the total number of KPs enrolled in case management and referred for care as the denominator for each step in the cascade. Numerators were provided for each step in the cascade so they could be recalculated with different denominators based on program need or for specific reporting requirements.

Qualitative Analysis

We conducted qualitative analysis of client interviews using manual content analysis to code and elucidate themes. We analyzed provider interviews, FGDs, and key informant interviews through a process of

creating matrices in Microsoft Excel to elucidate themes, commonalities, and differences across provider and KP types. Initially, qualitative researchers entered the same interviews into the analysis matrix to ensure consistency and methodological rigor during the analysis process. Following alignment, researchers individually entered interviews into matrices. The research team then reviewed matrices to identify the most salient themes.

Cost Analysis

The objective of the cost assessment was to determine the unit cost for three intervention models delivered by the Care Continuum project. The assessment used a programmatic perspective (i.e., only Care Continuum project program-related costs were included; not costs incurred by program beneficiaries). Data collection used an ingredients approach: we identified specific program activities, and then also identified inputs or ingredients to those activities, and measured (in appropriate units) and valued them. The study measured economic costs, which represent the opportunity costs of using the resources in the intervention. We collected costs for the past three program years, with the first year of such costs excluded to mirror available output measures; all cost and output data presented range from November 2017 through October 2018. We collected cost data from both Care Continuum project headquarters and 15 CSOs. We collected all CSO and the majority of JSI data in Ghanaian Cedis (GHS) and converted them into United States dollars (US$) using an average rate for the period (4.381). We valued personnel costs by applying the proportion of time used in program activities to gross monthly or annual salary. We annualized capital costs, or items such as vehicles, furniture, and technology with a useful life of more than one year, using the respective useful life years during the specific time they were used in the program.

Data analysis used a combination of step-down cost accounting and activity-based costing.[3] We first listed and mapped all costs. This allowed us to identify those costs that were cross-cutting and therefore shared by the interventions and those that could be linked directly to individual intervention models. We then grouped the costs into investment and maintenance expenditures. Investment expenses included annualized capital costs and building rental expenses, and specific program expenses related to training and the upfront development of the HLP system. Maintenance expenses included personnel costs, administrative and office expenses, and program costs specific to each intervention. Because we used a micro-costing approach for data collection, we were able to identify highly specific cost types within the program cost category for each intervention. Highly detailed lists of costs were reviewed for each intervention model. Subcategories were determined using simplification (for example, costs related to and regrouping of line-item descriptions, which were then linked to individual costs in a new column. We then sorted and totaled the costs using pivot tables.

We used staffing level-of-effort (LOE) estimates to determine the proportion of total administrative, building, capital, and office expenses included in the analysis; 100 percent of CSO staff and 38 percent of Care Continuum project staff spent time on the three interventions. We then allocated the included costs to individual interventions using the estimates of time spent on each intervention, which differed at the CSOs and the Care Continuum project:

- Case management (22% for CSOs, 8% for the Care Continuum project)
- HLP (0% for CSOs, 11% for the Care Continuum project)
- Core services (78% for CSOs, 19% for the Care Continuum project)

[3] Step-down cost accounting is an analytical approach to calculating unit costs that relies on a step-by-step approach. SDCA is typically broken into six or seven steps that start with defining the question and cost categories, identifying costs, and then assigning and allocating costs to categories. Activity-based costing assigns costs to groupings based on the activities that were performed, typically using allocation factors determined by staff LOE. In this analysis, activity-based costing was used to allocate shared program costs to the three KP intervention models.

We calculated the total cost for each intervention as a sum of the capital and recurrent costs. We obtained the average cost per intervention by dividing total cost by the output indicators collected, as listed below.

- Number of HLP clients
- Number of new HIV-positive KPs enrolled in ART
- Number of KPs reached through individual and small-group level HIV preventative interventions

Ethics

This study was submitted to the University of North Carolina at Chapel Hill's institutional review board and received a "non-research" classification. The study was approved by the GHS Ethical Review Committee.

RESULTS

Service Accessibility and Quality

Project Implementation

Below we present results answering the research question "What Care Continuum project KP models have been implemented to increase access to and retention in the quality HIV service cascade for KPs, and what are the scope and reach of those service interventions in the priority sites?"

The Care Continuum project builds on previous projects that have focused on direct service delivery through peer education, mobile outreach, and drop-in centers for KPs in target districts. Service delivery is carried out through the work of 10 subimplementing partners consisting of CSOs experienced in KP services. The Care Continuum project has continued these approaches and added innovative ones by (1) adding an adherence case management element to direct service provision to promote adherence to ART among HIV-positive KPs enrolled in treatment, (2) creating a healthy living mobile technology platform to engage with KPs at risk of HIV and those who are HIV positive and enrolled in care. The Care Continuum project also intended to integrate gender-sensitive programming and GBV services throughout its support of direct service provision and select Care Continuum project staff were provided with training in gender integration through MEASURE Evaluation (with support from USAID Ghana) in the start-up phase of the program.

Finally, Care Continuum project supports quality of direct service provision to KPs through its work at the national level to promote service guidelines and policies that help KPs access quality HIV services while simultaneously working to improve capabilities and leadership of Ghanaian stakeholders to scale up evidence-based activities focused on KPs.

Direct Services

Figure 1. Cascade of treatment among those testing positive for HIV (n=1,389)

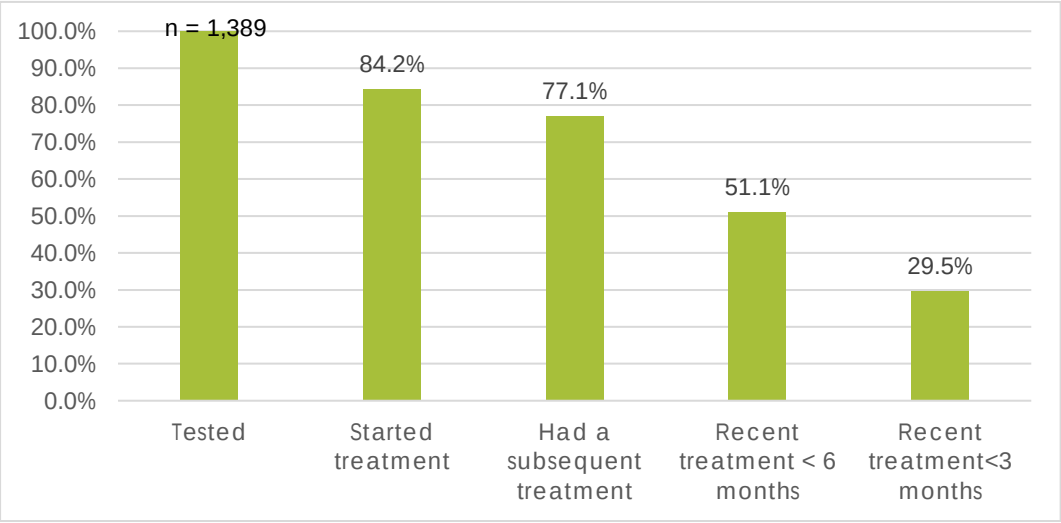


Figure 1 depicts the pathway an individual might take during identification and enrollment in Care Continuum project services. Below we describe the direct service KP models Care Continuum project is implementing to increase access to and retention in the quality HIV services cascade, as well as the scope and reach of those activities that are the focus of this assessment.

Peer education. The goal of peer education is to promote the adoption of preventive behaviors to reduce the risk of HIV infection, offer referrals, and increase testing for HIV and sexually transmitted infections (STIs). This strategy engages peers of the target population in delivering the interventions. The peer educator is usually an FSW or MSM who knows the community. The peer educators provide HIV, tuberculosis, STI, sexual, and GBV information and education, and refer for services as needed. They also conduct microplanning to identify landmarks, hotspots, and facilities to further target the intervention. Within their catchment area, they promote and sell condoms and lubricants, support outreach HIV testing, and distribute social and behavior change materials. The community-level activities are documented, and monthly reports submitted to the CSO.

Case management approach. The case management approach provides support to the client from the point of enrollment or initiation of therapy through maintaining treatment to achieve viral load suppression. It aims to improve patient retention and improved outcomes by allowing a smooth interface between the health facility and the community.

When a client is diagnosed as HIV positive, the healthcare worker discusses case management during the client's adherence counseling sessions. If the client agrees to participate in case management, the healthcare worker and CSO identify a suitable case manager, who then collaborates with the client and healthcare worker to develop an individualized plan. The case manager is expected to develop both short- and long-term treatment goals with clients while providing ongoing support to ensure they reach treatment objectives. They also support contact tracing, send appointment reminders, provide referrals, and conduct counseling. In addition, the case manager works with the health worker to support disclosure of HIV status to family members.

Healthy Living Platform. The HLP is a self-subscription platform that leverages technology for KP programming through an integrated helpline that connects KP to important information and counseling services. It is a two-way interactive communication platform via both voice messages and integrated live calls. It aims to promote healthy living among KPs and provide anonymized counseling support. Messages are transmitted daily and weekly to clients, depending on their needs. When a potential user calls to access services, an integrated voice recorder system calls the client back and links first-time and regular users to counselors. The system offers the opportunity to select different local languages and send SMS messages to counselors.

Helpline counselors. Helpline counselors are trained in HIV and STI counseling. They provide education on STI, HIV, sexual and GBV, tuberculosis, nutrition, among other topics. The helpline counselors accept phone calls and text messages from KP and provide support as needed. They counsel and refer clients to appropriate facilities.

The Care Continuum project also works with drop-in centers, MWatchers and MFriends (KP-friendly community professionals for referral) to provide additional services to the KPs they serve. These services were not included in this assessment.

On-third of the management clients were from Greater Accra., and 26 percent were from the Ashanti and Western districts. For HLP clients, the majority were from Greater Accra (68%), and 17 percent were from the Western region.

More than half of the clients interviewed were between the ages of 25 and 39. The median age was 30. Approximately half were FSWs and one-third MSM (see Table 1). The majority (75%) had received case management; the second most popular service (14%) was engagement with a peer educator. Respondents were asked the number of male and female sexual partners they had had in the previous four weeks. The median number of male sexual partners was two, whereas the number of female sexual partners was zero.

Table 1. Demographic characteristics of clients interviewed

Characteristics	Case management clients		HLP clients	
Region of residence	n	%	n	%
Greater Accra	281	36%	142	68%
Ashanti	203	26%	10	5%
Brong Ahafo	101	13%	4	2%
Eastern	--	--	3	1%
Western	--	--	36	17%
Central	--	--	3	1%
Volta	--	--	5	2%
Northern	--	--	4	2%
Upper West	--	--	1	0%
Western	203	26%	--	--
Age of clients				
15–24 years old	33	4%	14	7%
20–24 years old	134	17%	40	20%
25–29 years old	198	25%	75	37%
30–34 years old	143	18%	31	15%
35–39 years old	107	14%	21	10%
40–44 years old	78	10%	7	3%
45–49 years old	47	6%	8	4%
50+ years old	40	5%	6	3%
Gender of clients interviewed				
Man	230	30%	137	66%
Woman	475	61%	57	27%
Transgender man	11	1%	4	2%
Transgender woman	38	5%	5	2%
Don't know/prefer not to say	25	3%	5	2%
KP status of clients interviewed				
FSW	395	54%	38	25%
FSW partner	18	2%	3	2%
MSM	284	39%	100	65%
MSM partner	38	5%	12	8%
Type of service clients interviewed received				
Case management	592	75%	4	2%
Peer counselor	107	14%	1	0.5%
DIC	1	0%	--	--
Mobile outreach	2	0%	3	1%
Health facility	86	11%	1	0.5%
Healthy Living Platform	--	--	199	96%

Table 1 shows the demographic characteristics of the clients interviewed. Table 2 shows the demographic characteristics of the providers interviewed. MSM and FSW each made up about 40 percent of the providers interviewed. The remaining 20 percent were transgender (6.7%), bisexual (3.3%), FSW partners (1.1%), and MSM partners (1.1%). More than half of the providers were peer educators (53%), with case managers making up 38 percent of those interviewed and HLP counselors 10 percent. Peer educators commonly reported working with MSM, whereas case managers reported working primarily with FSW. HLP counselors reported working primarily with both MSM and FSW.

For all types of providers, the most common service provided to clients was the provision of condoms and lubricants (Table 3). For HLP counselors and peer educators, the second most common service provided was assessment of HIV risk, whereas for case managers it was ensuring that their clients go to their scheduled appointments. More than 80 percent of peer educator and case manager respondents stated that they follow up by contacting the client by phone, text, or email.

Table 2. Demographic characteristics of providers interviewed

Characteristics	Providers	
Region of residence	n	%
Greater Accra	35	39%
Ashanti	15	17%
Brong Ahafo	10	11%
Western	30	33%
Age of providers interviewed		
19–24	11	12%
25–39 years old	60	67%
40+ years old	18	20%
Gender of providers interviewed		
Man	24	27%
Woman	51	58%
Transgender man	3	3%
Transgender woman	10	11%
KP status of providers interviewed		
FSW	36	40%
FSW partner	1	1%
MSM	34	38%
MSM partner	1	1%
Type of service provided		
HLP counselor	9	10%
Drop-in center staff	1	1%
Mobile outreach	1	1%
Peer educator	48	53%
Case manager	34	38%
Nurse	3	3%

Table 3. Services provided to clients by providers (N=91)

Services provided	HLP counselor	Peer educators/ DIC/mobile outreach personnel	Case managers
	n	n	n
Assessment of HIV risk	8	42	17
Condoms and lube	9	51	24
Emergency contraception	1	9	3
Other contraception	3	13	6
Pregnancy tests	0	4	2
Rape counseling	3	10	5
Information on correct and consistent condom use	7	26	15
Information on the helpline	3	8	9
Text (mHealth) health info messages to clients	1	3	7
Other in-person HIV info for key populations	5	7	9
Referrals for HIV testing	9	35	11
Referrals for PMTCT	3	5	3
Referrals for mental health services	0	1	3
Referrals for STI services	6	37	15
Referrals for Mfriend services	1	1	7
Referrals for GBV services	6	34	16
Accompany clients to health facilities	--	--	16
Help clients get treatment from pharmacy	--	--	18
Ensure clients go to scheduled appointments	--	--	21
Other	--	3	--

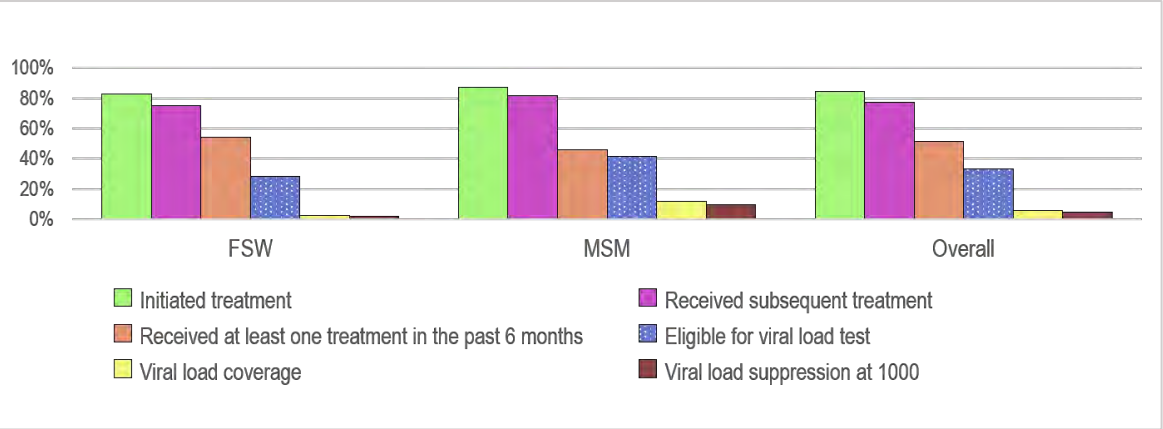
According to routine reports from the Care Continuum project, in Quarter 4 of 2018, it had 69 peer educators, 47 case managers, and 15 healthy living counselors.

Linkage to ART for HIV-Positive KPs Enrolled in Case Management

Next, we discuss the research question, "What are the percentages of eligible clients who enroll through the KP models under review? What percentages are successfully followed up for three months and six months?"

Of the 1,389 HIV-positive clients included (all clients enrolled in case management under the Care Continuum project up to September 30, 2018), 84 percent started treatment. Of those who started treatment, 91.5 percent had a subsequent treatment. Sixty-six of those who had a subsequent treatment had a treatment in the previous six months, and nearly 58 percent of that group had received treatment in the previous three months.

Figure 2. Treatment and suppression cascades, by total KPs and overall



Typically, patients are declared lost to follow-up if they go for more than 28 days without an appointment (after having missed an appointment, and accounting for prescriptions that cover multiple months. Default is marked when a client has missed an appointment but it has been less than three months since they were due to be seen. Of those clients from the cascade data who had a subsequent medical appointment after initiation, 11 percent had their most recent appointment when expected and 27 percent were fewer than three months past their expected appointment date..

More than 60 percent of clients had their last appointment more than 90 days before data collection. The overall median time to recent appointment after initiation was 121 days (4 months).

Of the 1,170 clients whose files included a date of treatment initiation, more than half started treatment the day they were tested (Table 4), with another almost 20 percent starting within one week of testing. The overall median days to initiation of treatment after being tested was zero (i.e., treatment was started the same day as testing). Table 5 shows the amount of time a client was retained.

Table 4. Time to initiation of treatment after testing

Time to initiation of treatment after testing	n	%
Same day	621	53.1%
1 week	216	18.5%
1 month	179	15.3%
3 months	102	8.7%
6 months	33	2.8%
> 6 months	19	1.6%
Total	1170	100.0%

Table 5. Time of retention or most recent treatment

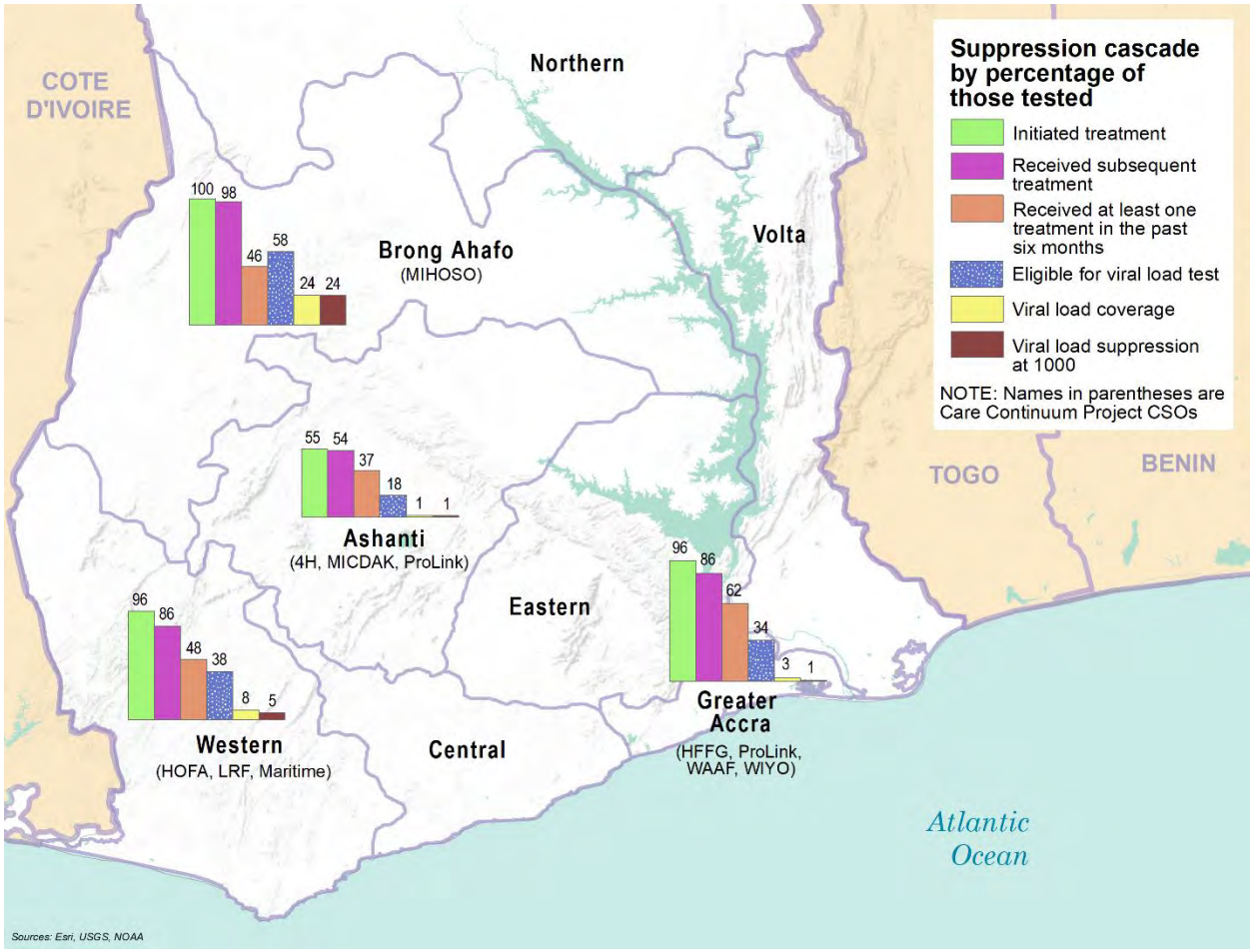
Time of retention/most recent treatment	n	%
1 month	118	11.0%
3 months	292	27.3%
6 months	300	28.0%
> 6 months	361	33.7%
Total	1,071	100.0%

For the 16 percent of clients whose files did not list a date of treatment initiation, nearly all (95%) had a status of "other." Five percent had a status of dead, default, lost to follow-up, or transfer. Nearly all of those considered "other" were not successfully linked to care. Table 6 summarizes three-, six-, and nine-month retention rates for three cohorts of HIV-positive KPs enrolled in case management through the Care Continuum project. We can see from this table that three-month retention rates are approaching the 90-percent PEPFAR standard, especially for MSM, but then fall off sharply, with about half of KPs, FSW, and MSM retained at nine months.

Table 6. Retention rates for HIV-positive KPs enrolled in case management

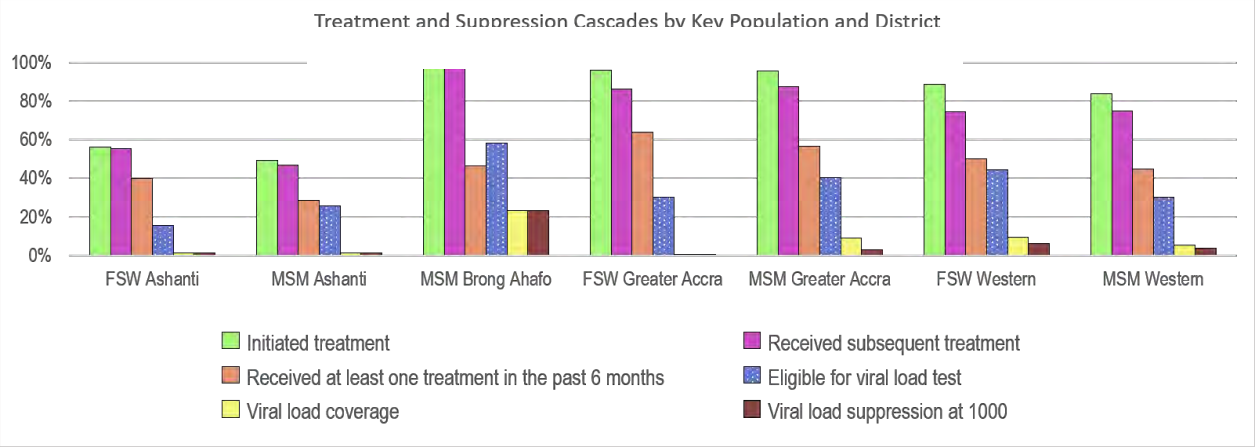
		3-month retention			6-month retention			9-month retention		
KP status	Cohort	Num	Dem	3 mo.	Num	Dem	6 mo.	Num	Dem	9 mo.
	1	83	98	84.7%	74	98	75.5%	52	98	53.1%
	2	113	149	75.8%	91	149	61.1%			
	3	122	190	64.2%						
FSW	All	318	437	72.8%	165	247	66.8%	52	98	53.1%
	1	59	66	89.4%	54	66	81.8%	35	66	53.0%
	2	124	138	89.9%	101	138	73.2%			
	3	105	139	75.5%						
MSM	All	288	343	84.0%	155	204	76.0%	35	66	53.0%
	1	142	164	86.6%	128	164	78.0%	87	164	53.0%
	2	237	287	82.6%	192	287	66.9%			
	3	227	329	69.0%						
All KPs	All	606	780	77.7%	320	451	71.0%	87	164	53.0%

Figure 3. Suppression cascades, by percentage of those tested



Recording the viral load was largely absent from client folders, with only 16 percent of client records including a first viral load entry and only 18 percent of those with a first entry including a subsequent one. The low retention rate keeps many KPs from reaching eligibility for a viral load test (at six or more months on treatment), and provider survey responses indicate that having lab work done involves a financial cost to the KP that many find a constraint. The steep drop-off in retention and viral load information is easily observable in the following tables and figures, which show treatment cascades by KP type and region. These variations are interesting because they indicate that programs in different regions may be faring differently when it comes to retention. For example, in Brong Afo, 71 percent of KPs enrolled in ART were eligible for a viral load test (meaning they had been retained for at least six months) at some point before data collection, but only 58 percent had received a treatment within the past six months (Figures 3 and 4). This finding suggests that retention actually may be declining; in another three months, there may be fewer KPs newly eligible for viral load tests than in previous quarters. However, by contrast, in Greater Accra, only 34 percent of KPs were eligible to receive a viral load test before the time of this study, but 62 percent of the enrolled KPs had received treatment in the past six months. These data suggest that Greater Accra has an opportunity to retain those KPs and boost the number eligible to receive viral load tests in the coming quarter. Figure 4, showing the geographic breakdown by KP type, shows regional differences as well, with the steep drop-offs at six-month retention common for both types of KPs. We also analyzed cascade and retention data by age bands; however, we noted little variation by age (data not shown).

Figure 4. Treatment and suppression cascades, by KP and district



Quality of KP HIV Services

Drawing from client and provider interviews and provider FGDs, as well as technical support from the Care Continuum project, below we answer the research question: "What is the quality of KP HIV service interventions implemented by the Care Continuum project and IPs receiving project support? What are the areas of relative strength and quality that could benefit from greater improvement?"

Client perspective

Survey and interview results indicate that clients are able to access and are very satisfied with the services they receive from the Care Continuum project and would often refer others to those services.

Table 7. Overall quality of care reported by case management and HLP clients interviewed

Case management clients					HLP clients			
Type of service	Good		Poor		Good		Poor	
	n	%	n	%	n	%	n	%
Ease of getting care	757	96%	25	3%	182	88%	4	2%
Prompt return of calls/SMS	727	94%	34	4%	151	73%	6	3%
Waiting time	729	94%	45	6%	155	75%	10	5%
Provider listens to you	778	99%	5	1%	179	87%	4	2%
Provider takes enough time with you	763	97%	11	1%	187	91%	1	0%
Provider explains what you want to know[a]	774	99%	4	1%	20	53%	3	8%
Provider gives good advice and treatment	775	99%	5	1%	185	91%	3	1%
Admin staff is friendly and helpful	737	94%	35	4%	184	89%	1	0%
Facility is neat and clean	737	95%	17	2%	165	81%	1	0%
Confidentiality	763	99%	11	1%	185	91%	5	2%

[a] Had an abnormally low response rate for HLP clients, with only 38 clients answering the question.

When asked specifically about quality of care, clients reported very high opinions of the quality of services (see Table 7). All case management clients and 97 percent of HLP clients interviewed reported being able to receive the services that they sought. Nearly 100 percent of case management respondents stated that

the quality of care they received was good. HLP client experiences varied more; however, the majority (75% or more) still reported the quality of care they received was good. In addition, close to 100 percent of case management respondents and HLP clients were satisfied with the services provided and would refer someone else to services (data not shown).

For case management clients, the three most cited reasons for accessing services were for health education, help in staying on their HIV treatment, and receiving condoms and lubricants. For HLP clients, the three most cited reasons were referral for HIV testing, assessment of HIV risk, and health education (results not shown).

In addition to high opinions of service quality, more than half of the respondents reported feeling comfortable in bringing their partners with them for health services, talking to their partners about health issues, disclosing their HIV status to their providers, and reporting GBV to their providers.

In the qualitative portion of the interviews, when asked what they liked about Care Continuum project services, both HLP and case management clients identified provider attitudes as a positive aspect of the services, specifically noting that providers were friendly, professional, and honored confidentiality. HLP clients felt they were greeted cordially, and that providers spoke to them with patience, listened to them, made them feel at home, devoted time to them, and offered quick and reliable solutions. Positive aspects highlighted by case management clients were that providers were supportive, trustworthy, respectful, and passionate.

"*They are detailed with the explanations on treatment and they make us feel at home by talking to us well.*" – MSM, case management

In addition to provider characteristics, both HLP and case management clients noted receiving condoms and lubricants—either free or at a reduced price—as being a positive aspect of service provision. They also liked that drugs were provided and usually available, and could be delivered to them. Finally, case management clients noted liking that the services offered had helped them improve their health and live a normal life.

"*I have not regretted enrolling because I'm getting better with medication.*" – FSW, case management

Clients offered similar explanations for why they selected the Care Continuum project for services, including provider attributes, quality of care, health information, and referrals and recommendations as important factors. In addition, case management clients cited a need for support. HLP users noted a need for health information as a factor in choosing the Care Continuum project. Recommendations and referrals from both health facilities and friends were also noted as a key reason for choosing the Care Continuum project.

It is important to note that the data for HLP clients may not be representative of the eventual case load of the platform. Although the platform had retained contact information for clients enrolled under an early text/phone helpline (Text Me! Flash Me!), few of those contacts remained valid, subscribed to the new HLP platform, or felt comfortable in replying to the interview request. This factor likely relates to the timing of the assessment; the new HLP had been launched only recently at the time of data collection, and more time will be needed for the platform to build a large, active population of subscribers.

Provider perspective

Provider survey interviews and FGDs revealed a range of positive approaches to engage and retain clients, areas of pride and enjoyment in their roles, as well as challenges and areas for improvement.

When asked what they enjoyed about their jobs, peer educators (both FSWs and MSMs) reported that they appreciated the knowledge they had gained through their work, which has enabled them to help their peers

and educate them about HIV prevention and care. Similarly, case managers reported that they liked helping their clients to take care of themselves.

> *"As a peer educator, I get the opportunity to talk to my peers on how to protect themselves from HIV and other STIs, empower them to know their rights, and also tell them to report any issue on violence."* – MSM, peer educator

> *"This is what gives me fulfillment in the job, that the client will take the medication, remain strong, and continue enjoying life."* – FSW, case manager

During FGDs, peer educators and case managers discussed a variety of strategies to engage or reengage clients, centering around the main themes of maintaining contact, education, social support, and motivation, and helping clients access care. Providers stayed in touch with their clients through calling, visiting, and connecting through social media. Providers also contacted clients' peers and partners in attempts to locate them. During interviews, data collectors presented providers with a care scenario that included elements of stigma, side effects, clients defaulting, fear of disclosure, disease progression, and mental health or GBV victimization.

In describing their approaches, peer educators and case managers mentioned a variety of positive actions, such as the following:

- Counseling their clients on the importance of taking ARVs to stay healthy, education around side effects, and health facility referrals to address client complaints
- Reassuring the client that what they discuss is confidential
- Referrals for needed services, including STI testing, side effects of medication, and case management
- Accompanying the client to the health facility
- Picking up ARVs for the client (so the client can avoid stigma)
- Building rapport by being encouraging, patient, accepting, checking in and visiting the client regularly, and listening without interrupting before advising clients
- Sharing resources (condoms, lubricants, money for transport)

Technical Support and Capacity Strengthening

In addition to providing and supporting direct services for KPs as described above, the Care Continuum project provides support to CSOs around service delivery, organizational development, implementing best practices, and planning. This support takes the form of training and sharing best practices, tools, resources, and at times, embedded support.

Implementing partner key informants described both the organizational and technical best practices shared by the Care Continuum project. Key informants at CSO organizations also provided the assessment team with documentation of training received or implementation of best practice where available. Regarding organizational best practices, IPs highlighted training received on proposal and abstract writing, financial reporting and compliance, progress reporting (data and narrative), and training on various standards of practice and data reporting tools to guide and document their work.

Technical best practices cited during interviews included the following:

- Use of case managers and peer educators to monitor HIV clients and ensure they are retained in care
- Meeting KP members at their homes to provide testing ("doorstep approach") and link those who are HIV positive to care—some KPs fear accessing services at health facilities because of stigma
- Working with facilities to supply defaulters with ARVs at their homes
- Focusing on data to tell the story of their work

- Information sharing (e.g., sharing information about the project with stakeholders, such as senior FSWs, hotspot managers, ghetto managers, etc., to identify cases beyond those identified by case managers and peer educators)

Sub-Implementing partner respondents also reported they were better able to go beyond prevention and testing to get KP clients on ARVs, retain them in care, and suppress viral load. They were also able to test at KPs' homes to reach those reluctant to visit a health facility.

When asked about tools and resources shared by the Care Continuum project, respondents discussed both organizational and technical tools and resources. The organizational tools mentioned by respondents were M&E tools, financial reporting tools, resources on developing an organizational strategic plan and branding the organization, an organizational capacity assessment tool, a technical capacity assessment tool, and a quality assurance and quality improvement tool. Technical tools and resources mentioned by respondents were an index partner testing tool, a disclosure tool, various data capturing tools, field manuals (separate manuals for FSWs and MSM), various registers—clinical care, beneficiary, cascade—client tracking tools, and a tool for documenting reduction in viral load. IPs also received training from the Care Continuum project focused on building both organizational and technical capacity.

Organizational capacity building covered the following:

- Proposal and abstract writing
- Administration, leadership, and management
- Financial reporting and compliance
- Use of data collection tools
- M&E

Technical capacity building covered the following:

- Sexual and GBV training
- Training on behavior change communication materials and how to use them
- Data analysis, quality, and visualization

Although the Care Continuum Project may have provided training and supports in other areas (such as human resources) these were not mentioned explicitly by key informants at the CSOs; However, the CSO's did recognize the Care Continuum project for strengthening their overall management capacity as local implementing organizations.

Respondents expressed they would like more training on M&E, how to get funding to implementing activities without passing through another IP, and fundraising. One respondent also noted the initial trainings were helpful, but they would like refresher trainings.

Sub-IPs indicated they received regular supervision, including feedback on reports, finance, and assistance documenting successes. Most respondents expressed appreciation for the support and felt it has increased their ability to meet KP needs. When asked about supervision, one respondent said, "They correct us and then also encourage us when we are on the right path. They help us a lot…being around [they] also serve as a motivation because you are working and your donor is around to support you." Sub-IPs felt they would be able to function without support from the Care Continuum Project, though the majority were concerned about funding. Others indicated they would miss the technical support and capacity building.

Table 8. Provider training

Received training/orientation when first became a provider	HLP counselor		Peer educators/DIC/mobile outreach personnel		Case managers	
	n	%	n	%	n	%
Yes	9	69%	51	98%	29	94%

No	4	31%	1	2%	2	6%
Received additional training since becoming a provider						
Yes	11	73%	46	88%	26	84%
No	4	27%	6	12%	5	16%

DIC: drop-in center

Nearly all of the peer educator and case manager respondents (98% and 94%, respectively) reported having some type of training when they became providers, whereas only 69 percent of HLP providers reported receiving such training (Table 8). The majority of all providers (73% of HLP counselors, 84% of case managers, and 88% of peer educators and other providers) reported receiving additional training since becoming a provider. However, the HLP provider training situation is actually better than first appears when one considers that several of those who reported receiving no orientation training did report receiving additional training. This may be due to the HLP intervention being in start-up phase during the time of interview and that finalization of training and provision of additional training was ongoing. When asked about needs for future trainings, HLP counselors, peer educators, and case managers all requested trainings and education to strengthen their performance of current job functions, including new information and refresher trainings. Many providers specifically requested more frequent trainings. Specific areas of interest were GBV, the rights of KPs, lay counselor training, HIV and STI treatment, and defaulter tracing. Another area of strength for the Care Continuum Project lay in Supportive Supervision and Provider Confidence. Virtually 100% of all providers interviewed and of all types reported receiving regular supervision and felt confident in their ability to discharge their responsibilities and in their value to their communities and organizations.

Areas for improvement

Client perspective

Clients were asked their thoughts on how services could be improved—both generally and how they could be made more welcoming to KPs. Suggestions covered provider-specific recommendations, reducing stigma and discrimination, ensuring confidentiality, consistently providing condoms and lubricants, infrastructure concerns and ideas, furthering community involvement, and expanding service provision.

Provider-related concerns and suggestions

Many respondents suggested additional provider training to make all services more KP friendly, including more education around issues specific to KPs and providing KP-friendly services, citing stigma of KPs by health providers and the general public as a problem with current services.

"There should be more education about MSMs to the general public so that they treat us like any other human being." – MSM

"All providers attending to MSMs should be friendly, even if it is their first time meeting them." – *MSM*

Clients also suggested that more providers be recruited and trained to serve KPs.

Reducing stigma and discrimination

Many clients pointed to improvements that could be made outside of the facility or providers. They included community education on the rights of KPs, training for communities around gender, the legalization of sex work and homosexuality, and the support of law enforcement for such legal changes. Clients also flagged support for FSWs and MSM reporting harassment as a priority for making services more welcoming. Suggestions included a mechanism for reporting outside of the law enforcement system

or working with law enforcement to improve services for KPs. This suggestion is in line with provider and client reports of police harassment, violence, and arrest of KPs. Interestingly, few clients discussed calling on MWatchers, MFriends, or the Commission on Human Rights and Administrative Justice as community resources to deal with harassment or violence.

"They should stop the stigma because in the absence of our case managers, they don't treat us well." – MSM

"Communities should be reoriented on gender behaviors and attitudes." – MSM.

"Educate people from bullying MSMs and accept them as normal people, too." – MSM

Ensuring confidentiality

Many clients also pointed out issues around confidentiality of services. They suggested recruiting peer educators from different communities to preserve the confidentiality of HIV tests and services. Some clients expressed concern about the confidentiality of the mobile outreach service. Some also expressed concern that provider confidentiality be ensured.

"It is okay, but there should be more privacy in going for our medications." – MSM

Provision of condoms and lubricants

Clients expressed dissatisfaction with the provision of condoms and lubricants. The issues noted included a desire for condoms and lubricants free of charge or preferring condoms and lubricants available in the health centers because of the difficulty in finding peer educators through whom to access condoms.. Others requested home delivery of protective supplies. Clients also indicated that having a consistent supply of contraceptives, condoms, lubricants, and medications contributed to welcoming services.

"Condoms should be given to [the] care provider so she supplies [them] to us because when it is given to peer educators, we sometimes don't get them because the P. E. is not around or wants to sell [condoms] to us." – MSM

Infrastructure

Case management clients suggested the expansion of current facilities and addition of new buildings to accommodate more clients and those who need to be admitted. Several MSM and FSW clients noted a preference for services offered separately from the general public, either in a separate section or building, to preserve their confidentiality.

"Places for service delivery should be changed to avoid people from noticing who we are." – *FSW*

"*Getting our own private place at the facility to avoid stares from other patients and people at the facility."* – MSM

Community involvement

Clients also suggested additional involvement of community members in service provision and programming.

Expanding service provision

Finally, both HLP and case management clients had suggestions for additional services that the Care Continuum project could add to improve services for KPs. Clients suggested the expansion of outreach programs to additional KPs—specifically, seminars in churches and expanded peer education services. Other suggestions were increased sexual health education, general education on healthy living with HIV, and more regular provider follow-up. Case management clients suggested adding financial and material support to the Care Continuum project's offerings. Examples included money for transportation, assistance with accommodation, job provision, assistance renewing health insurance cards, covering medication costs, and providing food for clients.

Provider perspective

Case managers, peer educators, and HLP counselors shared many examples of positive responses and approaches employed to engage clients. At the same time, some concerns cropped up concerning the tactics used. Some respondents used these tactics:

- Used fear to motivate clients to stay on treatment
- Did not make any referrals
- Breached confidentiality of other clients to reassure a current client or locate a client
- Did not counsel on safer sex
- Did not tell a client his or her test results because the provider did not think the client was ready (one provider)

"*I will tell him if he doesn't come for his medication, he will die and he will not die peacefully.*" – MSM, peer educator

"I would use a client of mine as an example and tell her look at her, she also has the virus but because she takes her medication regularly, she looks very healthy and well, so if you also take your medication, that's the same way you will be and the sickness will not show signs on you." – FSW, peer educator

When prompted with an example of a client showing symptoms of depression, nearly all providers failed to flag mental health as an area for referral or follow-up, with some suggesting the issue most likely was a side effect of the medication.

FGDs also revealed challenges in helping clients adhere to care, including having to cover a large geographic region; having the wrong or outdated contact information; clients avoiding them; and clients asking for money, food, or transport to access treatment. Some clients previously had had negative experiences with NGOs, and so were resistant to working with peer educators and told others to avoid them.

One focus group discussed frustration over the lack of appropriate funds available to support clients; another discussed frustration with targets set by supervisors and not being paid if they did not reach those targets. Some providers also reported experiencing violence or threats during their work.

Individual interviews with peer educators also revealed challenges around clients wanting to be given something when they interact—condoms, refreshments, compensation for time, or money for transport. A few peer educators reported that gaining clients' trust was difficult. A few others noted that they had to overcome rumors about their work (that they took clients' blood for rituals or were going to infect them with HIV). Still others said that they would like to have ID cards to prove they were peer educators working with an agency.

A handful of peer educators also reported that convincing clients to test was a challenge. A few MSM peer educators reported that it was not safe to gather clients in groups, and that MSM feared exposure and could be difficult to locate.

Case managers specifically noted challenges related to default and loss to follow-up. The causes included clients being reluctant to talk to case managers, clients being difficult to reach, and clients refusing to take medication or demanding money in exchange for taking medication. Several case managers reported not being able to reach referred clients using the contact information they were given. Both MSM and FSW clients were described as difficult to reach. Case managers noted difficulties in finding times when FSWs were available to talk, including dissatisfaction at having to meet them late at night or when they were smoking or drinking.

"Sometimes you meet the client for the first time, take their information, take their contact, and later call them, and you are told the number doesn't exist. It's a major challenge we face with our clients." – MSM, case manager

Case managers were asked for their perceptions as to why clients decline to participate or drop out of services. The most common reason for both scenarios was fear of disclosure (25 declined; 12 dropped out), followed by confidence in their own ability to access services (10 declined; 10 dropped out). Other reasons were no stable location (7 declined; 9 dropped out) and no secure phone (4 declined; 7 dropped out). Another common challenge for case managers across KP type was a lack of condoms and lubricants.

"Most of the time the challenges I face on the field are when there is a shortage of condoms and lubricants. This is because we cannot do HIV interventions without condom and lubricant distribution. Whenever there is a shortage, it makes the work very difficult because for a client to give you his attention, you have to give him those things." – MSM, case manager

Financial challenges came up multiple times across KP types. Challenges included case managers having to pay for lab tests when clients could not afford them; both case managers and clients having difficulty affording transportation to meet; and other financial challenges for clients, including housing.

Additional challenges included stigma at health facilities against KPs and case managers not having identifying material, such as identification cards or t-shirts, specific to their roles.

Many of the challenges to service provision that providers noted were echoed in provider perspectives on challenges experienced by clients, which pose a threat to their ability to engage with services. Clients face poverty, homelessness, violence, stigma, hunger, and lack of social support—all of which hinder their ability to access health facilities, take treatment, and stay on treatment. Drug and alcohol use also hinder clients' ability to adhere to treatment.

Participants reported that some clients are fatalistic, have received misinformation about treatment, or do not want to take treatment until they feel sick. Others stop taking treatment because of side effects or to avoid disclosing their HIV status. Providers made many references to KP preferring prayer or faith healing as an approach to managing their infection and relayed that there were many religious leaders in the community who discourage people from taking treatment. High mobility was also a challenge in staying on treatment.

Participants reported that some clients were in denial about their status and not ready to accept it or start treatment. Clients reported being afraid that people they knew would see them at the health facility or they would encounter stigmatizing or unkind treatment from facility staff. One FGD discussed clients without health insurance being charged for lab tests, care, and treatment. Participants also reported that clients had concerns about confidentiality that hindered them from accessing care or services.

Gender

Providers and clients were asked about GBV, the reasons for it, and why someone might not report it. We first discuss provider results, followed by client perspectives.

GBV definitions shared by case managers and peer educators centered around examples of physical and sexual violence. GBV definitions by FSWs included clients refusing to pay and subsequently beating and raping them. A few case managers mentioned partner violence. Clients refusing to pay FSWs was the most common response from case managers who were FSWs themselves. A few respondents said that GBV could come in the form of being harassed or shamed by neighbors or the general public because of their status as an FSW; respondents also reported that police beat and rape FSWs and take their money. A client refusing to use a condom was also reported as GBV.

When defining or describing GBV, MSM peer educators and case managers discussed various forms of violence suffered as a result of being MSM. Physical and sexual violence included being raped or beaten by strangers or by men who did so after having sex with them. Case managers also noted controlling personal autonomy of a partner as GBV experienced by MSM.

Although the vast majority of these examples mentioned specific cases or examples rather than a definition, a few case managers and peer educators included definitions that indicated a deeper understanding of GBV:

"In short, what I can say is that it is violence that occurs between a man and a woman, a man and man, or a woman and a woman in terms of sexuality or having sex." – MSM, case manager

"Gender-based violence is where our clients are abused because of their gender. It can come in the form of sexual, economic, legal, social…The most common one is sexual, because of their sexual orientation…most of them face lots of violence within the community, especially those who act girly..." – Case manager

"*Abuse of a person because of his sexual orientation or gender…*" – MSM, peer educator

In describing why GBV occurs, peer educators frequently offered reasons that blamed the victim. For example, FSW peer educators explained that FSWs experience GBV over "misunderstandings" with clients, because they cheat on their boyfriends or refuse to give them money, because some women "*like it when their men beat them,*" or because they (FSWs) become drunk and violent.

Case managers noted individual, situational, and societal reasons for GBV. Individual and situational factors cited for violence against FSWs included arguments about money between FSWs and both nonpaying partners and clients. Multiple case managers also cited arguments around fidelity within partnerships as causing GBV. On a societal level, case managers noted that FSWs lack support and protection against harm because of society's views about their profession.

"Some [men] feel that if you are a prostitute, then it means anything can be done to you. You have no say on whatever he does to you. You also don't have [a]license on the job you do, you don't pay tax…So because of that, in Ghana, it is very evident that if you are a prostitute you have no say at the police station, so everybody does whatever they want to you." – FSW, case manager

Regarding violence against MSM, many case managers and peer educators engaged in victim blaming, citing the way MSM talk, dress, and behave.

"It is due to the way many people dress." – MSM, case manager

All FGDs reported a high level of violence toward MSM and FSW clients, as well as challenges for both groups in reporting and accessing police services. The groups recognized that MSM could be victims of GBV, also discussing homophobia as a form of and cause for violence, and intimate partner violence.

Victim-blaming attitudes also surfaced in some FGDs, similar to the opinions expressed in individual interviews, including someone being too flamboyant and knowing where not to walk. There was also some agreement among MSM that intimate partner violence is an important expression of love in their community. FGDs among FSWs did not express the same level of victim-blaming attitudes.
Other case managers noted that stigma against MSM contributed to GBV.

"The non-acceptance of our preference in our communities..." – MSM, case manager

Similarly, some MSM peer educators reported that GBV against MSM occurs because they are not accepted by society and perpetrators know that MSM will not report such violence.

"*[GBV] occurs when society sees one's behavior as contrary to the norms of society.*"

Finally, several case managers noted a lack of education around gender in the community as a cause of GBV.

"So much ignorance in our community. People don't really know and understand what gender is…" – Case manager

Reasons for not reporting GBV

Case managers and peer educators said that both FSWs and MSM did not report GBV because they feared it would lead to exposure of their KP status; that they would suffer violence after reporting from the police, community members, or the perpetrator; and, because prostitution and homosexuality are both illegal, KPs feared being arrested if they reported such violence.

For FSWs, dependence on nonpaying partners was noted as a reason that violence from these partners would not be reported, as well as a lack of community support.

"…society frowns on the job they do as FSWs, and that discourages them from reporting such cases. So, if there is something bothering them, they don't make it known to anyone or go to the police station. Because the society had not accepted them and the job they do, they've also not accepted themselves. They think there are no laws to protect them." – FSW, case manager

Case managers noted that some MSM did not report GBV because they blame themselves for the violence.

"Clients don't report gender-based violence because they feel they are wrong themselves for what they do. They don't understand gender and don't have the confidence, so anytime they face issues of gender-based violence, the first thing they do is to blame themselves for causing the harm upon themselves, so for that matter, they do not want to report it." – MSM, case manager

MSM peer educators also reported that violence against MSM goes unreported for fear of being publicly exposed, because being MSM is illegal, and because police will not help and might even arrest them. A couple of respondents reported that MSM do not report intimate partner violence for fear of losing their relationship.

The understanding of GBV varied among the clients interviewed; many of them were unfamiliar with the term. Definitions provided by clients varied, and included intimate partner violence, violence against FSWs by clients, violence against MSM, and violence against men or women for behaving outside of social norms. Clients identified both individual actions and community-level factors as causes of GBV. Individual actions were KP public behavior, financial issues, disagreement with clients of FSWs, and relationship issues. Community-level factors included a lack of acceptance because of sociocultural and religious norms, as well as a lack of legal support and security.

"Non acceptance in the society…" – MSM

"Because it is not legalized in Ghana, people take advantage of it and abuse people because they know you cannot report." – MSM

"Because they think their victims are going against societal norms…" – MSM

When asked why victims might not report GBV, clients noted fear, issues with law enforcement, socioeconomic and cultural issues, shame, unwilling to disrupt the home, and protecting their relationship. Their fears included fear of stigmatization, public disclosure, arrest, and losing clients.

Scale-Up and Transition

Affecting KP Service Delivery at the National Level

How have the Care Continuum project activities at the national level affected service delivery for KPs?

Over the past two years, the Care Continuum project has collaborated with and technically supported efforts at the national level to improve access to and the quality of services to KPs in Ghana, including collaborations with GAC, the National AIDS Control Program (NACP), GHS, and Global Fund in various capacities.

According to stakeholder key informant interviews, the Care Continuum project has made a significant contribution to the national KP landscape. It has contributed to multiple national guidelines and legislation, including the updated standard operating procedures (SOPs) for KP service delivery, the

updated HIV/AIDS policy, the Treat All Policy, GAC Act 938, differentiated service delivery manual, and ART guidelines. More specifically, the Care Continuum project was part of the technical working group that spearheaded the process to develop SOPs for KP service delivery. The KP guidelines were first developed in 2011–15; the revision includes internationally accepted standard principles of care delivery.

The Care Continuum project also has helped develop the final draft of the National HIV/AIDS Policy, to be released in 2019. According to the GAC, the Care Continuum project was instrumental in the section on testing across all populations, as well as including new and best practices at the global level, such as case management, self-testing, and index testing. The GAC Act 938 establishes a key basis for policy formulation for the national response, and the Care Continuum project staff played an important role in the section on human rights and stigma and discrimination. The Care Continuum project team also helped draft the legislative instrument to guide implementation of the GAC Act. In addition, the Care Continuum project supported the redesign of the KP behavior change communication material in collaboration with the GAC, and its input informed new approaches to program design for the New Funding Model 2 for the Global Fund application.

Stakeholder interviews also revealed that the Care Continuum project has made significant contributions to service delivery, particularly in strengthening the case management strategy for linking clients to care. One NACP respondent indicated that the Care Continuum project is well known for its advocacy around KPs and stigma, ensuring that KPs are considered when decisions are made at the national level. The respondent also noted that the Care Continuum project advocated for and facilitated a training on stigma and discrimination for NACP to help it understand the challenges KPs face.

The Care Continuum project also has developed a curriculum and institutionalized it into GHS trainings. This development required successful advocacy and justification to GHS of why it is important to integrate KP sensitivity into its regular training. Currently the Care Continuum project provides technical assistance and staff expertise for the trainings but also has provided curricula that embed KP issues into the GHS training so they can be part of the regional training.

The Care Continuum project also has formed a close working relationship with the metropolitan health directorate and the metropolitan, municipal, and district assemblies to provide commodities (condoms) at the district level. In addition, it has worked to ensure that the commodities are part of the national forecast and thus taken on by the Government of Ghana.

Even though the Care Continuum project and GAC have made a number of gains at the national level, during interviews clients noted changes that could be made at the community and societal levels to make services feel more welcoming. Needed changes could include educating KPs and other community members about what national policies exist and what rights KPs have regarding freedom from abuse and access to services.

Clients noted that the legalization of homosexuality and sex work, as well as the corresponding support from law enforcement, are important changes that would have an impact on their experiences in their communities. Clients also prioritized support for FSWs and MSM reporting harassment as part of making services more welcoming. Suggestions included a mechanism for reporting outside of the law enforcement system or working with law enforcement to improve its responses and services for KPs.

Scale-Up/Transition of KP Models

Client and IP Perspective on Scale-Up and Transition

In this section, we discuss the following research questions "To what extent has the Care Continuum project been successful in scaling up and transitioning KP models? What are the factors that hinder or facilitate scale-up/transition of KP models?"

During interviews with the Care Continuum project's implementing partners, respondents reported that targeting KP groups is key to controlling the spread of HIV, making scale-up of the project worthwhile. They suggested scaling up to districts in Ghana that currently do not have the Care Continuum project and including more stakeholders (e.g., community leaders, hot spot heads) in the process. Respondents felt that the use of peer educators and case managers to retain and trace clients in care was a very important aspect of the project, and critical to reducing viral load and the spread of infection.

Several respondents discussed the Care Continuum project's emphasis on reaching targets related to 90-90-90 (that is, the Joint United Nations Programme on HIV/AIDS [UNAIDS] and partners launch of the 90–90–90 targets; the aim was to diagnose 90 percent of all HIV-positive persons, provide ART for 90 percent of those diagnosed, and achieve viral suppression for 90 percent of those treated by 2020). Some felt the strong emphasis on targets might create unintended pressure on providers to overreport or possibly be less scrupulous in detecting and eliminating duplicate records. Several respondents felt the targets were unrealistic, given the funding provided. Others lamented that though funding had been cut, targets had not been reduced.

"We are seen [as] meeting targets and people are doing anything to get the target. If not, people will end up faking things and we are not painting the real picture on the ground. That has been my issue, and we learn best practices at review meetings which are very consistent and well organized. I at times look at the figures presented and I wonder why people have high figures and numbers reported. I see people present that they have reached 100 percent and enrolled into care as 90 percent and I think how … trying to please donors [is] not helping …Some people just present figures to meet the high targets from donor[s] but we are not presenting the true picture on the ground."

IPs shared many examples of how the Care Continuum project has supported them and strengthened their capacity through trainings, supportive supervision, and at times embedding technical staff to mentor local staff. Trainings received from the Care Continuum project focused both on building organizational and technical capacity, as discussed earlier. Respondents also reported they had frequent and regular supportive supervision visits that helped them build their organizational and technical capacity; some mentioned that they had embedded advisors. IPs reported receiving supportive supervision somewhere between biweekly and monthly, with some respondents noting visits were "frequent." Supervision topics included M&E, data quality, finance and accounting, and technical supervision. IPs complete monthly and quarterly reports that include both data and narrative, as well as success stories. They reported receiving helpful feedback from the Care Continuum project and were able to review reports until they were accepted (substandard reports are "rejected.")

"They correct us and then also encourage us when we are on the right path. They help us a lot… being around [they] also serve as a motivation because you are working and your donor is around to support you."

Respondents reported they are now able to go beyond prevention and testing to get KP clients onto ARVs, retain them in care, and suppress viral load. They also are able to bring testing to KPs' homes to reach those reluctant to visit a health facility. In addition, they feel better prepared and trained on project management and finances. Although respondents felt they could function independently of the Care Continuum project, all acknowledged that funding would be a problem once the project ended. They would also miss the capacity building and technical support the Care Continuum project has provided.

National Perspective on Scale-Up and Transition

Key informant interviews with national stakeholders also supported the idea of scale-up and transition, but these respondents expressed concerns about the resources needed. As mentioned above, significant gains have been made in the KP landscape, and stakeholders feel that local CSOs "can form the foundation of the implementation of KP programs," but financial and technical resources still will be needed.

Key informant interviewees agreed that the investment in KPs has been worthwhile and will be important to sustain. One national stakeholder discussed reconsidering the current strategy of focusing solely on KPs, saying that there is a need to look at the general population, in which prevalence is high and indicators are worsening. Other key informants suggested keeping the focus on KPs, noting they are key drivers of the epidemic. Overall, key informants agreed that maintaining, scaling up, and transitioning services to the Government of Ghana is desirable and supported by many key players.

Stakeholders also talked about how the transition from the Care Continuum project to the Government of Ghana is embedded throughout the project, citing how the development of the SOPs, materials the Care Continuum project has shared with the national coordinating body, mapping of hot spots, and even Global Fund programs mirroring the lessons from the Care Continuum project and PEPFAR all support sustainability and transition.

Interviewees also cited the capacity built and networks established among those CSOs that are current sub-IPs as facilitating scale-up and sustainability. The knowledge and skills peer educators and case managers have gained will continue to support HIV-prevention efforts among the KP communities. Further, a Care Continuum project key informant noted that as Care Continuum project has trained more staff and promoted skill building, turnover has increased. This informant noted that turnover was a challenge at times, but ultimately means more highly qualified providers and professionals working locally.

Factors seen as potentially hindering successful scale-up and transition include financial and human capacity and buy-in from stakeholders. Multiple stakeholders mentioned the lack of funds for scale-up and transition to the Government of Ghana, stressing the importance of advocacy and buy-in among national leaders, including those not focused on KPs. Two stakeholders noted that the cultural and political environment plays a role as well, with some KP behaviors being taboo and illegal. One stakeholder said the Government of Ghana would have a hard time taking on a project that focuses on KPs because their lifestyles are not culturally acceptable; such a move might appear to give government endorsement to homosexuality or sex work.

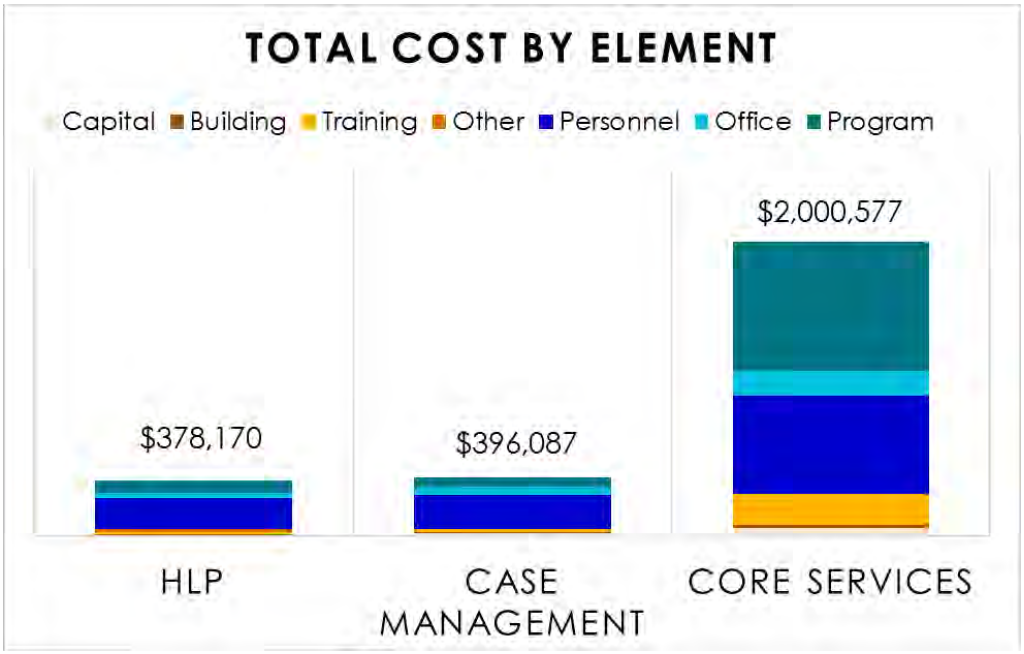
Cost Analysis Results

The cost assessment aimed to answer the question "What are the per-beneficiary (KP reached) operating costs of the Care Continuum project KP HIV intervention models?"

Overall, the total two-year costs of the three intervention models were $378,170 for HLP, $396,087 for case management, and $2,000,577 for core IP services (Figure 5).

The average costs per output (person reached) for the three models were $29.54 per individual reached for HIV prevention through core services, $82.79 per HIV-positive individual enrolled onto ART via case management, and $115.72 per client for HLP (Table 9).

Figure 5. Total cost of each intervention, by key elements



For all three interventions, the cost was largely driven by maintenance costs related to personnel, office, and program expenses (86%–88%), with investment expenditure on capital, building, and training costs constituting less than 15 percent (Table 7). The make-up of program-related costs will be detailed later for each intervention model, but Figure 5 highlights how these costs comprise a larger share of the total cost for core services compared to the other two intervention models.

Table 9. Total cost and unit cost, by intervention model

Intervention model	HLP	Case management	Core services
Investment	$ 48,345 (13%)	$ 46,017 (12%)	$ 283,429 (14%)
Capital	$ 2,192	$ 16,633	$ 56,947
Building	$ 6,234	$ 7,306	$ 20,962
Training	$ 17,058	$ 22,078	$ 205,520
Other	$ 22,869	$ -	$ -
Maintenance	$ 329,817 (87%)	$ 350,069 (88%)	$ 1,717,148 (86%)
Personnel	$ 209,401	$ 235,562	$ 669,383
Office	$ 36,188	$ 55,337	$ 167,245
Program	$ 84,229	$ 59,171	$ 880,521
Total cost	$ 378,170	$ 396,087	$ 2,000,577
Output measure	HLP clients:	New HIV+ KP enrolled in ART:	Individuals reached w/HIV preventative interventions:
	3,268	4,784	67,733
Cost per output	$ 115.72	$ 82.79	$ 29.54

Tables 10 through 12 provide a detailed breakdown of the costs for each of the three intervention models.

Investment costs: Capital and building costs accounted for a relatively small proportion of costs (1%–4%). Training related to the individual models also was not a large cost driver (5%–10%). Of the total cost

for the HLP model, 6 percent was attributable to a grant for developing the system. Neither of the other two models had other investment-related costs. The Care Continuum project headquarters bore all of the investment costs for the HLP. Investment costs for the other two intervention models were found at both the CSO and headquarters levels—a larger proportion of capital costs at the CSO level, and slightly more training-related costs at the Care Continuum project headquarters level.

Maintenance costs: Personnel costs accounted for a large share of costs in all three interventions (33%–59%). Office costs, excluding building rental payments, ranged from 8 percent to 14 percent. Program costs also served as a large cost driver (15%–44%), particularly for core services. Within the subcategory of program costs, the specific types of costs have been defined further. For case management (Table 10), costs included those related to case manager stipends and referral payments, and some small miscellaneous costs. The HLP program costs (Table 11) included annual system fees, HLP counselor stipends and phone costs, and small miscellaneous program expenses.

Core services had the most robust information on program costs; because of the wide variation in HIV-prevention programming found at CSOs, we grouped costs into similar types of activities. For example, outreach activities might include CSO costs related to "Moonlight Outreach"; "Love & Trust"; "My Sex Life"; and other HIV-related education, testing, or stigma reduction programming. The largest proportion of program costs was for meetings, which included all expenses related to weekly or biweekly meetings, monthly meetings, or otherwise (9%). This proportion was followed by peer education, a category that included peer educator stipends, communication and monthly transportation, peer-led referral costs (8%), and CSO capacity building (8%) provided by the Care Continuum project headquarters.

Similar to investment costs, maintenance costs were also found at both levels of programming for both case management and core services (Table 12). Commodity (HIV test kits and condoms) and CSO capacity-building costs were found only at the Care Continuum project headquarters level, whereas most other program costs for core services were incurred at the CSO level. For case management, costs were split between these levels, most likely because case managers were selected independently and the program headquarters and CSOs paid for them. The HLP had no maintenance costs at the CSO level, even though individual CSOs reached and reported on clients.

Table 10. Cost of case management

	The Care Continuum project HQ	CSO	Total	%
Investment				
Capital	$ 2,202	$ 15,126	$ 17,328	4%
Building	$ 6,262	$ 3,022	$ 9,284	2%
Training	$ 21,524	$ 555	$ 22,078	6%
Maintenance				
Personnel	$ 143,925	$ 91,637	$ 235,562	59%
Office	$ 24,872	$ 30,464	$ 55,337	14%
Program				
Case manager stipend/phone	$ 11,880	$ 24,472	$ 36,352	9%
Case manager referral payments	$ -	$ 21,274	$ 21,274	5%
Other	$ 109	$ 1,436	$ 1,545	0%
Total cost for case management			$ 398,760	

Table 11. Cost of healthy living platform

	The Care Continuum project HQ	CSO	Total	%
Investment				
Capital	$ 3,204	$ -	$ 3,204	1%
Building	$ 9,111	$ -	$ 9,111	2%
Training (HLP counselor)	$ 17,058	$ -	$ 17,058	4%
System development	$ 22,869		$ 22,869	6%
Maintenance				
Personnel	$ 209,401	$ -	$ 209,401	55%
Office	$ 36,188	$ -	$ 36,188	9%
Program				
HLP maintenance	$ 4,207	$ -	$ 4,207	1%
HLP counselor Stipend/phone	$ 76,460	$ -	$ 76,460	20%
Other	$ 3,562	$ -	$ 3,562	1%
Total cost for HLP			$ 382,059	

Table 12. Cost of core services

	The Care Continuum project HQ	CSO	Total	%
Investment				
Capital	$ 5,299	$ 53,321	$ 58,620	3%
Building	$ 15,070	$ 10,651	$ 25,721	1%
Training	$ 131,636	$ 73,883	$ 205,520	10%
Maintenance				
Personnel	$ 346,356	$ 323,027	$ 669,383	33%
Office	$ 59,856	$ 107,389	$ 167,245	8%
Program				
DIC running costs	$ -	$ 55,413	$ 55,413	3%
HIV testing services	$ -	$ 36,245	$ 36,245	2%
HIV outreach activities	$ -	$ 103,056	$ 103,056	5%
Monitoring & supervision	$ -	$ 40,191	$ 40,191	2%
Peer educators	$ -	$ 151,937	$ 151,937	8%
Staff communication/travel	$ -	$ 24,784	$ 24,784	1%
Meetings	$ -	$ 182,382	$ 182,382	9%
Identification & site mapping	$ -	$ 6,091	$ 6,091	0%
Test kits	$ 107,596	$ -	$ 107,596	5%
Condoms	$ 3,605	$ -	$ 3,605	0%
Capacity building	$ 169,220	$ -	$ 169,220	8%

Total cost for core services			$ 2,007,009	

DISCUSSION

The USAID-funded Care Continuum project is in its third year and has made significant progress in service provision for KPs in Ghana, both at the national and local levels. Results indicate that the Care Continuum project has been successful in scaling up best practices regarding case management and peer education, as the project set out to do. Sub-IPs spoke highly of the Care Continuum project's technical and organizational support, particularly embedded support. National-level stakeholders similarly agreed that CSO capacity has been strengthened, and simultaneous gains in national policy and service delivery guidelines have been made through national support from the Care Continuum project. Although the Care Continuum project has made significant progress, the final years of the project will provide opportunities to focus on preparing for the transition to the Government of Ghana, advocating for policy changes and financial support, and continuing to focus on high-quality service provision.

Client interviews revealed many project strengths and reasons why clients appreciate the support they receive from the Care Continuum project and would recommend it to others. Specifically, clients discussed their feelings of being supported, encouraged, and offered valuable education and services from the Care Continuum project—features they reported as lacking in some health facilities. Clients appreciated the information they received through peer educators, HLP counselors, and notifications, as well as the facilitated support for adherence from case managers.

Providers also reported a range of positive approaches for engaging and retaining clients in services. Many strategies mirrored what clients liked about the services—staying in touch, supporting clients, and offering commodities such as condoms. Providers reiterated the importance of education and confidentially.

In addition to questions about direct services for KPs, providers and IPs were asked about trainings they received around service delivery, organizational development, implementing best practices, and planning. Nearly all providers reported receiving training from the Care Continuum project either before or subsequent to becoming peer educators, HLP counselors, or case managers; however, most also desired more training around GBV, the rights of KPs, lay counselor training, defaulter tracing, and HIV and STI treatment.

Implementing partners shared many examples of technical and organizational support from the Care Continuum project. Technical support improved IPs' ability to provide services to clients and retain them in treatment using best practices; they also were aided by their training on sexual and GBV. In addition to technical support, IPs received organization support and training—an important step in transitioning services to CSOs and enhancing their ability to manage programs. IP key informants reported training in proposal writing, financial reporting and compliance, and M&E. These skills are particularly important for enabling CSOs to apply for and receive funding independently. On an encouraging note, key informants said that three CSOs are moving toward receiving USAID grants on their own.

The Care Continuum project has shown great success in linking clients to HIV treatment. Of all clients who tested HIV positive, 84 percent started treatment, with more than half starting the same day and 70 percent starting within a week. Of those who started treatment, 91.5 percent had a subsequent treatment. Retention in care, however, has been more of a challenge. Rates of default and loss to follow-up were also high, leading to even more limited data available on viral load. The qualitative data show case managers discussing the challenges in helping clients to maintain treatment, which aligns with the quantitative data. Retaining clients to viral suppression is a vital step in the 90-90-90 cascade, and a key focus for programs seeking to move to epidemic control.

Areas for improvement

Though clients, providers, and national stakeholders all shared positive experiences and feedback, they also offered suggestions for improvement. Client recommendations for improvement focused on making

general health services more KP friendly, decreasing stigma, improving confidentially, and increasing community involvement. The Care Continuum project works in these areas already, but clients felt that further improvement is needed. For example, one client noted that he felt stigmatized while accessing services when his case manager was not present. Viewed positively, this situation may indicate that the case managers are helping decrease stigma and increase access to services, but also shows that without the case managers present, services seem to return to sub-par levels. Other clients' experiences of stigma and negative experiences in accessing health services also points to the ongoing need to sensitize providers across the board.

For the most part, clients reported feeling that providers kept their information confidential and were trustworthy; however, they mentioned a few instances of broken confidentially, which is especially concerning among KPs in general and HIV-positive KPs in particular. Clients suggested using peers from other communities as peer educators because they would not be so easily recognizable in the clients' community. Clients also requested separate facilities to allow them to maintain confidentiality away from the general public and receive high-quality KP services. Although this idea may not be realistic, the program should take client concerns about stigma and confidentially seriously.

Confidentially also arose as an issue in client interviews and FGDs. One tactic that providers discussed was breaching confidentiality to locate a client or sharing client stories as motivation for other clients to stay on treatment. Although sharing anonymous client stories as a motivator could be helpful, providers may need more training in ensuring that confidentially is not breached in the process. Other issues that arose during the scenario portion of the provider interviews—in which data collectors shared a story about a client and providers responded as to how they would handle the situation—included providers neglecting to recommend referrals, counsel clients on safe sex, or address mental health issues. Providers failing to mention these steps during the scenario did not necessarily mean they would overlook these details in their real work; however, the very small number of providers who discussed mental health indicates it might be a topic they are overlooking.

In addition to the wide range of positive practices providers mentioned using, findings indicate a few areas needing attention. Several providers gave examples of using fear to motivate clients to start or maintain treatment. Education about disease progression without medication—as well as transmission—is important, but respecting clients' rights to choose is also vital and should not be overlooked.

Although most providers stated they already were trained when they became providers, it was not true 100 percent of the time; in fact, it was as low as 69 percent for HLP counselors. Lack of timely training is a major concern because it is unclear how well informed these providers are, possibly limiting their ability to provide services, especially to KPs. Training subsequent to becoming a provider was reported as between 73 percent and 88 percent, also showing room for improvement in refresher trainings. The variation in training, particularly upon becoming a provider, may make consistent implementation of services a challenge. Increased monitoring of provider training is important for quality and consistent implementation of program features.

Condoms and lubricants arose as one of the most accessed and appreciated services, but also as an area for improvement. Clients appreciated providers offering them condoms and lubricants, and preferred receiving them for free. Inconsistencies were noted—some clients were given commodities at no cost, whereas others had to pay for them. Providers noted challenges around providing HIV services when there were shortages of condoms and lubricants.

Gender is a cross-cutting area of the Care Continuum project, with providers and clients alike having a range of knowledge and experience in dealing with GBV. Several IPs noted that they received training on sexual and GBV, yet providers' understanding varied in interviews. Most providers could explain GBV as violence between partners or when an individual was attacked because of his or her gender, but few were

able to accurately articulate why GBV occurs. Many reasons offered for GBV included victim-blaming behavior, such as being in the wrong place or walking in the "wrong" way.

In addition, very few providers referenced working with or referring to MFriends or MWatchers, which they are supposed call in to help with GBV cases. Both client and provider experiences with law enforcement ranged from ambivalence to fears of arrest and abuse when reporting GBV. The Commission on Human Rights and Administrative Justice has a system in place for reporting and support outside of the law enforcement system, but its availability did not appear to have been communicated clearly to providers or clients. Training and awareness around this system is needed, both for practical reporting needs and so victims of abuse feel there is a system of support in their communities.

Clients had a broader range of understanding of GBV, with some completely lacking familiarity with the term. This lack of understanding of GBV and its causes among providers and clients alike indicates a need for additional focus on GBV education and available services. Finally, clients also discussed the importance of community education around the rights of KPs, gender and GBV, legalizing sex work and homosexuality, and improving the approach of law enforcement toward KPs.

Scale-Up and Transition to the Government of Ghana

National stakeholders spoke highly of the Care Continuum project in key informant interviews and offered many examples of how it has contributed to the national landscape, particularly through the development of KP SOPs. Providing support for and institutionalizing such documents is a key step in transition and helps ensure that the government has guidelines for quality KP service provision. Key stakeholders also noted their importance, as the resource documents and SOPs are available to the government and distributed to all partners involved in KP programming.

The Care Continuum project's work to institutionalize KP training in the standard GHS training is also noteworthy. Embedding KP training throughout standard training has the potential to reach all new healthcare providers, thus significantly increasing provider awareness of and sensitivity to KPs. A training of trainers for GHS staff delivering the material will help ensure that the KP aspects of training are maintained and appropriately delivered after the Care Continuum project staff cease providing technical support.

Although most key informants at the national level felt the transition of services is embedded in the Care Continuum project's ongoing work or would start in earnest in Year Four, increasing the deliberate and explicit nature of transition may improve the ability of the Government of Ghana to prepare and take on the Care Continuum project's efforts. If the Government of Ghana takes over the Care Continuum project's role in supporting KP CSOs, transition should include sharing all relevant training materials, capacity-building plans, and supportive supervision guidelines, as well as ensuring there are individuals prepared to deliver trainings and support CSOs.

Cost Analysis

The cost assessment found that the largest proportion of spending went toward the core services, but because of the large number of individuals this model reaches, it also had the least expensive cost per beneficiary of the three intervention models assessed. The average cost found for the core IP services aligns with previous research on similar CSO-delivered HIV-prevention services, for which unit costs ranged from $20–$214 for individual CSOs targeting FSWs and MSM. HLP, although the least expensive intervention by total cost, had the highest cost per beneficiary. Case management costs were also less expensive than the core services in total, but more expensive when measured by average cost per beneficiary reached.

Personnel and program-related expenses were the key cost drivers for each intervention model. Core services would be costlier than the other two interventions in total to maintain. HLP, now that it has been developed and actively distributed, may result in reduced maintenance costs over time, particularly for

personnel, whereas the numbers of those reached as clients might continue to grow through word of mouth, meaning that over time, the average cost per client reached could continue to decline.

Given that a primary focus of this assessment was to better understand the new intervention models that the Care Continuum project developed and rolled out, an initial analysis might show that the two novel intervention models—HLP and case management—provide less cost savings than the other package of core services. However, it is important to consider that the output measures used to calculate average costs limit some of the comparability across the three interventions. The core services focus predominately on HIV prevention and testing, using activities that might constitute one-time outreach events that reach a large number of people but use a small amount of resources, combined with ongoing peer education requiring more resources. Trying to compare this conglomerate of services with case management, which by its nature requires a large amount of contact and effort per client compared to the delivery of stigma reduction outreach, is difficult; the cost of case management could be expected to be higher per beneficiary than that of the core services. The case management services delivered by the Care Continuum project were perceived positively by KPs and are needed as Ghana works toward addressing retention in care and viral suppression in these populations.

The HLP had been running for only a couple of months before this assessment—a limited amount of time for obtaining and retaining clients. Given the high per-client cost, it may be worthwhile to also consider developing alternative or parallel interventions connecting to KPs and then reassessing the cost in another year. In addition, the cost per beneficiary for core services may be affected by economies of scale, as well as the longer period during which these types of services have been delivered compared to the other two interventions.

This assessment provides an estimate of the cost of these interventions, including headquarters technical assistance, capacity building, and CSO support costs. Transition to the Government of Ghana is not realistic without some expenditure on support to the CSOs engaged in direct service delivery. These costs were not addressed in previous analyses of KP HIV services, thus making this analysis a useful contribution of this study. Costs incurred at the Care Continuum project headquarters level directly related to the capacity and quality of CSO service delivery include training, capacity building, and commodities (condoms and test kits). It is challenging to set a value on the proportion of labor costs at the Care Continuum project headquarters that contribute to capacity building, but any plan for transition would need to address staff costs for providing CSO support, skills building, and oversight.

This cost analysis has several limitations. First, the use of staffing LOE estimates to determine allocation decisions allowed for a breakdown of costs for the three intervention models but made assessing unit costs by CSO difficult, thus limiting the comparability and assessment of cost by location. Additionally, even though the team collected highly detailed cost input data, the outcome measures, particularly for core services, are quite general and not specifically linked to the intervention models or program activities taking place. The availability of more specific program outcome measures that link more clearly to intervention activities could have allowed for more detailed unit cost calculations.

RECOMMENDATIONS

Recommendations for service delivery

- Additional training for the Care Continuum project providers is recommended in the following areas:
  - Maintaining confidentiality
  - Making necessary referrals, including mental health referrals
  - Providing consistent counseling on safer sex
  - Using appropriate approaches for motivating clients and avoiding inappropriate ones (e.g., not using fear to scare patients into adherence)
  - Addressing mental health issues and services—screening, resources available, common issues among KPs
  - Using active listening
  - Addressing gender and GBV
    - What GBV is and why it occurs; this education should include not blaming the victim
    - Services available to support victims, whether or not they want to report GBV (e.g., counseling, support groups), and what providers can do beyond reporting to support their clients who have experienced GBV (e.g., importance of listening, safety planning)
  - Clarifying providers' roles in offering GBV services (e.g., counseling), referrals, and reporting
  - Describing the scope and depth of services to be provided to ensure consistent service delivery
  - Teaching strategies to improve retention in care and prevent loss to follow-up, either facility based (e.g., supportive supervision to facility staff working with KPs) or community based (e.g., peer adherence groups)

- Training is also recommended for all service providers, including medical professionals. Such training should include the following:
  - Continuing to support GHS in instituting pre- and in-service training of healthcare providers on stigma and discrimination, and on providing KP-friendly services
  - Conducting training of trainers to ensure GHS staff will be able to carry out the KP portions of the training that the Care Continuum project currently provides

- Training for law enforcement on KP rights, needs, and KP-friendly service provision. Consider other law enforcement interventions aimed at reducing violence against KPs (e.g., accompaniment through the reporting process). This intervention could be an extension of the current MWatcher/MFriend referral process.

- Providing trainings for KPs around knowing their rights, defining GBV, and what they can do if they experience or witness GBV.

- Ensuring condoms and lubrications are available. Provide clear and consistent messaging about where and how to get them, and whether they are free or need to be purchased so KPs will know what to expect.

- Increasing community involvement to decrease stigma and raise awareness of GBV and knowledge of KP rights.

- Giving the Care Continuum project providers some form of identification, such as badges, to show they are affiliated with the project and increase their credibility. Ensure this identification can be easily hidden so as not to draw attention to clients who prefer not to be known as receiving services from the Care Continuum project.

Other recommendations that emerged from key informant interviews include the following:

- Providing more training and money for peer educators to attract more people to the position
- Better identifying clients (biometric ID) to capture who is on ARVs; some people are reported as lost to follow-up but may be getting ARVs from a different facility
- Increasing communication between CSOs to avoid double counting and aid in continuation of care for mobile populations with regard to 90-90-90
- Addressing stigma by enforcing government policies so KP members are not afraid to access services; policies exist but are not enforced

Recommendations for transition and scale-up

- Increase advocacy to strengthen political commitment and funding
- Document the KP package of services and interventions, including all training materials, guides, SOPs, supervision tools and guidelines, job descriptions, and guidance documents
- Share the package of services and interventions with Government of Ghana partners
- Conduct continuous advocacy with GAC and GHS to achieve institutionalization of the package of services
- Sensitize key actors and stakeholders, and ensure they are committed to driving the process
- Integrate the costed package of services into the next HIV Strategic Plan 2021–2025
- Include the cost of technical assistance, training, and other CSO capacity-building activities into the costed package of services

CONCLUSION

The findings of this study make note of the Care Continuum project's progress during its first phase of implementation, as well as areas of improvement needed, for the continued consideration of programmers and policymakers. Some obstacles noted include the universal difficulty faced by the Care Continuum project's CSOs and their sister GHS facilities in retaining KPs in care and treatment once they are identified as HIV positive and have begun using ARVs. Further analysis of the treatment cascade indicates that these struggles exist for both MSM and FSW populations, although some variability is noted by region. National-level stakeholders, including representatives of the GHS, recognize the work that remains to be done in GHS facilities to maintain HIV services that are KP-friendly and may promote retention. The same stakeholders also noted the Care Continuum project's contributions to the policy environment in Ghana, which may help promote more KP-friendly policies in the country.

Finally, costs must be considered when determining which intervention packages to implement. Although this report provides start-up and maintenance costs for HLP and case management services, recalculating costs per beneficiary once these new service modalities have had time to be fully established might provide a more favorable cost-per-beneficiary number than the one that could be provided at the time of this study.

REFERENCES

Strengthening the Care Continuum Project Ghana. (2017). Assessing the scope and effectiveness of key population interventions in the response to the HIV and AIDS Epidemic in Ghana. Retrieved from http://www.ccmghana.net/index.php/surveys?download=141:assessment-of-hiv-kp-interventions-2017.

Gobin, S. & Foley, S. (2019). Rapid Costing Assessment of USAID-funded Structural & Behavioral HIV Prevention Activities, Part II: Results of Quantitative Cost Analysis. Chapel Hill, NC, USA: MEASURE Evaluation, University of North Carolina. Retrieved from https://www.measureevaluation.org/resources/publications/tr-19-323

JSI. (2016). *USAID's Strengthening the Care Continuum Project's Year 2 workplan.* Accra, Ghana: John Snow Research and Training Institute.

MEASURE Evaluation. (2017). *The role of drop-in centers in achieving Global HIV targets in Ghana.*

PEPFAR. (2018). Congressional budget justification supplement. Retrieved from https://www.pepfar.gov/documents/organization/278059.pdf.

APPENDIX A. RESEARCH METHODS

Data Collection Techniques, Recruitment (Incentives), Client Contact, Duration, and Privacy

Study questions around service delivery focused on three kinds of direct service interventions:

1. The HLP—a social media platform
2. The core implementing partner (IP) supported services (mobile outreach, peer education, and drop-in centers)
3. The ART case management service

This evaluation placed special emphasis on client experiences of quality in the HLP and case management interventions, and client experiences and exposure to the other direct prevention services, including peer educators, drop-in centers, and mobile outreach.

Data Collection Stream 1

Measurement of the scope and reach of the Care Continuum project direct HIV service interventions in 11 priority districts

Reach was determined for each intervention type and documented using the Care Continuum project's routine reporting on numbers served and types of service delivery points in operation. These data included number of KPs reached, number of KPs tested for HIV, number of HIV-positive clients identified, and number initiated on treatment. Furthermore, information was collected on the number of clients accessing the HLP by KP type and number of clients enrolled in case management.

Data Collection Stream 2

Measurement of quality of the Care Continuum project services in 11 priority districts

Quality of care was determined in a variety of ways through client and provider interviews and FGDs.

HLP clients: Information about the study was broadcast on the HLP. Client were requested to indicate whether they were interested in being interviewed and provide telephone numbers; research assistants conducted telephone interviews using the standard client questionnaire. Clients who declined were not interviewed.

Case management clients: The number of clients sampled per district was proportional to size. Case managers and healthcare providers reached out to clients. Research assistants interviewed interested clients face to face. Clients who had concerns about privacy and confidentiality were offered the option of the telephone interview. Clients who declined in-person or telephone options were not interviewed.

The client questionnaire (HLP and case management) elicited information on the perceived quality of care of services offered, willingness to recommend the service to others, and willingness to disclose personal information to providers and partners.

Provider interviews: All providers (peer educators, case managers, counselors) working with sub-IPs; those available were interviewed.

Focus group discussions: Focus group discussions were conducted in all locations with five or more providers in each category.

FGDs with providers also explored their experiences and challenges in addressing KPs' HIV needs and their understanding of GBV.

Data Collection Stream 3

Description of program activities supporting the direct delivery of accessible and high-quality HIV services for KPs in the 11 priority districts; this data stream also documents how the Care Continuum project has contributed to positive changes in government policies affecting HIV/STI service delivery for KPs

Finally, this data collection work stream (particularly through the key informant interviews) describes how the Care Continuum project has been working to transition services to the Government of Ghana and what factors have promoted or hindered that effort, as seen from the perspective of the different key stakeholders.

Data sources included the following:

- Desk review of program workplans, manuals, reports, and other relevant documents obtained online, from the Care Continuum project, or from USAID
- Key informants' interviews involving six representatives at the national level of the NACP, Ministry of Health, GAC, Country Coordinating Mechanism of the Global Fund, USAID, the Care Continuum project, and all 10 sub-IPs of the project

Data Collection Stream 4

Outcomes for adherence counseling/case management for HIV-positive KPs

Documentation of clients who had tested HIV positive were reviewed from the records of the sub-IP. Data collectors recorded unique identifiers for all HIV-positive clients who had been enrolled successfully and tracked them to the health facility to which they were referred. They physically reviewed the clinical records of the clients with health facility staff. Data collectors then extracted information on the date of initiation of HIV treatment, viral load results, and the date of the most recent visit. They determined the client's final status (active, default, lost to follow-up, dead, transferred out, or other) based on the clinical records. The team then determined the linkage rate from sub-IP to health facility and retention in treatment post enrollment, as well as the viral load coverage for clients who had been on treatment for more than six months and the viral load suppression rate.

Sampling Process

The case management clients were selected across the 11 priority districts, weighted proportionally to the number of case management clients reached from October 1, 2017 to September 30, 2018. The study included all HLP clients who indicated their willingness to participate, as well as all providers offering services at the time of the study. Peer educators and case managers facilitated the recruitment of case management clients for the study and advised them on how to participate.

Ethical Considerations

This study was submitted to the University of North Carolina at Chapel Hill's institutional review board and received a "non-research" classification. The GHS Ethical Review Committee approved both the study and evaluation.

All participants in the study provided written informed consent, except for the HLP and case management clients; data collectors interviewed them by phone, during which they provided oral informed consent. The data collector's signature certified that consent had been obtained. The consent described the purpose of the research and informed all participants of the risks and benefits of their participation in the study, and their rights as study participants. Token compensation was provided after the interview. Clients interviewed by telephone were offered a recharge credit worth about $1.

Data Collection

Research assistants experienced in KP programming were identified and trained. All data collectors were trained, not only in the procedures for collecting qualitative and quantitative data, but also in ethics, procedures for maintaining data confidentiality, and appropriate handling and storage of data and information from the study. Data collectors were also trained in recognizing, responding to, and reporting adverse events. Field supervisors were recruited to monitor the exercise, check data quality issues, and provide technical backstopping in the data collection throughout. These supervisors coordinated the data collection and interviews in each region. Four teams were deployed to the Greater Accra, Ashanti, Western, and Brong Ahafo Regions. The HLP team conducted the telephone interviews from the Ghana School of Public Health. The final team conducted the national-level stakeholder interviews in Accra. Data collection took place over a two- to three-week period.

The questionnaires used for the study were structured, with closed- and open-ended questions that elicited choices based on preformulated alternative answers to a set of questions. The team used closed-ended questions to obtain information relevant to the research questions and facilitate analysis. The team transferred the structured questionnaires to a mobile application (REDCap) for data collection. Data collectors used REDCap to help reduce the length of time for data collection and processing, and facilitate real-time monitoring of the data collection. Data quality issues in data collection were identified in real time and data cleaning occurred simultaneously with collection. Data analysis started immediately after the data collection ended. All research assistants were adequately trained to use the data collection tools and REDCap.

Data Management and Storage

Data collectors reviewed all completed data collection forms, corrected any errors or inconsistencies, and submitted all data collection through the REDCap application. They submitted interview recordings and consent forms (kept separately) by hand to research supervisors. Supervisors reviewed the forms for accuracy, consistency, and completion. Qualitative interviews and discussions were transcribed in English. All hard copies of data collection forms, recordings of interviews and discussions, and informed consents (kept separate from data) were securely delivered to the principal investigators, who kept them in locked filing cabinets. Sensitive data, such as the data sets, were transferred to the principal investigators through secure and encrypted means.

Quantitative Analysis

Interview Surveys

For the purposes of this analysis, the final sample size comprised 788 case management client interviews, 208 HLP client interviews, and 90 provider interviews. We conducted descriptive analyses for all three interview types.

Cascade Data

The original data set had 1,503 cases. After the data were cleaned, the final sample size was 1,389 cases. The team identified 31 cases of duplicates, based on a unique identification code; if a pair of duplicates had identical folder numbers as well as identical entries for all date data points, the team deleted all duplicate records, leaving one unique record. If a pair of duplicates had an identical unique ID, different folder numbers, and different date data points, the team kept all records in that pair and gave each one a new ID to make it unique. Three duplicate records were excluded. Fifty-four cases had dates of initiation from

before the case's date of testing, so the team excluded them from the final sample size. Sixty cases had the dates of most recent treatment occurring before the case's date of initiation; the team also excluded these cases from the final sample size. The overall final sample size of cases was 1,389.

We conducted descriptive analyses for all cases in the final sample size and analyzed the time between treatment and testing and the length of time between date of last treatment and initiation of treatment. To obtain the time when a case initiated treatment, we subtracted the date of initiation of treatment of a case from the date of testing. We obtained the time of most recent treatment by subtracting a case's date of most recent treatment from the date of initiation of treatment. We excluded from the analysis of time to recent treatment those cases that had dates of most recent treatment equal to their dates of initiation of treatment .

Qualitative Analysis

We conducted a qualitative analysis of client interviews using manual content analysis to code and elucidate themes. We analyzed provider interviews, FGDs, and key informant interviews through a process of creating matrices to elucidate themes, commonalities, and differences across provider and KP types. Qualitative researchers separately entered the same interview as a cross-check to ensure consistency and methodological rigor during the analysis process. Once they reached agreement on their analyses, one researcher then coded interviews or entered them into matrices.

Cost Analysis

Table A1. CSO included in the cost assessment

Region	CSO Name
Greater Accra	WIYO–TEMA
	HFFG–GA WEST
	MLPF–TEMA
	WAAF
	ProLink–GA WEST
Brong Ahafo Ashanti	MIHOSO–Techiman
	4-H
	MICDAK–Kumasi & Bekwai
	ProLink–Bekwai & Obuasi
Western	HOFA–Prestea
	HOFA–Shama
	HOFA–STMA
	LRF–STMA
	MLPF–STMA

Collation of Data, Dealing with Missing Information, Other Decisions

We consolidated cost data from 17 separate Excel files acquired through the Ghana School of Public Health following data collection at the CSOs and through the financial director at the Care Continuum project. The files contained five individual tabs with cost data recorded by core IP services, referral chain management, cross-cutting costs, personnel, and capital costs. We carefully consolidated the data into a single tab for each reported cost category. Data for CSOs and the Care Continuum project prime were consolidated separately. We reviewed the data for missing data relevant to the analysis and then valued/estimated missing data and capital costs using the following steps:

1. When dates of staff employment were missing, we used the month of the first incurred expense or the start of Project Year 2 (whichever came first).

2. If salary data were missing, we used a salary for the same position from other NGOs (averages, when possible).

3. If LOE was missing, LOE for the same position from other NGOs was supplemented with an estimate.

4. We inferred missing capital costs using REPUBLIC OF GHANA PUBLIC PROCUREMENT AUTHORITY UPDATE OF PRICES FOR COMMON USER ITEMS, October 2016.

5. We averaged the useful life for capital costs from four Ghana-specific sources: Ghana National Petroleum Company, Metropolitan, Municipal and District Assemblies, Produce Buying Company, and Ghana Stock Exchange.

6. Capital costs valued at less than US$100 or Ghanaian cedi 500 were considered recurrent costs.

7. We converted Ghanaian cedi to US$ using a US$1 to 4.381 Ghanaian cedi exchange rate (extracted from the XE currency converter average of October 1, 2016–September 30, 2018.

8. We converted all dates for staff employment to month and year; capital costs dates were converted to fiscal year.

9. We filtered out all Project Year 1 costs, leaving only costs from Project Years 2 and 3 (October 1, 2016 to September 30, 2018); we also estimated capital cost and staff costs using this time period.

Categorization of Costs

We first mapped all costs and linked them to the three interventions of interest. We allocated any shared costs using staffing LOE (see allocation decisions).
We then broke costs into investment (capital) and maintenance (recurrent) expenditures. Investment expenses included allocated annualized capital costs and building rental expenses, and specific program expenses related to training and the upfront development of the HLP. Maintenance expenses included all relevant personnel costs, program costs, and recurrent office expenses.
Because we used a microcosting approach, we were able to identify highly specific cost types within the program cost category (core services). We determined these subcategories using the simplification and regrouping of cost line-item descriptions, which we linked to individual line items in a new column. We then sorted and collated costs pivot tables to see aggregate costs by the identified program categories and year.

Allocation Decisions
We used these percentages—100 percent of CSO staff and 38 percent of all the Care Continuum project staff spent time on the three interventions of interest—to determine the proportion of total administrative, building, capital, and office expenses included. We then allocated those costs to individual interventions, using the estimates of staff time spent on each intervention, which differed at the CSOs and the Care Continuum project:
1. We allocated CSO staff time spent on non-intervention specific work (termed "cross-cutting") using the proportion of staff time spent on case management (22%) and core services (78%).
2. We allocated recurrent office costs and annualized capital costs to each intervention using the proportion of total staff time spent on each intervention:

Case management (22% for CSOs, 8% for Care Continuum project)
HLP (0% for CSOs, 11% for Care Continuum project)
Core services (78% for CSOs, 19% for Care Continuum project)

APPENDIX B. DATA COLLECTION TOOLS

Care Continuum Client Interview

No.	Question	Response	Skip
SECTION 1: Interview Information			
C101	Location (District/Town)		
C102	Date of Interview:		
C103	Interviewer Name:		
C104	Type of service:	Case Management 1 Peer Counselor 2 DIC 3 Mobile Outreach 4 Other: _____ 5	
CONSENT			

No.	Question	Response	Skip
C105	**Take Consent:** Good day! My name is _____. I am here on behalf of [IMPLEMENTING AGENCY] to better understand health services in this area. While nothing you tell us will be shared with anyone other than the researchers, some questions may make you uncomfortable or you may not want to answer a particular question. You are free to skip any question that you are not comfortable answering. The information gathered will help the Ghana AIDS Commission and other partners working with female sex workers and men who have sex with men in Ghana to improve the services being provided and to better support health providers in their efforts to improve health services for their communities. We will protect information about you to the best of our ability. You will not be named in any reports. Your provider will not be made aware of any of your responses. Some staff of The University of Ghana and the University of North Carolina may sometimes look at your research records. However, no one other than authorized study personnel will be able to access your information. Your participation in this research is completely voluntary. Also, you can choose to end your participation at any time during the interview. Additionally, if you have questions we are providing this consent in written form with your rights as a participant and contact information for this study. At this point, do you have any questions? Do I have your agreement to begin the interview? ___ YES, consent is given—Proceed to C201 ___ NO, consent is not given—**stop interview**		

SECTION 2: Service experience			
In this section we are interested in learning more about your experiences as with your health services. Remember that this interview is confidential, and no one will ever know of your responses to these questions.			
C201	For what reason did you access the (answer from C104)? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Other in-person HIV prevention information for KP 8 Referral for HIV testing 9 Referral for PMTCT 10 Referral for Mental Health Services 11 Referral for STI services 12 Referral for Mfriend services 13 Referral for Gender-based violence 14 Accompany to facility 15 Assistance with obtaining treatment from pharmacy/dispensary 16 Other services (specify):_____ 17 Don't know 88 Prefer not to say 99	
C302	Did you receive the services you accessed (answer from C104) for?	Yes 1 No 2 Don't know 88 Prefer not to say 99	1 → skip to 304

C303	If not, why were you unable to receive the services you accessed (answer from C104) for?	Provider was not able to help 1 Supplies were not in stock 2 Other (specify): _____ 3 Don't know 88 Prefer not to say 99				
C304	How well do you think the (answer from C104) are doing in the following areas:	Good	Poor	N/A	Prefer not to say	
	A. Ease of getting care	1	2	88	99	
	B. Prompt return of calls/SMS	1	2	88	99	
	C. Time waiting to be seen	1	2	88	99	
	D. United States Agency for International Development (USAID)Provider listens to you	1	2	88	99	
	E. Provider takes enough time with you	1	2	88	99	
	F. Provider explains what you want to know	1	2	88	99	
	G. Provider gives good advice and treatment	1	2	88	99	
	H. Administrative staff is friendly and helpful	1	2	88	99	
	I. Facility is neat and clean	1	2	88	99	
	J. Confidentiality	1	2	88	99	
C305	Overall, how satisfied are you with services provided by (answer from C104)?	Satisfied 1 Unsatisfied 2 Don't know 88 Prefer not to say 99				
C306	Overall, how likely are you to refer someone you know to this service?	Likely 1 Unlikely 2 Don't know 88 Prefer not to say 99				

C307	What did you like about the services provided by (answer from C104)?
C308	What can the services do to improve?

SECTION 3: Personal Information			
Thank you for your responses so far. In this section we are interested in learning more about you. This information will help us better understand your background and point of view. Remember that this interview is confidential, and no one will ever know of your responses to these questions.			
No.	**Question**	**Response**	**Skip**
C301	How old were you on your last birthday?	_____ years Don't know 99 Prefer not to say 88	
C302	With which gender do you most identify?	Man 1 Woman 2 Transgender Man 3 Transgender Woman 4 Other: _____ 5 Don't know 88 Prefer not to say 99	

C303	Do you identify as: **Select all that apply.**	FSW - Roamer 1 FSW – Seater 2 FSW Partner 3 MSM 4 MSM Partner 5 Transgender 6 Other: _____ 7 None 8 Don't Know 99 Prefer not to say 88				
C304	Number of sexual partners in last 4 weeks	Number of men: _____ Number of women: _____				
C305	How comfortable are you in:	Comfortable	Not Comfortable	N/A	Prefer not to say	
	A. Bringing your partner with you for health services	1	2	88	99	
	B. Talking to your partner about health issues	1	2	88	99	
	C. Disclosing HIV status to partner	1	2	88	99	
	D. Disclosing HIV status to health provider	1	2	88	99	
C304	E. Reporting gender-based violence to provider	1	2	88	99	
C306	Please describe what you think gender-based violence is?					
C307	What do you think are some of the reasons why GBV occurs?					

C308	What do you think are some reasons someone might not report gender-based violence?		
C309	How might services become more welcoming?		

Interview Complete. Thank the client for their participation!

Care Continuum Provider Interview

No.	Question	Response	Skip
SECTION 1: Interview Information			
M101	Region	Ashanti 1 Brong-Ahafo 2 Greater Accra 3 Central 4 Eastern 5 Northern 6 Western 7 Upper East 8 Upper West 9 Volta 10	
M102	District/Town		
M103	Implementing Partner/Project		
M104	Date of Interview:		
M105	Interviewer Name:		
CONSENT			
M106	**Take Consent:** Good day! My name is _____. I am here on behalf of [IMPLEMENTING AGENCY] to better understand the services provided to female sex workers and men who have sex with men by project staff like yourself. While nothing you tell us will be shared with anyone other than the researchers, some questions may make you uncomfortable or you may not want to answer a particular question. You are free to skip any question that you are not comfortable answering. The information gathered will help the Ghana AIDS Commission and other partners working with female sex workers and men who have sex with men in Ghana to improve the services being provided and to better support Referral Chain Mangers in their efforts to improve HIV services for their communities. We will protect information about you to the best of our ability. You will not be named in any reports. Your employers will not be made aware of your responses. Some staff of The University of Ghana and the University of		

	North Carolina may sometimes look at your research records. However, no one other than authorized study personnel will be able to access your information. Your participation in this research is completely voluntary. Also, you can choose to end your participation at any time during the interview. Additionally, if you have questions we are providing this consent in written form with your rights as a participant and contact information for this study. At this point, do you have any questions? Do I have your agreement to begin the interview? ___ YES, consent is given—Proceed to M101 ___ NO, consent is not given—**stop interview**

SECTION 2: Personal Information			
In this section we are interested in learning more about you. This information will help us better understand your background and point of view and what perspective and experience you bring to your role. Remember that this interview is confidential, and no one will ever know of your responses to these questions.			
No.	**Question**	**Response**	**Skip**
M201	How old were you on your last birthday?	_____ years Don't know 99 Prefer not to say 88	
M202	With which gender do you most identify?	Man 1 Woman 2 Transgender Man 3 Transgender Woman 4 Other: _____ 5 Don't know 99 Prefer not to say 88	
M203	Do you identify as: **Select all that apply.**	FSW- Roamer 1 FSW- Seater 2 FSW Partner 3 MSM 4 MSM Partner 5 Transgender 6 Other: _____ 7 None 8 Don't Know 99 Prefer not to say 88	
M204	In what capacity do you provide services/what is your role in service provision? **Select all that apply.**	Healthy Living Platform counselor 1 Drop in Center staff 2 Mobile outreach 3 Peer Educator 4 Referral Chain Manger 5 Nurse 6 Other: _____ 7 Don't Know 99 Prefer not to say 88	
M205	Have you, yourself, received an HIV test in the last 12 months?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to next section
M206	If YES, where did you receive your HIV test?	Clinic 1 Home test 2 Other (specify) _____ 3 Don't know 99 Prefer not to say 88	

SECTION 3: Healthy Living Platform Counselor (SKIP if not a Healthy Living Platform Counselor)
In this section we are interested in learning more about your experiences as a Healthy Living Platform Counselor and the specific services you provide to your clients. Remember that this interview is confidential, and no one will ever know of your responses to these questions.

M301	How long have you worked as a Healthy Living Platform Counselor?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M302	Did you receive training or orientation when you first became Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 304
M303	Who provided your first training or orientation when you became a Healthy Living Platform Counselor?	A senior Healthy Living Platform Counselor/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't Know 99 Refused 88	
M304	Have you received any additional training since becoming a Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 306
M305	Who provided the additional training?	A senior Healthy Living Platform Counselor/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M306	When was your most recent training for Healthy Living Platform Counselor?	DATE: _____ /_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 308
M307	What specific kinds of training have you received as a Healthy Living Platform Counselor? **Select all that apply.**	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Healthy Living Platform Components 6 Using the USSD menu 7 Healthy Living Platform Helpline 8 Counsellor Helpline 9 Monitoring and Evaluation Analytics 10 Sending voice/SMS messages to subscribers 11 Voice surveys 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	
M308	Do you receive supervision as a Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 310
M308a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	

M309	How often do you meet with your Healthy Living Platform Counselor supervisor ?	Weekly 1 Monthly 2 Quarterly (every 3 months) 3 Biannually (every 6 months) 4 Annually 5 Never 6 I don't know 99 Prefer not to say 88	
M310	When you have a question about how to respond appropriately to a client's needs as a Healthy Living Platform Counselor, who do you most often ask for advice?	Another Healthy Living Platform Counselor 1 A supervisor 2 Counselor helpline 3 Internet 4 Training or other Care Continuum Materials 5 Other (specify): _____ 6 Don't know 99 Prefer not to say 88	
M311	Overall, how confident are you that you have the training and support needed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M312	What additional training or support (if any) do you feel would be useful to you in doing your job as a Healthy Living Platform Counselor?	Specify: _____ _____ _____ 1 None 2 I don't know 99 Prefer not to say 88	
M313	As a Healthy Living Platform Counselor, what key population group do you work with **most**?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ 5 Don't know 99 Prefer not to say 88	
M314	What services do you provide to clients as a Healthy Living Platform Counselor? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services (specify):_____ 17 Don't know 99 Prefer not to say 88	
M315	Where do you get the information you deliver to clients? **Select all that apply.**	Healthy Living Platform Counselor training 1 Another HLP Counselor/supervisor 2 Counselor helpline 3 Online 4 Other: _____ 5	

		Don't know 99 Prefer not to say 88	
M316	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M317	What data do you routinely collect for each **RETURN** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M318	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M319	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M320	How do you think Healthy Living Platform Counselor are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M321	How valued do you feel Healthy Living Platform Counselor are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

SECTION 4: Peer Educator/DIC Staff/Mobile Outreach (SKIP if not a Peer Educator/DIC Staff/Mobile Outreach)			
In this section we are interested in learning more about your experiences as a Referral Chain Manager and the specific services you provide to your clients. Remember that this interview is confidential and no one will ever know of your responses to these questions.			
M401	How long have you worked as a Peer Educator/DIC Staff/Mobile Outreach?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M402	Did you receive training or orientation when you first became a Peer Educator/DIC	Yes 1 No 2 Don't know 88 Prefer not to say 99	2 [Symbol] skip to 404

	Staff/Mobile Outreach?		
M403	Who provided your first training or orientation when you became a Peer Educator/DIC Staff/Mobile Outreach?	A senior peer educator/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M404	Have you received any additional training since becoming a Peer Educator/DIC Staff/Mobile Outreach?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 406
M405	Who provided the additional training?	A senior peer educator1 A supervisor 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M406	When was your most recent training for Peer Educator/DIC Staff/Mobile Outreach?	DATE: _____ /_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 408
M407	What specific kinds of training have you received as a Peer Educator/DIC Staff/Mobile Outreach?	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Client enrollment 6 Client follow-up 7 Partner notification and disclosure 8 Client data collection 9 Reporting client data 10 Client confidentiality 11 Healthy Living Platform 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	
M408	Do you receive supervision as a Peer Educator/DIC Staff/Mobile Outreach?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 410
M408a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	
M409	How often do you meet with your Peer	Weekly 1 Monthly 2 Quarterly (every 3 months) 3	

	Educator/DIC Staff/Mobile Outreach supervisor?	Biannually (every 6 months) 4 Annually 5 Never 6 Don't know 99 Prefer not to say 88	
M410	When you have a question about how to respond appropriately to a client's needs as a Peer Educator/DIC Staff/Mobile Outreach, who do you most often ask for advice?	Another peer educator/DIC staff/mobile outreach 1 A supervisor 2 Internet 3 Training or other Care Continuum Materials 4 Other (specify): _____ 5 Don't know 99 Prefer not to say 88	
M411	Overall, how confident are you that you have the training and support needed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M412	What additional training or support (if any) do you feel would be useful to you in doing your job as a Peer Educator/DIC Staff/Mobile Outreach?	Specify: _____ _____ _____ 1 None 2 Don't know 99 Prefer not to say 88	
M413	What key population group do you work with most?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ 5 Don't know 99 Prefer not to say 88	
M414	Where or how do you usually recruit new clients? **Select all that apply.**	Word of mouth 1 Healthy living Platform 2 Other Internet sites/ online apps 3 Drop-in centres 4 Bars/café's 5 Streets/hangouts 6 Brothels 7 Bus stations 8 Health facility 9 Other (Specify):_____ _____ 10 Don't know 99 Prefer not to say 88	
M415	Where do you usually go to meet with first time clients? **Select all that apply.**	Online / Mobile Apps 1 Healthy living referrals 2 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9	

		Don't know 99 Prefer not to say 88	
M416	Where do you go usually to meet with <u>return</u> clients? **Select all that apply.**	Online/ Mobile Apps 1 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M417	How do you most frequently contact clients for follow up?	I contact them by phone, text, or email 1 They contact me by phone, text, or email 2 Chance meeting 3 Schedule follow up meeting at each contact 4 No way to follow up 5 Other (Specify):_____ 6 Don't know 99 Prefer not to say 88	
M418	What services do you provide to clients as a Peer Educator/DIC Staff/Mobile Outreach? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services (specify):_____ 17 Don't know 99 Prefer not to say 88	
M419	Do you have a written referral form to give clients?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	
M420	Do you have a written list of referral locations to use when making a referral?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	3 [Symbol] skip to 422
M421	How often is this list updated?	Quarterly 1 Biannually 2 Annually 3 Never 4 Other (specify) _____ 5 Don't know 99 Prefer not to say 88	
M422	What supplies do you have/carry	Condoms 1 Lube 2 Referral forms 3	

	when seeing clients? **Select all that apply.**	Client register/notebook 4 IEC Materials 5 Referral lists 6 Other (specify) _____ 7 No supplies 8 Don't know 99 Prefer not to say 88	8 [Symbol] skip to 425
M423	Where do you get the supplies you have/carry?	Specify: _____ Don't know 99 Prefer not to say 88	
M424	What do you do if you are out of supplies?	Specify: _____ Don't know 99 Prefer not to say 88	
M425	Do you send health information by text to clients?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 427
M426	Where do you get the information you deliver by text to clients?	Specify: _____ Don't know 99 Prefer not to say 88	
M427	Do you charge fees for condoms/lube or any other services?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 429
M428	What services are provided for a fee? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Healthy Living Platform 8 Text health information messages to clients 9 Other in-person HIV prevention information 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services: _____ 17 Don't know 99 Prefer not to say 88	
M429	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M430	What data do you routinely collect for	Name 1 Address 2 Mobile Number 3	

	each **RETURN** client? **Select all that apply.**	Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M431	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M432	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M433	How do you think peer educators are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M434	How valued do you feel peer educators are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

SECTION 5: Referral Chain Manager Survey (SKIP if not a Referral Chain Manager)			
In this section we are interested in learning more about your experiences as a Referral Chain Manager and the specific services you provide to your clients. Remember that this interview is confidential and no one will ever know of your responses to these questions.			
M501	How long have you worked as a referral chain manager?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M502	Did you receive training or orientation when you first became a referral chain manager?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 504
M503	Who provided your first training or orientation when you became a peer educator?	A senior referral chain manager/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M504	Have you received any additional training since becoming a referral chain manager?	Yes 1 No 2 Don't know 88 Prefer not to say 99	2 [Symbol] skip to 506

M505	Who provided the additional trai ning?	A senior referral chain manager 1 A supervisor 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M506	When was your most recent training for Referral Chain Management?	DATE: _____/_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 508
M507	What specific kinds of training have you received as a referral chain manager?	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Client enrollment 6 Client follow-up 7 Partner notification and disclosure 8 Client data collection 9 Reporting client data 10 Client confidentiality 11 Healthy Living Platform 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	
M508	Do you receive supervision as a referral chain manager?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 510
M508a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	
M509	How often do you meet with your referral chain manager supervisor?	Weekly 1 Monthly 2 Quarterly (every 3 months) 3 Biannually (every 6 months) 4 Annually 5 Never 6 Don't know 99 Prefer not to say 88	
M510	When you have a question about how to respond appropriately to a client's needs as a referral chain manager, who do you most often ask for advice?	Another referral chain manager 1 A supervisor 2 Internet 3 Training or other Care Continuum Materials 4 Other (specify): _____ 5 Don't know 99 Prefer not to say 88	
M511	Overall, how confident are you that you have the training and support need ed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	

M512	What additional training or support (if any) do you feel would be useful to you in doing your job as a referral chain manager?	Specify: _____ _____ _____ 1 None 2 Don't know 99 Prefer not to say 88	
M513	What key population group do you work with most?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ ___ 5 Don't know 99 Prefer not to say 88	
M514	How are you assigned new clients? **Select all that apply.**	Referred from another referral chain manager 1 Referred from health facility 2 Referred from Drop in Centres 3 Other (Specify):_____ _____ 4 Don't know 99 Prefer not to say 88	
M515	Where do you usually go to meet with first time clients? **Select all that apply.**	Online / Mobile Apps 1 Healthy living referrals 2 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M516	Where do you go usually to meet with return client s? **Select all that apply.**	Online/ Mobile Apps 1 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M517	How do you most frequently contact clients for follow up?	I contact them by phone, text, or email 1 They contact me by phone, text, or email 2 Chance meeting 3 Schedule follow up meeting at each contact 4 No way to follow up 5 Other (Specify):____ _____ 6 Don't know 99 Prefer not to say 88	
M518	For how long do you follow up with clients with no response before t hey are lost to follow up?	< 1 month 1 1-3 months 2 4-6 months 3 6-9 months 4 > 9 months 5 Don't know 99 Prefer not to say 88	
M518	What services do you provide to clients as	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3	

	a referral change manager? **Select all that apply.**	Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Accompany client to facility 17 Assist with obtaining treatment from pharmacy/dispensary 18 Ensure clients go to scheduled appointments 19 Other services (specify):_____ 20 Don't know 99 Prefer not to say 88	
M519	Do you have a written referral form to give clients?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	
M520	Do you have a written list of referral locations to use when making a referral?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	3 [Symbol] skip to 140
M521	How often is this list updated?	Quarterly 1 Biannually 2 Annually 3 Never 4 Other (specify) _____ 5 Don't know 99 Prefer not to say 88	
M522	What supplies to you carry when seeing clients? **Select all that apply.**	Condoms 1 Lube 2 Referral forms 3 Client register/notebook 4 IEC Materials 5 Referral lists 6 Other (specify) _____ 7 No supplies 8 Don't know 99 Prefer not to say 88	8 [Symbol] skip to 525
M523	Where do you get the supplies you carry?	Specify: _____ Don't know 99 Prefer not to say 88	
M524	What do you do if you are out of supplies?	Specify: _____ Don't know 99 Prefer not to say 88	
M525	Do you send health information by text to clients?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 527

M526	Where do you get the information you deliver by text to clients?	Specify: _____ Don't know 99 Prefer not to say 88	
M527	Do you charge fees for condoms/lube or any other services?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 529
M528	What services are provided for a fee? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Healthy Living Platform 8 Text health information messages to clients 9 Other in-person HIV prevention information 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Accompany client to facility 17 Assist with obtaining treatment from pharmacy/dispensary 18 Ensure clients go to scheduled appointments 19 Other services (specify):_____ 20 Don't know 99 Prefer not to say 88	
M529	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M530	What data do you routinely collect for each **RETURN** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M531	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M532	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	

M533	How do you think referral chain managers are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M534	How valued do you feel referral chain managers are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

Page Break

SECTION 6: Norms and Attitudes

Thank you for your time so far. We're moving on to a short open-ended section followed by a case scenario. In this section I'll ask you about your ideas related to your work. These are open questions and there are no right or wrong answers; we are interested in understanding your opinions.

Reconsent for audio recording.

M601: What do you like best about your work as a Health Living Platform Counselor/ Peer Educator/DIC Staff/Mobile Outreach/Referral Chain Manager?

M602: What challenges do you face in providing services to key populations?

M603: We've talked about the types of services you provide. Can you please tell me a bit more about gender-based violence services you or others provide for KP?

M604: Please describe what you think a gender-based violence case is?

M605: What do you think are some of the reasons why GBV occurs?

M606: What do you think are some reasons a client would not want to report this type of violence?

SECTION 7: Care Scenarios

In this section we will read a scenario and we'd like to hear how you would approach the situation given your training and experience There are no right or wrong answers; we are interested in understanding your approach.

M701: (For peer educator) Jean is a 19-year-old male sex worker who works mostly around bars in the city centre. He is not very proud of his work but feels he has no choice as he did not go to secondary school and has no training or professional skill.

Jean comes into your drop-in (or mobile) clinic asking for treatment for sores on his anus. You refer him to the health facility, but also offer an HIV test and he declines. You counsel Jean about the importance of knowing his status. He reveals that he knows he is HIV positive but has stopped taking his medication because they upset his stomach and he was having trouble hiding it from his family. What would you do?

Pause for participant to answer.

Probe:

- Can you give an example of how you would develop rapport with Jean?
- Can you give an example of how you would use active listening with Jean?

After some discussion Jean expresses that he is very afraid of what will happen to him as the disease progresses, but he feels paralyzed by as HIV as well as the medication. He doesn't have anyone to talk to about it. What do you do?

Pause for participant to answer.

After participant has offered examples of what s/he would do, continue reading: You offer to help him become involved in the RCM program, but he is afraid of the stigma that comes with RCMs. What steps might you take to help Jean see how RCMs can be beneficial?

Pause for participant to answer.

If Jean still refuses, what do you do?

Probe:

- Would you make any referrals?
- Would you share any resources?

Page Break

M702: (For DIC or mobile) Gifty came to the clinic two weeks ago because she hurt her foot and was having trouble walking. During the course of her treatment, the nurse offered Gifty an HIV test and she accepted. The test results came back positive, which was very surprising to Gifty. The nurse offered to enroll Gifty on treatment and referred her to the RCM program. Gifty said she would start ARVs, but didn't want an RCM to visit her because her boyfriend would find out. This week Gifty came back to the clinic again because she burned her hand. She also had some bruises on her arm, but she said that was from accidentally bumping into something during the night when she couldn't see well. The nurse asked her about medication adherence. Gifty said she started to take her medications, but her boyfriend became suspicious, so she had to throw them away. The nurse asked you to talk to Gifty. How do you proceed? What steps would you take to help get her back on treatment and in the RCM program?

Pause for participant to answer.

Probe:

- How do you introduce yourself? Build rapport?
- What do you do if she still doesn't want to get on treatment?
- How do you talk about disclosure?
- Do you ask about her repeated injuries?

Continue:

During the course of the conversation, you learn that Gifty has a boyfriend she has been with for about 6 months. She hopes they will get married one day. Sometimes her boyfriend occasionally needs money and asks her sleep with his

friends in exchange for money. When she refuses, he has beaten her. He always is very sorry the next day, so she is certain that he will change his ways. Does this change your approach? If so, how?
Pause for participant to answer.
Probe:

- Would you make any referrals?

Page Break

M703: (For RCM) You are following up with your client, Kwame, who you've been working with for about six months. Kwame missed his clinic appointment last week and didn't answer his phone when you called to follow up. You were able to get in touch with him after a week and are meeting him at his home. Please walk through how you would approach the situation and assess his needs.
Pause for participant to answer.
Probes:

- How would you greet him?
- Where would you speak with him?
- What are the first questions you would ask him?
- Would you complete a physical assessment? If so, when?

If interviewee indicates they would complete an assessment ask: The physical assessment reveals the client is having some mild side effects, and occasional moderate side effects. What steps do you take?
Pause for participant to answer.
Eventually Kwame admits that he has stopped taking his medication because of his side effects and because "it was just too hard" to keep taking them. How do you respond?
Kwame also mentions that he has been feeling very tired and down lately. He has not wanted to do things that he used to enjoy. Does this change your approach? If so, how?
Probe:

- How do you prioritize and plan what your client should do?
- Would you make any referrals?

Interview Complete. Thank the staff member for their participation!

Care Continuum Provider Interview

No.	Question	Response	Skip
SECTION 1: Interview Information			
M101	Region	Ashanti 1 Brong-Ahafo 2 Greater Accra 3 Central 4 Eastern 5 Northern 6 Western 7 Upper East 8 Upper West 9 Volta 10	
M102	District/Town		
M103	Implementing Partner/Project		
M104	Date of Interview:		
M105	Interviewer Name:		
CONSENT			
M106	**Take Consent:** Good day! My name is _____. I am here on behalf of [IMPLEMENTING AGENCY] to better understand the services provided to female sex workers and men who have sex with men by project staff like yourself.		

	While nothing you tell us will be shared with anyone other than the researchers, some questions may make you uncomfortable or you may not want to answer a particular question. You are free to skip any question that you are not comfortable answering. The information gathered will help the Ghana AIDS Commission and other partners working with female sex workers and men who have sex with men in Ghana to improve the services being provided and to better support Referral Chain Mangers in their efforts to improve HIV services for their communities. We will protect information about you to the best of our ability. You will not be named in any reports. Your employers will not be made aware of your responses. Some staff of The University of Ghana and the University of North Carolina may sometimes look at your research records. However, no one other than authorized study personnel will be able to access your information. Your participation in this research is completely voluntary. Also, you can choose to end your participation at any time during the interview. Additionally, if you have questions we are providing this consent in written form with your rights as a participant and contact information for this study. At this point, do you have any questions? Do I have your agreement to begin the interview? ___ YES, consent is given—Proceed to M101 ___ NO, consent is not given—**stop interview**

SECTION 2: Personal Information			
In this section we are interested in learning more about you. This information will help us better understand your background and point of view and what perspective and experience you bring to your role. Remember that this interview is confidential, and no one will ever know of your responses to these questions.			
No.	**Question**	**Response**	**Skip**
M201	How old were you on your last birthday?	_____ years Don't know 99 Prefer not to say 88	
M202	With which gender do you most identify?	Man 1 Woman 2 Transgender Man 3 Transgender Woman 4 Other: _____ 5 Don't know 99 Prefer not to say 88	
M203	Do you identify as: **Select all that apply.**	FSW- Roamer 1 FSW- Seater 2 FSW Partner 3 MSM 4 MSM Partner 5 Transgender 6 Other: _____ 7 None 8 Don't Know 99 Prefer not to say 88	
M204	In what capacity do you provide services/what is your role in service provision? **Select all that apply.**	Healthy Living Platform counselor 1 Drop in Center staff 2 Mobile outreach 3 Peer Educator 4 Referral Chain Manger 5 Nurse 6 Other: _____ 7 Don't Know 99 Prefer not to say 88	
M205	Have you, yourself, received an HIV test in the last 12 months?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to next section
M206	If YES, where did you receive your HIV test?	Clinic 1 Home test 2 Other (specify) _____ 3 Don't know 99 Prefer not to say 88	

SECTION 3: Healthy Living Platform Counselor (SKIP if not a Healthy Living Platform Counselor)			
In this section we are interested in learning more about your experiences as a Healthy Living Platform Counselor and the specific services you provide to your clients. Remember that this interview is confidential, and no one will ever know of your responses to these questions.			
M301	How long have you worked as a Healthy Living Platform Counselor?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M302	Did you receive training or orientation when you first became Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 304
M303	Who provided your first training or orientation when you became a Healthy Living Platform Counselor?	A senior Healthy Living Platform Counselor/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't Know 99 Refused 88	
M304	Have you received any additional training since becoming a Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 306
M305	Who provided the additional training?	A senior Healthy Living Platform Counselor/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M306	When was your most recent training for Healthy Living Platform Counselor?	DATE: _____ /_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 308
M307	What specific kinds of training have you received as a Healthy Living Platform Counselor? **Select all that apply.**	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Healthy Living Platform Components 6 Using the USSD menu 7 Healthy Living Platform Helpline 8 Counsellor Helpline 9 Monitoring and Evaluation Analytics 10 Sending voice/SMS messages to subscribers 11 Voice surveys 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	

M308	Do you receive supervision as a Healthy Living Platform Counselor?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 310
M308a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	
M309	How often do you meet with your Healthy Living Platform Counselor supervisor?	Weekly 1 Monthly 2 Quarterly (every 3 months) 3 Biannually (every 6 months) 4 Annually 5 Never 6 I don't know 99 Prefer not to say 88	
M310	When you have a question about how to respond appropriately to a client's needs as a Healthy Living Platform Counselor, who do you most often ask for advice?	Another Healthy Living Platform Counselor 1 A supervisor 2 Counselor helpline 3 Internet 4 Training or other Care Continuum Materials 5 Other (specify): _____ 6 Don't know 99 Prefer not to say 88	
M311	Overall, how confident are you that you have the training and support needed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M312	What additional training or support (if any) do you feel would be useful to you in doing your job as a Healthy Living Platform Counselor?	Specify: _____ _____ _____ 1 None 2 I don't know 99 Prefer not to say 88	
M313	As a Healthy Living Platform Counselor, what key population group do you work with **most**?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ 5 Don't know 99 Prefer not to say 88	
M314	What services do you provide to clients as a Healthy Living Platform Counselor? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11	

		Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services (specify):_____ 17 Don't know 99 Prefer not to say 88	
M315	Where do you get the information you deliver to clients? **Select all that apply.**	Healthy Living Platform Counselor training 1 Another HLP Counselor/supervisor 2 Counselor helpline 3 Online 4 Other: _____ 5 Don't know 99 Prefer not to say 88	
M316	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M317	What data do you routinely collect for each **RETURN** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M318	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M319	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M320	How do you think Healthy Living Platform Counselor are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M321	How valued do you feel Healthy Living Platform Counselor are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

SECTION 4: Peer Educator/DIC Staff/Mobile Outreach (SKIP if not a Peer Educator/DIC Staff/Mobile Outreach)

In this section we are interested in learning more about your experiences as a Referral Chain Manager and the specific services you provide to your clients. Remember that this interview is confidential and no one will ever know of your responses to these questions.			
M401	How long have you worked as a Peer Educator/DIC Staff/Mobile Outreach?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M402	Did you receive training or orientation when you first became a Peer Educator/DIC Staff/Mobile Outreach?	Yes 1 No 2 Don't know 88 Prefer not to say 99	2 [Symbol] skip to 404
M403	Who provided your first training or orientation when you became a Peer Educator/DIC Staff/Mobile Outreach?	A senior peer educator/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M404	Have you received any additional training since becoming a Peer Educator/DIC Staff/Mobile Outreach?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 406
M405	Who provided the additional training?	A senior peer educator1 A supervisor 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M406	When was your most recent training for Peer Educator/DIC Staff/Mobile Outreach?	DATE: _____/_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 408
M407	What specific kinds of training have you received as a Peer Educator/DIC Staff/Mobile Outreach?	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Client enrollment 6 Client follow-up 7 Partner notification and disclosure 8 Client data collection 9 Reporting client data 10 Client confidentiality 11 Healthy Living Platform 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	
M408	Do you receive supervision as a Peer Educator/DIC Staff/Mobile Outreach?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 410

M408a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	
M409	How often do you meet with your Peer Educator/DIC Staff/Mobile Outreach supervisor?	Weekly 1 Monthly 2 Quarterly (every 3 months) 3 Biannually (every 6 months) 4 Annually 5 Never 6 Don't know 99 Prefer not to say 88	
M410	When you have a question about how to respond appropriately to a client's needs as a Peer Educator/DIC Staff/Mobile Outreach, who do you most often ask for advice?	Another peer educator/DIC staff/mobile outreach 1 A supervisor 2 Internet 3 Training or other Care Continuum Materials 4 Other (specify): _____ 5 Don't know 99 Prefer not to say 88	
M411	Overall, how confident are you that you have the training and support needed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M412	What additional training or support (if any) do you feel would be useful to you in doing your job as a Peer Educator/DIC Staff/Mobile Outreach?	Specify: _____ _____ _____ 1 None 2 Don't know 99 Prefer not to say 88	
M413	What key population group do you work with most?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ 5 Don't know 99 Prefer not to say 88	
M414	Where or how do you usually recruit new clients? **Select all that apply.**	Word of mouth 1 Healthy living Platform 2 Other Internet sites/ online apps 3 Drop in Centres 4 Bars/café's 5 Streets/hangouts 6 Brothels 7 Bus stations 8 Health facility 9 Other (Specify):_____ _____ 10 Don't know 99 Prefer not to say 88	
M415	Where do you usually go to meet with first time clients? **Select all that apply.**	Online / Mobile Apps 1 Healthy living referrals 2 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	

M416	Where do you go usually to meet with <u>return</u> clients? **Select all that apply.**	Online/ Mobile Apps 1 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M417	How do you most frequently contact clients for follow up?	I contact them by phone, text, or email 1 They contact me by phone, text, or email 2 Chance meeting 3 Schedule follow up meeting at each contact 4 No way to follow up 5 Other (Specify):_____ 6 Don't know 99 Prefer not to say 88	
M418	What services do you provide to clients as a Peer Educator/DIC Staff/Mobile Outreach? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services (specify):_____ 17 Don't know 99 Prefer not to say 88	
M419	Do you have a written referral form to give clients?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	
M420	Do you have a written list of referral locations to use when making a referral?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	3 [Symbol] skip to 422
M421	How often is this list updated?	Quarterly 1 Biannually 2 Annually 3 Never 4 Other (specify) _____ 5 Don't know 99 Prefer not to say 88	
M422	What supplies do you have/carry when seeing clients? **Select all that apply.**	Condoms 1 Lube 2 Referral forms 3 Client register/notebook 4 IEC Materials 5 Referral lists 6	

		Other (specify) _____ 7 No supplies 8 Don't know 99 Prefer not to say 88	8 [Symbol] skip to 425
M423	Where do you get the supplies you have/carry ?	Specify: _____ Don't know 99 Prefer not to say 88	
M424	What do you do if you are out of supplies?	Specify: _____ Don't know 99 Prefer not to say 88	
M425	Do you send health information by text to clients?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 427
M426	Where do you get the information you deliver by text to clients?	Specify: _____ Don't know 99 Prefer not to say 88	
M427	Do you charge fees for condoms/lube or any other services?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 429
M428	What services are provided for a fee? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Healthy Living Platform 8 Text health information messages to clients 9 Other in-person HIV prevention information 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Other services: _____ 17 Don't know 99 Prefer not to say 88	
M429	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M430	What data do you routinely collect for each **RETURN** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99	

		Prefer not to say 88	
M431	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M432	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M433	How do you think peer educators are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M434	How valued do you feel peer educators are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

SECTION 5: Referral Chain Manager Survey (SKIP if not a Referral Chain Manager)			
In this section we are interested in learning more about your experiences as a Referral Chain Manager and the specific services you provide to your clients. Remember that this interview is confidential and no one will ever know of your responses to these questions.			
M501	How long have you worked as a referral chain manager?	_____ months/years (circle appropriate time frame) Don't know 99 Prefer not to say 88	
M502	Did you receive training or orientation when you first became a referral chain manager?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 504
M503	Who provided your first training or orientation when you became a peer educator?	A senior referral chain manager/supervisor (1 on 1) 1 Group workshop facilitator 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M504	Have you received any additional training since becoming a referral chain manager?	Yes 1 No 2 Don't know 88 Prefer not to say 99	2 [Symbol] skip to 506
M505	Who provided the additional training?	A senior referral chain manager 1 A supervisor 2 Other (specify): _____ 3 Don't know 99 Prefer not to say 88	
M506	When was your most recent training for Referral Chain Management?	DATE: _____ /_____ MM YY Never been trained 77 Don't know 99 Prefer not to say 88	77 [Symbol] skip to 508

M507	What specific kinds of training have you received as a referral chain manager?	Basic facts about STIs 1 Basic facts about HIV 2 Basic facts about ART 3 HIV among KP in Ghana 4 Introduction to Care Continuum Project 5 Client enrollment 6 Client follow-up 7 Partner notification and disclosure 8 Client data collection 9 Reporting client data 10 Client confidentiality 11 Healthy Living Platform 12 Gender based violence 13 Other (specify)_____ _____ 14 Don't know 99 Prefer not to say 88	
M508	Do you receive supervision as a referral chain manager?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 510
M508a	If yes, from whom:	Specify: _____ Don't know 99 Prefer not to say 88	
M509	How often do you meet with your referral chain manager supervisor?	Weekly 1 Monthly 2 Quarterly (every 3 months) 3 Biannually (every 6 months) 4 Annually 5 Never 6 Don't know 99 Prefer not to say 88	
M510	When you have a question about how to respond appropriately to a client's needs as a referral chain manager, who do you most often ask for advice?	Another referral chain manager 1 A supervisor 2 Internet 3 Training or other Care Continuum Materials 4 Other (specify): _____ 5 Don't know 99 Prefer not to say 88	
M511	Overall, how confident are you that you have the training and support needed to provide quality services?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M512	What additional training or support (if any) do you feel would be useful to you in doing your job as a referral chain manager?	Specify: _____ _____ _____ 1 None 2 Don't know 99 Prefer not to say 88	
M513	What key population group do you work with <u>most</u>?	MSM 1 Roamer FSW 2 Seater FSW 3 Partners of FSW 4 Other (Specify):_____ ___ 5 Don't know 99 Prefer not to say 88	
M514	How are you assigned new clients? **Select all that apply.**	Referred from another referral chain manager 1 Referred from health facility 2 Referred from Drop in Centres 3	

		Other (Specify):_____ _____ 4 Don't know 99 Prefer not to say 88	
M515	Where do you usually go to meet with <u>first time</u> clients? **Select all that apply.**	Online / Mobile Apps 1 Healthy living referrals 2 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M516	Where do you go usually to meet with <u>return</u> clients? **Select all that apply.**	Online/ Mobile Apps 1 Drop in Centres 2 Bars/café's 3 Streets/hangouts 4 Brothels 5 Bus stations 6 Clients' Home 7 Health facility 8 Other (Specify):_____ _____ 9 Don't know 99 Prefer not to say 88	
M517	How do you most frequently contact clients for follow up?	I contact them by phone, text, or email 1 They contact me by phone, text, or email 2 Chance meeting 3 Schedule follow up meeting at each contact 4 No way to follow up 5 Other (Specify):____ _____ 6 Don't know 99 Prefer not to say 88	
M518	For how long do you follow up with clients with no response before they are lost to follow up?	< 1 month 1 1-3 months 2 4-6 months 3 6-9 months 4 > 9 months 5 Don't know 99 Prefer not to say 88	
M518	What services do you provide to clients as a referral change manager? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7 Information on the Helpline 8 Text (MHealth) health information messages to clients 9 Other in-person HIV prevention information for KP 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Accompany client to facility 17 Assist with obtaining treatment from pharmacy/dispensary 18 Ensure clients go to scheduled appointments 19 Other services (specify):_____ 20 Don't know 99	

		Prefer not to say 88	
M519	Do you have a written referral form to give clients?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	
M520	Do you have a written list of referral locations to use when making a referral?	Yes- Can provide a copy 1 Yes- Cannot provide a copy 2 No 3 Don't know 99 Prefer not to say 88	3 [Symbol] skip to 140
M521	How often is this list updated?	Quarterly 1 Biannually 2 Annually 3 Never 4 Other (specify) _____ 5 Don't know 99 Prefer not to say 88	
M522	What supplies to you carry when seeing clients? **Select all that apply.**	Condoms 1 Lube 2 Referral forms 3 Client register/notebook 4 IEC Materials 5 Referral lists 6 Other (specify) _____ 7 No supplies 8 Don't know 99 Prefer not to say 88	8 [Symbol] skip to 525
M523	Where do you get the supplies you carry?	Specify: _____ Don't know 99 Prefer not to say 88	
M524	What do you do if you are out of supplies?	Specify: _____ Don't know 99 Prefer not to say 88	
M525	Do you send health information by text to clients?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 527
M526	Where do you get the information you deliver by text to clients?	Specify: _____ Don't know 99 Prefer not to say 88	
M527	Do you charge fees for condoms/lube or any other services?	Yes 1 No 2 Don't know 99 Prefer not to say 88	2 [Symbol] skip to 529
M528	What services are provided for a fee? **Select all that apply.**	Assessments of HIV risk 1 Condoms and lube 2 Emergency contraception 3 Contraceptive methods other than condoms and EC 4 Pregnancy tests 5 Rape counseling 6 Information about correct and consistent condom use 7	

		Information on the Healthy Living Platform 8 Text health information messages to clients 9 Other in-person HIV prevention information 10 Referrals for HIV testing 11 Referrals for PMTCT 12 Referrals for Mental Health Services 13 Referrals for STI services 14 Referrals for Mfriend services 15 Referrals for gender-based violence 16 Accompany client to facility 17 Assist with obtaining treatment from pharmacy/dispensary 18 Ensure clients go to scheduled appointments 19 Other services (specify):_____ 20 Don't know 99 Prefer not to say 88	
M529	What data do you routinely collect for each **FIRST TIME** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M530	What data do you routinely collect for each **RETURN** client? **Select all that apply.**	Name 1 Address 2 Mobile Number 3 Service requested 4 Service received 5 Other _____ 6 Don't know 99 Prefer not to say 88	
M531	How do you record your client contact information?	Client register 1 Notebook 2 Other: _____ 3 Don't know 99 Prefer not to say 88	
M532	Overall, how confident do you feel about your ability to accurately record and report your client and service related data?	Confident 1 Unconfident 2 Don't know 99 Prefer not to say 88	
M533	How do you think referral chain managers are perceived by the client community in your areas?	Positively 1 Negatively 2 Don't know 99 Prefer not to say 88	
M534	How valued do you feel referral chain managers are by your support organization?	Valued 1 Not valued 2 Don't know 99 Prefer not to say 88	

SECTION 6: Norms and Attitudes
Thank you for your time so far. We're moving on to a short open-ended section followed by a case scenario. In this section I'll ask you about your ideas related to your work. These are open questions and there are no right or wrong answers; we are interested in understanding your opinions. **Reconsent for audio recording.**
M601: What do you like best about your work as a Health Living Platform Counselor/ Peer Educator/DIC Staff/Mobile Outreach/Referral Chain Manager?

M602: What challenges do you face in providing services to key populations?

M603: We've talked about the types of services you provide. Can you please tell me a bit more about gender-based violence services you or others provide for KP?

M604: Please describe what you think a gender-based violence case is?

M605: What do you think are some of the reasons why GBV occurs?

M606: What do you think are some reasons a client would not want to report this type of violence?

SECTION 7: Care Scenarios
In this section we will read a scenario and we'd like to hear how you would approach the situation given your training and experience There are no right or wrong answers; we are interested in understanding your approach.
M701: (For peer educator) Jean is a 19-year-old male sex worker who works mostly around bars in the city centre. He is not very proud of his work but feels he has no choice as he did not go to secondary school and has no training or professional skill. Jean comes into your drop-in (or mobile) clinic asking for treatment for sores on his anus. You refer him to the health facility, but also offer an HIV test and he declines. You counsel Jean about the importance of knowing his status. He reveals that he knows he is HIV positive but has stopped taking his medication because they upset his stomach and he was having trouble hiding it from his family. What would you do? *Pause for participant to answer.*

Probe:

- Can you give an example of how you would develop rapport with Jean?
- Can you give an example of how you would use active listening with Jean?

After some discussion Jean expresses that he is very afraid of what will happen to him as the disease progresses, but he feels paralyzed by as HIV as well as the medication. He doesn't have anyone to talk to about it. What do you do?
Pause for participant to answer.
After participant has offered examples of what s/he would do, continue reading: You offer to help him become involved in the RCM program, but he is afraid of the stigma that comes with RCMs. What steps might you take to help Jean see how RCMs can be beneficial?
Pause for participant to answer.
If Jean still refuses, what do you do?
Probe:

- Would you make any referrals?
- Would you share any resources?

Page Break

M702: (For DIC or mobile) Gifty came to the clinic two weeks ago because she hurt her foot and was having trouble walking. During the course of her treatment, the nurse offered Gifty an HIV test and she accepted. The test results came back positive, which was very surprising to Gifty. The nurse offered to enroll Gifty on treatment and referred her to the RCM program. Gifty said she would start ARVs, but didn't want an RCM to visit her because her boyfriend would find out. This week Gifty came back to the clinic again because she burned her hand. She also had some bruises on her arm, but she said that was from accidentally bumping into something during the night when she couldn't see well. The nurse asked her about medication adherence. Gifty said she started to take her medications, but her boyfriend became suspicious, so she had to throw them away. The nurse asked you to talk to Gifty. How do you proceed? What steps would you take to help get her back on treatment and in the RCM program?
Pause for participant to answer.
Probe:

- How do you introduce yourself? Build rapport?
- What do you do if she still doesn't want to get on treatment?
- How do you talk about disclosure?
- Do you ask about her repeated injuries?

Continue:
During the course of the conversation, you learn that Gifty has a boyfriend she has been with for about 6 months. She hopes they will get married one day. Sometimes her boyfriend occasionally needs money and asks her sleep with his friends in exchange for money. When she refuses, he has beaten her. He always is very sorry the next day, so she is certain that he will change his ways. Does this change your approach? If so, how?
Pause for participant to answer.
Probe:

- Would you make any referrals?

Page Break

M703: (For RCM) You are following up with your client, Kwame, who you've been working with for about six months. Kwame missed his clinic appointment last week and didn't answer his phone when you called to follow up. You were able to get in touch with him after a week and are meeting him at his home. Please walk through how you would approach the situation and assess his needs.
Pause for participant to answer.
Probes:

- How would you greet him?
- Where would you speak with him?
- What are the first questions you would ask him?
- Would you complete a physical assessment? If so, when?

If interviewee indicates they would complete an assessment ask: The physical assessment reveals the client is having some mild side effects, and occasional moderate side effects. What steps do you take?
Pause for participant to answer.
Eventually Kwame admits that he has stopped taking his medication because of his side effects and because "it was just too hard" to keep taking them. How do you respond?
Kwame also mentions that he has been feeling very tired and down lately. He has not wanted to do things that he used to enjoy. Does this change your approach? If so, how?
Probe:

- How do you prioritize and plan what your client should do?
- Would you make any referrals?

Interview Complete. Thank the staff member for their participation!

Key Informant Interview Guide: Care Continuum Project

Introduction: I am working on a USAID funded project called MEASURE Evaluation to document efforts to improve HIV care, especially retention, among key populations in Ghana. We are interested in learning how the Care Continuum Project works with key stakeholders to support and eventually transition efforts to the government. We are conducting interviews with people who have been or will be involved supporting, collaborating, or eventually absorbing work done under Care Continuum Project to improve testing, retention, and viral suppression. I would like to read our consent form so that you understand our study and how we will protect the confidentiality of your answers. May I begin?

Read consent form, give out written consent

Turn on the tape recorder

Please start by stating:

- Your name (interviewer only)
- Type of key informant (GOG, USAID, IP, sub IP, other)
- Agency/Department name
- Title

We are interested in better understanding and documenting what is working well about the ways the Care Continuum Project supports scaling up and transitioning effective KP models of HIV/AIDS services at the national level. We would like to ask you a few questions about the ways you have interacted with Care Continuum staff, and your overall experience partnering with the project.

1. Please describe your relationship or interaction with Care Continuum Project?

2. Have there been any policy changes affecting HIV/STI service delivery for key populations in the past 2 years?
    a. If so, was Care Continuum Project involved in this change? How?

3. Have there been any changes in service delivery guidelines for KP in the past 2 years?
    a. If so, was Care Continuum Project involved in this change? How?

4. If Care Continuum's KP services (such as RCM/peer educators/health living platform] were to be scaled up under the Government of Ghana's oversight as part of the Ghana Health Services or GAC across the country, what would need to happen to ensure it is successful?
    a. What about the project should be changed (if anything) to ensure it is successful?
    b. Do you think this is a worthwhile investment for Ghana to make? Please explain.

5. How has Care Continuum Project been working to prepare for the transition of your services to the Government of Ghana once the Project ends? Please explain.

We'd like to learn a little more about your sub partners.

6. How do you decide who gets training and when?
7. What type of supportive supervision do you provide to your sub partners?
8. Are there sub partners that stand out among the rest?
    a. Who are high performers?
    b. What makes them different than others?

9. How well do you think your sub partners will be able to function without support from the Care Continuum project? Please explain.

10. Is there anything else you would like to tell me about Care Continuum Project and the work you do?

Key Informant Interview Guide: Sub IPs

Introduction: I am working on a USAID funded project called MEASURE Evaluation to document efforts to improve HIV care, especially retention, among key populations in Ghana. We are interested in learning how the Care Continuum Project works with key stakeholders to support and eventually transition efforts to the government. We are conducting interviews with people who have been or will be involved supporting, collaborating, or eventually absorbing work done under Care Continuum Project to improve testing, retention, and viral suppression. I would like to read our consent form so that you understand our study and how we will protect the confidentiality of your answers. May I begin?

Read consent form, give out written consent

Turn on the tape recorder

Please start by stating:

- Your name (interviewer only)
- Type of key informant (GOG, USAID, sub IP, other)
- Agency/Department name
- Title

We are interested in better understanding and documenting what is working well about the ways the Care Continuum Project supports scaling up and transitioning effective KP models of HIV/AIDS services at the national level. We would like to ask you a few questions about the ways you have interacted with Care Continuum staff, and your overall experience partnering with the project.

1. Please describe your relationship or interaction with Care Continuum Project?

2. Are there any best practices that you learned from working with Care Continuum Project that you will apply to future work?

3. Are there any tools or resources that Care Continuum Project shared with you that you plan to use in the future?

4. If Care Continuum's KP services (such as RCM/peer educators/health living platform] were to be scaled up under the government of Ghana's oversight as part of the Ghana Health Services or GAC across the country, what would need to happen to ensure it is successful?

    a. What about the project should be changed (if anything) to ensure it is successful?
    b. Do you think this is a worthwhile investment for Ghana to make?

Now we have a few questions about training and support.

5. What types of trainings have you received from the Care Continuum project?
    a. Has it been enough?
    b. In what areas would you like more training?

6. What types of supportive supervision have you received?
    a. Has this met your needs?

7. How do you feel about the reporting process?
    a. Have you ever received feedback on your reports? If yes, please describe how the feedback was used.
    b. How do you feel about the reporting requirements?
        i. Probe for frequency, timing, amount

8. Do you feel like your partnership with the Care Continuum project has increased your ability to meet the needs of the population you are serving? Please explain.

9. Could you function independently, without support from the Care Continuum project? Please explain.

10. What support(s) from the Care Continuum project would you miss most if it wasn't available?

We have just one more question, thank you for your patience.

11. Is there anything else you would like to tell me about your experience working with Care Continuum Project?

APPENDIX C. RESOURCES

In addition to the references cited in the text and data collected as described:

1. Care Continuum Project Training Materials for Implementing Partners and Service Providers
2. Care Continuum Project Staff and Client Numbers by Region
3. Care Continuum Project Cost Reporting (Prime plus Implementing Partners)
4. Care Continuum Annual Workplans and Annual Reports
5. Care Continuum Case Management Client Data (for Cascades)
6. Care Continuum HLP Study Notification and Participation Request Messaging

APPENDIX D. ROLES AND BIOGRAPHIES OF STUDY AUTHORS

Elizabeth G. Sutherland, PhD (team leader) is the senior advisor for health areas and senior technical specialist for HIV at MEASURE Evaluation. Prior to joining MEASURE Evaluation, she spent five years at FHI 360 in the Health Services Research Division. Dr. Sutherland is a technical expert in program monitoring and evaluation for service delivery projects serving marginalized and vulnerable populations. She has been working with key populations programs in Ghana for eight years. Dr. Sutherland's research interests include feasible evaluation designs, process evaluation, and implementation science research. Her professional goal is to contribute to the evidence base to optimize resource constrained health systems to work for all persons in need.

Abby Cannon, MPH, MSW, is the technical specialist for M&E and gender for MEASURE Evaluation at the University of North Carolina at Chapel Hill. She joined the MEASURE Evaluation team in 2010 and has since spearheaded efforts to integrate gender across project technical areas, international health information systems, and capacity building. Her research focuses on the intersection of gender and health within HIV, women's economic empowerment, gender-based violence, and orphans and vulnerable children. She has worked with OVC, domestically and internationally, in direct care as well as research, scale-up, and M&E.

Samuel Dery, PhD, is a health informatics specialist with over twelve years' experience in biostatistics, research, and M&E, health management information systems, and data mining. Dr. Dery has extensive experience in research, biostatistics, HIV and AIDS, M&E, and health information systems. Dr. Dery has worked with the Ghana AIDS commission as the M&E coordinator responsible for data management and has been part of the mapping and size estimation of key populations while working the commission. He has been involved in and led a number of research projects in Ghana, such as an Assessment of the Planned Parenthood Association of Ghana and an HIV and TB Programme for Prison Inmates under The Global Fund New Funding Model Phase I.

Dr. Justice Nonvignon, PhD, is senior lecturer and health economist involved in teaching and evaluation of programs (health economics and financing, health systems leadership, health systems evaluation, and health policy). He holds a PhD in Public Health (health economics) from the University of Ghana and an MA in Economics from the University of Dar es Salaam, Tanzania. Justice's current research focuses on economic evaluation of health, population, and nutrition programs; economic burden of diseases on vulnerable populations and their caregivers (the elderly, people with mental disorders, and children); health financing, including fiscal space for health; technical and productive efficiency of hospitals; and impact evaluation. He is also interested in health care utilization among vulnerable populations and health systems issues (such as leadership and governance for health). He has served as principal or coinvestigator of a number of research projects on health economics, systems, and policy-related issues in Ghana, Botswana, Kenya, Malawi, and Nigeria and has helped conduct other multi-country projects. He has been involved in research projects funded by the World Health Organization (WHO)/TDR, WHO African Regional Office, GSK Vaccines, African Population and Health Research Centre, the Danish International Development Agency, Netherlands Organization for Scientific Research, and the African Health Economics and Policy Association. He has consulted for PATH, the World Bank, UK Department for International Development (DFID), MSH, and other local organizations.

Shaylen Foley, MPH (Yale) is an M&E specialist with six years of experience in qualitative and quantitative research methods, economic evaluation and modelling, data quality analysis, and information system strengthening. She has worked on both private and USAID-funded public health research activities. She currently works for MEASURE Evaluation, Palladium. She has technical experience in HIV prevention, population and reproductive health, OVC, FSW, and has worked in sub-Saharan Africa and Southeast Asia. Previously, she led research activities on U.S. prostitution diversion programs for the Yale Global Health Justice Partnership, conducted research on HIV prevention among sex workers with

the Centre for Excellence in Research on AIDS in Malaysia, and completed a Fulbright Fellowship in Indonesia.

Brittany Schriver Iskarpatyoti, MPH, is technical specialist for M&E with MEASURE Evaluation. She specializes in integrating gender into M&E systems, with particular interest in key populations, HIV/AIDS, and male-engagement programs. She has coauthored a Toolkit for Integrating Gender in the Monitoring and Evaluation of Health Programs, which was used in Ghana among USAID-funded projects. Ms. Iskarpatyoti brings additional expertise in measuring perceptions and quality of health services—having updated MEASURE Evaluation's Quick Investigation of Quality guide for monitoring quality of care in family planning, to be more gender-inclusive. She holds a Master's in Public Health from Emory University and previously worked on the Gender and Empowerment Team at CARE and as a U.S. Peace Corps Volunteer in Namibia.

Kwasi Torpey, MD, PhD, MPH, FGCP is an associate professor of family and reproductive health and head of the Population, Family and Reproductive Health Department at the University of Ghana's School of Public Health. He is a physician, public health program manager, researcher, and trainer with over 20 years of experience in public health implementation and programming in HIV in Ghana, Nigeria, Kenya, Uganda, Ethiopia, Eritrea, Tanzania, Mozambique, and Zambia. He has worked on USAID, the United States Centers for Disease Control and Prevention, DFID, World Bank, Global Fund, Ghana Ministry of Health, and UN-funded Projects. Professor Torpey has been instrumental and taken the lead role in designing and implementing biomedical, operational, and health-systems research to improve program effectiveness. He has published widely in HIV prevention, care, and treatment in resource-limited settings. Professor Torpey is a member of several local and international HIV technical working groups and acts as a reviewer for several international journals on HIV/AIDS.

APPENDIX E. CONFLICT OF INTEREST

There is no conflict of interest on the part of the investigators for the study.

APPENDIX F. SCOPE OF WORK

MEASURE Evaluation Phase IV

Scope of Work and Country Work Plan Narrative YEAR 4: Midterm Performance Evaluation of the Care Continuum Project's IR Two and Progress Towards Scale Up and Transition

October 2017– September 2018

September 20, 2018

Ghana

Carolina Population Center
University of North Carolina at Chapel Hill
137 East Franklin St., Chapel Hill, NC 27517 USA
TEL: 919-445-9350 FAX: 919-445-9353
http://www.cpc.unc.edu/measure

MEASURE Evaluation is a MEASURE project funded by the U.S. Agency for International Development (USAID) under the terms of Leader with Associates Cooperative Agreement AIDOAA-L-14-00004. Views expressed in this report do not necessarily reflect the views of USAID or the U.S. government.

Table of Contents

TABLE OF CONTENTS 1

INTRODUCTION 2

MEASURE EVALUATION PHASE IV 2

OVERALL OBJECTIVE AND STUDY QUESTIONS 3

MIDTERM ASSESSMENT OF CCP IR 2 & SCALE UP AND TRANSITION: WORKPLAN 4

TIMELINE AND BENCHMARKS/DELIVERABLES 9

BUDGET SUMMARY 11

Introduction

The Care Continuum Project is working in Ghana to promote HIV service delivery to key populations (KP) in 12 districts. The Care Continuum Project is funded by USAID and works closely with the Government of Ghana, local Implementing Partners, The Global Fund, Civil Society, and other stakeholders to deliver services and build capacity for KP appropriate HIV programming. The Care Continuum Project is a new mechanism that follows on several previous projects focused on KP (Linkages, SHARPER, SHARP projects). Previous projects have focused on direct service delivery and have left a legacy of peer education, mobile outreach, and drop in centers for KP in target districts. The Care Continuum Project is adding to that core of direct service innovative strategies by creating a healthy living social media platform and other innovative models to engage with KP at risk of HIV and enroll and link those who are HIV positive in care. Care Continuum is also adding an adherence case management element to direct service provision to promote adherence to ART among HIV positive KP enrolled in treatment. Finally, Care Continuum is supporting quality of direct service provision to KPs through their work at the national level to promote service guidelines and policies that support the ability of KP to access quality HIV services. Importantly, one of Care Continuum's main objectives is to , engage in implementing effective and innovative service delivery models, while also simultaneously working to improve capabilities and leadership of Ghanaian stakeholders at the community, district, and national levels to scale-up evidence-based activities focused on KP.

MEASURE Evaluation has been asked to conduct a midterm assessment of Care Continuum's progress to scale up and transition KP activities. MEASURE Evaluation will therefore work with Care Continuum on Results Area 2, which seeks to increase access to quality services and promote retention in quality HIV service cascade for KPs.

MEASURE Evaluation Phase IV

The primary objective of MEASURE Evaluation is to enable countries to strengthen their systems to generate high quality health information that is used for decision making at local, national and global levels. MEASURE Evaluation applies a systems approach to achieve this objective in a sustainable way. One application of this approach is to increase capacity for rigorous evaluation. MEASURE Evaluation's results framework reflects the overarching implementation strategy whereby the project works through distinct activities to achieve results. Achievements in the four result areas shown below contribute to the overall project objective.

Result 1: Strengthened collection, analysis and use of routine health data;

Result 2: Improved country-level capacity to manage health information systems, resources and staff;

Result 3: Methods, tools and approaches improved and applied to address health information challenges and gaps;

Result 4: Increased capacity for rigorous evaluation.

Overall Objective and Study Questions

Assess Care Continuum's progress with scaling up and transitioning effective KP models to ensure sustainability of HIV/AIDS services to KPs in Ghana. The activity will also assess and document ongoing implementation, quality, and accessibility of service delivery supported by Care Continuum. The assessment will also be used to identify areas of strengths and areas where additional technical support may be needed to improve quality and services of the direct HIV service interventions being implemented with the Care Continuum and ultimately with the Government of Ghana.

Study questions:

Service Accessibility and Quality:

A. What Care Continuum KP models have been implemented to increase access to and retention in quality HIV service cascade for KPs and what are the scope and reach of those service interventions in the priority sites?
B. What is the quality of KP HIV service interventions implemented by Care Continuum and IPs receiving Care Continuum support? What are the areas of relative strength and what are the areas of quality that could benefit from greater improvement?
C. How have Care Continuum activities at the National Level (under other IRs) affected service delivery for KPs (e.g. have CCP activities supported positive change in quality of service delivery guidelines and other national level policies affecting service delivery for KP)?

Scale-up/Transition of KP models

D. What are the percentages of eligible clients who enroll through the KP models under review (including adherence counseling for KP who are also PLHIV)? What percentages are successfully followed up for 3 months and 6 months? For those enrolled in adherence counseling, what proportions are successfully linked and maintained on ART during the 6 month follow up period? What factors do clients cite in their decision to enroll in specified model? What are the clinical profiles of clients?
E. To what extent has Care Continuum been successful in scaling up and transitioning

KP models (that is, extending USAID supported models to new districts and/or previously unreached groups? What are the factors that have or might hinder or facilitate scale up/transition of KP models? How might these factors be mitigated during transition from PEPFAR to GoG funding and implementation?

Cost

F. What are the per beneficiary (KP reached) operating costs of the Care Continuum KP HIV intervention models?

Midterm Assessment of CCP IR 2 & Scale up and Transition: Workplan

Activity Lead: Beth Sutherland
Additional Implementing Staff: Shaylen Foley, Carolina Mejia, Ashley Strahley
Sr. Advisory Staff: Erin Luben (Country Portfolio Manager for Ghana)

Assessment Approach and Methods:

This study will focus on three areas of direct service intervention models:

1. The Healthy Living Social Media Platform and Social Network Testing
2. The core IP supported services (mobile outreach, peer education, and Drop In Centers)
3. The Adherence Referral Chain Management Service

Data Collection Stream 1:

Measurement of Scope and Reach of Care Continuum direct HIV service interventions in 12 priority districts.

Reach will be determined for each intervention type and documented using Care Continuum's routine reporting on numbers served and numbers and types of service delivery points in operation. This will include numbers of calls to the helpline, subscribers to the SMS service, numbers tested for HIV and referred for HIV and HIV related services (including GBV) at DIC, numbers served by peer educators, tested at mobile outreach, and numbers enrolled and successfully followed in case management.

We will collect information on scope of services provided through a review of SMS message content and through client interviews. Client interviews will also be used to document what range of Care Continuum services any particular client has been exposed to (e.g. helpline, social media, peer educators, case managers, etc.), the range of services sought on the day of interview, and permission to access case manager records of clients' interview (to link interview

data to program data on adherence and referral completion for HIV positive case management clients treatment status (i.e. on treatment, adherent on treatment, length). Clients will also be asked to self-report HIV status, time on treatment, etc.), experience of GBV, and whether providers screened them for GBV. Social Media Platform Clients will be recruited to the study through text message content ("pushed" invitations and through invitation by helpline counselors).

Data Collection Stream 2:

Measurement of quality of Care Continuum services in a sample of 6 of 12 priority districts.

Quality of Care, client service participation, and client profiles will be determined in a variety of ways:

- SMS message content analysis
- Content analysis of published guidelines for Care Continuum and by the GoG (developed with Care Continuum participation/support)
- Client Interviews and focus group discussions (FGDS)
- Provider interviews and FGDs (discussing client scenarios)
- Documentation of provider training and supervision visits by Care Continuum in 12 districts

Quality of care measures will seek to document quality and content of training materials and published guidelines, job aids, improvements in training materials and published guidelines (through publication of subsequent versions of these materials), improvements in scores of participants pre-and post- training where available, quality of direct service provision (through hypothetical client scenarios) and perceived quality of service provision (through client interviews). We will also document effectiveness of provider training through provider interviews (surveys and FGDs) with service scenarios to determine whether and to what degree providers are equipped to respond to a variety of client presentations. Analysis of quality of care will focus on client satisfaction, unmet needs of clients upon exit, and content analysis and handling of hypothetical scenarios will be evaluated against national and international standards of care for KP.

individual KP typically engages in, a demographic and clinical profile for program participants, and the average length of time a KP client has been engaged with the clinical models in which they participate.

Data Collection Stream 3:

Description of program activities supporting the direct delivery of accessibly and high-quality HIV services for KP in the 12 priority districts.

This work will also document how CCP has contributed in positive changes in government policies affecting HIV/STI service delivery for Key Populations.

Finally, this data collection work stream (particularly through the key informant interviews) will describe how CCP has been working to transition services to the Government of Ghana and what factors have promoted or hindered that effort, from the perspective of the different key stakeholders.

- Desk review of program workplans, reports, and other relevant documents
- Interviews with Key Informants including representatives from Government of Ghana partners, Global Fund Partners, Implementing Partners, Care Continuum COP (or designate), and Care Continuum AOR (or designate)

Data Collection Stream 4:

Outcomes for Adherence Counseling/Case management for HIV positive KP

As part of this study we will look at the percentage of clients testing HIV positive who are referred and successfully enrolled in Case Management. We will also determine the proportion of enrollees who are successfully followed up for 3 months and 6 months post-enrollment at mid-term.

This information will be derived from Program data on numbers testing HIV+, numbers referred for and enrolled in Case Management, and Numbers followed up at 3 months and 6 months post-enrollment.

Case management clients will be asked for permission to access their records at their ART clinic. These records will be used to determine, where possible, whether clients have successfully completed their referral to an ART facility and will provide clinical profiles of clients. We will also determine if KP have been started on ART and have been tested for viral load at their referral facility. This information, together with client interviews on the reasons for their decisions to enroll in case management and their experience with both case management and the facility is expected to provide information to help Care Continuum better understand the barriers to ART enrollment and adherence among their clients and possibly to work with Ghana Health Services, USAID, and other partners as appropriate to improve the quality of care as implemented by the facilities (though this particular site of service delivery is outside of CCP's direct control).

Sample Sizes for FGDs, Provider Interviews, and Client Interviews

4-6 FGDs will be conducted with providers. Each FGD will contain representatives of each of three respondent categories:

- Providers (from all three service types: healthy living platform, direct prevention and testing services by IPs, and case management)
- FSW clients, and
- MSM clients from across the priority service districts

Survey interviews sample sizes are calculated to generalize to the 6 sampled districts and provide insights to support programming and understand client needs across the program areas.

Survey interviews will be conducted with:

- 20-30 providers sampled proportional to main service provision type (healthy living platform counselors, DIC staff/Mobile outreach/Peer Educators, and Referral Chain Managers)
- A self-selected sample of 300 self-referred Healthy Living Platform Subscribers (proportional to the proportion of self-identified FSW and MSM who are enrolled)
- A target-based sample of 150 FSW case management clients (target numbers of clients will be set proportional to client load in each district)
- A target-based sample of 150 MSM case management clients (target numbers of clients will be set proportional to client load in each district)

The sample will be drawn across the sample of 6 priority districts with weight proportional to size sampling.

Clients in sample districts will be recruited for interviews through several mechanisms:

- Peer Educator, DIC nurses, Adherence Counselors, and Helpline Nurses will notify their clients of the study and advise them on how to participate (script will be provided by MEASURE Evaluation and approved by IRB as will any and all compensation to study participant)
- A "push" invitation to participants in the Health Living Social Media Platform to let clients know of the study and advise them on how to participate (script will be provided by MEASURE Evaluation and approved by IRB as will any and all compensation to study participant)

COSTING STUDY

MEASURE Evaluation will work with the Care Continuum Project to determine the best way to approach the cost data collection, using staff interviews and review of JSI's financial reporting structure. Prospective cost information about labor allocation and other costs will be regularly collected using MEASURE designed data capture tools or other reporting methods deemed appropriate. MEASURE Evaluation will work with the project to capture and track project costs by the three primary service delivery types: healthy living platform, direct prevention and

testing services, and case management. Cost data capture will be conducted by project and CSO staff (if determined to be feasible) with periodic monitoring by MEASURE on a quarterly basis and with support from our in-country subagreement partner. As part of the costing portion of the assessment, MEASURE Evaluation will work with JSI to understand the proportion of labor and shared project costs that should be allocated to each intervention area using survey tools and interviews. MEASURE will also work with M&E and program staff to collect service delivery count data.

Timeline and Benchmarks/Deliverables*

Benchmark/Deliverable	2017 - 2018											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
In country/virtual consultations	X	X										
Desk review and finalization of Activity scope			X	X								
Signed subagreement with local research institution					X							
Tools and protocol finalized with input from local subagreement partner					X							
Protocol submitted to IRB in country and at UNC					X							
Costing tools finalized					X							
IRB Approvals Received						X						
Data Collector Training Completed							X					
Data Collection completed								X				
Data entry and cleaning completed									X			
Data Analysis Completed										X		

* **Timeline dependent upon approval of work plan**

Benchmark/Deliverable	2017 - 2018											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
In-Country Dissemination/Validation meeting Held											X	
Study Report Completed												X
Costing Report Completed												X

Budget Summary

Items	Budget Assumptions	Amount $USD
Personnel	1. Activity Lead and Operations Research Specialist, 2 months over 12 months 1. Gender Specialist and Qualitative Data Specialist, 1 month over 12 months 1. Program Coordinator and Data analysist, 2 months over 12 months 1. Health Economist, 1.5 months over 12 months 1. Programming specialist (for Tablet based data collection), 2 weeks over 12 months 1. Communication Specialist (for copy edits and visuals), 2 weeks months, over 12 months	$108,380
Travel	3 Round Trips from Chapel Hill, NC to Accra, Ghana to support (1)Data Collector Training (1) costing data collection and (1) and a data validation/dissemination event.	$37,448
Subcontracts	To be Awarded in February to support data collection, management, and cleaning	$145,679
Other Direct Costs	One full day data validation/dissemination meeting to be held in Accra, Ghana	$9,383
Total		$300,890

MEASURE Evaluation
University of North Carolina at Chapel Hill
123 W. Franklin Street, Suite 330
Chapel Hill, NC 27516 USA
Phone: +1 919-445-9350
measure@unc.edu
www.measureevaluation.org

This publication was produced with the support of the United States Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement AID-OAA-L-14-00004. MEASURE Evaluation is implemented by the Carolina Population Center, University of North Carolina at Chapel Hill in partnership with ICF International; John Snow, Inc.; Management Sciences for Health; Palladium; and Tulane University. Views expressed are not necessarily those of USAID or the United States government. This report was prepared independently by Elizabeth Sutherland, MEASURE Evaluation (team leader), Abby Cannon, MEASURE Evaluation, Samuel Dery, University of Ghana School of Public Health, Justice Nonvignon, University of Ghana School of Public Health, Shaylen Foley, MEASURE Evaluation, Palladium, Brittany Schriver Iskarpatyoti, MEASURE Evaluation, and Kwasi Torpey, University of Ghana School of Public Health TRE-18-016

ISBN: 978-1-64232-105-0

USAID
FROM THE AMERICAN PEOPLE

PEPFAR

MEASURE
Evaluation