Evaluation Report

KIKOP: Matongo Catchment
September 2019
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Executive Summary

The following report is a detailed summary of a mixed-methods process evaluation that assessed the implementation of the Care Group (CG) and Routine Home Visitation (RHV) interventions in the Matongo catchment during their first seven to eight months of operation. The research was conducted during 12 weeks from June to September 2019 by 2020 MPH candidate Lindsay Woodcock. Research goals and methodology were guided by Curamericas Global Program Manager Barbara Muffoletto and KIKOP Project Coordinator Kevin Kayando who are also in charge of the management of the data analyzed in this study. Research design and data collection were conducted in Kisii, Kenya while data analysis and interpretation was conducted in North Carolina, U.S. Part A of the report presents the results of the quantitative study conducted to analyze performance CG and RHV data collected throughout the program. Part B of the report presents the results of a qualitative study that explored the experiences of the Community Health Volunteers that carry out the RHVs.

INTERVENTION DESCRIPTION

The Kisii Konya Oroiboro Project (KIKOP) is a community-based public health program that seeks to improve maternal and child health by utilizing culturally sensitive health education coupled with health facility strengthening and true community empowerment. The project is a joint partnership between the Curamericas Global and the Kisii County Department of Health (KCDOH) that aims to reduce neonatal and maternal mortalities, and morbidity and stunting among children under two.

To achieve these goals, KIKOP employs two community-based intervention models: care groups (CG) and routine home visitations (RHV). Both of these interventions were launched in the catchment area of Matongo, located in the sub-county of Kitutu Chache South in November 2018.

The routine home visitation model is a community-based service strategy that delivers health programing to individual households by Community Health Volunteers (CHVs). KIKOP CHVs are Matongo community members that received specific health education training to impart advice and guidance to the households they serve and to record and collect vital health data to support the ongoing monitoring of health outcomes. RHVs occur through scheduled visits that target mothers who are pregnant, that have recently given birth, or that have children under the age of two. Table 1 features a simplified logic model with more detail about the intervention components that were the focus of the following process evaluation.

RHV Logic Model (Process components only)

Resources	Inputs / Activities	Intended Outputs
- Trained CHVs to carry out RHVs - Data collection forms and questionnaires for each RHV type - RHV schedule and tracking system - Quality Improvement and verification check (QIVC) lists - QIVC tracking system	- Prenatal home visits - Puerperal home visits - U2 home visits - Monthly CHV meetings with KIKOP staff to collect RHV data - Data entry of RHV information - Identification and registration of new pregnancies and children - Quarterly QIVC assessment for field officers and CHVs	- 22 CHVs trained to execute RHVs at 80% QIVC performance proficiency - 2 prenatal home visits per pregnancy - 3 puerperal home visits per live birth within 48 hours, 7-14 days, and 30-60 days - Six home visits per child under age 2 at 3, 6, 9, 12, 18 and 24 months - 100% registration of all new pregnancies and children - Monthly CHV meetings with KIKOP staff

Table 1

The care group model is a health education and promotion strategy that is defined by its training cascade. This KIKOP care group cascade disseminates health information to large numbers of mothers in the catchment through a recurring schedule of group lessons and home visits that trickle down from intervention supervisors to five community-based Care Group Promoters, to 43 community-based Care Group Volunteers, who then teach it to 9 to 10 neighbor women through groups called Neighbor Groups. At each layer of the cascade, maternal and child health education is passed on, with Neighbor Groups utilizing mothers within the community to train and support their neighboring mothers. Additionally, the intervention is designed to carry out home visits to reinforce address barriers at the household level and encourage behavior change. Table 2 features a simplified logic model with more detail about the intervention components that were the focus of the following process evaluation.

CG Logic Model (Process components only)

Resources	Inputs / Activities	Intended Outputs
- Trained promoters and CGVs to carry out group meetings and home visits - Data collection forms form meeting attendance and home visit completion - Health education curriculum and materials - Quality Improvement and verification check (QIVC) lists - QIVC tracking system	- CG lessons/meetings (FOs to promoters, promoters to CGVs; CGVs to neighbor women - CG home visits (promoters to CGV; CGV to neighbor women - Bi-weekly health education lessons - Identification and reporting of new births, deaths, miscarriages, stillbirths, migrations and pregnancies (vital events) - Monthly promoter meetings with KIKOP staff to collect CG data - Data entry of CG information - Quarterly QIVC assessments for field officers, promoters and CGVs on CG facilitation	- 2 CG trainings per month for promoters with 80% attendance - 2 CG group lessons/meetings per month for CGVs run by promoters with 80% attendance - 2 CG lessons/meetings per month for neighbor women run by CGVs with 80% attendance - 2 CG home visits per month for each promoter (n=5) completed by field officers - 2 CG home visits per month for each CGVs (n=43) completed by promoters - 2 CG home visits per month for each neighbor women (n=461) completed by CGVs - 100% registration of all new births, deaths, stillbirths, miscarriages, migrations and pregnancies (vital events) - 80% performance on QIVC on measures

Table 2

RESEARCH DESCRIPTION

Implementation of CGs and RHVs officially launched November 2018. Still in its early stages of implementation, a process evaluation of quality and performance was identified by program management as an important tool for measuring adherence to intended programming and informing staff of any needed program adaptations early on.

A mixed-methods preliminary process evaluation was initiated at approximately eight months following the launch to assess the quality of implementation in its initial stage of operation. The evaluation was designed to observe if the intervention being implemented as planned, the reach of the program, and to measure the quality of the program execution. It also served to provide detailed insight from CHVs about their experiences conducting RHVs. The evaluation is intended to provide performance data to inform decision making around opportunities for improvement and new implementation tools or strategies feasible for its context and available resources.

Part A - Quantitative Report

RESEARCH SUMMARY

As the first component of the process evaluation, a quantitative analysis of existing program implementation data was executed to provide a measure of intervention performance. The study was designed to understand how KIKOP staff and volunteers carried out the critical activities of the Care Group (CG) and Routine Home Visitation (RHV) interventions. The study was guided by the following research questions:

- To what extent was the KIKOP program (care groups and routine house visitations) implemented consistent with CG methodology and CBIO methodology?

- To what extent did the KIKOP program (care groups and routine house visits) reach the community members it intended to reach?
- Did the care group intervention have the intended level of participation?
- To what extent were the planned activities of each KIKOP project (care groups and routine house visits) completed by staff?
- How much of each component of the KIKOP program did staff deliver?

RESEARCH METHODS

The quantitative analysis was conducted using Microsoft Excel and designed to examine RHV register and quality improvement and verification checklist (QIVC) data collected for both the CG and RHV interventions. The study period of interest spanned from November 19, 2018 to June 30, 2019; approximately seven months. The analysis began with identifying the primary research questions of interest as outlined above. The second step involved researching the implementation activities of each intervention by reviewing program materials, logic models, and asking senior management questions to get a deeper understanding of all the program inputs, activities and outputs. From the primary research questions, a list of secondary sub-questions was created, which served as the basis for defining the study's indicators. Indicators with specified numerators and denominators were developed and edited to reflect feedback from program management. Throughout this process missing data was entered by KIKOP staff. Upon completion of data entry, new data summary tables were crafted for each Excel dataset to gathered data points needed to measure each indicator. This process involved crafting unique Excel formulas that combined applicable data into summary tables. Drafts of the summary tables and formulas were provided to program management for feedback. Several rounds of changes to the summary tables were implemented. As the analysis was finalized, fact sheets illustrating the targeted quantitative findings were developed to report preliminary findings. The fact sheets were edited to reflect feedback and served as the basis for this report.

It is important to note that the data featured in this report does not account for the migration of mothers to other communities. The data sources do not currently address the issue in a way that would allow the assessment to account for those changes. All data reflected in this report is based on the quality of the data sources, which may be subject to error. Additionally, the analysis may also be subject to minor measurement error because it was conducted by only one researcher.

RHV Indicators

Research Question	Indicator	Data Source
To what degree or extent were the routine house visitations implemented as planned by staff?	- Percent of puerperal and U2 RHVs completed as scheduled through June 30, 2019 - Completion rate of puerperal visits; of U2 visits - Percent of puerperal and U2 RHVs completed in the timeframe they were intended (U2: 30 days; Puerperal: 48 hours, 7-14 days, 30-60 days) - Percent of women that received all three puerperal visits - Average puerperal QIVC scores for checklist item #12 assessing completion in the appropriate timeframe - Percent of pregnant women that received two prenatal visits - Percent of U2, puerperal and pregnancy QIVCs completed for CHVs across both quarters - Percent of QIVC feedback checklists completed by field officers for CHVs across both quarters; completed by supervisors for field officers - Average QIVC score for feedback checklist items #17 and 19 assessing the use of examples and solution identification for field officers for CHVs across	Pregnancy / Birth Register; U2 Register; RHV QIVC Tracking Sheet
To what degree or extent did the routine house visitation intervention reach	- Number of households each CHV is responsible for November 2018 - June 2019; average number - Average number of visits completed by all CHVs per month - Number of U2 visits completed by each CHV per month	Pregnancy / Birth Register; U2 Register

the community members it intended to reach?	- Number of pregnant, puerperal, and U2 households reached per month - Number of pregnant, puerperal, and U2 households reached between November 2018 and June 2019	
To what degree or extent were the planned activities routine house visits completed by staff?	- Percent of CHV QIVCs on home visits at or above 80% - Average QIVC score for all CHVs and for each CHV on checklist items # 1-13 that assessing interview skills; - Average QIVC score for all CHVs and for each CHV on prenatal QIVC items # 13, 18, 19, 20, 22, 24, 32 assessing the most important activities of the prenatal RHVs including antenatal care, exclusive breastfeeding, hospital deliveries, and danger signs during prenatal across CHVs; - Average QIVC score across CHVs and for each CHV on puerperal QIVC items # 13, 15, 18, 21, 24, 25, 26 assessing the most important activities of the puerperal RHVs including exclusive breastfeeding, danger signs, child health, maternal infection symptoms, vitamin supplementation, and health education - Average QIVC score across CHVs and for each CHV on U2 RHV items # 15, 16, 17, 19, 21, 22, 23, 24, 25, 29, 30, 33 assessing the most important activities of the U2 RHVs including vaccine verification, vitamin supplementation, exclusive breastfeeding, child health, nutritional measurements, danger signs, family planning, and handwashing - Average QIVC score for checklist item #3 assessing family member participation in RHV - Percent of CHVs that completed/reviewed a birth plan during the pregnancy visits - Averaged QIVC score on puerperal checklist item # 34 assessing review of birth plans across CHVs; for each CHV	RHV QIVC Tracking Sheet

CG Indicators

Research Question	Indicator	Data Source
To what extent were the care groups implemented as planned by staff?	- Number of lessons delivered by field officers - Percent of lessons delivered to CGVS - Percent of homes visits completed for CGVs - Number of completed summary sheets collected - Average QIVC score on across promoters and for each promoter on group lesson checklist items # 18 and 19 covering vital events collection - Percent of completed promoter QIVCs; - Percent of completed promoter feedback QIVCs	CG Supervisors Report; CG QIVC Tracking Sheet
To what extent did the care group intervention reach the community members it intended to reach?	- Average CGV attendance rate across all meetings held - Number and percent of meetings with ≥80% CGV attendance - Average number of CGVs that attend care group meetings - Percent of meetings ≥80% neighbor women attendance - Average neighbor women attendance rate across all meetings held	CG Supervisors Report
To what degree or extent were the planned activities of	- Percent of home visits completed by promoters following each lesson (percent of first lesson home visits; of second lesson home visits)	CG Supervisors Report; CG QIVC

the care groups completed by staff?	- Number of home visits each CGV received from Dec 2018 – June 2019 - Percent of home visits completed by CGVs following each lesson - Percent of first lesson home visits completed by CGVs; of second lesson home visits - Averaged QIVC score on checklist items # 1- 13 accessing facilitation skills across promoters and CGVs; for each promoter and CGV - Averaged QIVC score across promoters on checklist items # 18, 19, 20, 21, 22, 23, 26, 27, 28 assessing the most important activities during the CGV meetings including collection of vital events, recap of last lesson, commitment confirmation, lesson plan, and discussion of barriers across promoters and CGVs; for each promoter and CGV - Averaged QIVC scores for checklist items # 35, 36, and 37 assessing mastery of the lesson material and accuracy and completeness of educational content across promoters and CGVs; for each promoter and CGV - Averaged QIVC score on checklist items # 15, 16, 17, 18, 19, 20 assessing the most important aspects of the home visits including an inquiry about health changes, reviewing the lesson materials, overcoming barriers, scheduling follow up visits across promoters and CGVs; for each promoter and CGV	Tracking Sheet

RESULTS – Routine Home Visitations

The following is a summary of the most significant findings of the quantitative analysis of RHV data.

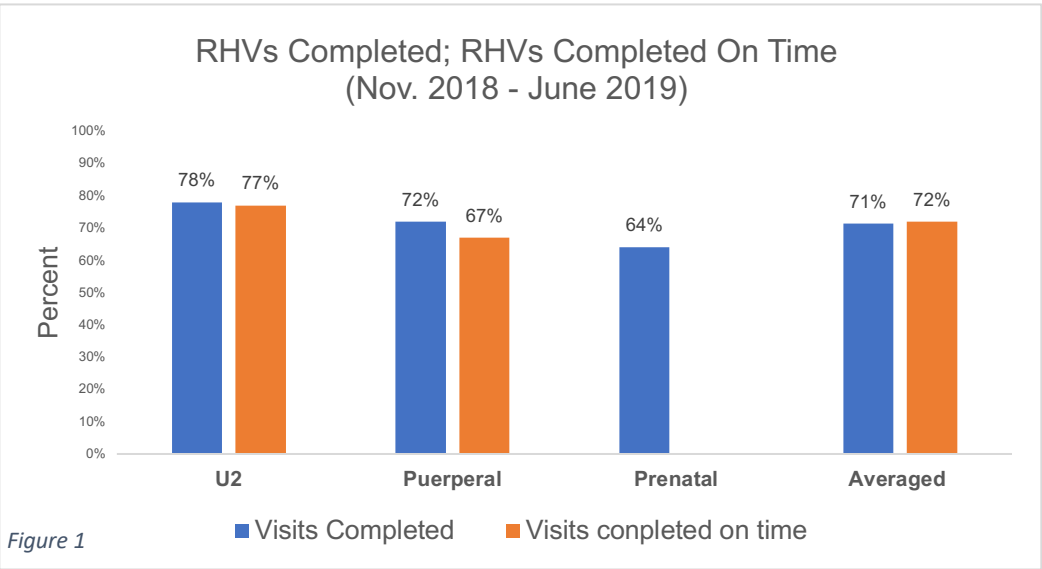

Figure 1

RHV	U2
Intended	639
Completed	499

The analysis revealed that all three categories of RHVs fell just shy of achieving 80% completion with an average of 71% as illustrated in Figure 1. Between November 19, 2018 and June 30, 2019, the intervention completed 78% of the intended U2 visits, 72% of the puerperal visits and fewer prenatal visits at 64%. However, the majority of RHVs are being completed during the appropriate timeframe (i.e., within 30 days of the suggest completion date for U2 visits, and within 48 hours, 14 days and 60 days for puerperal visits). Across all RHVs, 72% of visits completed were completed on schedule. On-time completion was not assessed for prenatal visits because there are no standard timeframes set for this RHV type.

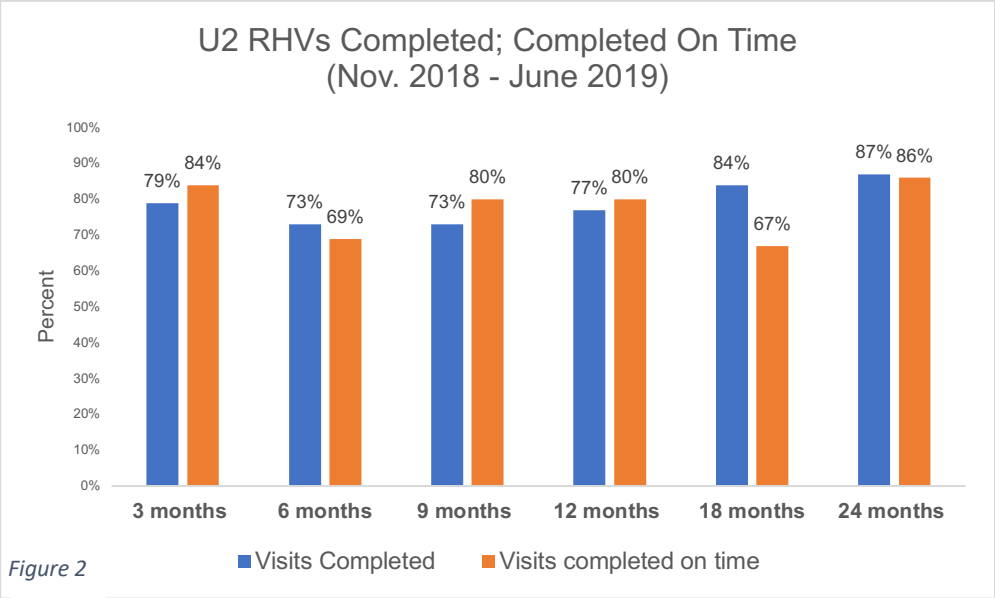

Figure 2

U2 RHV	Intended	Completed
3 M	84	67
6 M	117	85
9 M	126	92
12 M	126	97
18 M	110	92
24 M	76	66

Looking more closely at each RHV subcategory, the analysis reported that the completion for U2 RHVs ranged from 73% to 87% as depicted in Figure 2. For both the sixth-month and ninth-month RHVs only 73% of the visits were completed as intended. Most of the U2 subcategories showed a high percentage of visits completed on time except for six months where 69% of visits were completed on time and 18 months where 67% were on time.

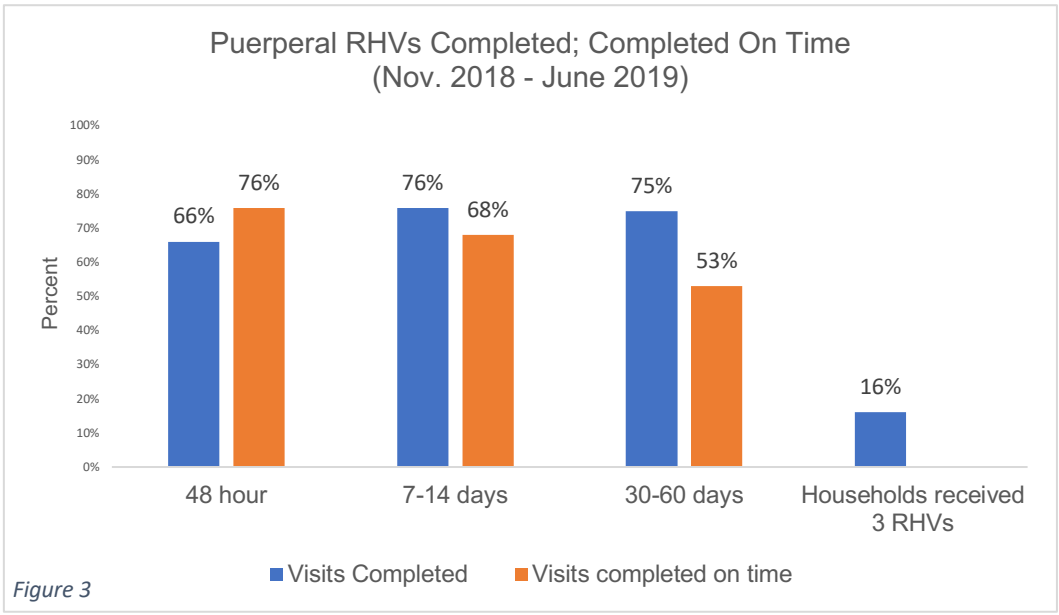

Figure 3

RHV	Puerperal
Intended	262
Completed	188

Figure 3 shows that the subcategories of puerperal visits experienced similar outcomes. The 48-hour puerperal visit had the lowest completion with only 66% completed for all those intended. The subsequent puerperal visits (7-to-14 days and 30-to-60 days) had a higher percent of RHVs completed at 76% and 75% respectively. More noteworthy is the number of households that received all three puerperal RHVs. Data analysis showed that 16% of all applicable puerperal households received all three visits as intended between November 2018 and June 2019. (Only births that occurred more than 60 days before June 30 were considered in this calculation.) The on-time completion of puerperal visits showed moderate performance during the first visit with 76% completed on-time but then experienced a stable decline to 68% for the 7-to-14-day visits and 53% for the 30-to-60-day visits.

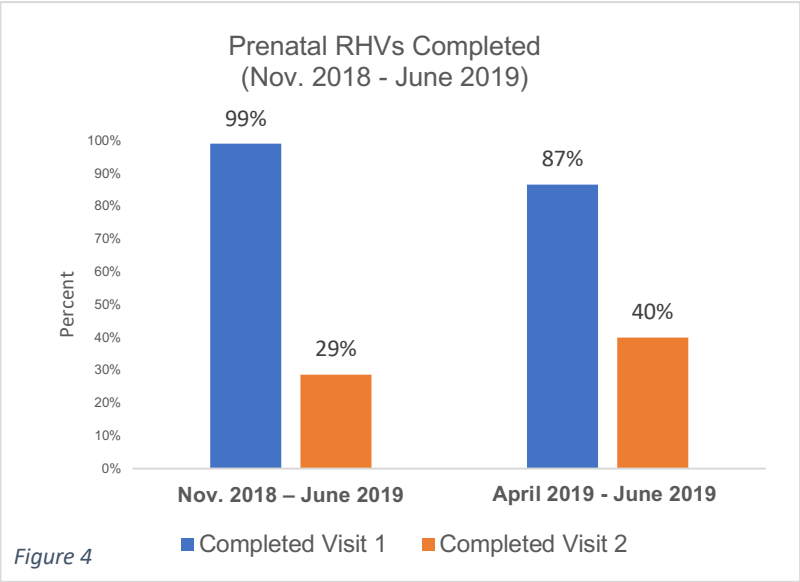

Figure 4

RHV	Prenatal
Intended	216
Completed	139

A similar trend was reported for the number of prenatal RHVs completed as shown in Figure 4. For the first prenatal visits, 99% of all RHVs were completed as intended between November 2018 and June 2019. Completion for just the second quarter of 2019 (April to June 2019) was slightly lower at 87%. Although the percent of completed first prenatal visits were extremely high, the percent of second prenatal visits were significantly lower. Among all second prenatal visits intended, only 29% were completed from November 2018 to June 2019. However, the number of completed second prenatal visits seems to be slowly increasing as depicted by the 40% completion of all those intended between April 2019 and June 2019.

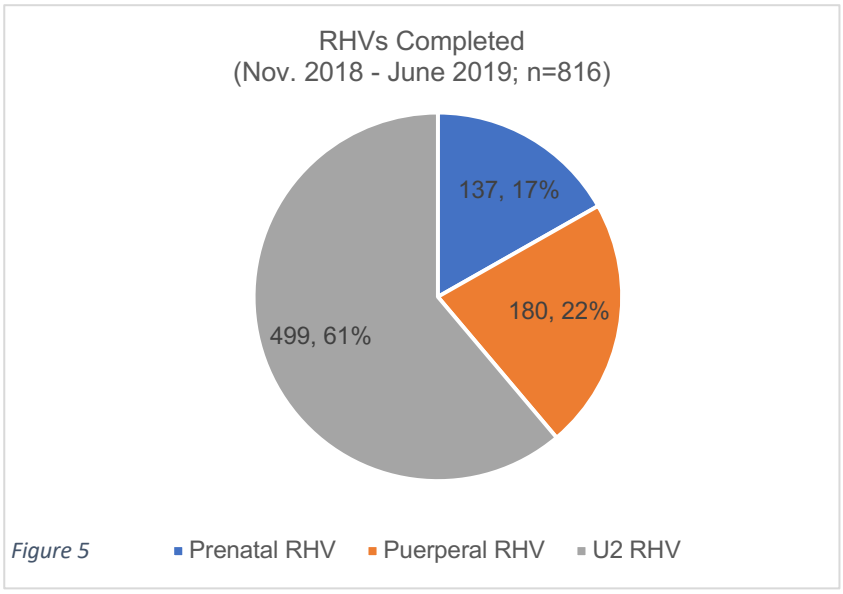

Figure 5

An assessment of the quantity of RHVs completed during the study period shows that the 22 CHVs completed a total of 816 RHVs during the seven months (Figure 5). U2 RHVs represent a majority of the RHVs that were completed.

Figure 6 illustrates the number of households the CHVs reached each month, which also represents the distribution of the 816 RHVs across each month. This averages to approximately 102 households reached monthly

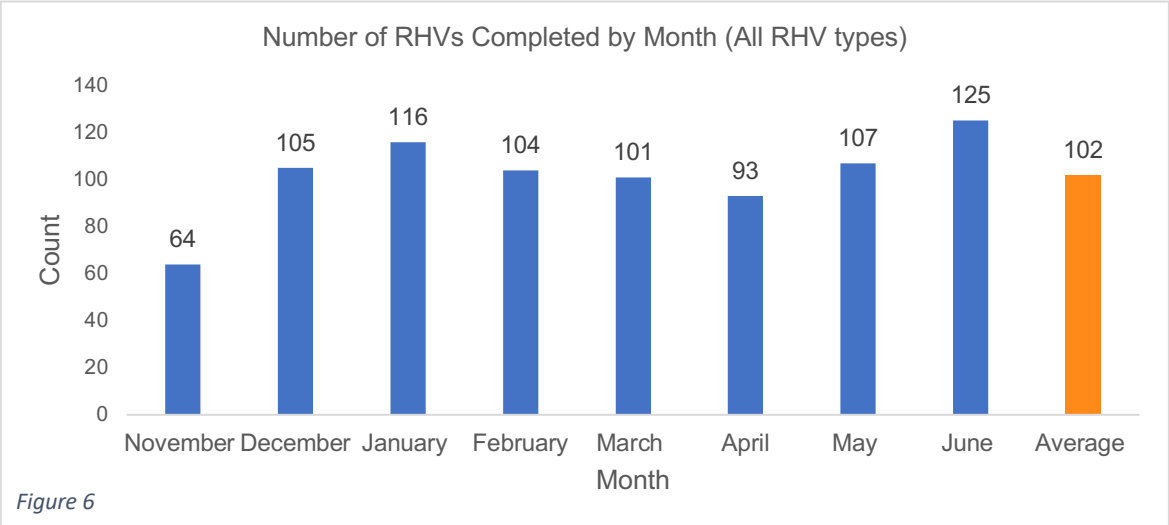

Figure 6

Total	815

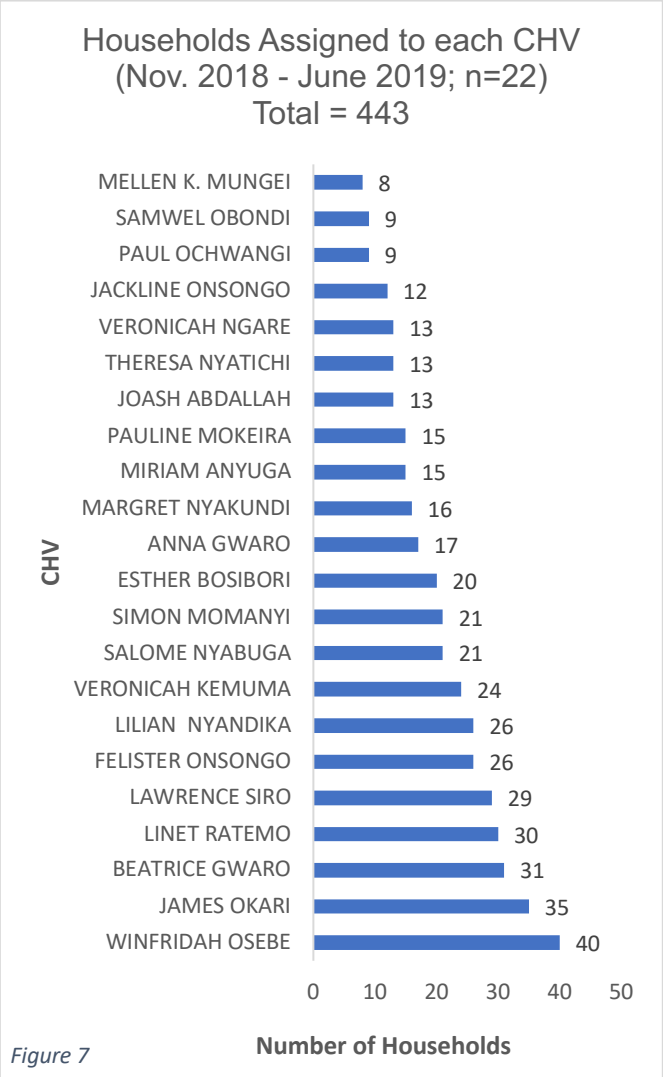

Figure 7

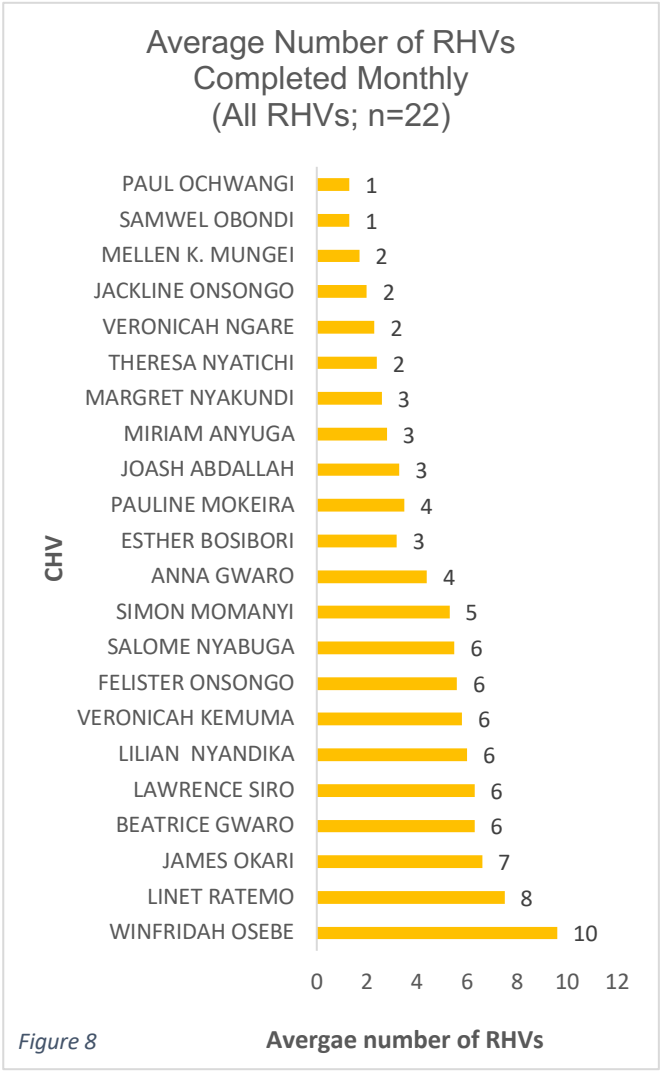

Figure 8

However, the analysis revealed that the distribution of RHV households serviced by each CHV varies greatly as depicted in Figure 7. The number of households being serviced by CHVs ranged greatly from as low as eight households to as high as 40 households. Currently, seven CHVs are servicing 25 or more households, while another seven CHVs are responsible for less than 15. As a result, the number of RHVs each CHV is responsible for completing each month varies widely. As depicted in Figure 8, there are 10 CHVs that completed an average of five to 10 RHVs per month, while the remaining 12 CHVs average less than five each month. By the end of the study period (June 30, 2019), the intervention reached a total of 443 households (Figure 7).

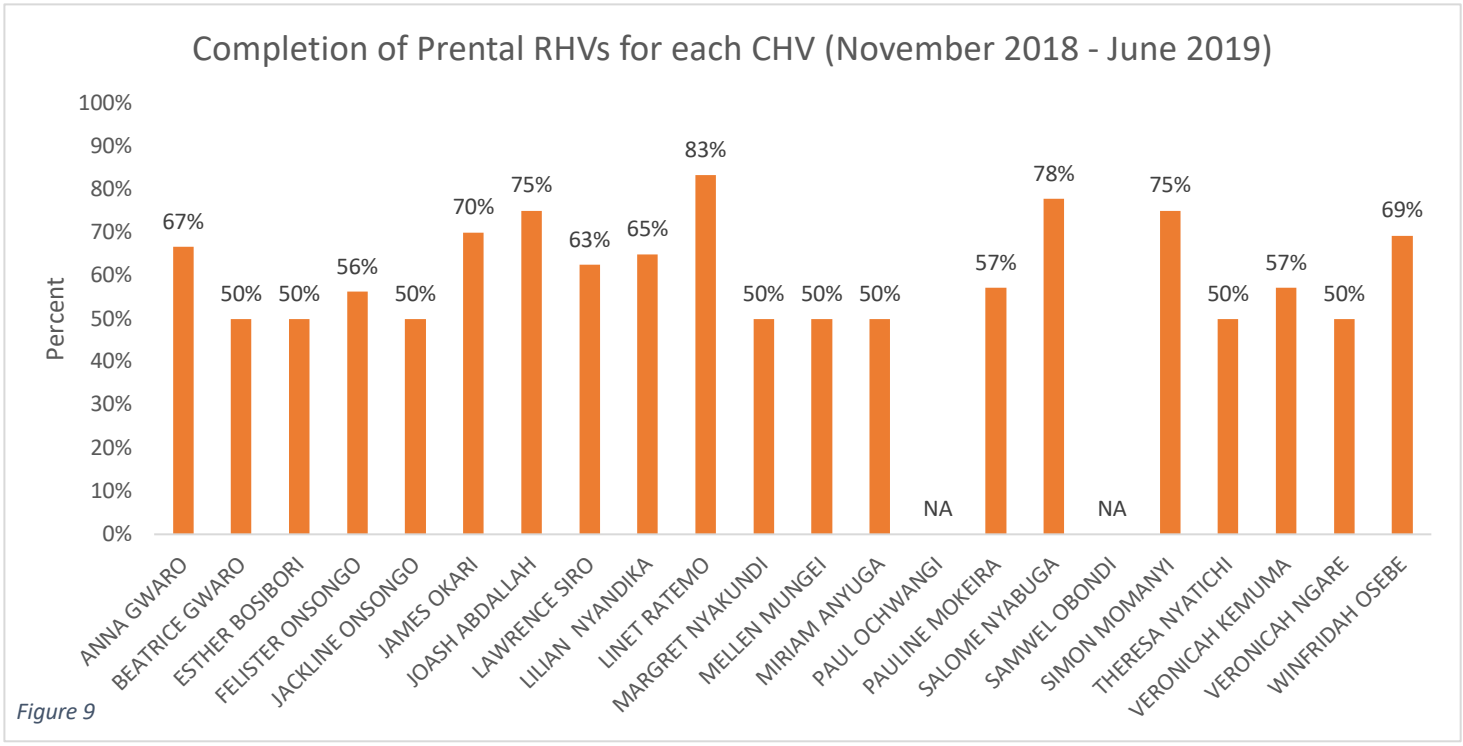

Figure 9

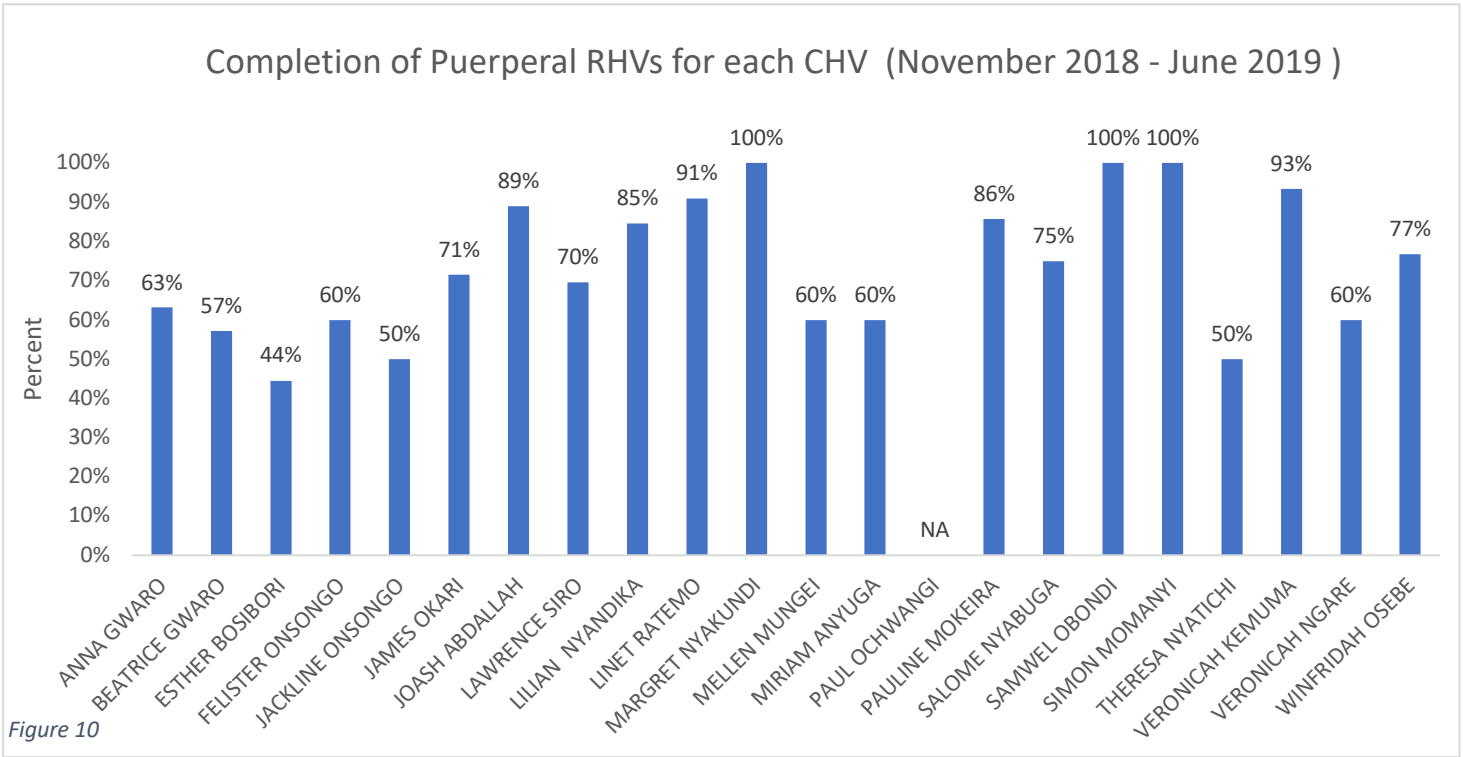

Figure 10

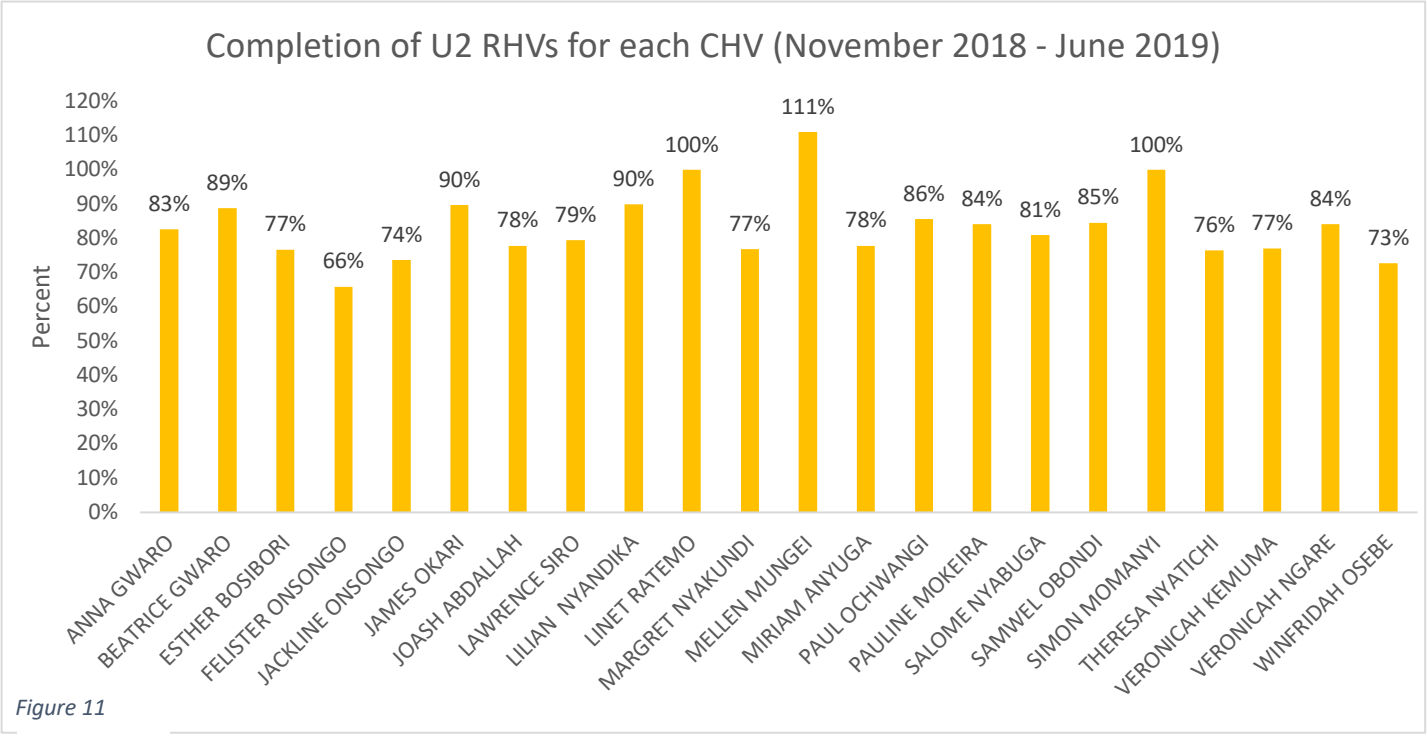

Figure 11

An assessment of the percentage of RHVs each CHVs has completed showed a significant amount of variance as well. As depicted in Figure 9, there are several CHVs that are completing approximately 50% of their prenatal RHVs as intended. This calculation is based on the completion of two prenatal RHVs per mother as the intervention intended. Figure 10 shows that CHVs are completing the puerperal RHVs are higher rates. Twelve CHVs, just over half, are completing 70% or more of their puerperal RHVs. Eight of those 12 CHVs are completing 80% or more. For U2 RHVs, the majority of the CHVs are completing 70% or more of the U2 RHVs as illustrated in Figure 11. The analysis showed that one CHV completed U2 RHVs above 100%. According to the data sources, that CHV completed more U2 RHVs than they needed to. This could be due to a number of reasons, including a data entry error.

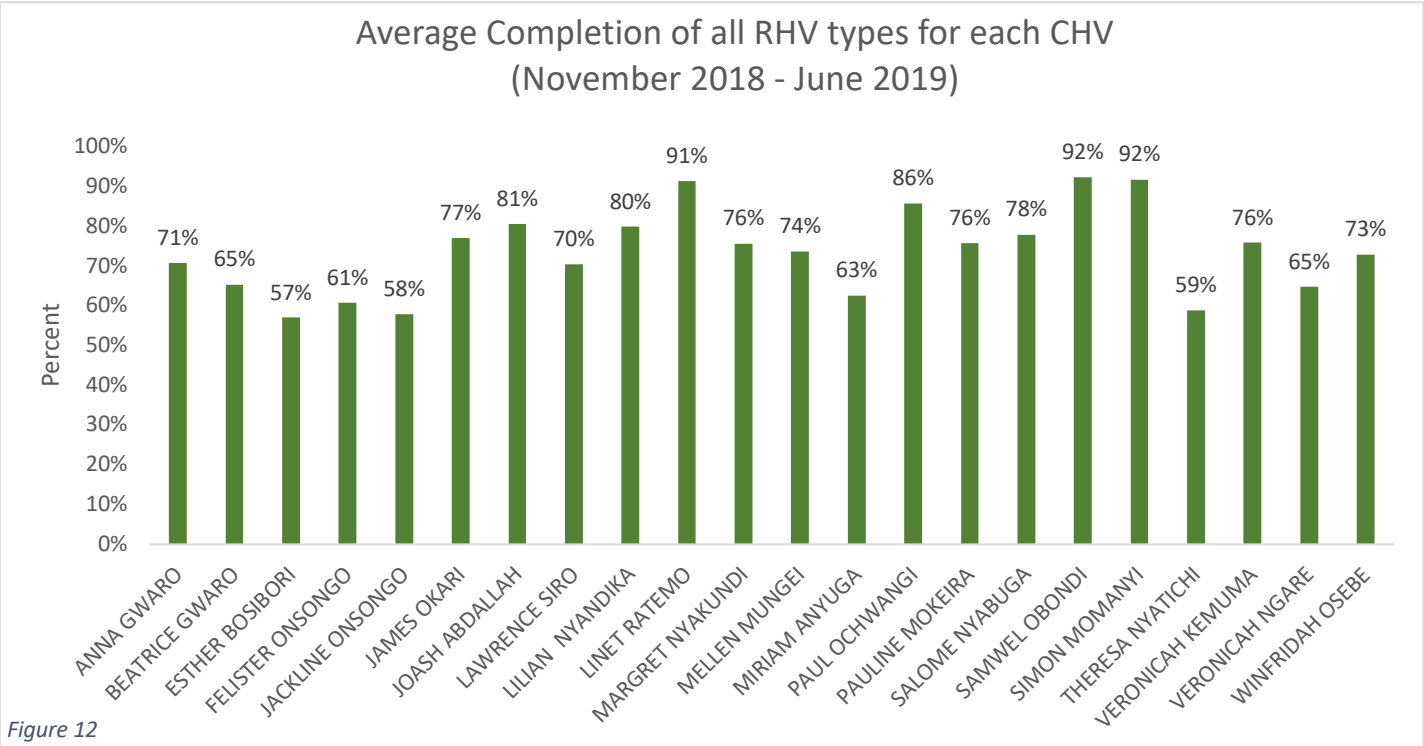

Figure 12

The completion average for all RHVs types for each CHV showed that approximately 63% of the CHVs are completing 70% or more of their intended RHVs as shown in Figure 12.

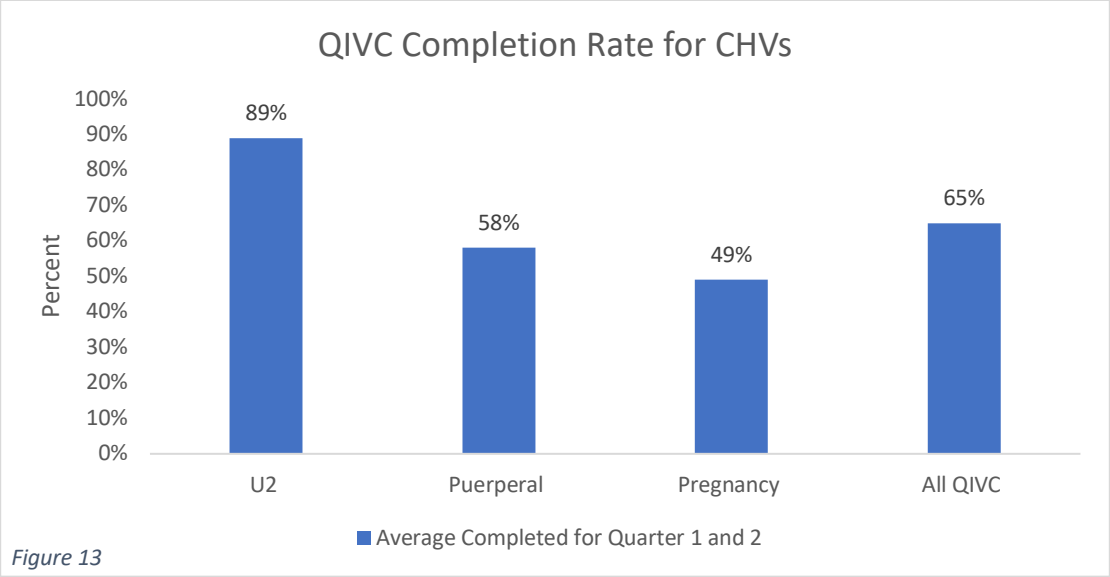

Figure 13

The analysis of RHV data also assessed the quality of the intervention delivery using QIVC data. The average completion of QIVCs for all RHV types across the first two quarters of 2019 was 65% (Figure 13). Please note that due this small percentage of available data, the following indicators may not accurately represent true CHV performance.

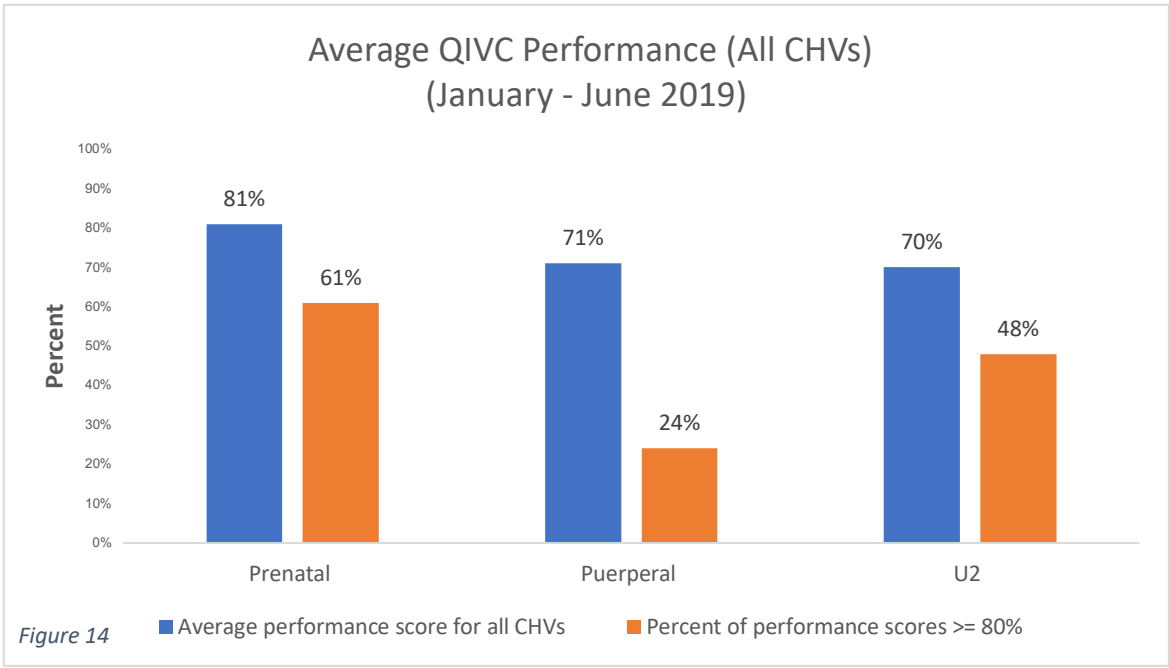

Figure 14

The assessment reported that program QIVC performance across all CHVs neared or reached the 80% proficiency benchmark for all RHV types as depicted in Figure 14. CHVs achieved the highest group-level performance on prenatal RHVs at 81%. However, the number of puerperal and U2 QIVC performance scores at or above the 80% benchmark was moderately low. For puerperal RHVs, only 24% of all program performance scores succeeded in meeting the 80% benchmark. For U2 RHVs the percentage was slightly higher at 48%.

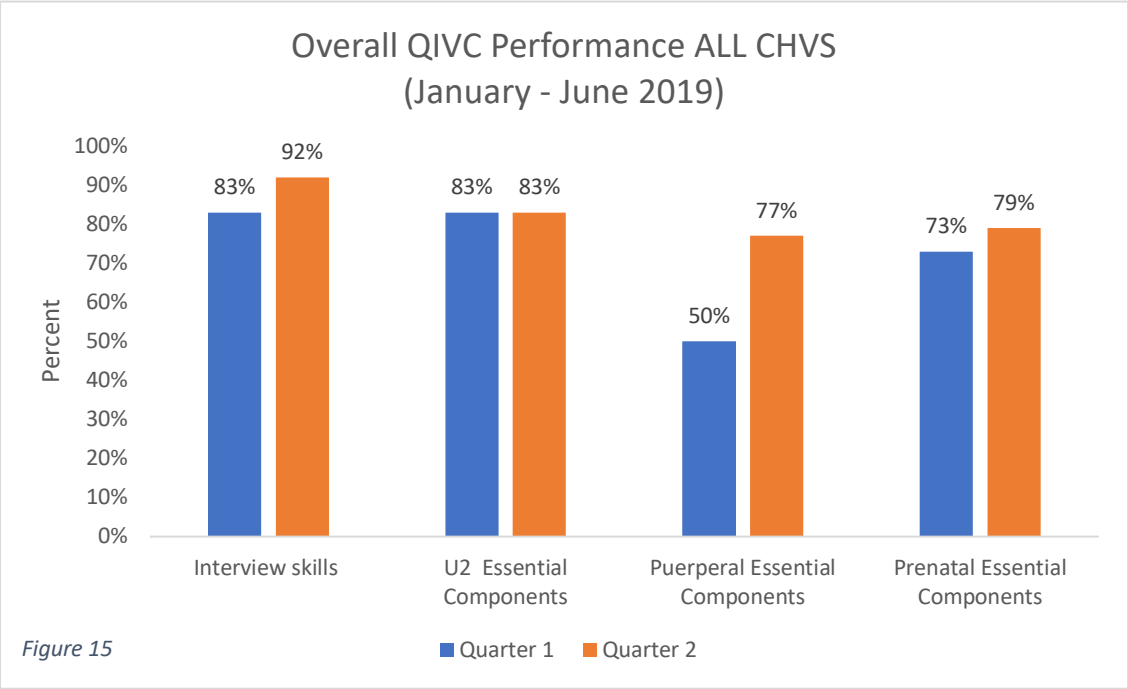

Figure 15

Further analysis revealed that CHVs performed moderately well on the most essential components of each RHV type as indicated in Figure 15. Each of the featured measures in Figure 15 are defined as follows:

- **Interview skills for all RHV**: introduction, active listening, eye contact, adequate time to answer questions, etc.
- **Top prenatal indicators**: antenatal care, exclusive breastfeeding, hospital deliveries, and danger signs during pregnancy
- **Top puerperal indicators**: exclusive breastfeeding, danger signs, child health, maternal infection symptoms, vitamin supplementation, health education
- **Top U2 indicators**: vaccine verification, vitamin supplementation, exclusive breastfeeding, child health, nutritional measurements, danger signs, family planning, and hand washing

CHVs showed a high aptitude for interview skills by improving from 83% in quarter one to 92% in quarter two. CHVs achieved moderate scores for top indicators across all the RHV types, except for the top puerperal performance indicators in quarter one at 50%. CHVs maintained a high, consistent score for the top U2 indicators at 83%, but showed a sizeable improvement in the prenatal and puerperal top performance indicators. For the top prenatal indicators, CHVs improved from 73% to 79% between quarter one to quarter two. For the top puerperal performance indicators, CHVs improved from 50% to 77% between quarter one to quarter two.

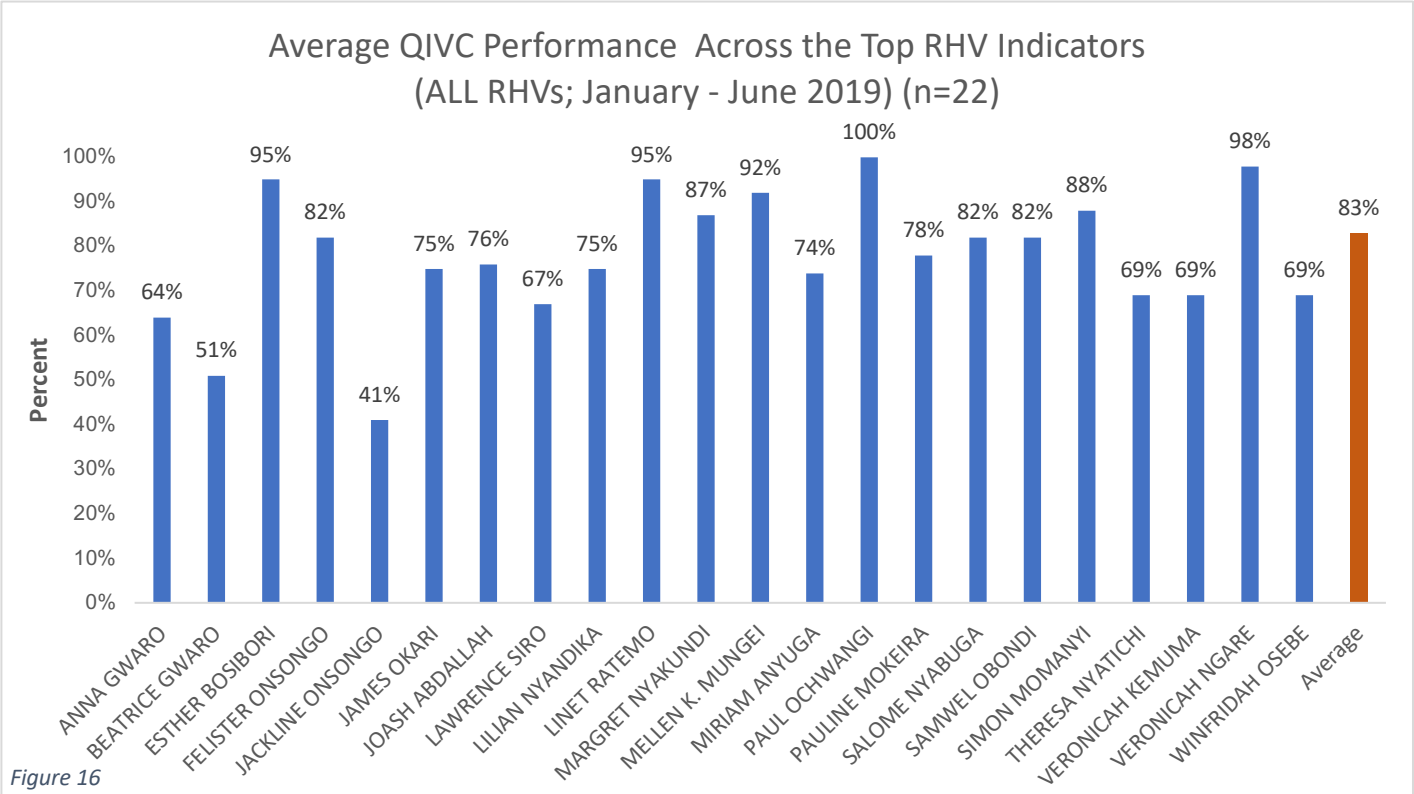

Figure 16

At an individual unit of analysis, CHV performance showed much more variation in proficiency. Roughly half (n=10) of the CHVs executed the top performance indicators for all RHV types at the 80% benchmark. For each CHV, Figure 16 depicts an averaged performance rate that combines their scores on the top indicators for all RHVs. There are currently eight CHVs that are performing under 75%, which suggests that various aspects of the RHVs are not being implemented as intended.

RESULTS – Care Groups

The following is a summary of the most significant findings of the quantitative analysis of CG data.

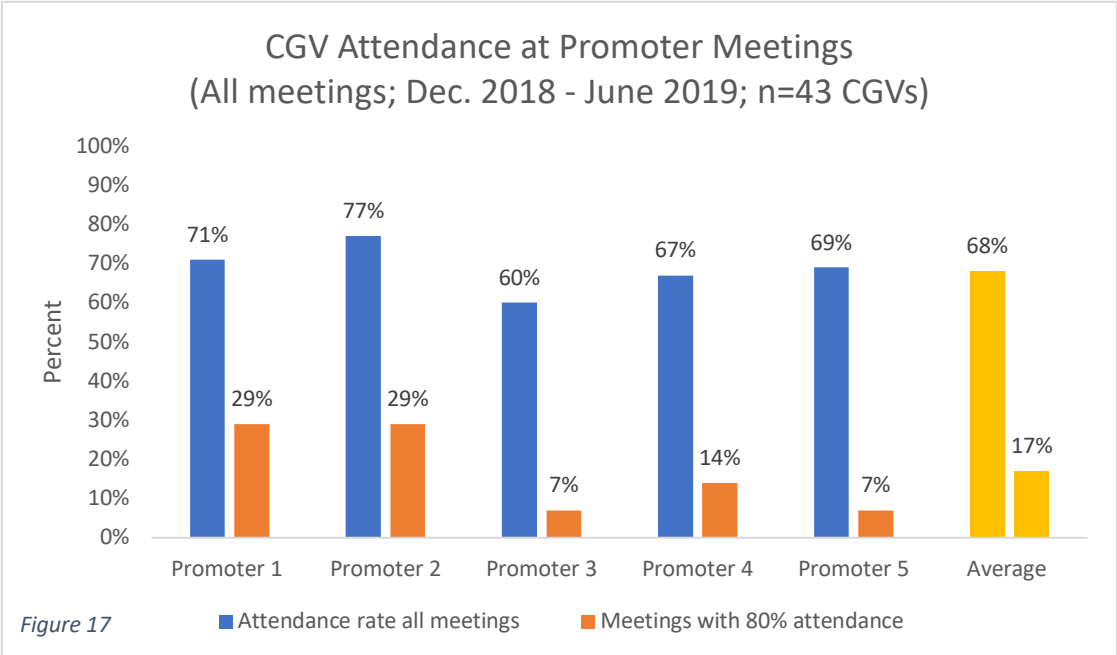

Figure 17

An analysis of promotor and CGV group meeting attendance and home visit data showed that the intervention performed below the goal benchmark. Average attendance across the bi-weekly promoter group meetings for CGVs was 68% from December 2018 to June 2019 (seven months) as depicted in Figure 17. On average 29 of the 43 CHVs attended the group meetings every two weeks. Group meeting attendance for promoter two achieved the highest rate at 77%. Additionally, only 17% of all promoters group meetings held achieved 80% attendance or higher.

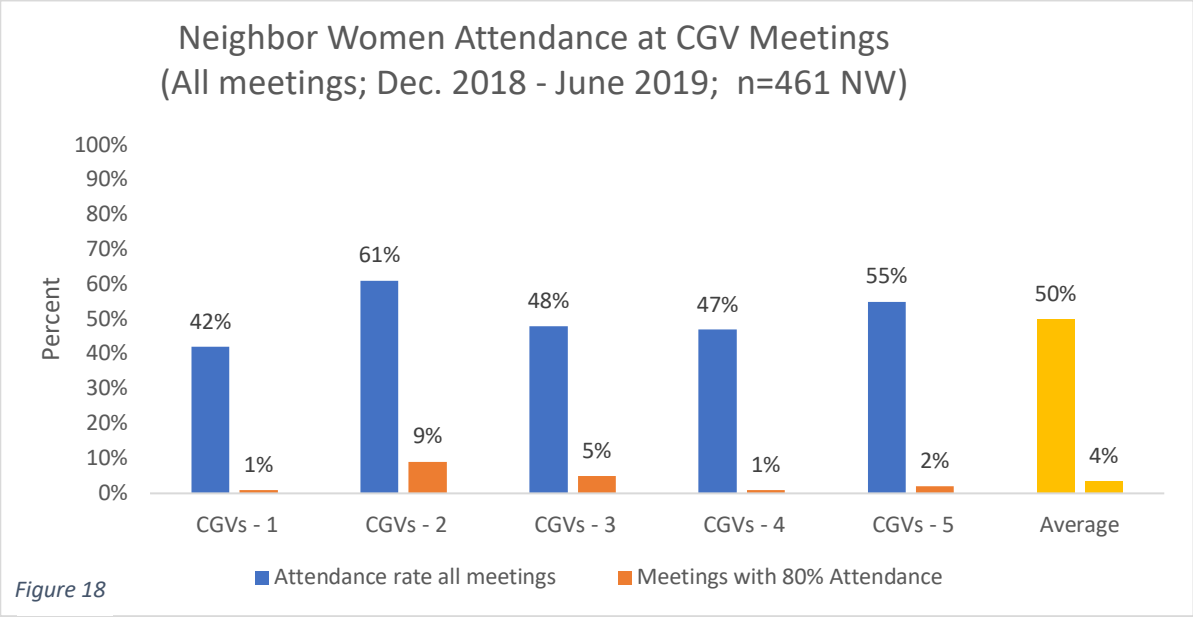

Figure 18

Data for the sets of care group meetings for neighbor women revealed the same trend as illustrated in Figure 18. Average attendance across the bi-weekly CGV group meetings for neighbor women was 50% during the same time. On average 231 of the 461 neighbor women attended the group meetings every two weeks. For care groups one, three, and four, group meetings attendance fell below 50%. Only 4% of all group meetings CGVs held for neighbor women achieved 80% attendance or higher.

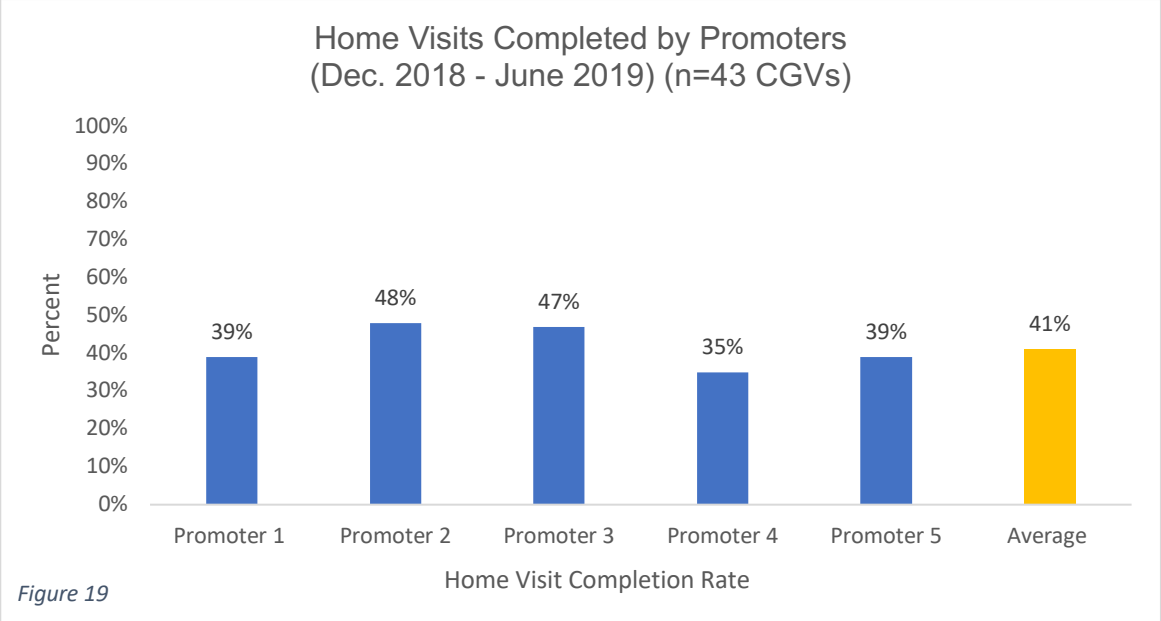

Figure 19

Assessing the frequency of CG home visit completion, the analysis found that both promoters and CGVs were completing less than half of the intended home visits during the seven months. Figure 19 shows that across all promoters an average of 41% of the intended home visits to CGVs were completed.

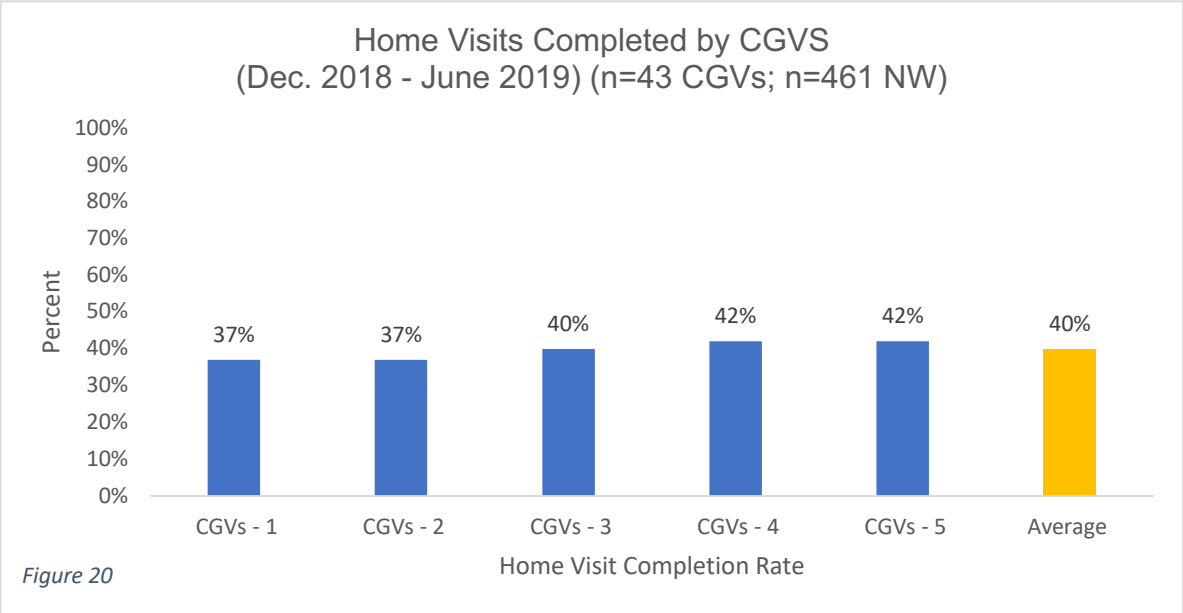

Figure 20

CGVs completed an average of 40% of the intended home visits to neighbor women as shown in Figure 20.

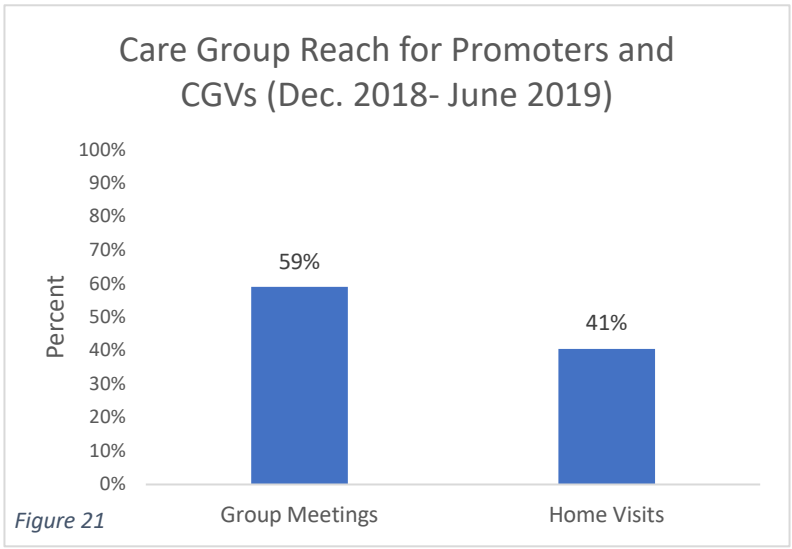

Figure 21

When promoter and CGV rates were averaged, the intervention maintained 59% attendance on group meetings and 40% completion of home visits as illustrated in Figure 21. Due to limited detailed information available to conduct an individual-level analysis of those served by the intervention, these figures serve as the best proxy on the intervention's reach.

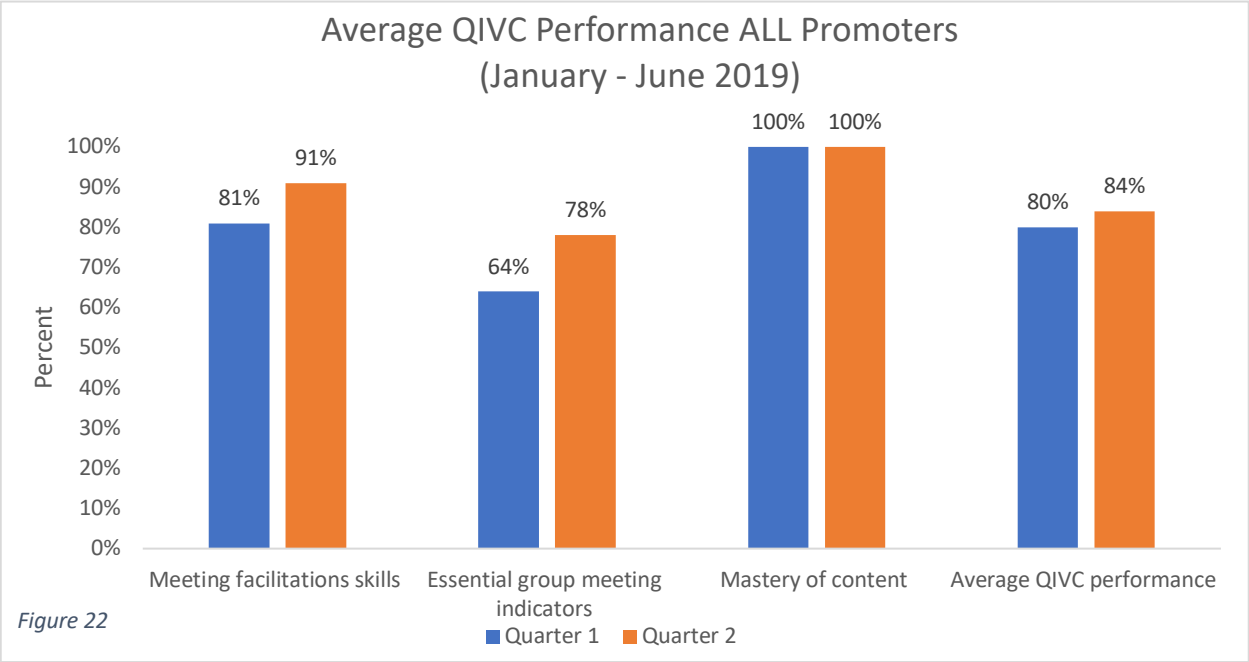

Figure 22

The assessment of CG QIVC data for both promoters and CGVs revealed high rates of performance. Promoters achieved high marks on the majority of the most essential components of the group meetings as shown in Figure 22 and 23. Each of the featured measures in Figure 22 and 23 are defined as follows:

- **Meeting facilitation skills**: sitting at the same level, eye contact, participant encouragement, open-ended questions, and time to respond
- **Top group meeting indicators**: a collection of vital events, recap of the last lesson, commitment confirmation, lesson plan, and discussion of barriers
- **Mastery of content**: lesson material proficiency, and accuracy and completeness of educational content across
- **Top home visit indicators**: inquiry of health changes, reviewing the lesson materials, overcoming barriers, scheduling follow up visits

Promoters showed a high proficiency in the lesson content with a consistent QIVC score of 100% across both quarters. They also achieved an average program QIVC performance score that consistently met the 80% threshold.

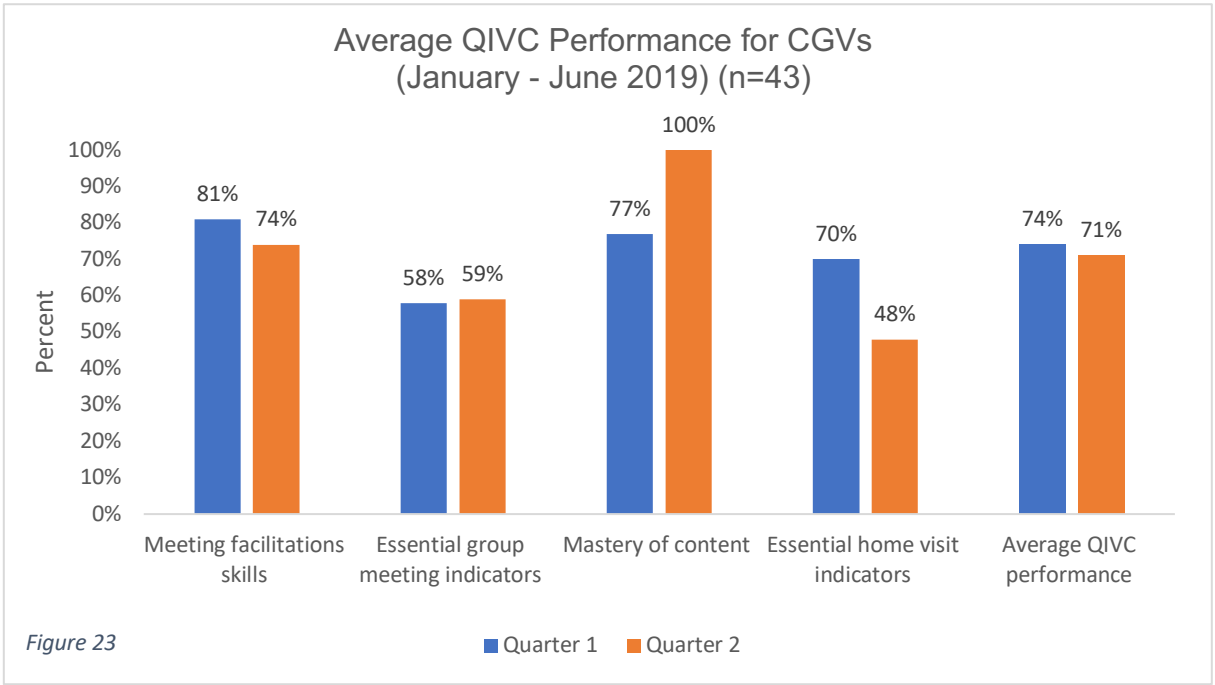

Figure 23

CGVs showed slighter lower rates of performance across all segments measured and small dips in performance from quarter one to quarter two in some cases as seen in Figure 23. CGVs showed ongoing mastery of the lesson content by improving from a 77% average in quarter one to 100% in quarter two. Additionally, they showed a moderate aptitude on meeting facilitation skills by achieving a score of 81% in quarter one, but then a slight decline to 74% in quarter two. CGVs also maintained lower performance on the top group meeting and home visits indicators, which indicates that they may not be carrying out critical components of the intervention.

DISCUSSION and RECOMMENDATIONS

The evaluation of both RHV and CG register and QIVC data highlighted several trends that are influencing the quality of implementation.

RHV

The analysis demonstrated that the RHV intervention is performing at a satisfactory level and is generally on track. Most of the key aspects of the intervention are being carried out as intended with the expectation of conducting two to three prenatal visitations per pregnancy, conducting three puerperal visitations for each new birth, and six visits to mothers of children U2. Areas for growth include completing quarterly QIVC assessments as currently, only 65% of the intended visitation QIVCs are being completed, and even fewer feedback QIVCs are being administered.

The majority of RHVs are being carried out by CHVs as planned, and on time as scheduled. During the study period (November 2018 – June 2019) an average of 71% of all intended RHVs were completed. Additionally, 72% of RHVs completed were completed within the appropriate timeframe. CHVs were most successful in implementing the U2 RHVs and completed 499 visitations during those first seven months, which represents 78% of all intended U2 RHVs. Completion of puerperal visits was similarly successful at a completion rate of 72%. However, the analysis demonstrated an opportunity to improve the number of 48-hour visitations that are completed (66% completion rate) and to ensure that all households with new births receive all three puerperal visitations. Currently, only 16% of all households received all three visits. Additionally, the analysis reported that although 99% of all recorded pregnancies are receiving a first prenatal visit, very few are receiving a second. Only 29% of the identified pregnant women received a second visit. Both of these findings suggest that there is an opportunity to help CHVs prioritize pregnancies and new births. Due to the short turn-around of the prenatal and puerperal visitations, and reliable scheduling and notification system that ensures CHVs remain vigilant of those RHVs may help close that service gap. A scheduling system that automatically populates a monthly and quarterly report of upcoming RHVs to be distributed to each CHV every month is highly recommended. KIKOP staff should lead the effort to revamp the existing process in use (i.e., yearly paper checklists) to ensure that it is contextually appropriate.

The analysis also showcased the significant variation in CHV caseload, which could be indicative of the gap in the completion rate. Currently, the number of households being serviced by CHVs spans from eight to 40, which is approximately four times the lowest. The data showed that 11 CHVs are servicing less than 20 households. There are also 11 CHVs completing less than four RHVs each month on average, while others are averaging six to nine each month. A preliminary comparison between the CHVs completing the highest and lowest number of monthly RHVs and the percent of U2 RHVs they are completing showed some signs that the number of households impacts the ability to complete RHVs, but no concrete patterns were immediately observed. Further analysis is needed to confirm if caseload affects RHV completion rates. Additionally, the number of assigned households will fluctuate over time with new births and children aging beyond 2 years of age, but it would still be advantageous to seek out solutions that more evenly distribute workload, which could ensure quality. Solutions can include creating partner communities in which two CHVs with nearby communities work to help one another in time when the workload is imbalanced or recruiting more a couple more CHVs to split communities with high need.

CG

The analysis of CG data revealed that the intervention is performing below its target attendance goals and that components of the intervention are not being implemented as intended. Using average attendance and visit completion rates from both promoters and CGVs as a proxy, the analysis showed that the intervention may have only reached 59% of community members with the group meetings and 40% with the home visits.

Although group meeting attendance for both promoters and CGVs is a positive development, attendance is still significantly lower than the 80% benchmark. Promoter group meetings to CGVs are faring slightly better than CGV group meetings to neighbor women with an average of 68% and 50% respectively. Due to the high level of individual effort that is required of the CG model, low attendance is a sign that the members of the community are still in the process of subscribing to it. Low participation may also be a sign that the current schedule of lessons is too frequent for the community context. This evidence suggests that the number of CG lessons be reduced to once a month, rather than two until greater attendance is achieved. At the current level of participation, the effectiveness of the intervention to produce the expected outcomes will likely be impacted long-term. Reducing to one lesson may prove to be useful for scaling the project into other communities. Two lessons per month may be too large of a commitment for program volunteers. Phasing implementation so that it is gradual may improve attendance during its pilot stage. Other options to improve participation can include further community-wide promotion of the CG benefits.

The home visit completion was also significantly lower than the target goal. Promoters completed only 41% of all intended home visits while CGVs completed 40%. A review of more detailed register data did show that home visits were being carried out only for those individuals that did not attend the group meetings, which provide context for the lower rates. To maintain the effectiveness of the care group model, promoters and CGVs should be instructed to complete home visits for each member of their group following each lesson.

Part B - Qualitative Report

RESEARCH SUMMARY

Building on the quantitative process evaluation of KIKOP programs, a qualitative study was executed to further investigate the experiences of the Community Health Volunteers (CHVs) charged with field implementation of the Routine Home Visitations. The study was designed to understand their perceptions around the existing caseload, the facilitators and barriers to completing RHVs, and their satisfaction with the core responsibilities of the position. Additionally, the study sought to gather contextual insight into how well the RHVs were being received by the Matongo community. The study was guided by the following research questions:

- Which cultural, social, physical or organizational factors are influencing how RHVs are being completed in the Matongo catchment?
- Are CHVs managing an appropriate and manageable volume of work for their position?
- Do CHVs have the resources, tools, and training to carry out the RHVs as intended?
- How satisfied are the CHVs with their job responsibilities and the support they receive from KIKOP staff?

RESEARCH METHODS

The qualitative study was conducted using a semi-structured, focus-group design of randomly selected CHVs. Due to the tailored nature of the RHVs and the limited timeframe to conduct research, the focus group design offered the ability to collect a wide range of experiences from a sizeable sample. The process began with identifying the research questions of interest with program management. A defined research goal, research questions, interview questions, suggested probes and transitions were then developed and amassed in an interview guide (see Appendix A). The interview guide was used to facilitate active discussion during each focus group and included interview questions such as: “Can you tell me about any challenges you faced in completing all of your assigned home visits?”; “Can you describe how a home visit typically takes place?”; and “How do you feel about the adequacy of the resources and tools you are given to complete the home visits?” Eight topical codes with various sub-codes were selected and defined based on the interview guide (see Appendix B). Examples include workload, staff support, and influential factors. Additionally, an informed consent form was developed for participants (see Appendix C).

Participants were randomly selected using the randomizing function of Excel. A sample size of 10 participants was selected to achieve 45 percent representation of the target population as well as content

saturation in the limited time allotted. Each of the participants was contacted via telephone to inquire and secure their interest in participating. On July 11, 2019, two focus groups, with five CHVs each, were conducted at the Matongo Health Centre following an informed consent process. The focus groups were led by KIKOP staff and were administered in Swahili. The audio was captured using a recording phone application, a tape recorder, and Microsoft One Note on a laptop computer. Each focus group ran for approximately one hour. Each participant was compensated for their travel and provided cash for a refreshment of their choice.

The audio recordings were safely stored and transcribed into English by two temporary KIKOP consultants. Once transcribed, the focus group transcripts were read and coded using Dedoose software. Memoing of emerging themes also took place during this process. Once coded, the data were thematically analyzed by code to extract the most salient ideas. A matrix of emerging themes allowed for further synthesis of the data, which yielded seven common themes with various theme constructs. The content analysis was conducted by a single outside researcher.

RESULTS

The content analysis identified seven themes as most dominate across the two focus groups and the 10 participating CHVs. These themes represent recurring ideas and thoughts among participant responses. Below is a summary of each theme and the constructs that define them.

Theme 1: Workload

CHVs acknowledge that the role involves multiple tasks to manage but believe the volume of responsibility is aligned with the prestige of the position. The data revealed there are variances in CHV perceptions about workload, but the most salient challenge cited to the role is household availability and cooperativeness. Based on the estimated number of RHVs, CHVs dedicate 2 and 6 hours per week meeting with households and another 1 to 4 hours traveling per week, not including administrative scheduling and planning tasks.

Theme Construct	**Supporting Excerpt**
Mother availability, cooperativeness, and accessibility are the predominate reasons why caseload is viewed as challenging and time-consuming.	"*This role, to me it is not much, but the people we visit are the ones that make it really challenging. You will get like when you have your program, that today I will visit this and that household, let us say 3 households. You may visit the first household and the owner is not at home, that means you will have to visit only two and go back for the one you missed. That is one way, our work becomes challenging, but if everything could be going as per schedule, it is not really much to handle."* -- FG2 Participant 3
CHVs also estimate that they complete between 4 to 12 RHVs per week, which require an estimated 10 to 30 minutes each.	*"In a week I can visit 12 homes and I usually spend like 20 minutes if the owner is cooperative. When they are uncooperative I spend almost 30 minutes or more so all together it takes more than 3 hours."* -- FG1 Participant 3
Completing RHVs is a balance between home responsibilities and CHV responsibilities.	*"The strategies I use is using the checklist so when I am free I usually cross-check and know which homes I have to visit so after finishing my chores I can go visit whenever I am sure the mother I am visiting is also free*."-- FG1 Participant 3
Distance is not cited as a challenge to CHV workload due to their location of residence in the community.	*"For me, it is not quite a distance as such. It takes me like 15 - 20 minutes to move from one home to another."* – FG2 Participant 3 *"The distance is not long since it can take you around 20 minutes from one house to another."* -- FG1 Participant 2

CHVs recognize the need to review health information several times. Know that a repeat of material is a necessary part of the role.	*"If a mother has forgotten all I can do is remind them, you know for a grownup they do a lot of things making it is easier for them to forget. So I just keep reminding them then we start teaching them. (Participant 5: repeating now and again to households will help them.)(Participant 3: explaining to them in details will help.)"* – FG1 Participant 2
Rain directly influences CHV workload and how RHVs are scheduled. CHVs request additional supplies to better cope with unpredictable weather.	*The work that we have is a bit heavier, but we are doing our best, especially once it rains, imagine where you're going to visit the road is poor, its impassable and at that time it has rained heavily, and you're forced to go because the activity you're going for is scheduled in your program. […]You have to wade through the rain and mud so that you meet your plan so that the following day you visit a different home."* -- FG2 Participant 2 *"Take, for example, one of my colleagues mentioned about the challenge of frequent rains, there are times you schedule a visitation in the afternoon but then the rains catch up with you. If you could be having, raincoats, umbrella and boots, you can just leave for your visitations without much worry amid the rains."* -- FG1 Participant 2
Some CHVs express that the workload is heavy, while other do not seemed to share that opinion.	"*The amount of work you have given is so much, because, […] we are supposed to be walking and [completing] home visitations. There are those that we visit who are not in our registers, so that we put them also in the register. Another role is dealing with labor women; we also talk to them for more than two weeks. We are also supposed to visit women with babies as well as visit those that are pregnant. To me the work is too much, but we are managing as we are used to it being that way*." – FG2 Participant 1

Theme 2: Expanding Role

The CHV role has evolved to include several other responsibilities that are beyond the scope of the position as a result of demand from the households they interact with and the community at large. CHVs not only value this added recognition but have embraced the role of CHV as an opportunity to address pertinent health issues affecting their community to work to improve the health of all community members.

Theme Construct	**Supporting Excerpt**
There is an assumption that CHVs are village doctors that can diagnose and distribute medication. This is increasing their scope of work beyond health education to on-demand problem solving and treatment.	*"There are times we make a home visit, you get a baby with a fever, these people trust us and when they see you, they even expect you to give them medication to relieve the fever before they take them to hospital. That also becomes a bit challenging because it is not all about education but also offering them solutions."* -- FG2 Participant 2 *"I have created a level of trust in the village, even people call me at night, as in telling me our village Doctor how do we handle this issue, I explain to them and tell them that tomorrow I will visit them to assess the situation."* -- FG2 Participant 3

Health referrals and coordinating immediate care have become a prominent assumed responsibility for the position as a result of increasing requests to address various health concerns.	*"You see when we go to the homes and people see us as their doctors, as soon as they meet you, they begin explaining to you their problems about the health of their babies, but you only end up referring them, just that referral makes them dissatisfied because they expect even medication. That's when they can have confidence in your work."* -- FG2 Participant 3

Theme 3: Work Strategies

CHVs employ several organizational and interpersonal strategies to both complete their monthly tasks on schedule and to facilitate positive household interactions. CHVs delicately balance building a good rapport with data collect and health education.

Theme Construct	**Supporting Excerpt**
The checklist that has been provided is a helpful tool for staying organized and planning a schedule of visits.	*"Since I have the checklist I am usually aware of the number of people I can visit in a month so I divide them up to know what time I can use to attend to them then I plan my schedule […] I will like to say that, those checklists are really helping as a great deal, they make our work easy, it helps you plan how you carry out visitation, like whom will I visit this month. They help us do our work efficiently and with ease."* -- FG1 Participant 1
Acquiring knowledge of individual household schedules and building rapport and mutual respect with each household has been very useful in completing RHVs.	"*Since I understand my people, if I am supposed to visit them on Tuesday I will go early in the morning so as to find them since that is a market day. So that is the direction I take. If I find someone who goes to work first I usually go when they are back from work. So I usually follow the checklist and understand how my people operate to know their availability and how to reach to them."* -- FG1 Participant 5 *"Your mood, attitude and introduction are very important when making the first contact with the household. The kind of words coming out of your mouth should be of cheer and that invoke hope. Even if she is busy in her farm or her, other chores, use words that are of cheerful spirit, thank her for their time once you are through and even if some may require you to pray with them. Just pray with them."* -- FG2 Participant 4
Mood is a strong determining factor for how well the RHVs will be conducted. CHVs are mindful of moods and tread lightly to ensure that interest is not lost.	*"Once you have come, you must understand her mood, you may enter a household, and get that they had a misunderstanding, in that case, I just greet them brief about why you have med the visit. If they are welcoming and in a cheerful mood, you may introduce and dig deeper into the subject on their health."* -- FG2 Participant 1 *"When filling the questionnaire and you see her tired and losing interest or you perceive her answers to be harsh, you can stop the questionnaire and request her to come later in the day to complete it without becoming a bother to her. So actually, you must take them, as they want not the way you will want things to go."* -- FG2 Participant 5
Persistence and program awareness has increased household participation and community-wide acceptance	*"These days because they are familiar with us and aware of our roles, they are so welcoming. Even if they may refuse, they have never turned us away the third time. That means we must be persistent. For example, a woman who had rejected*

which has made data collection easier.	*my visitations on two occasions but you can imagine on the third day, she was even the one calling me to visit their household."* -- FG2 Participant 1 *"Some share the information while others do not. What makes them share now is when I meet others and they tell me 'I heard you visited so and so and you taught them well. You can visit me as well."* – FG1 Participant 3

Theme 4: Social, Cultural, and Organizational Barriers
The ability to reach the target population and implement the RHV intervention as intended is affected by a few contextual factors linked to interpersonal and social norms.

Theme Construct	**Supporting Excerpt**
Migration is a significant barrier to RHV data collection. Relationship troubles are cited as a contributing factor.	*"Another challenge is when I get to a household you find the couples disagreed and the mother moved out with the baby so you have to wait until they come back so that you can go do the home visits."* -- FG1 Participant 4 *"I have a challenge of migration of people in my village. You will get that when you have planned to do a visitation, for example, two households a day, so if you visit a household that you have purposed to visit and you never find a person there as they have migrated. So you do not get the hospital cards hence data, this makes your work hard. So when she stays away for more than six months, I will fail to report and your records will indicate that I haven't done my reports yet it is not my fault.*"-- FG2 Participant 2
The desire for women to acknowledge or hide pregnancy plays a big role in data accuracy and RHV participation.	*"There are some mothers who do not give full information, but for those who understand things to do with health they are ready to tell you everything, they are times when the woman gets a pregnancy they do not want, it was unplanned for, so they do not want to give you the information, maybe they do not want the husband to know."* -- FG1 Participant 1 *"I also have one household were when I realized that that woman was pregnant, I visited her and told her that I have come to check on her. I told her what I do, which she agreed when I asked her whether she was pregnant or not. She refused to acknowledge her pregnancy, and if it is there then she will go and confirm the test. She has refused to enroll in the group or take my advice."* -- FG2 Participant 2
Unwillingness to participate or provide sensitive information is a common occurrence, which is hypothesized to be the result of the desire for privacy and/or the stigma around health conditions.	*"For me, the challenge was with the pregnant mothers who know their status so when you ask for their record book they do not agree on giving you the book due to fear of stigma."* -- FG1 Participant 3 *"When you ask for their hospital record card when you want to fill they tell us they give us we go to [unclear 54:59]. So there are some matters they do not open up about."* -- FG1 Participant 5

Theme 5: In-field Preparedness and Competency

CHVs are highly confident in their ability to conduct both the data collection and health education components of the RHVs. Lack of materials and incentives are cited as an obstacle.

Theme Construct	**Supporting Excerpt**
CHVs no longer have any challenges with understanding data collection forms. This includes how to properly conduct the nutritional measurements, which is an element of the RHVs that mothers seem to enjoy.	"*Initially we used to experience some confusion but nowadays we have understood the forms."* -- FG2 Participant 4 *"That one [weighing, measuring height, and taking MUACs] we have no problem even when they see us they bring their babies weighing, they even want to take the measurements themselves."* – FG 2 Participant unknown
Lack of materials requires some CHVs to share. CHVs also report that height boards may be too short and a need for an identification badge.	"*They are not enough at all, just take for example, we are forced to share height boards as we only have one in two villages, where we are two CHVs, one in Kiaboiga A and I in B, and it is like a scramble. You may get that when I want to go for my fieldwork, I cannot go as it is with my colleague, or she tells you to wait until a certain date. You see this makes our work a bit challenging. Had it been that you could be having yours, you do not have to wait for her. I request that to make our work easier, ensure that each of us has his/hers among other things that we do not have enough."* -- FG2 Participant 5
Community members expect incentives during RHVs. Offering incentives to pregnant women and new mothers are viewed as a solution to improve RHV interactions and motivate them to seek facility care.	*"Now, there are times during visitations, a household sees you having a bag, and immediately they think you have brought something for them getting them exited only to realize you didn't have anything for them. I remember someone once told me, as if you can carry anything good even a bar of soap! This challenges you so much, like what you pay a home visit and then they expect some goodies from you, which you will not be in a position to offer. This also discourages so much."* -- FG2 Participant 4 *"There are instances where when you visit the mother, you sympathize with the situation, the way the baby is handled, what they use to handle the baby, they are hungry, haven't eaten a thing, or they lack some one or two things. The reality is that these people are existing and are amongst us in the village and we visit them. I feel bad when I visit them empty-handed, it could be better when I pay them a visit; at least I take them something. You do not visit a woman who slept hungry empty-handed; they see it as a waste of time when you visit them. At least help us to make such visitations better, so that where we identify a need, could be soap, basins, petroleum jelly or even food. At least something, to make them happy and more welcoming."* -- FG2 Participant 4
The length and redundancy of the forms are viewed as problematic. CHVs also noted a few questions that did not translate to the context of the community setting.	*["They are long and keep on repeating themselves."* – FG1 Participant 1] "*For instance, this question asking that, are you pregnant? You see I have a young baby, last time you asked the same question repeatedly. What type of family planning do you practice? They answer you; I told you last time, why can you not check what you wrote down last time."* – FG1 Participant 2

	"On the forms, we fill there is a question that asks 'how long would you like to take to have another child?' there are some who dodge that question. Some tell you 10 years; some tell you years and some tell you that question is hard; they do not know how to answer that."-- FG1 Participant 4 *"I see confusion in the question asking a mother what her baby feed on last evening, it becomes difficult as even to me I get confused so the mother gets confused the more. So I used to ask KIKOP Staff what it meant so that when I go out to train neighbor women when I am collecting my data. So nowadays, they know."* – FG2 Participant 5

Theme 6: KIKOP Support

CHVs maintain strong working relationships with KIKOP staff and rely on them for in-field assistance and problem-solving throughout the month. Request for more meetings and more opportunities for refresher courses and continuing education.

Theme Construct	Supporting Excerpt
Monthly meetings are viewed as an opportunity to provide refresher health education training.	*"My thoughts on the monthly reports is they should be taking us for many seminars so that we can know what we should be doing since we have not gotten to 90% of the information we need to know on health."* -- FG1 Participant 4 *"Provide us with refresher courses to be effective and efficient at least twice or once a month depending with a need."* -- FG2 Participant 4
CHVs support continuing education courses on STIs and other relevant health matters for CHVs, and organizing catchment-wide health education meetings to reach more people with basic health information.	*"The one that was missing was on the other diseases like HIV and Tuberculosis. Since when we go to a household and we find someone has a sign of Tuberculosis we do not leave them there we usually try where we can. If we get more help we can even help the rest. We should not just depend on the education on pregnant mothers and under 2 babies alone."* -- FG1 Participant 4 "*To call for "barazas", for this information to reach many people, "Barazas" will help us to reach more people…"* FG2 Participant 1
Monthly meetings are valuable for troubleshooting and problem-solving. CHVs request for a second meeting to allow more time to address emerging issues and stress desire for meetings to start on time as scheduled (9 a.m.).	*"There are challenges that we encounter while in the village, but when we come to such meeting with KIKOP Staff. They help provide solutions to those challenges, they add to us our knowledge to take to the villages, and even if we encounter the same challenges again, be it in the neighbor group, neighbor women or in the households, and we normally invite them. For sure, they come to help us provide solutions to those issues."* – FG1 Participant 2 *"Then that means that we good time managers, if we agree our meeting time to be 9:00 am, let it remain to be 9:00 am."* – FG1 Participant 1
Highly value support by field officers and call on them often for assistance both in the community and with data reporting.	"*It also helps us, when you realize you can go to a certain household alone, especially if it is a new outcome, you can request a KIKOP staff to accompany you to that home to educate that woman. […] If for example you have three women to visit per day on the same date, in that case you*

	contact the field officer to come and assist you going to one." -- FG2 Participant 4 *"I will like to say that reporting is good, for instance there are instances where you face challenges, you inquire and are given direction, what you need to do, do this or that or in other situations the KIKOP Officer comes to your assistance. I do not see it challenging because we are always with them throughout the month, so I do not see it challenging as such."* -- FG2 Participant 1

Theme 7: Work Satisfaction

CHVs are highly satisfied with the scope of their work and the opportunities it affords them. The importance placed on the task of data collection and how it reflects on their performance seems to be the only point of stress.

Theme Construct	Supporting Excerpt
Missing data seems to be a point of stress and contention. Commentary suggests that missing data is a measure of their job performance and that they believe their primary purpose is solely to collect data.	*So when she stays away for more than six months, I will fail to report and your records will indicate that I haven't done my reports yet it is not my fault."*-- FG2 Participant 2 *"She refused to acknowledge her pregnancy, and if it is there then she will go and confirm the test. She has refused to enroll into the group or take my advice. As field officers, you may come across her and you may put the blame on me for not enrolling her or having her attend care services, yet it is not my fault."* - FG2 Participant 2
Access to health training is a leading reason why CHVs find satisfaction in their work. They enjoy having health expertise that is recognized by the community, which reinforces their motivation for the role.	*"I enjoy working as a CHV because there are a lot of lessons and topics that I learn at KIKOP, of which if I were not a CHV, I could not be knowing or having the privilege to know first-hand information."* -- FG2 Participant 4 *"Health lessons that we get is another factor that I enjoy the most at KIKOP. There are so many lessons, other things that we learn here, I never believed that they ever existed that way. Working as a CHV and now at KIKOP has enlightened me so much, I am able to read and write, think critically, counsel, and manage the health of people, before being a CHV; I was just a homemaker and a small-scale farmer."* -- FG2 Participant 5
Engaging the community from the beginning, in addition to the tools and materials provided, has allowed CHVs to approach households with better ease. Community endorsement has brought prestige to the CHV role, which increases their job satisfaction.	*"KIKOP took a good step when they involved the administration, village elders in doing their work in the community so their project was legalized now it is easier to go into someone's household. The uniforms have also helped."* - FG1 Participant 5 *"I am happy when I am called the Doctor number one in the village, in case of anything health related happening in the village, people normally say, call our village Doctor, she must help in this actually it is her work. This brings me happiness when I help others. Health lessons that we get is another factor that I enjoy the most at KIKOP."* -- FG2 Participant 5

DISCUSSION and RECOMMENDATIONS

The qualitative data reveals that while CHVs enjoy the prestige of their position and take pride in their work, they also face several challenges that burden their workload. Household availability and cooperativeness are cited as the most significant challenges, which suggests more can be done to support CHV efforts by increasing community awareness of the program's activities and benefits. CHVs highlight program awareness as an influential factor in the willingness to cooperate. Additionally, the need to revisit households because of the lack of availability requires a larger time investment. Although CHVs highlight the checklists as useful tools for staying organized, this tool does not have the added feature of appointment scheduling and confirmation. To fill this gap, some CHVs have taken the initiative to build knowledge of household schedules to properly schedule their RHVs. However, identifying a more pragmatic method for scheduling and confirming RHV appointments may be more sustainable for reducing time waste long term. Solutions may include organizing ways to enhance phone communication to allow CHVs to confirm appointment times and neighbor women to alert CHVs of scheduling changes. Another option may be a leave-behind appointment card with key behavioral messages from the appointment. The data also revealed CHV have different perceptions regarding workload, which offers further evidence that there is an imbalance in the number of assigned cases identified in the quantitative analysis. Based on the estimated number of RHVs completed each week, CHVs spend between three and 10 hours per week traveling to and preforming RHVs, which equates to 13 hours per month for some CHVs and 40 hours per month for others. Working to balance caseload across CHVs could improve the overall delivery of the program and ensure all RHVs can be completed on time.

Other significant barriers were more contextual and included migration, mood, and willingness to acknowledge pregnancies. Migration, due mostly to relationship disputes, is cited as the primary reason for missing RHV data. While addressing interpersonal issues is beyond the scope of the intervention, creating a data collection process that better addresses migration by allowing KIKOP staff to remain in touch with those that relocate temporarily could be a viable solution. Pregnancies have also been challenging for CHVs to record due to denial or desire to keep them secret. A perception that RHV data is open to the public or will be publicly displayed is possible. Using terms such as "register" and the emphasis on announcing vital events could also be contributing. The perceived lack of privacy may also contribute to the reluctance of some women to provide sensitive information as cited by CHVs. Adding a layer of confidentiality and consent to the data collection and reporting process may improve willingness to participate. Missing data as a result of these barriers seems to be a significant cause of job stress. The stress from not being able to capture data implies a strong focus on collection as a performance measure of the position. Revisiting employee culture and priorities are recommended. CHVs also explicitly described mood as a strong determining factor regarding when and how RHVs are completed. This suggests that some women view the RHVs as burdensome and of little value, or that CHVs perceive this to be their viewpoint. It could also be evidence that CHVs are not stressing the value of RHVs to households. However, careful navigation of mood is one of the strategies that CHVs have employed to ensure households remain engaged. If interest is lost, CHVs will pause the visit and negotiate a time to return to finish. This along with building strong rapport by greeting households warming, having a jovial attitude, and expressing authentic interest in household wellbeing contributes to the successful completion of RHVs. These strategies are primarily self-directed and provide evidence that CHVs possess high-quality interpersonal skills, which KIKOP staff can further nurture and promote.

To enhance their job performance, CHVs stressed the need for more materials and training. CHVs report that households expect incentives and that distributing small gifts will create more welcoming environments and increase motivation to participate. This expectation could be the result of other non-governmental organizations working in the region as suggested by KIKOP management. Their desire to provide immediate solutions to a known household need may also contribute. However, CHVs may not be fully aware that gifts often produce short-term effects, or that providing incentives will set a long-lasting precedent that could chip away at the participatory feature of the program. In addition to incentives, CHVs highlighted the need for rain gear, identification badges, and more height boards to reduce unnecessary job difficulty. Providing the proper number of height boards and creating identifications badges are low-cost solutions that are highly recommended. CHVs would also like KIKOP staff to support them by providing refresher courses and training on new health topics in addition to troubleshooting. CHVs suggest this additional facetime be spread across two monthly meetings, but the expansion of the

program to other catchments should be taken into account. Spending time during each meeting to review one or two key features of the RHVs in detail could be easily incorporated, especially if meetings start on time as CHVs have requested. Observational research confirms that meetings start significantly later than scheduled. KIKOP staff could expend much more effort to respect the time of the CHVs during these interactions. It may also be valuable to troubleshoot and provide refresher training in small breakout groups to allow for more open communication and tailoring of content. Providing training on new health topics should be considered, but with a focus on those that fit within the intervention goals and suite its target audience. Additionally, it is evident that KIKOP staff provided CHVs with high-quality support as was required during the launch of the intervention, but it is recommended that the KIKOP staff focus on building CHV capacity to reduce the volume of in-field assistance that is needed.

Finally, the qualitative data reported that CHVs are highly satisfied with their positions due primarily to their access to health education and the community recognition it affords them. The data revealed that this recognition has expanded their role to include on-demand health care consultation and treatment that is far beyond the scope of the intervention. Many of the participating CHVs described being labelled as the village doctor and taking time to advise households on topics such as STIs. Demand for their attention has organically increased their caseload and possibly created unintended adaptations to the intervention. Both may be impacting how the intervention is being implemented and their ability to carry out the activities as intended. CHVs have embraced this expanded role for highly admirable reasons, but a discussion about the amount of flexibility that is appropriate for the intervention should be conducted among program leadership and then with CHVs.

LIMIMITATIONS

Limitations of this qualitative study include the breadth of topics covered, facilitation by KIKOP staff, and potential researcher bias. The number of content areas covered in each of the CHV focus groups limited the ability to reach a deep understanding of any single topic. Although the study was comprehensive, further investigation into some of the more complex subjects would be ideal to truly understand why they are occurring. The focus groups were also facilitated by KIKOP field officers, which may have influenced how participants responded to the questions. This means that the data could be significantly skewed positive. Lastly, the content analysis was conducted by one researcher and as a result, is subject to biases of that researcher. More than one researcher is recommended for analysis to ensure a higher level of objectivity.

APPENDIX A

Matongo Community Health Volunteers - Qualitative Interview Guide
Date: July 2, 2019
Data collector: Lindsay Woodcock
Project: KIKOP Routine Home Visits
Informants / Population: Community Health Volunteers
Interview Format: Focus group
Date of interview: To be determined
Number of focus groups: 2
Number of participants per focus group: 5

Purpose: To investigate the delivery of the KIKOP Routine Home Visits (RHVs) by Community Health Volunteers (CHVs) for pregnant women and mothers with children under the age of two. The goal of the focus group is to understand the implementation strengths and challenges experienced by CHVs from their perspective. It will also serve to gather contextual insight on how well components of the RHVs are translating for members of this rural community. Analysis of the interviews is intended to inform recommendations for process improvements that will increase program fidelity and delivery.

Introduction: Good afternoon. Thank you all for taking the time to speak with me today. **(*Insert facilitator introduction = name and title*).** The purpose of this focus group is to learn more about how the routine homes visits are being carried out in the Matongo catchment. I am interested in learning about your what it is like for you to conduct home visits so that I may learn more about things that are working well and things that may need to be improved from your point of view. It is also a chance for you to share your suggestions.

The series of questions I have will ask you about your individual experiences and things that you have noticed while being a CHV and while completing home visits. There are no right or wrong answers to these interview questions because I only want to learn about how the visitation program is working from your opinion. I hope that your responses will truly reflect on how you think and feel. If there are any questions that you do not feel comfortable answering or would not like to address, please to let me know and I will continue to the next question. Our discussion will take no more than 90 minutes.

This interview is being recorded and **(*insert name*)** will be taking notes so that we can ensure we record your response accurately. Your name will not be recorded and all response will be recorded anonymous. After this interview, we ask that you keep any information shared today confidential.

Do you understand why we are holding this interview? Do you consent to continue with the interview? If so, please take a few moments to complete this consent form.
Hand out and collect signed informed consent.
Thank you for completing the consent form. Before we begin the interview, do you have any questions or concerns?
If no questions.

Transition: To get us started I have a few questions that will help me get to know you and your role as a CHV with KIKOP.

INTRODUCTION QUESTIONS

1. Can you tell me your name, the community you represent as CHV, and how long you've been a CHV?
2. Can you tell me a little about the responsibilities you have as a CHV?

Transition: Thank you for sharing some background information on your role as a CHV. Now I will ask some questions about the amount of work required of CHVs and your experiences managing your numerous responsibilities.

RESEARCH QUESTION 1 (R1): Are CHVs managing the appropriate volume of work for their position and as intended by the intervention?

R1 Interview Question 1: Can you tell me about the amount of work and time that is required to complete all the responsibilities of the home visits?

Probes:

a. How do you feel about the amount of work required?
b. How much time do you spend each week on the tasks involving home visits?
c. Can you tell me about the average amount of walking that is required to complete the home visits each week?
d. How much time do you spend walking to your home visits each week?

R1 Interview Question 2: Can you tell me about any challenges you faced in completing all of your assigned home visits?

Probes:

a. What are the reasons that a home visit is not completed during the month?
b. Have you had any difficulties managing the number of visits that need to be completed?
c. Have you had any difficulties scheduling visits with mothers?
d. Do you think the checklists for the home visits work well?

R1 Interview Question 3: Can you describe the strategies you use to schedule and complete your home visits on schedule?

Probes:

a. Can you tell me about how you go about scheduling visits with mothers?
b. Can you describe some of the strategies you use to save time and make sure that all visits are completed in the 30 days you are given?
c. Can you describe some of the strategies you use to visit all the moms on your list for the month?
d. How have you or KIKOP staff resolved scheduling issues?

R1 Interview Question 4: How do you feel about the adequacy of the resources and tools you are given to complete the home visits?

Probe:

a. Can you think of anything that would help you better complete the home visits?
b. Can you think of anything that would better prepare you for the home visits?
c. Can you think of anything that KIKOP can do that would help you complete the homes visits?

R1 Interview Question 5: Do you have any thoughts or ideas about the monthly meetings with KIKOP staff?

Probes:

a. Which parts of the meetings do you enjoy the most?
b. Which parts of the meetings do you think can be improved?
c. What do you think the meetings should focus on the most? (Ask about training, team building games, sharing feedback with staff, a time to ask KIKOP questions about challenges encountered during the month.)

Transition: Thank you for providing information about your experiences managing the CHV responsibilities. Next, I would like to ask you some questions about your experiences being trained to carry out the responsibilities of a CHV.

RESEARCH QUESTION 2 (R2): How satisfied are the CHVs with their training and the support they receive from KIKOP to complete the components of the home visits?

R2 Interview Question 1: What initial and ongoing training does KIKOP provide to support you as a CHV?

Probes:

a. Can you describe the training and engagement you receive from KIKOP?
b. Can you describe the support you receive from KIKOP?
c. How can the training and support provided by KIKOP be improved?
d. In what ways could KIKOP better support you as a CHV?

R2 Interview Question 2: How prepared do you feel to teach and speak about all the subjects covered in the home visits?

Probes:

a. What subjects, if any, do you feel you could learn more about?
b. What subjects, if any, were missing from the training?
c. Which subjects, if any, do you feel you have a hard time describing to mothers?
d. During your first home visit, were there any aspects that you did not feel prepared to speak about?
e. If not mentioned, ask specifically about: weighing/measuring the child, counseling the mother, reading the health card, filling out the questionnaire.

R2 Interview Question 3: What do you think about the data collection and reporting process?

Probes:

a. What part of the data collection and reporting process do you feel works well?
b. What parts of the data collection and reporting process have been challenging?
c. What parts have you had requested help with from KIKOP staff?
d. What parts of the forms are the hardest to ensure they are accurate?
e. Are there any parts of the forms that are confusing to mothers which make home visits difficult?

Transition: Thank you for sharing your thoughts on your CHV training. I would now like to discuss your experiences carrying out home visits.

RESEARCH QUESTION 3 (R3): Which cultural, social, physical or organizational factors are influencing how the RHVs are being completed?

R3 Interview Question 1: Can you describe how a home visit typically takes place?

Probes:

a. Are there factors that influence how they take place?

b. What do you typically say and do upon arrival?
c. How do you typically end the visit?
d. Are there any unique things that you do during the home visits?

R3 Interview Question 2: Can you describe your experiences working/interviewing mothers?

Probes:

a. Can you describe the challenges, if any, you have had interviewing mothers? (If not mentioned, ask specifically about: cultural norms, social norms, physical obstacles)
b. Can you describe how you have overcome those challenges?
c. Can you describe the successes you have had interviewing mothers? (If not mentioned, ask specifically about: cultural norms, social norms, and physical advantages.)

R3 Interview Question 3: Can you tell me about how receptive and welcoming mothers are to the visits?

Probes:

a. Can you think of any comments that mothers have made about the visits?
b. Do they express any discomfort about the visit?
c. How forthcoming are mothers with sharing information with you?
d. Do you feel that the information they are sharing is accurate?
e. Can you think of anything that would help improve a mother's interaction with you?
f. Can you think of anything that would help improve a mother's impression of the visitation program overall?

R3 Interview Question 4: Which aspects of the RHVs do you think are the most important to mothers and children?

Probes:

a. Have mothers made any comments about which aspects they think are most important?
b. Have mothers made any comments about which aspects they think are most helpful?

Transition: Thank you for sharing your direct experiences carrying out the home visits. I just have a few final questions about your role as a CHV.

RESEARCH QUESTION 4 (R4): How satisfied are the CHVs with their job responsibilities and the support they receive from KIKOP staff?

R4 Interview Question 1: What part of being a CHV do you enjoy the most?
R4 Interview Question 1: What parts of your position would you like to improve?

Probes:

a. What suggestions do you have for improving the CHV program?
b. Do you have any thoughts on which items KIKOP should prioritize with how the home visits are completed?

Conclusion: Thank you so much for your participation and all of the input you provided today. We appreciate your feedback and will use what you said here today to improve the KIKOP program. Before we close, does anyone have any questions or anything else they would like to add?
If no questions or comments
Thank you again.

APPENDIX B

Matongo Community Health Volunteers - Topical Code Book

Parent Code	Sub Code	ID	Decision Rules
Workload		1.0	Apply anytime a participant describes the volume of work, time or effort that is required to complete their job as CHV. This will include the unique challenges of carrying out home visits as scheduled.
	Work strategies	1.1	Apply anytime a participant describes strategies that they used to complete their CHV tasks before and after the home visits.
	Workstyle	1.2	Apply anytime a participant describes how they conduct home visits. This will include any information about the approaches or strategies they employ during the home visits. It may also include how they were trained to complete home visits.

Suggestions		2.0	Apply anytime a participant suggests how to improve a process or method related to CHV work.
Staff Support		3.0	Apply anytime a participant remarks about the support they receive from staff in carrying out their duties.
	Tools	3.1	Apply anytime a participant discusses the tools they use, as well as the tool they believe they need to carry out their duties.
Content		4.0	Apply anytime a participant describes their level of comfort with the content/subject area of the RHVs. This can include their confidence in the material or what they may feel they could learn more about.
	Training	4.1	Apply anytime a participant comments about the training they received from KIKOP.
Data management		5.0	Apply anytime a participant comments on the process of collecting and reporting data. This will include what they think works well and what they find challenging.
Influential factors		6.0	Apply anytime a participant describes any other factors that impact the home visits that are not cultural, social or environmental.
	Cultural / Social Factors	6.1	Apply anytime a participant describes a social or cultural factor that positively or negatively influences the home visits.
	Environmental Factors	6.2	Apply anytime a participant describes an environmental factor that positively or negatively influences the home visits.
Interaction		7.0	Apply anytime a participant describes what it is like to work with mothers. This will include how receptive mothers are and the successes and challenges they have faced when interacting with them or trying to interact with them.
	Feedback	7.1	Apply anytime participants describe the direct feedback they receive from mothers about the home visits. This will include which aspects of the visits the mother think are important and things that make them uncomfortable.
Satisfaction		8.0	Apply anytime a participant comments about their like or dislike of their position as CHV or aspects of their job.

APPENDIX C

Matongo Community Health Volunteers – Focus Group Informed Consent

Hello. My name is _____and I work with the Kisii Konya Oroiboro Project (KIKOP). I am conducting this research on behalf of the Ministry of Health and the KIKOP project.

By participating in this focus group you have the opportunity to help to advance our understanding of basic questions about the progress of the KIKOP project in the Matongo catchment. The purpose of the focus group is to learn from your experiences as Community Health Volunteers to help us understand what we can do to improve the KIKOP project. We will use the information you provide today to identify and adopt practical changes to the KIKOP project. The focus group will take no more than 90 minutes.

During the focus group, I will ask a series of questions about your experiences as a Community Health Volunteer for KIKOP. Please answer them to the best of your ability. Any comments or remarks that you provide will be confidential. You will not be identified by name in the collected data or any reports using information obtained from this focus group. Your confidentiality as a participant in this study will remain secure.

While we would like you to answer every question, you are not required to respond if you do not feel comfortable doing so. You may also ask any questions about this focus group or the content being addressed at any time. You also have the right not to participate if you so choose and may leave the focus group at any time without any consequence. Compensation for this focus group is limited to Ksh 200 for travel and Ksh 50 for refreshment.

By signing this form, you acknowledge that you understand the purpose of the focus group, have no further questions about the process that you would like answered, and that you voluntarily agree to participate.

Name	**Signature**