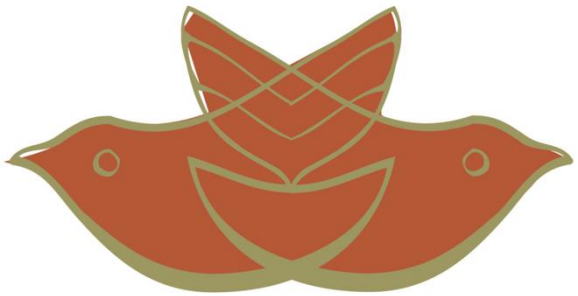

Operational Research Report on the Care Group Training Cascade in Matongo Catchment – Kisii, Kenya

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Abbreviations

KIKOP – Kisii Konya Oroiboro Project

MHC – Matongo Health Centre

CHV – Community Health Volunteer

FO – Field Officer

CGV – Care Group Volunteer

NW – Neighbor Women

QIVC – Quality Improvement Verification Checklist

FGD – Focus Group Discussion

Introduction

Background

Maternal and infant mortality have remained significant global public health problems for decades. Women and infants around the world have consistently struggled to access the resources they need for adequate prenatal, postnatal, obstetric, and infant care to remain safe and healthy during pregnancy and childbirth. The burden of maternal and infant mortality falls disproportionately on vulnerable populations, such as individuals living in low-resource settings both in the United States and around the world.

Maternal death refers to the death of a woman while pregnant or within 42 days of the termination of her pregnancy from any cause related to, or aggravated by, the pregnancy or its management (WHO, 2020). In 2015, it was estimated that 303,000 maternal deaths occurred globally, most of which could have been prevented (WHO et al, 2015). Although maternal mortality decreased by approximately 44% between 1990 and 2015, underserved communities such as those in low-income countries and rural areas continue to be more heavily burdened by maternal death. In fact, the maternal mortality ratio in developing countries is almost 20 times greater than the rate in developed countries, and 99% of maternal deaths occur in developing countries such as those in sub-Saharan Africa and South Asia (WHO et al, 2015). The most common direct and indirect causes of death for mothers include hypertension, hemorrhage, unsafe abortion, and infections (WHO, 2019). Many deaths result from complications both during and following pregnancy and childbirth and are preventable since they can be managed and treated with proper obstetric and perinatal care. However, women living in underserved communities who lack access to health resources remain at risk for these complications and subsequent death despite the availability of life-saving resources elsewhere.

Infant mortality refers to the death of a child within his or her first year of life (CDC, 2019). Major causes of newborn death worldwide include preterm birth, birth asphyxia, infections, and birth defects (WHO, 2020). Infants born and raised in developing countries are more heavily burdened with infant mortality. In 2017, the infant mortality ratio in low-income countries was over 10 times greater than the ratio in high-income countries (48.6 and 4.6 deaths per 1,000 live births, respectively; CIA, 2020). Furthermore, 75% of all child deaths under the age of five occur within the first year of life, indicating the importance of access to quality care during infancy (WHO, 2020).

Skilled birthing attendants including doctors, nurses, and midwives are invaluable during deliveries due to their ability to identify and manage life-threatening complications. It is well-understood that maternal and infant deaths are less likely when deliveries occur in the presence of skilled birthing attendants. Still, less than half of all women in Africa deliver with the help of a skilled professional compared to 99% in high-income countries (USAID, 2017). Women living in rural parts of developing counties experience even greater difficulty in accessing the care they and their infants need to have a safe and healthy delivery. Rural areas often experience health worker shortages, and the infrastructure connecting individuals in rural areas to health facilities is often poor or inadequate (APP, 2010). As a result, up to 75% of mothers in parts of sub-Saharan Africa deliver their babies at home without the assistance of a skilled birth attendant, thus putting themselves and their infants at risk of complications and possible death (Kifle et al, 2018).

Many maternal and infant deaths can be prevented with proper obstetric and post-delivery care, yet utilization is low as women and infants often experience four types of delays which impact their access to care and increase their risk of death: 1) delay in recognizing complications, 2) delay in deciding to seek care, 3) delay in reaching a health facility, and 4) delay in receiving quality and appropriate care at the facility (The Partnership, 2006). Because of the first two common delays, a mother's ability to recognize complications and decide when it is appropriate to seek care is essential to her and her infants' health during pregnancy, childbirth, and postpartum. Providing mothers with antenatal care not only screens for

pregnancy-related complications, but also educates mothers on proper care for themselves and their newborns such as proper diet, exclusive breastfeeding, identifying danger signs during pregnancy and in newborns, and developing a birth plan for the day of delivery (The Partnership, 2006).

Like much of sub-Saharan Africa, Kenya is burdened by high levels of maternal and infant mortality. As of 2017, the reported maternal mortality ratio in Kenya was 342 deaths per 100,000 live births – over 25 times greater than the maternal mortality ratio in developed countries (CIA, 2020). Currently, the reported infant mortality rate in Kenya is 29.8 per 1,000 live births (CIA, 2020). Contributing to these poor maternal and infant mortality rates is the fact that 62% of women in Kenya give birth without a skilled birth attendant and are less likely to visit the health facility within 48 hours of delivery – a window which is critical to identify and treat complications (USAID, 2017).

Kisii is a county within Kenya with an urban center surrounded by rural communities. When the 2009 Population and Housing Census was completed, the population of Kisii was just over 1.1 million individuals and expected to grow to 1.3 million by 2017. The county occupies over 1,300 km^2 of Kenya and contains nine sub-counties. Matongo is one such sub-county with 2018 project data showing infant and maternal mortality rates double and triple national averages (91 per 1,000 live births and 1,515 per 100,000 live births, respectively).

Many maternal and infant deaths in Matongo can be linked to the four delays previously discussed. In a formative research report from 2018 conducted by staff at Curamericas Global, women in Matongo described many of the barriers they face to attending a health facility for delivery. The cost associated with receiving services offered at hospitals and health facilities was a major limiting factor. Supporting this finding are the results from a 2009 study, which found that 98% of women who delivered in a health facility had to pay out-of-pocket fees (Perkins et al, 2009). Women also reported fear of being abused or beaten, feeling ashamed, or being exposed at health facilities. It has been estimated that 1 in 5 women in Kenya who deliver at a health facility or hospital experience some form of disrespect and/or abuse such as physical abuse; non-consented, non-dignified, or non-confidential care; discrimination; abandonment; and detention in facilities (Abuya et al, 2015). Gender norms which dismiss women's voices and decision-making abilities regarding their birth plan, where to deliver, and whether/how to save money for transportation to a health facility also impact access to care. Women also mentioned cultural norms including the belief that women in Africa should have a natural birth at home without assistance, as well as fear of delivering a female child when the father wanted a son. Finally, even if a woman chooses to deliver at a facility and that decision is supported by her social network, she may still experience difficulties accessing care such as poor planning or lack of a birth plan, travel time, transportation, healthcare worker strikes, and health facilities not offering 24/7 services.

Curamericas Global

Curamericas Global, Inc. (Curamericas) is a non-religious, apolitical nonprofit organization based in Raleigh, North Carolina. In 2018, Curamericas partnered with the Ministry of Health (MoH) in Kisii, Kenya to improve rates of maternal and infant mortality through a project called the Kisii Konya Oroiboro Project (KIKOP). KIKOP utilizes the community-based, impact-oriented methodology to address the most critical health problems in communities. Through this methodology, communities are studied closely prior to program implementation to identify their most pressing health issues. A house-to-house census is conducted to identify individuals in each household, evaluate nutritional status, and determine the prevalence of household health infrastructure (e.g. hand washing stations). Family health data is collected through routine home visitation, health records, surveys, and group meetings. This data collection enables the design of evidence-based programs to address the community's current health needs. Following program implementation, programs are monitored by tracking health service utilization and health status.

Throughout programs, vital events are monitored to provide data-driven action plans and quality improvement. In this way, interventions can be modified to meet the evolving needs of the community.

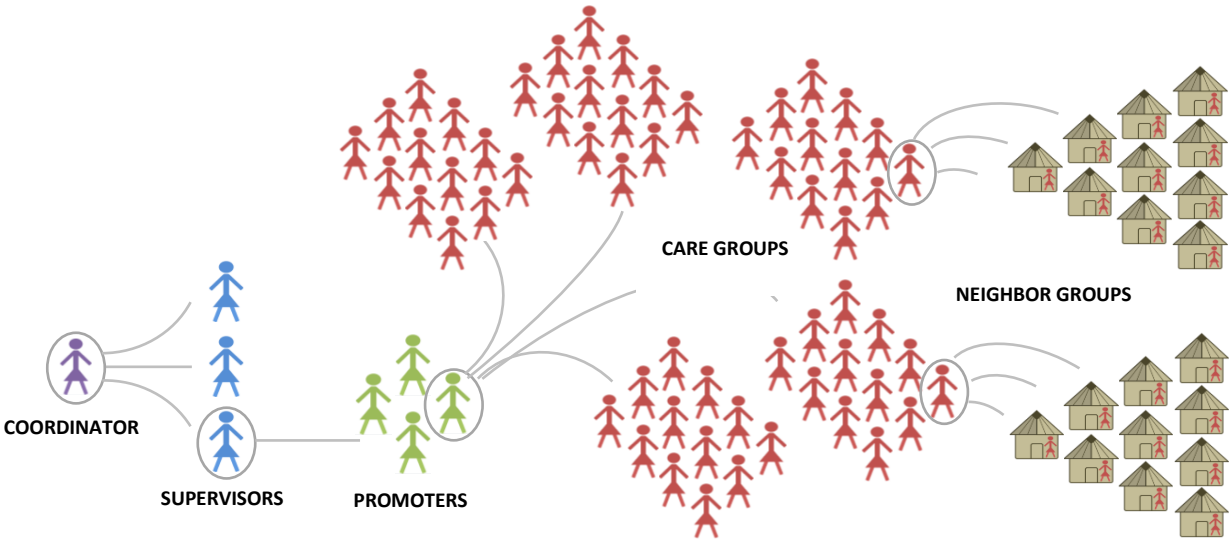
KIKOP piloted its three interventions aimed at health systems strengthening and health education in Matongo due to its high levels of maternal and infant mortality. Long before KIKOP's formation, the MoH sponsored the development of the Matongo Health Centre (MHC) to provide basic maternity, HIV, and primary care services. To increase access to specifically the maternal health services at MHC, KIKOP hired two nurses to staff the health center at night to provide 24/7 care to mothers.

In addition to expanding the facility's hours, KIKOP began two community outreach initiatives to educate mothers on the importance of prenatal care and proper care for newborns, encourage mothers to deliver at the health facility, and monitor the growth and development of children under two. Community Health Volunteers (CHVs) are selected by their communities and responsible for the overall health in the community and the documentation of vital events such as pregnancies, births, miscarriages, deaths, and migrations. Each volunteer is assigned to one community. S/he visits pregnant women and mothers of children under age two on a regular basis to document vital events and reinforce best practices such as delivering at the health facility and exclusively breast feeding babies under six months of age. In addition to monitoring and supporting the health of community members, CHVs work to foster a widespread support of mothers and young children in the community through participation on a village health committee.

The second community health initiative is the implementation of a Care Group training cascade. Care Groups offer a series of lessons that are intended to encourage health facility delivers and facilitate health behavior change at the household level. This structure of health education has been proven to improve maternal health, child health, and nutritional outcomes. These lessons include topics such as prenatal care, nutrition, breastfeeding, danger signs during pregnancy and in newborns, and how to develop a birth plan.

Health information begins at the level of paid KIKOP staff known as field officers (FOs). FOs help develop and prepare the lessons and teach lessons to promoters who then teach Care Groups. Each Care Group consists of 10-15 community-based volunteer health educators, known as Care Group Volunteers (CGVs). Each CGV is then responsible for regularly meeting with and teaching Neighbor Groups – a group 10-15 pregnant women, mothers of children under two, and women of reproductive age (collectively known as Neighbor Women [NW]) within their own community. The structure of Care Groups facilitates behavior change within households through the passage of health information from FOs, to promoters, to CGVs, to NW. In this way, Care Groups create a multiplying effect through which a small number of paid project staff disseminate information on critical health matters to hundreds of women. The diagram below demonstrates the multiplying effect offered by the Care Group structure.

Structure of the Care Group Training Cascade



Each **Coordinator** (paid staff) is responsible for 3 to 6 Supervisors. A project may hire multiple Coordinators (overseen by a **Project Manager**) if needed to meet the desired coverage.	Each **Supervisor** (paid staff) is responsible for 4 to 6 Promoters.	Each **Promoter** (paid staff) supports 4 to 9 Care Groups.	Each **Care Group** has 10 to 15 Care Group Volunteers that are elected by Neighbor Group members.	Each **Care Group Volunteer** shares lessons with 10 to 15 **Neighbor Women** and their families, known as a **Neighbor Group**. (There is a maximum of 15 Neighbor Women in each Neighbor
Each Promoter reaches about 500 to 1,200 women.				

Every month, two lessons are provided from FOs to promoters, from promoters to CGVs, and from CGVs to NW. Promoters conduct home visitations to members of their Care Groups to teach the lessons to those who missed the group meeting, answer questions mothers have regarding the information, and ensure the health behaviors in households match the best practices taught at lessons. In addition to learning the information from promoters, CGVs also teach bimonthly lessons and conduct home visitations to members of their Neighbor Groups. Both CGVs and promoters are responsible for practicing the healthy behaviors taught in the lessons to set a good example for those they teach. This peer support is an essential component of the training cascade, as healthy behaviors are more likely to be adopted into households when women have a positive relationship with their FO, promoter or CGV. Through this system of home visitations, group lessons, and role-modeling, Care Groups facilitate neighbor-to-neighbor peer support and foster a community-wide interest in and desire to improve maternal and infant health.

As a form of continuous quality improvement, FOs and promoters regularly attend group lessons led by other facilitators (promoters and CGVs) and fill out Quality Improvement Verification Checklists (QIVCs). These checklists document whether facilitators remain friendly and polite, provide accurate information, ask the right questions, and collect appropriate health data from mothers.

Ongoing review of project data shows that since program implementation there has been only one maternal death, significantly reduced infant and child deaths, and an increase in health facility

deliveries. However, quantitative data does not explain the mechanisms through which these improvements are made, nor does it describe the experiences of those participating in the program. To learn more about the impact of Care Groups on this improvement in maternal and infant mortality, an operational research study utilizing qualitative method investigated the following six research questions:

- How do promoters and CGVs see their role with the KIKOP project?
- How do promoters, CGVs and NW feel about their involvement with the Care Group training cascade?
- How do promoters, CGVs and NW feel about the lessons they receive and the support they are provided with?
- What do promoters, CGVs and NW think about the current state of the Care Group training cascade?
- How do promoters, CGVs and NW feel about the current state of home visitations?
- How do promoters and CGVs feel about their ability to collect and manage project data?

Methods

Focus group discussions (FGDs) were the chosen methodology for this research study. To investigate the state of Care Groups, FGDs with promoters, CGVs, and NW were required. The format of FGDs allowed participants to share ideas, build off each other's stories, and obtain multiple perspectives from many informants within a reasonable amount of time. Research questions and the formative research report written in 2018 guided the development of individual interview questions for the FGDs. Interview guides for all three informant groups are located in Appendix 1.

Two focus groups were held for each group of informants for a total of six FGDs. Since there are only five promoters in Matongo, all five participated in one of two FGDs. It was important to obtain a sample of volunteers from multiple communities to learn about the lived experiences of participants throughout Matongo. To obtain a varied sample, twelve CGVs and twelve NW were randomly selected to participate in FGDs. All six FGDs were held at the MHC.

The first FGD with three promoters was facilitated in English by the international intern leading the research study. Informants were told they could speak in English or their native language and have their responses translated into English by a translator present for the FGD. Still, the language barrier made it difficult to have a free-flowing conversation, so the five remaining focus groups were conducted in the local Kisii language and facilitated by KIKOP staff to encourage more conversation and reduce participant burden. To prepare, facilitators received a "crash course" on qualitative research led by the intern, reviewed the interview guides prior to each FGD, and practiced asking the questions in Kisii language to avoid errors in translation.

Before any questions were asked, all informants were explained the purpose of the FGD and research study and read and signed a declaration of consent agreeing to participate. All informants were made aware that their participation was entirely voluntary and that there were no consequences if they chose not to participate or left the FGD early. Informants were assured that everything they shared with the group would be anonymous and remain confidential and asked not to repeat anything shared by other members of the FGD. A notetaker was present for all six FGDs, and the audio was recorded by the facilitator and subsequently stored in Dropbox. Each focus group took approximately 75-90 minutes to complete. The table below outlines the schedule for the FGDs conducted for this research study.

Informants	Number of FGDs	Topics Investigated	Date
Promoters (n=5)	2	Perceived role with KIKOP Reasons for and against participating in Care Groups Topics of Care Group lessons and quality of lessons provided by FOs Structure of typical Care Group lessons Successes and challenges with Care Groups, home visits, and data collection/management Ways to improve trainings by FOs, home visits, and/or processes around data collection and management	Monday, July 1 & Thursday, July 11
Care Group Volunteers (n=12)	2	Perceived role with KIKOP Reasons for and against participating in Care Groups Topics of Care Group lessons and quality of lessons provided by promoters Structure of typical Care Group and Neighbor Group lessons Successes and challenges with Care Groups, Neighbor Groups, home visits, and data collection/management Ways to improve trainings by promoters, home visits, and/or processes around data collection and management	Tuesday, July 9
Neighbor Women (n=12)	2	Reasons for and against participating in Neighbor Groups Topics of Neighbor Group lessons and quality of lessons provided by CGVs Structure of typical Neighbor Group lessons Successes and challenges with Neighbor Groups and home visits Ways to improve trainings by CGVs and home visits	Wednesday, July 10

Analysis

After all six FGDs took place, two KIKOP volunteers transcribed the audio files from the local Kisii language into English. The English transcripts were then analyzed using systematic thematic coding on software called Dedoose. Twenty-one thematic codes were chosen based off the research and interview questions (Appendix 2). Following an initial read of the transcripts, an additional three interpretive codes were chosen based on identified reoccurring themes. Written transcripts and all twenty-four codes were uploaded to Dedoose. Transcripts were read line-by-line and coded based on pre-established thematic and interpretive codes. Data was then categorized based on interview question to obtain summarized and comprehensive responses to each question asked.

Results

Roles and Responsibilities

Perceived Responsibilities

Promoters correctly recalled many of their assigned responsibilities with the training cascade. They explicitly mentioned receiving lessons by FOs, teaching CGVs at bimonthly Care Group meetings, and

making sure the lessons were being passed down to NW. They explained that home visitations occur in between the bimonthly Care Group meetings.

> *"As a promoter I was chosen and educated, after that I handed the knowledge down to the care group leaders and CGVs who also hand it down to the women in neighbor group. Thereafter I follow up to know if the knowledge was passed down to them."* – Promoter

When CGVs were asked about their roles and responsibilities with Care Groups, they listed their duties to receive trainings from promoters and thereafter train NW on health behaviors. Other CGVs specifically mentioned their duty to serve as role models for peers within their communities.

> *"Our work is train and teach our brethren, we tell them how they are supposed to take care of their babies (…) and when we see someone has a challenge, we visit her and advise her how she is supposed to take care of her baby."* – Care Group Volunteer

> *"We're supposed to be good role models, you know you can't tell someone to observe good hygiene yet you do not practice that, she will rather ask you how has it helped you and you'll lack words to respond."* – Care Group Volunteer

Barriers to Meeting Responsibilities

Barriers prohibiting promoters, CGVs, and NW from participating in trainings included having to take care of children, caring for a sick person, and getting into conflicts with husbands.

> "*It may happen that I also have a sick person to look after, which can also hinder me for attending."* – Neighbor Woman

Another frequently cited barrier was the inability to complete home visits at previously agreed upon times. Both promoters and CGVs reported often arriving at a woman's home only to realize that she is not home or available to meet. Reasons for this may be that the woman got into a fight with her husband and left temporarily or perhaps got busy or distracted with her chores.

> *"There are times you might go [for a home visit] and find that they have quarreled with the husband and she has left so you have to come back the following day."* – Promoter

Other times, CGVs will attempt to schedule a time for a home visit with a NW and she will refuse to meet them, claiming that it is more worth her time to go to work so she can earn money.

> *"When you make an appointment to meet [NW], they tell you that they will waste their time, they want sitting allowance, which if they were to be working for someone, they could have gotten something."* – Care Group Volunteer

CGVs also face barriers to completing their Neighbor Group registers because they often do not have writing materials to complete these forms.

Involvement with Care Group Training Cascade

Motivation to Participate

Promoters reported feeling motivated knowing that Care Groups are something that has the support of all members of the community, including traditional birthing attendants and CHVs. They also stay motivated because their involvement allows them to interact with mothers and learn about women's health behaviors and health facility usage, and they can see that mothers are excited by the games that are played and they enjoy and concentrate on the lessons they are taught. In general, mothers expressed a desire for more time to be spent on games and activities during lessons.

> *"What gives me the motivation to attend the meetings it the fact that the mothers usually attend the meetings. Secondly, they are also excited by the game we usually play at the meetings. Thirdly, they also give me the report on how they came to the hospital and how they were attended to."* – Promoter

> *"[We are motivated by] games and skits that make us relax from the day's hard work. The play time should also be prolonged instead of being for just a few minutes."* – Neighbor Woman

> *"The time we have for games and exercise is too short … You may find that when we are about to know how to do the games, it is when it is ending … We wish they extended this time a bit."* – Neighbor Woman

CGVs had similar motivation for participation. They explained that they enjoy learning from and advising each other on how to take care of their babies and feel proud when they observe NW exhibiting the behaviors taught in Neighbor Groups.

> *"You feel proud of yourself, when what you have taught them, they understand and put to practice what they have learnt. Even if a third party asked her of what she had learnt, she can also happily share."* – Care Group Volunteer

In addition, CGVs felt motivated to participate because they appreciate that by educating others, they gain valuable knowledge about how to better care for their own families. They also recognize that it will be difficult to fulfill their role as health educators if they miss Care Group meetings.

> *"The lessons are for your own good. Before you go out to help intended persons, you benefit from the lessons first hand."* – Care Group Volunteer

> *"If I happen not to attend a meeting, then I will not go out to teach the other women. I have to attend the meeting to know what must learn so that I can teach my group."* – Care Group Volunteer

NW were predominantly motivated to participate by the information they acquire at meetings because teaches them how to care for their children and families. In addition, they enjoy the games and the social aspect of meetings with other mothers in the community.

> *"I am excited with the studies when we play the games because they get my brain to be alert and learn better as opposed to when we do not use the games. The games make learning*

> *exciting and also if the promoter humbles themselves to our level it makes us understand better in the class."* – Neighbor Woman

> *"You'll find sometimes a woman was beaten in the night. She comes to the Care Group and she is sad. When she starts playing games, now she feels good."* – Promoter

Deterrents to Participate

Multiple CGVs and NW explicitly stated that they enjoy the lessons and that nothing deters them from participating in Care Groups. Distance to meeting sites did not seem to impact attendance. Promoters said that all of their CGVs are nearby, and each Care Group and Neighbor Group choses their meeting places democratically so lessons are typically held in a spot convenient for most group members.

Although distance was not a deterrent, promoters reported that often poor weather conditions contribute to poor attendance at Care Group meetings and that this was demotivating.

> *"What can hinder me is their absenteeism. Let us say if I go today and only get like 2 people when I was expecting almost 13 people. And when I call for the meeting again I get like three people." – Promoter*

Absenteeism was not only demotivating for promoters, but for NW as well. From time to time, NW recall, facilitators do not show up for group meetings. CGVs explained that sometimes this occurs because they have disputes with their husbands.

> *"A time we go to the agreed place for our meeting, however we get that our teacher is not there, we spend there, we spend there a little longer, leaving the place at 3:00 pm or at 4:00pm. This affect our morale, if we never keep time."* – Neighbor Woman

> *"You may have to go to your paternal home, because of some dispute with your husband, can make it hard or impossible to reach them."* – Care Group Volunteer

Ideal Meeting Times

There was not one specific day of the week that was convenient for promoters, CGVs, and NW alike. Wednesday was frequently cited as a preferred day for meetings. Monday and Thursday were rarely cited as convenient days for meetings due to the local market being held on both of these days and funerals being held on Thursdays. Weekends were also not frequently cited as convenient because many people attend church on both Saturday and Sunday.

Informants had different preferences for the time of day for meetings, however meeting in the afternoon was preferred almost twice as often as meeting in the morning. Informants often shared this preference because it allowed them to complete chores and prepare lunch for their families before going to the meeting. Other individuals reasoned that morning meetings were more convenient because they could attend their meeting and still be home in time to prepare lunch for their children.

Overall, there was not one specific time of day and/or day of week that was convenient for the vast majority of informants. Instead, meeting days and times are typically decided within the Care and Neighbor Groups based on each member's availability.

> *"It depends on the day of the week (…) A time you may say that it is on Monday that you're free, but you get that one among the group is busy hence you can teach one when the other is absent."* – Care Group Volunteer

Time Commitment

Meeting facilitators stressed the importance of keeping meetings brief to keep attendance high and make sure women do not lose interest. Promoters say the time commitment is increasing for them because the number of CGVs who come to group meetings is decreasing. As a result, promoters have to conduct more home visits to CGVs in addition to their other responsibilities. Although not explicitly stated, it is possible that this is occurring for CGVs as well.

Care Group and Neighbor Group Meetings

There was much variability about the desired frequency of meetings; some volunteers would prefer to have only one meeting per month, while some neighbor women requested multiple meetings per week. On average, Care Group and Neighbor Group meetings typically last 1-2 hours. There was consensus that any meeting lasting longer than 2 hours will discourage women from coming back. Both CGVs and NW explained that meetings often run long because people are late and the facilitator has to repeat part of the lesson for tardy participants.

> *"About the time, it depends on the neighbor women, sometimes they can be carried away with the games they usually play so it ends up taking long so could be even one hour. It also depends on how interested they are in the lesson being taught. Sometimes when the lesson is interesting they have to ask so many questions so it takes longer."* – Promoter

> *"The problem is there is a difference between those who come early and those who come late since the urge to learn by the first person kind of reduces since they are delayed by those coming late."* – Promoter

Home Visits

Most NW reported receiving one home visit per month, although one NW said she receives two. When the promoters and CGVs were asked how many home visits they make each week, their responses varied from one to five visits. This typically depended on attendance in group lessons, necessitating facilitators to conduct more home visits following lessons for which many participants were absent. Facilitators typically tried to limit home visits to 30 minutes so as to not over-burden the mothers. There was consensus that visits lasting longer than 45 minutes were too long.

Current and Future Topics

Both participants and facilitators had positive things to say about the past topics taught in lessons. They could not recall any topics which were not useful or applicable to their health and lives.

> *"We also get nutritional advice. We used to mix a babies food with several other foods, but they showed us what to do, do this, do that, do not do this. This encourages us and motivates us to attend even more classes. You tell yourself, go and get more lessons. They are helpful, to know how we can progress and how we can be better."* – Neighbor Woman

Recommendations for Future Topics

Participants had many suggestions for topics for future lessons. The following topics were recommended, with topics requested most frequently listed first: personal and home hygiene, sexually transmitted diseases (including syphilis, gonorrhea, HIV and PMTCT), infectious and emerging diseases, family planning, food storage, first aid (Heimlich Maneuver), and child nutrition.

Quality of Trainings Provided by Facilitators

Mothers and CGVs receiving the lessons from other facilitators perceive the lessons to be of high quality and think facilitators create a positive learning environment.

> *"They handle us well, everything they teach us we understand even the Exercises and practices they offer us, we are able to understand and later apply it on our own."* – Care Group Volunteer

> *"If I was to rate the promoters, I would say they scored 100%. Because they are friendly and joyful, when they come for classes they are kind and conduct the games in a friendly manner."* – Neighbor Woman

In general, women felt comfortable asking questions in lessons and felt that facilitators are patient and take the time to answer questions to ensure the concepts are understood. CGVs said that when facilitators do not know an answer they will acquire an answer from someone else.

> "*They answer us well, and when you practice it on your own, they always come back to see how you are faring/ applying what they had taught you. We always ask questions and they always answer us.*" – Neighbor Woman

> *"Where they are not sure or do not know, they normally put it down, they go inquire and later get back to you on the appropriate response."* – Care Group Volunteer

NW perceive CGVs to be worn out and tired and recommended providing CGVs with incentives to increase motivation.

> *"They are good and look so knowledgeable, but they get warn out! They also require some break and even motivation, but they are still young and strong."* – Neighbor Woman

Promoters in particular feel supported by the FOs because the FOs can fill in for the promoters when the promoters have to miss a CG meeting for something like a funeral. The promoters also call FOs if they forget something they learned. After promoters receive each lesson, they rate it as good, fair, or poor on a chart in the office so that the FO can receive feedback regarding how the lesson went.

Promoters, on the other hand, said that often CGVs are not prepared to teach the material because their literacy levels are not advanced enough to understand the lesson plans. When this happens, promoters have to fill in and teach the lessons for CGVs.

> *"When we were choosing [the Care Group Volunteers] they did not know that they were going to be teaching other women … There are others who do not know how to read even if they were chosen for that role. They were not aware that they were going to deal with any writings so when we take these forms for them to teach there are some who are afraid. You can teach them*

but when they get to the neighbor women as you listen to them teach you can see that they did not understand what you taught them. So you have to accompany them and help them teach the neighbor women as well." – Promoter

"I work like someone who is employed … At the beginning when we are choosing the CGVs we did not know what they were going to do so we choose them randomly. There are some we choose who are not literate so when they see the lesson plan they refuse to take it up. Even for those who are literate they are intimidated with the size of the lesson plan. So when they all refuse to teach I am forced to do it myself. I just have them there to stand in but I am the one doing the work." – Promoter

Learning Environment

Informants receiving lessons from facilitators felt like they were kind, humble, and able to create an engaging environment for learning.

"The games make learning exciting and also if the promoter humbles themselves to our level it makes us understand better in the class." – Neighbor Woman

"They are very understanding when you tell them your case. If a certain person has a given problem and so on and so forth, they are so concerned." – Care Group Volunteer

State of Care Group and Neighbor Group Meetings

Care Group lessons occur twice per month. Most lessons last between one and two hours, however women reported that lessons lasting almost two hours make them tired and have trouble focusing. Attendees at meetings are promoters and CGVs.

Neighbor Group lessons last approximately one hour; women say they may be less likely to attend if meeting last any longer than one hour. Meetings usually occur at the home of one of the NW or at a community center. Some Neighbor Group lessons are held outside under trees or in fields, however when lessons are in public spaces, there are often interruptions.

"We used to sit by the roadside, where there is interruptions from people like drunkards. Our teacher said that she would get us from the roadside and take us to her home. Therefore, we mostly sit in her home and take our lessons from there, where there is no noise or dust or drunkards to interrupt our meetings!" – Neighbor Woman

On average, CGVs reported having anywhere from 8-12 active NW in their Neighbor Groups. Women said they often started with more, but had several women stop coming because they migrated or started working a full-time job for which they can earn money.

"I had 15, three adolescents moved to nearby city, two are not willing, saying they can participate in what they do receive any payment. The remaining, we are active together." – Care Group Volunteer

Regular attendees at Neighbor Group lessons include NW and their children, but sometimes TBAs, CHVs, and promoters also attend. CGVs may also invite other CGVs to their Neighbor Group meeting in case there is something they do not understand and need help explaining to mothers.

> *"CGVs and women with babies or pregnant women, when we are together we form a Neighbor Group. Where even a promoter can make a visit during our meeting. They like attending so much and we normally choose a central place where all of us can attend with much ease."* – Care Group Volunteer

Two NW said that women who are not part of the Neighbor Group and who do not have babies sometimes attend their meetings out of curiosity.

> *"There are those living around us, and sometime around the place where we sit when we have our meeting, curious people who want to know what is happening there also come and you cannot send them away."* – Neighbor Woman

> *"Sometime women who do not have babies come to our meetings, Community health workers and other curious on-lookers."* – Neighbor Woman

To teach the lessons, facilitators utilize flipcharts and lesson plans prepared by Curamericas Global and KIKOP. Women stressed the importance of incorporating many pictures, demonstrations, and exercises into the lessons to reinforce concepts and skills since many mothers are illiterate. To NW and CGVs, lessons provide valuable and helpful information. Although volunteers sometimes experience challenges when trying to attend, they recognize the importance of attending meetings so they do not miss important information.

> *"When you do not attend the meetings, the teacher may view this as disrespectful. It will also make you lag behind as others go much ahead more than you do."* – Neighbor Woman

> *"You miss a lot. You cannot afford missing a [Care Group] meeting."* – Care Group Volunteer

> *"You may not wish to miss a [Care Group] meeting unless something seriously hindered you from attending."* – Care Group Volunteer

Multiple CGVs and NW mentioned that they use a merry-go-round for their group meetings. This is a system by which everyone brings a small amount of money to the woman hosting the meeting so that she can supply small refreshments such as tea to the group members. This serves as motivation for the group members to attend the meetings.

> *"We made it like a merry go round … When we come to your home, you may make even tea, we take it, study, and upon leaving, we give you something small."* – Care Group Volunteer

State of Home Visits

During home visits, facilitators encourage husbands to participate, otherwise the meetings are just between the facilitator and mother. Home visits are usually around 30 or 45 minutes, however one CGV said her home visits last longer than one hour.

> "*I spend more than one hour while conducting home visit. Because you do not arrive in her home and immediately embarking on teaching her, you must create a rapport first, some stories here and then, then slowly introduce your topic*." – Care Group Volunteer

When asked what usually occurs during a home visit, NW expressed that CGVs ask why they were absent, review lesson material, check on their baby, update the Neighbor Group register, and make sure they are performing the health behaviors taught at previous lessons. If the baby is sick, the CGV will advise the mother on what to do to take care of the baby. If the woman is pregnant, the CGV will check on her health.

> *"Like when she normally comes to my home, she normally finds out whether what she had trained you on, you are applying them in your family. Like draining away stagnant water from the compound, removing litter, to see how you are mounting your net."* – Neighbor Woman

> *"I am impressed since they come, survey and see if I am feeding the child the right foods for their age and correct me if I am not doing it right."* – Neighbor Woman

Some facilitators felt that home visits are a better way to teach people than group meetings since education is provided directly to mothers at a speed at which she is comfortable. NW also thoroughly enjoy the visits and appreciate the lessons by CGVs.

> *"Home visits are better than the group meetings … When you are teaching them directly they understand better than when you teach the group*." – Promoter

> *"To me, even if she comes repeatedly, I just enjoy the lessons she brings to my home. She shows me and educates me how to take care of the baby and many other things."* – Neighbor Woman

> *"There is nothing [not to like about home visits]. You cannot be unhappy about their visits."* – Neighbor Woman

There were mixed responses regarding what happens when CGVs miss group meetings. Multiple CGVs commented that the promoters follow the correct protocol by visiting the CGV to find out why she was absent, review lesson material, and obtain Neighbor Group registers.

> *"When you do not attend a meeting, maybe you were busy or was away, the promoter may visit you. You give the promoter your register, explain to him/her why you missed, explain about the register and the promoter explains to you what they discussed in the meeting and you get on the same page with the rest of the team."* – Care Group Volunteer

However, others revealed that there is often improper follow-up when CGVs miss meetings.

> *"At times, the promoter gives the material to someone to bring to you."* – Care Group Volunteer

> *"I look for the promoter to get the lessons if I happen to miss a lesson."* – Care Group Volunteer

On the other hand, all NW were in agreement that when they miss a meeting the CGV comes to their home to see why they missed the meeting and teach them the lesson that they missed.

> *"Our leader takes a step and comes to our homes with the tools to find out why we did not attend the meeting. After that they will update us on what they learnt in the meeting"* – Neighbor Woman

Male Involvement

A few women reported having very supportive husbands who support KIKOP and readily allow them to go to the meetings.

> *"If my husband knows that tomorrow we have meeting at 2:00 pm, he is even the one reminding you to go for the meeting."* – Neighbor Woman

More often, however, women feel that men make it difficult for them – CGVs and NW, in particular – to participate. Sometimes women need to obtain permission before going to meetings.

> *"Facilitator: So do you seek permission from your husband in order to attend CGs meeting? Care Group Volunteer: Sure! You cannot just walk out of your house like that."*

> *"For me, when I am invited for a certain meeting somewhere, I have to let him know without which, misunderstandings arise."* – Care Group Volunteer

Many men expect that women be paid or receive items of value for their participation, especially CGVs who often spend many hours each week conducting and receiving lessons and home visits.

> *"CGVs can be given something no matter how small so that their husbands do not quarrel with them once they get home."* – Promoter

> *"There is a problem is the CGVs, we started working well with them but along the way they started saying their husbands are asking them since they left in the morning there is nothing they are bringing back home... So it is like their working spirit is deteriorating."* – Promoter

There was an overall desire for males to be more invested in the trainings and the project. Women recommended encouraging men to attend the health lessons and/or providing women with written materials or handouts so men may have a better understanding of what is being taught at meetings.

> *"[Care Group Volunteers] usually … tell them they have brought them something new to learn. They can also inquire if the husband is there, if he is in they can request them to come and learn together."* – Promoter

> *"When we are meeting we would want our husbands to be encouraged to attend so as to bring some warmth."* – Neighbor Woman

> *"I can also say there is a problem with men's involvement. Men should also get involved so that they can know what is taking place."* – Promoter

> *"You can give us books so that we can note down something so that when we get home even our husbands can say where we went we did something notable."* – Neighbor Woman

Collecting and Managing Project Data

Promoters reported filling out 2-3 QIVCs per month and submitting forms to FOs quarterly. Some promoters felt that QIVCs were necessary but too time-consuming with all of their other responsibilities and recommended shortening the questionnaire.

> *"You just asses if they are teaching what you taught them, whether you are asking the right questions, if the Care Groups are answering the questions in the right manner and if they are jovial while teaching them. I think that is its purpose and it does not take long."* – Promoter

All promoters agreed that they have a hard time obtaining completed Neighbor Group registers to fill out their promoter summary sheets. If a CGV does not attend the Care Group meeting, then promoters have to use their own money to call or travel to the home of the CGV and get the information. The forms are often incomplete because CGVs do not always ask about vital events at Neighbor Group meetings, so promoters often have to call CHVs to get this information.

> *"The summary sheets is kind of challenging to me because of the CGVs … Sometimes it is hard since when we ask them what happened it is like you are troubling them … They forget to ask things like pregnancies and miscarriages. So when they do not know about those I am forced to call the [Community Health Volunteer] to ask about the number of pregnancies or miscarriages in the area of that particular CGV since the CHV usually has a record."* – Promoter

CGVs feel that the Neighbor Group registers help them understand their communities better by informing them of who utilizes MHC, who is added to their group of NW, etc. Most CGVs understand that they are responsible for collecting information at Neighbor Group meetings on who has received home visits, who is pregnant, who has migrated, and other vital events. However, a couple CGVs reported not having a register or using them improperly.

> *"As for my sake, I do not have a register; I have never received nor seen one. By the way, I have claimed long time but I have never received it."* – Care Group Volunteer

> *"You guess the outcomes and fill them in the registers."* – Care Group Volunteer

Promoters feel that they were well-trained by FOs and that they do not need additional training on filling out forms and managing data. However, some CGVs said they would like refresher training on the Neighbor Group registers and QIVCs.

Successes within the Training Cascade

Successes of the Care Group trainings thus far include the fact that women are learning from and enjoying the lessons. Women who attend ask questions, are eager to learn, have good relationships with facilitators and are becoming empowered through their education. Women have seen improvements in the health of their families and communities as a result of their lessons and feel that there is community-wide support for KIKOP from women, TBAs, and CHVs.

> *"We have learnt immense health education from KIKOP, that why we see it better for us to go and learn, because any person who pays attention, normally finds it so helpful."* – Care Group Volunteer

> *"We see changes in our communities, women mind about sanitation and hygiene, about the health of their babies, how to make a baby's food and going to seek hospital services."* – Care Group Volunteer

> *"We love how the promoter understands us and teaches us in the way we prefer… they are happy to be teaching us."* – Neighbor Woman

NW in particular really enjoy the home visits they receive from CGVs. NW believe that the CGVs are friendly and happy when they visit, and CGVs are properly utilizing this time to see how the NW are learning and make sure they are doing their health behaviors at home.

> *"There is nothing unimpressive about the visits because they come to educate us."* – Neighbor Woman

Requests for incentives

CGVs have a hard time maintaining participation because many husbands expect the women to bring home money for their work and do not understand or support the fact that this is a volunteer position. Promoters also said that many CGVs feel like they are being mistreated because other organizations in the area gave small tokens for things like transportation. Promoters suggested that CGVs are given some type of incentives to motivate them and mitigate disagreements with their husbands.

> *"[The CGVs] started saying their husbands are asking them since they left in the morning there is nothing they are bringing back home ... We try to encourage and push them to work by telling them this work is on volunteer basis in order to help the community ... The only challenge is that their husbands ask why they are working and they bring nothing home."* – Promoter

> *"If the CGVs can be given something no matter how small so that their husbands do not quarrel with them once they get home. If we do that we can build our relationship with them they have the heart to work so if it is possible to give them something small they will be motivated."* – Promoter

> *"There is a seminar at Kioge church in a village called Keminyongo… Certain women go very early in the morning for a meeting… Once their lessons are over, you will see them leave their meeting with a packet of milk and a loaf of bread … [Neighbor Women] ask me, why these ones receive milk and bread, while for us you keep us sitting for long and free."* – Care Group Volunteer

Promoters explained that even though CGVs do want to learn and attend the lessons, they often have to sacrifice potential earnings from their work in order to attend meetings. It is hard for the promoters to expect that CGVs will sacrifice earnings for the lesson because many community members are impoverished and need money for food and other necessities.

> *"…In as much as they want to be taught if we go to their homes they are needy. They take on contracts so that they can be able afford their daily meals … So when you agree to meet on a certain day and they already have taken on a contract it becomes hard to convince them to attend the meeting instead of going to harvest where they know they will earn something."* – Promoter

One CGV said that she successfully convinced the NW that even though they are not given incentives, the lessons are still worthwhile because they provide education to care for their children. Overall, however, CGVs agreed that small incentives would increase attendance at Neighbor Group meetings.

> *"But once you have taught them, that is when they see the advantages of the lessons. You also explain to them that, these lessons are free and voluntary to help our children … We convince them and make them understand!"* – Care Group Volunteer

> *"If they receive anything however small then they will hardly miss Neighbor Group meetings."* – Care Group Volunteer

NW do not believe CGVs when they tell them that they do not receive remuneration for their time. As a result, NW think it is unfair that their trainers get paid while they have to sit for free and would rather skip group meetings and have the CGVs deliver the health information during home visits.

> *"Others say that our trainers are paid while they do not give us anything. Others say that, we only go there to waste our time without something in return. Just like that, lessons are normal, will always get those lessons in some other forums it is better; we remain here at our homes."* – Neighbor Woman

Promoters said small incentives should either be given to both CGVs and NW or neither groups, for tension could arise if some volunteers receive incentives and not others. If incentives are provided, CGVs specifically requested educational and identification materials; t-shirts, lessos (baby shawls), and bags (to carry paperwork) with KIKOP logos; and tea or snacks at group meetings. CGVs desire items with the KIKOP logo so that they will look professional and individuals will know that they are working for a health project and have been given the responsibility of educating the community.

> *"You told us that we would receive T-shirts or lessos labelled with KIKOP information, so buy them for us so that when we go out for health education they are able to know that these are health care providers."* – Care Group Volunteer

> *"When you are wearing something that identifies you, the people in the community will know that those are going to acquire knowledge for us and later come to tell us."* – Care Group Volunteer

NW requested incentives such as packets of milk, diapers, bread, sugar, basins, KIKOP-branded lessos, and drinking water. NW believe that incentives will motivate them to attend meeting and KIKOP-branded items in particular will increase awareness of the project.

> *"They can also promote us with some t-shirts so even passers-by can gain interest by wanting to know more on what we are doing."* – Neighbor Woman

> *"We need to get a T-shirt and a lesso that has the KIKOP label so that [when] we … go for the meetings people will not think that we were wasting time but we were somewhere learning."* – Neighbor Woman

> *"We were wondering if we could get things like soap, T-shirts or pampers for the babies. Of course we get to learn as mothers, but there are things that will encourage us to keep attending the Neighbor Women group meetings like getting sugar for the baby's porridge."* – Neighbor Woman

"If for example we were given milk as we're sited here, people will come, even someone who had rejected to come will still show up, saying that I also want to receive the packet of milk, for example. This will motivate people to come to the meetings." – Neighbor Woman

Discussion

Key Findings

Through the engagement of staff, volunteers, and participants in the KIKOP project we heard the diverse opinions and perspectives regarding Care Groups in the Matongo catchment. Successes with the project include the fact that women who participate feel empowered, are learning from the lessons, arrive eager to learn, have good relationships with facilitators, and enjoy coming to meetings to engage in games and socialize. As a result of these successes, women have observed differences in the health of their families and communities, and there is community-wide support of the project. Nonetheless, participants shared a number of challenges related to their involvement and responsibilities. Following the discussion of challenges, a list of recommendations is proposed to improve the intervention going forward.

Challenges

The first key challenge is that promoters expressed that they do not think CGVs are prepared to teach the lessons because they have poor literacy and feel overwhelmed by the size and complexity of lesson plans. As a result, promoters often teach Neighbor Group lessons for the CGVs, which increases their workloads significantly. This was supported in the interviews with NW, who frequently referred to their facilitators as promoters even though their lessons should be taught by CGVs. When CGVs do teach lessons on their own, it is possible that they are conveying information poorly or incorrectly, however more research is needed to confirm or deny this theory.

The fact that Neighbor Group lessons are sometimes taught by promoters is particularly concerning because of the second challenge that was raised, which is that promoters experience myriad barriers to completing the responsibilities already assigned to them. These barriers include having to care for children and other family members, needing to complete household chores, and finding that mothers refuse to meet for home visits despite having agreed upon a time to meet. Promoters sometimes also struggle to obtain completed and accurate Neighbor Group registers to fill out their promoter summary sheets, so their workloads are increased when they have to track down CGVs to obtain the forms and sometimes contact CHVs for information if the forms are incomplete. If promoters continue to assist with teaching Neighbor Group lessons in addition to their assigned responsibilities, they may quickly become burnt out and the Care Group intervention will no longer be sustainable.

Third, all participant groups brought up requests for incentives throughout conversations in focus group discussions. Promoters explained that they struggle to engage with CGVs who wish to receive incentives or small amounts of money for their time. CGVs have the same challenge with NW who think that CGVs receive remuneration while they receive nothing. Mothers explained that they sacrifice potential earnings by volunteering for KIKOP and that many of their husbands do not appreciate the value of health education and expect them to bring home money or items of value for the time they contribute to the project. Women also see community members receive small incentives for participating in other organizations and think they are being taken advantage of by KIKOP. These quarrels impact mothers' motivation to participate and may lead to volunteer drop out if frustration continues and mistrust for KIKOP intensifies. Additionally, gaining the support of husbands should be a priority going forward as many women need to obtain permission from their husbands to attend group lessons. If husbands do not agree, women may not participate. Those who do continue to participate may experience domestic abuse for disobeying their husbands.

Finally, facilitators (both CGVs and promoters) expressed that women are often absent or arrive late to group meetings. An interesting and surprising finding which arose from these conversations is the fact that many mothers—knowing that they will not be paid or compensated and are faced with multiple priorities at home—will intentionally skip group lessons knowing that the information will be delivered to them through a home visit. Tardiness and absenteeism were both cited as things that increase facilitators' workloads and discourage participation. This requires facilitators to either start lessons over, teach what women miss when they arrive late, or conduct home visits for those who are absent. Considering the already heavy workloads of volunteers, tardiness and absenteeism should be monitored going forward to limit the addition of excess and unnecessary to volunteers' responsibilities.

Recommendations

Based on the findings from this study, twelve recommendations can be made to improve the Care Groups intervention and ensure the sustainability of this community outreach approach for women in the community.

1. To improve attendance, meeting times should be chosen based on the preferences and availability of the members within each particular Care Group or Neighbor Group.
2. Salient lesson material at Care Groups and Neighbor Groups should be conveyed in no longer than one hour. However, since socialization is important for many women, they should be welcome and encouraged to stay longer to socialize if their schedules allow.
3. Individuals who arrive late should be required to stay after to learn the information they missed due to their tardiness so as to not inconvenience women who arrived on time.
4. Facilitators (CGVs and promoters) and mothers should sign a form (or provide a fingerprint) at home visits to ensure each mother receives at least two visits per month.
5. Small, periodic incentives (such as KIKOP-branded items, tea or snacks, bread, diapers, soap, drinking water, basins, and water treatment tablets) should be provided to NW and CGVs who have good attendance at group meetings, consistently arrive on time, and conduct their home visits.
6. Neighbor Groups and Care Groups should be encouraged to implement the merry-go-round system to provide refreshments to attendees and encourage mothers to host meetings.
7. Future Care Group lessons should be developed on sanitation and personal/home hygiene, sexually transmitted diseases, infectious and emerging diseases, family planning, food storage, first aid, and child nutrition.
8. Lesson plans should be simplified and incorporate pictures and demonstrations whenever possible so that the lessons are appropriate for the reading level of the facilitators.
9. After each lesson, participants should rate their facilitators as good, fair, or poor. Responses should be recorded to track lesson quality over time, and facilitators who consistently receive poor ratings should receive additional support from promoters. FOs should periodically attend group meetings to build trust, create relationships with participants, and reassure women that the health information they receive is legitimate.
10. Handouts should be provided to women at the end of each module with key concepts from the module's lessons to help mothers remember the information and inform husbands about what women receive in exchange for their participation.
11. Biannual refresher trainings should be held for NW, CGVs, and promoters to reinforce key concepts taught at lessons and review data collection forms.
12. When recruiting CGVs in Matongo and other catchments going forward, their literacy should be assessed to ensure those recruited for the role are able to accurately and reliably teach the lesson plans.

Conclusion

Remarkable improvements in the health of pregnant women, mothers, and infants have occurred in the last year since the KIKOP project began. More mothers receive antenatal care, attend MHC to deliver, and have the proper skills and education to have a safe pregnancy and care for an infant. However, this project is heavily reliant on the participation of volunteers, and these benefits only reach those individuals who choose and are able to participate. These volunteers face challenges specific to the cultural context of the community which should be heavily considered in attempts to manage volunteer's workloads, prevent burnout, increase overall participation, and otherwise improve the project in Matongo.

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Appendix

Appendix 1a. Interview Guide for Promoters

Satisfaction of Promoters with Participation in Care Groups

Interview Guide and Research Questions

Location: _____
Date: _____
Start/End times: _____
Informants: _____

Facilitator: _____
Note-taker (if applicable): _____
Interview format: _____

Purpose: To collect feedback from promoters and to understand what is going well and what changes should be considered in their role. This includes the lessons they receive from field officers, their role as facilitators of Care Groups, and their work as community health volunteers.

Population: Staff members of the KIKOP project serving the Matongo catchment in Kisii, Kenya who have a dual role as promoters in the Care Group cascade and community health volunteers in their communities.

Introduction

Good afternoon. Thank you all for agreeing to speak with me today. My name is _____ and I work as a _____ with the KIKOP project. I am interested in learning more about what is working well for the KIKOP project and what changes can be made to improve the project and the health of your communities.

I would like to ask you a series of questions about your experiences as community health volunteers and as promoters in the Care Group training cascade. Please know that there are no right or wrong answers to my questions. I only request honest answers that truly express your opinions, observations, and beliefs. I would love for each of you to answer every question, but you are not required to do so. If you feel uncomfortable answering a certain question, please let me know and you can skip it. If someone else has already expressed what you intended to say, you can simply indicate that.

We will record your voices and take notes during the interview, but your name will not appear in any document or report and what you say will be completely anonymous. We ask that you keep confidential what others have said in this group interview as well.

Do you understand the purpose of this interview?
Do we have your consent to continue with the interview? *(If yes, have them sign consent form.)*
Do you have any questions before we begin?

Let us begin. Feel free to interrupt me if you have any questions or do not understand something I say.

Introductory Questions

1. In what ways was health education incorporated into your community before the KIKOP project?

Research Question 1: How do promoters see their role with the KIKOP project?

1. What are your responsibilities as a promoter?
    - Probe: RHVs as CHV, lessons with FOs, lessons with CGVs, home visits with CGVs, filling out QIVCs, collecting vital events, filling out CG register; Which responsibility is the most difficult to fulfill? Which is the easiest?

2. What factors affect your ability to fulfill your responsibilities as a promoter?
    - Probe: permission from spouse, work commitments, distance to travel, being confused about your responsibilities

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Research Question 2: How do promoters feel about their involvement with Care Groups?

1. What motivates you to participate in Care Groups?

2. What deters you from participating in Care Groups?
    - Probes: distance to meeting site, permission from spouse, time commitment, frequency of lessons/meetings, child care

3. What day of the week and what time of day are most convenient for you to attend Care Group meetings?

Research Question 3: How do promoters feel about lessons provided by the FOs and the support they are provided with?

1. What do you think about the topics taught in Care Groups?
    - Probe: Are the topics relevant to the health needs of your community? Which have been useful? Which have not been useful?

2. What topics would you like to be taught in future lessons?

3. In what ways do the FOs encourage participation during the lessons?
    - Probe: encourage people to ask questions, facilitate discussion, relatable, friendly

4. In what ways could FOs create a better learning environment?

5. Can you comment on the quality of the trainings provided to you by the FOs?
    - Probe: Can you think of a time that you questioned the FO's understanding of the material he/she is teaching? Are FOs able to answer the questions you ask? Do they seem prepared?

How frequently do you feel confused during a lesson?

6. What could be improved about the lessons you receive from FOs?
    - Probe: formatting, length, level of detail, use of different teaching materials

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Research Question 4: What do promoters think about the state of the Care Groups and their work with them?

1. Can you describe a typical CG meeting with CGVs?
    - Probe: Where do you meet? How long do meetings take? Who attends the meetings aside from CGVs (CHVs, TBAs, mothers)? What materials do you use to teach the lessons?

2. What is going well at your CG meetings with CGVs?
    - Probe: Are CGVs interested? Is participation/attendance high?

3. What challenges are you currently facing at CG meetings?

4. How can KIKOP help you feel more prepared to teach CGVs the lessons?

5. How can CG meetings be improved?
    - Probe: length of the meetings, materials used to teach

Research Question 5: How do promoters feel about the home visits they conduct to the homes of CGVs?

1. Can you describe a typical home visit to a CGV?
    - Probe: How long do home visits usually take?

2. How often do you conduct home visits to CGVs?
    - Probe: Approximately how many home visits do you do every week?

3. What is going well at your home visits to CGVs?

4. What challenges are you currently facing at home visits to CGVs?

5. How can the home visits be improved?

Research Question 6: How do promoters feel about their ability to collect and manage project data?

1. Can you tell me about your experiences collecting vital events (births, deaths, stillbirths, miscarriages, and migrations)?

- Probe: How often do you collect data? What do you do with the information once it is collected? What difficulties have you had?

2. Can you tell me about your experiences filling out promoter summary sheets (regarding attendance at CGs and NGs)?
    - Probe: How often do you collect data? What do you do with the information once it is collected? What difficulties have you had? Do you receive the NG registers you need to fill out summary sheets?

3. Can you tell me about your role using QIVCs (at NG lessons and NW home visits)?
    - Probe: How often do you collect data? What do you do with the information once it is collected? What difficulties have you had?

4. Are there any data forms or processes for which you would like additional training?

5. Are there any data forms or processes that you think should be improved? How?

Appendix 1b. Interview Guide for Care Group Volunteers

Satisfaction of Care Group Volunteers with Participation in Care Groups

Interview Guide and Research Questions

Location: _____ **Facilitator**: _____
Date: _____ **Note-taker**: _____
Start/End times: _____ **Interview format:** _____
Informants: _____

Purpose: To collect feedback from Care Group Volunteers (CGVs) and to understand what is going well and what changes should be considered in their role. This includes not only the lessons they receive as participants in Care Groups but also their role as facilitators of Neighbor Groups. This study may also help to better understand why volunteers are motivated to participate and what barriers they face.

Population: Care Group Volunteers who are part of the KIKOP project serving the Matongo catchment in Kisii, Kenya who both facilitate Neighbor Groups and receive trainings from promoters.

Introduction

Good afternoon. Thank you all for agreeing to speak with me today. I am interested in learning more about what is working well for the KIKOP project and what changes can be made to improve the project and the health of your communities.

I would like to ask you a series of questions about your experiences as Care Group Volunteers in the Care Group training cascade. Please know that there are no right or wrong answers to my questions. I only request honest answers that truly express your opinions, observations, and beliefs. I would love for each of you to answer every question, but you are not required to do so. If you feel uncomfortable answering a certain question, please let me know and you can skip it. If someone else has already expressed what you intended to say, you can simply indicate that.

We will record your voices and take notes during the interview, but your name will not appear in any document or report and what you say will be completely anonymous. We ask that you keep confidential what others have said in this focus group as well. I anticipate that this discussion will last no longer than 90 minutes.

Do you understand the purpose of this interview?
Do we have your consent to continue with the interview? *(If yes, have them sign consent form.)*
Do you have any questions before we begin?

Let us begin. Feel free to interrupt me if you have any questions or do not understand something I say.

Introductory Questions

1. In what ways was health education incorporated into your community before the KIKOP project?

Research Question 1: How do CGVs see their role with the KIKOP project?

1. What are your responsibilities as a CGV?
    - Probes: Which responsibility is the most difficult to fulfill? Which is the easiest?

2. What factors affect your ability to meet you responsibilities?

Research Question 2: How do CGVs feel about their involvement with Care Groups?

1. What motivates you to participate in Care Group meetings with the promoter?

2. What deters you from participating in Care Groups?
    - Probes: How often does the distance to the meeting site prevent you from attending meetings? Do you need permission from your spouse to attend? How often do you struggle to find child care so that you can attend meetings? How often do you feel like your participation in Care Groups is too time-consuming? [What is an appropriate frequency for CG lessons?]

3. What are some ways that we can encourage you to participate in Care Groups with the promoter?
    - Probes: What non-monetary incentives can KIKOP provide you to encourage participation in Care Groups (ex. KIKOP clothing, baby shawls, recognition ceremony, meals, ID badges)?

4. What day of the week and what time of day are most convenient for you to attend Care Group meetings with the promoter?

Research Question 3: How do CGVs feel about lessons provided by the promoters and the support they are provided with?

1. What do you think about the topics taught in Care Groups?
    - Probes: Are the topics relevant to the health needs of your community? Which topics have been useful? Which topics have not been useful?

2. What topics would you like to be taught in future lessons?

3. In what ways do the promoters create a good learning environment during the lessons?
    - Probes: Do promoters encourage people to ask questions? How good are promoters at facilitating discussion? Are the promoters friendly and relatable?

4. In what ways could promoters create a better learning environment?

5. What happens when you do not attend a Care Group meeting?
    - Probes: Does the promoter come to your house to follow up? How does the promoter receive information from the Neighbor Group register?

6. Can you comment on the quality of the trainings provided to you by the promoters?
    - Probes: Can you think of a time that you questioned the promoters understanding of the material he/she was teaching? Are promoters able to answer the questions you ask? Do they seem prepared? How frequently do you feel confused during a lesson?

7. What could be improved about the lessons you receive from promoters?
    - Probes: Would you like the lessons to include more or less detail? What teaching materials would you like the promoters to use to teach the lessons?

Research Question 4: What do CGVs think about the state of the Neighbor Groups and their work with them?

1. Can you describe a typical Neighbor Group (NG) meeting with Neighbor Women (NW)?
    - Probes: Where do you meet? How long do meetings take? Who attends the meetings aside from NW (CHVs, TBAs, mothers)? What materials do you use to teach the lessons?

2. What is going well at your NG meetings with NW?
    - Probes: Are NW interested? How many NW come to NG meetings?

3. What challenges are you currently facing at NG meetings?

4. What happens if a NW does not come to a NG meeting?

5. In what ways can KIKOP help you feel more prepared to teach NW the lessons?

6. How can NG meetings be improved?
    - Probe: What teaching materials would you like to use to teach the lessons?

Research Question 5: How do CGVs feel about the home visits they conduct to the homes of NW?

1. Can you describe a typical home visit to a NW?
    - Probes: What happens during a home visit? How long do they usually take?

2. How often do you conduct home visits to NW?
    - Probe: Approximately how many home visits do you do every week?

3. What is going well at your home visits to NW?

4. What challenges are you currently facing at home visits to NW?

5. How can the home visits be improved?

Research Question 6: How do CGVs feel about their ability to collect and manage project data?

1. Can you tell me about your experiences filling out NG registers?
    - Probes: How often do you collect data? What do you do with the information once it is collected? What difficulties have you had?

2. For which data forms or processes would like additional training?

3. How could the data forms or processes be improved?

Appendix 1c. Interview Guide for Neighbor Women

Satisfaction of Neighbor Women with Participation in Care Groups
Interview Guide and Research Questions

Location: _____ **Facilitator**: _____
Date: _____ **Note-taker**: _____
Start/End times: _____ **Interview format:** _____
Informants: _____

Purpose: To collect feedback from the mothers participating in Neighbor Groups (NGs) and to find out what is going well and what changes should be considered in their role as participants in Neighbor Groups. This study may also help to better understand why mothers are motivated to participate and what barriers they face.

Population: Mothers who participate in Neighbor Groups in the Matongo catchment as part of the KIKOP project in Kisii, Kenya.

Introduction

Good afternoon. Thank you all for agreeing to speak with me today. I am interested in learning more about what is working well for the KIKOP project and what changes can be made to improve the project and the health of your communities.

I would like to ask you a series of questions about your experiences as mothers in Neighbor Groups. Please know that there are no right or wrong answers to my questions. I only request honest answers that truly express your opinions, observations, and beliefs. I would love for each of you to answer every question, but you are not required to do so. If you feel uncomfortable answering a certain question, please let me know and you can skip it. If someone else has already expressed what you intended to say, you can simply indicate that.

We will record your voices and take notes during the interview, but your name will not appear in any document or report and what you say will be completely anonymous. We ask that you keep confidential what others have said in this group interview as well. I anticipate that this discussion will last no longer than 90 minutes.

Do you understand the purpose of this interview?
Do we have your consent to continue with the interview? *(If yes, have them sign consent form.)*
Do you have any questions before we begin?

Let us begin. Feel free to interrupt me if you have any questions or do not understand something I say.

Introductory Questions

1. In what ways was health education incorporated into your community before the KIKOP project?

Research Question 1: What do mothers think about the state of the Neighbor Groups and their participation with them?

1. Can you describe a typical NG meeting?
    - Probes: Where do you meet? How long do meetings take? Who attends the meetings aside from NW (CHVs, TBAs, mothers)? What materials are used to teach the lessons?
2. What is going well at your NG meetings?
    - Probe: Are you interested in the material? What do you enjoy most about the NG lessons?
3. What challenges are you currently facing at NG meetings?
4. How can NG meetings be improved?
    - Probe: What teaching materials would you like the CGVs to use to teach the lessons?

Research Question 2: How do mothers feel about their involvement with Neighbor Groups?

1. What motivates you to participate in Neighbor Groups?
2. What deters you from participating in Neighbor Groups?
    - Probes: How often does the distance to the meeting site prevent you from attending meetings? Do you need permission from your spouse to attend? How often do you struggle to find child care so that you can attend meetings? How often do you feel like your participation in Neighbor Groups is too time-consuming? [What is an appropriate frequency for NG lessons?]
3. What are some ways that we can encourage you to participate in Neighbor Groups?
4. What day of the week and what time of day are most convenient for you to attend Neighbor Group meetings?

Research Question 3: How do mothers feel about lessons provided by the CGVs and the support they are provided with?

1. What do you think about the topics taught in Neighbor Groups?
    - Probes: Are the topics relevant to the health needs of your community? Which topics have been useful? Which topics have not been useful?
2. What topics would you like to be taught in future lessons?
3. In what ways do the CGVs create a good learning environment during the lessons?

- Probes: Do CGVs encourage people to ask questions? How good are CGVs at facilitating discussion? Are the CGVs friendly and relatable?

4. In what ways could CGVs create a better learning environment?

5. What happens when you do not attend a Neighbor Group meeting?
   - Probes: Does the CGV come to your house to follow up?

6. Can you comment on the quality of the trainings provided to you by the CGVs?
   - Probes: Can you think of a time that you questioned the CGVs understanding of the material he/she was teaching? Are CGVs able to answer the questions you ask? Do they seem prepared? How frequently do you feel confused during a lesson?

7. What could be improved about the lessons you receive from CGVs?
   - Probes: Would you like the lessons to include more or less detail? What teaching materials would you like the CGVs to use to teach the lessons?

Research Question 4: How do mothers feel about the home visits conducted by the CGVs?

1. Can you describe a typical home visit?
   - Probes: What happens during a home visit? How long do they usually take?

2. How often do you receive a home visit from your CGV?
   - Probe: How do you feel about the frequency of home visits from your CGV?

3. What do you enjoy about your home visits?

4. What do you dislike about your home visits?

5. How can the home visits be improved?

Appendix 2. Codebook

Care Groups and Neighbor Groups

Topical Codes and Sub-Codes
Data collection methods: Focus Group Discussions
Informants: Promoters, Care Group Volunteers, Neighbor Women

Topical Code	Code ID	Sub-Code	When to Apply Code
Roles and responsibilities	T1.0		Apply this code to text relating to participants' responsibilities and/or roles as members of the Care Group training cascade that is not captured by one of the sub-codes below.
	T1.1	Care Group Volunteers' responsibilities	Apply this code to text describing participants' roles and responsibilities as Care Group Volunteers.
	T1.2	Promoters' responsibilities	Apply this code to text describing participants' roles and responsibilities as Community Health Volunteers and/or as Promoters in the Care Group training cascade.
	T1.3	Barriers to meeting responsibilities	Apply this code to text describing the barriers participants face when trying to fulfill their responsibilities as Care Group Volunteers or Promoters.
Involvement with Care Group training cascade	T2.0		Apply this code to text relating to participants' involvement with the Care Group training cascade that is not captured by one of the sub-codes below.
	T2.1	Motivation to participate	Apply this code to text describing participants' motivation to participate in Care Groups/Neighbor Groups, including why they began participating and what keeps them motivated to participate.
	T2.2	Deterrents to participate	Apply this code to text describing any factors that deter participants from participating in Care Groups/Neighbor Groups, including distance to meeting sites, time commitment, child care, etc.
	T2.3	Ideal meeting times	Apply this code to text describing the ideal time of day and day of week that participants would like Care Group/Neighbor Group meetings to be held.
Topics of Care Group and Neighbor Group meetings	T3.0		Apply this code to text that relates to the topics of Care Group/Neighbor Group lessons that is not captured by one of the sub-codes below.
	T3.1	Current/past topics	Apply this code to text that describes participants' opinions about current and/or past topics taught at Care Group/Neighbor Group lessons.
	T3.2	Future topics	Apply this code to text that describes topics that participants would like to be taught in future Care Group/Neighbor Group lessons.
Quality of trainings by facilitators	T4.0		Apply this code to text that relates to participants' opinions about the quality of trainings they receive by Field Officers, Promoters, or Care Group Volunteers that is not captured by one of the sub-codes below.
	T4.1	Preparedness to teach material	Apply this code to text describing participants' opinions about their facilitators' readiness to teach the lessons, including their understanding of the material, ability to answer questions, and overall effectiveness as a teacher.
	T4.2	Learning environment	Apply this code to text describing characteristics of the learning environment at Care Group/Neighbor Group lessons, including the friendliness of the facilitators, encouragement of discussion, etc.
State of Care Group and Neighbor Group Meetings	T5.0		Apply this code to text that describes characteristics of a typical Care Group or Neighbor Group meeting, including its structure, format, and attendance.
State of home visits	T6.0		Apply this code to text that describes characteristics of a typical home visit, including its purpose, format, and length.
Data management and collection	T7.0		Apply this code to text that describes participants' experiences collecting and managing project data, including summary sheets, registers, and QIVCs.
Time commitment	T8.0		Apply this code to text describing the time commitment that participation in the training cascade requires, including frequency of and time required for Care Group/Neighbor Group meetings, home visits, and data collection.
Things that are going well	T9.0		Apply this code to text that describes something that is going well within the training cascade, such as Care Group/Neighbor Group meetings, home visits, or data collection.
Things that are challenging	T10.0		Apply this code to text that describes something that is challenging within the training cascade, such as Care Group/Neighbor Group meetings, home visits, or data collection.
Suggestions	T11.0		Apply this code to text that describes recommendations made by participants in Care Groups and Neighbor Groups for ways to improve the training cascade and/or address the barriers or challenges they face.