Nyagoto Formative Research Report

A. Background

The Kisii Konya Oroiboro Project (KIKOP) is a project implemented by Curamericas Global to reduce maternal and under-2 (U2) child mortality through culturally adapted, data-driven, community-based healthcare. In collaboration with local government partners, the project has successfully piloted in two areas of Kisii - Matongo, and Iranda - where there has been a 47% increase in birthing center use and a 38% increase of obstetric emergency referrals since January 2019. Health education provision through the care group model, community-based impact-oriented (CBIO) methodology and the Community Birthing Center model have also contributed to a reduction in maternal and neonatal mortality and improved community knowledge of sustainable health practices. Given this success, the project is now extending its services to Nyagoto; a new catchment area, with 39 communities, that is part of Kitutu-Chache North Sub-County. This region is divided into two Sub-locations – Rioma and Sikonge - and is serviced by the Nyagoto Clinic. The purpose of this formative research is to obtain information on the current state of maternal and child health in the target community to determine the most effective means of project implementation. This report describes the pre-entry conditions in the community that will aid KIKOP in the provision of services that are appropriate for the population being served.

B. Objectives

Group and Key informant interviews were conducted with Clan Elders, Community Health Education Workers (CHEWs), Community Health Volunteers (CHV's), Traditional Birth Attendants (TBAs), Nyagoto Clinic Staff, mothers who gave birth at home and mothers who gave birth at a health facility. The main objectives of this formative research are to understand:

- Objective 1: Why women are still delivering at home
- Objective 2: Health facility status and needs
- Objective 3: Contributors to child stunting and malnutrition
- Objective 4: Why women are delaying care-seeking during OB emergencies
- Objective 5: Stakeholder roles and contribution to maternal and child well-being

Research questions developed for use in the previous catchment areas were re-used to maintain consistency and facilitate better project design and implementation. Obtained results will be used to implement the five project objectives which are to increase access to quality, respectful maternal/newborn services; Improve attention to obstetric emergencies (including postpartum hemorrhage); Increase provision of essential newborn care (including neonatal resuscitation); Reduce child stunting in under-two children, and promote responsible and safe reproductive health behaviors among adolescents ages 10-19.

C. Proposed Interventions

The project's goals include strengthening existing health facility capacity through the creation of a 24-hr service community-based birthing center, reduce maternal mortality, neonatal mortality and child stunting and improve responsible reproductive health behaviors among adolescents between the ages of 10-19. This will be accomplished using Curamerica's evidence-based interventions as listed below:

Care Groups/CBIO – This is a training cascade model that entails the passing of health education information from the coordinator down to neighbor women (Figure 1). Participant women are selected based on pregnancy status and the presence of an under-2 (U-2) child in the home using Census data. Care Group lesson content is based on formative research from year one of the project and staff feedback. Lessons are grouped into modules, each containing information about maternal health, child health, and sanitation. All lessons within a module are presented to Supervisors (also referred to as Field Officers) quarterly. Supervisors then hold biweekly training sessions with Promoters, who in turn train the Care Group Volunteers, who then disburse the information to their Neighbor Groups. Each Neighbor Group is made up of 9-14 mothers, while each Care Group is made up of 8-10 Care Group Volunteers. Quality control is done using quality improvement and verification checklists (QIVCs) which are used to

ensure that lesson provision is standardized. Registers are used in Care Groups and Neighbor groups to monitor attendance, track vital events, and record lessons covered.

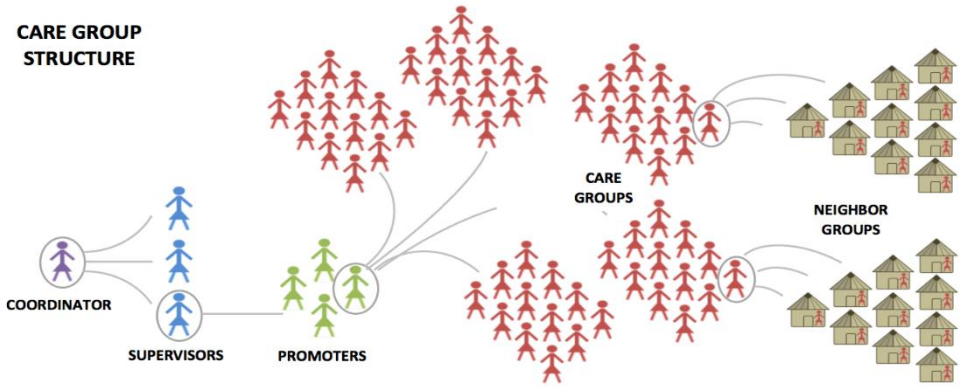

Figure 1: Care Group Training Cascade

Routine Home Visits (RHVs) – These are a key component of the CBIO approach that is necessary for relationship building and program outreach. RHV's give project staff the opportunity to understand the actual status of a beneficiary's condition and the barriers to implementing taught health information. RHVs are conducted by Community Health Volunteers (CHVs) using pre-written questionnaire forms. The CHV goes through each question with the mother and if there is a knowledge deficit noted, the CHV uses this knowledge capacity strengthening opportunity to review the missed or misunderstood content with the mother. These visits also include growth monitoring of the U-2 child. Every mother receives 11 visits from the beginning of her pregnancy to the time her child completes two years.

Health Facility Strengthening – A key contributor to maternal mortality is inadequate health facility capacity that often leads to mothers delivering at home in subpar conditions. Strengthening of existing health facility capacity is a hallmark of the Curamericas approach involving the construction or modification of an existing facility to become a Community Birthing Center (CBC). CBC's provide clean, safe, and high-quality maternal health services in a respectable, culturally sensitive manner 24 hours a day, 365 days a year.

Adolescent Health Education – Teen mothers most often experience complications during pregnancy and birth that place them at higher risk for mortality. Considering this, KIKOP aims to create an adolescent sexual reproductive health program, adapted to the rural Kenya context, to reduce teenage pregnancy, thereby

decreasing fetal/maternal complications and mortality in under-20 girls and the number of teens dropping out of school. The program also aims to increase decision making power among teens; empowering them to choose safe reproductive health behaviors including use of facility reproductive health services.

D. Research Questions

1. What is the overall status of current Level 1, Level 2, Level 3 and Level 4 services in Kisii County and in Kitutu Chache South Sub-County?
2. What are the challenges faced by the Level 3 and 4 facilities in providing quality maternal/newborn care and emergency obstetric care?
    - 2.1 What is the status of ambulance services and referral systems to high level facilities?
    - 2.2 What is the facilities' status with respect to meeting the criteria of a Community Birthing Center?
    - 2.3 How must they be further adapted to meet these criteria?
3. Why are women still delivering at home and not obtaining timely attention for obstetric emergencies?
    - 3.1 What are the barriers to women receiving antenatal and postpartum care, having health facility deliveries, and seeking timely attention to emergency obstetric care?
    - 3.2 What is being done to overcome the barriers? What are the challenges?
4. What is the status of child (under-2) malnutrition?
    - 4.1 What are the barriers and challenges being faced?
    - 4.2 What is being done to overcome these barriers/challenges?
5. What is the perception, at both the health facility and community levels, of respectful, culturally sensitive maternal/newborn care?
    - 5.1 How do providers, beneficiaries, and communities define respectful care?
    - 5.2 What are the local birth customs?
    - 5.3 Are the health facilities providing respectful care that respects local birth customs?
    - 5.4 How can the health facilities improve the provision of respectful, culturally appropriate care?
6. How can the work of the CHEWs and CHVs be optimized to improve maternal/newborn care and reduce child malnutrition?
    - 6.1 What challenges are they facing?
    - 6.2 How can they be integrated into the project?
7. What is the status of community mobilization for maternal/newborn health and child nutrition?
    - 7.1 How can the communities and health facilities work better in partnership to improve maternal/newborn health and child nutrition?
    - 7.2 How can traditional birth attendants be engaged in these efforts?

Please note: These questions were organized separately for each group. Order of questions listed above varies slightly between groups in questionnaires used for interviews. Please see appendix B for interview questions used for each group.

E. Method

Focus group purposive sampling was selected as the means of qualitative data collection. Following permission from the area Chiefs, the area Public Health Officer contacted research participants and requested them to avail themselves for the study. Interviews were held at Nyagoto Health Facility grounds over two days, beginning on September 9, 2019 with Community Health Volunteers (CHVs), Community Health Education Workers (CHEWs), Health facility staff, and Clan Elders. To avoid data compromising due to fear of being reprimanded, interviews with Mothers who delivered at home, Mothers who delivered at the health facility and Traditional Birth Attendants (TBAs) were conducted on day 2 (September 10, 2019). The number of participants in each focus group was as follows: 3 Health Facility Staff, 2 CHEWs, 9 TBAs, 11 mothers who delivered at home and 6 mothers who delivered at the health facility. Given that Nyagoto is divided into two Sub-locations (Rioma and Sikonge) with 39 communities, CHVs and Clan Elders were separated to two focus groups. One group of CHVs had 15, while the other had 19, while one group of Clan Elders had 26 and the other 32.

Verbal consent (see Appendix A) was obtained from participants prior to discussion initiation with permission to select their preferred language provided. Interviews were conducted in either English, Kiswahili, or Kisii depending on the preferred language of the participants. Each group was interviewed separately by two KIKOP staff, one serving as the facilitator and the other a notetaker and was recorded to allow for thorough analysis through transcription. Full transcription of all sessions was completed by this writer and an external consultant. Completed transcripts and facilitator notes were then coded (see Appendix C) and organized thematically to allow for extraction of the most important messages.

F. Results

Systematic thematic coding of the focus group discussions yielded five themes which characterize the commonalities among participant responses. Listed below is a description of each theme, its constructs and supporting statements.

Theme 1: Reasons for home delivery/Barriers to Health Facility Delivery

Social factors including poverty, poor education, and lack of birth plan were listed as the chief barriers to health facility delivery. Secondary to poverty is the area's environmental landscape which makes it challenging for women to seek timely maternal care. Participants cited bad roads, hilly terrain and living far from the facility as causes for home delivery; even when they would've preferred to deliver in a facility. In cases where poverty and environmental terrain did not pose a challenge, participants cited the health facility's sub-par conditions as a deterrent to facility use.

Theme Constructs	Illustrative Quotes
Social	
Poverty - no money for transport to facility Poor education – doesn't know EDD, no birth plan	*"There is no doctor here at night, Marani is far and our roads are bad, so at night women deliver at home."* – CHV *"Another thing is, most of them are quite poor and the linen they use for giving birth are very old. This makes them prefer giving birth at home so that people cannot see how poor they are."* – Clan Elder *"Many women give birth at home because they can't afford hospital expenses as compared to delivering at ah home. You get that you don't have transport means or expenses, or you don't have even soap, or clothes to wear to maternity. Sometimes there are some fee we pay when we are tested at the hospital, so you prefer to give birth at home hoping that all go well and only go to hospital for clinic and other services."* – TBA "*Additionally, another big problem we have is poverty. Pregnant women work with nothing to eat. Some even give birth in the garden because they have to work. It would be helpful for us to educate them on ways to make money i.e. selling tomatoes. The biggest issue in this community is poverty."* – CHV "T*here are some who are not aware and others who do not know how any months pregnant they are, therefore it is a factor."* – Clan Elder
Fear - haven't attended antenatal clinic, poor hygiene, close pregnancies, teen pregnancy, unknown HIV status, history of FGM, same gender delivery (partner will not allow mom to leave to go to the clinic) Lack of privacy - CHV/Caregiver gossiping	*"I just fear doctors……The doctors (nurses) shout at you, they do not attend to you, they'll just leave you there then go to attend to other things."* – Mother who Delivered in Facility *"Adolescents don't like hospital delivery for fear of being seen and feeling ashamed that they will be the talk of the community. So, they prefer secret home delivery or go to a hospital that is far where no one knows you. These adolescents are the most notorious in delivering at home and especially emergency labor for they mostly try to hide it so much until they cannot hide it anymore, which in most cases is either too late to help or its at night"* - TBA
Mistreatment	*"I have one point though it relates to what the others have said. We have bad doctors who do not attend to the mothers when they come to the facility they are assumed. Also, nowadays you have seen the hospitals are exposed on the television, so some women avoid coming to hospital since it may take long before they get attended to. Also, they do not handle us well, you will find a lot of mothers on the Que for services, but they*

	will speak to them rudely, these is another reason as to why they do not come here to deliver." – Clan Elder
Environmental	
Hilly Terrain Live far from facility	*"That is a huge challenge for us. First, the topography of this area is hilly, so you find that women wait till the last minute and since this is the only hospital in this area and it serves two locations, access becomes difficult. This is also a dispensary so if they come at night, there may be no provider. They prefer to come when they know there is a provider or go to further facilities, for example Marani. In the process, some end up delivering on the road or at home. Lack of planning is also a challenge. We often tell them to plan so that when it is time to deliver, they are near a health facility. Most women delay a lot due to lack of finances. Sometimes it may rain, making it hard to use the roads. Also, there are cases of young pregnancies, majority come from other places to live here with their relatives, who are often afraid to deliver in the hospital due to stigma, so they end up delivering at home."* – CHEW
Bad roads	*"Most of them give birth at home due to difficulty in accessing the medical facility. Like now, since it is raining it make it very difficult to get to hospital since the roads are impassable, making them to give birth home."* – Mother who Delivered in Facility
Facility	
• No maternity wings • Few providers • Overcharging • Male provider • Frequent vaginal exams	*"If it is possible we would ask to get a doctor who stays over at the facility at night since there are a lot of people who get sick at night and even most pregnant mothers usually give birth at night but do not find somebody to attend to them. So, what we can ask is for somewhere the doctors can stay so that they can be accessible even at night. Another thing is medicine. The doctor had told us that being tested is free but it is not free since after being diagnosed they would tell you what you are ailing from, let us say it is malaria or Typhoid, however we do not have the medicine, it is around 1000 shillings you can go buy from Nyachenge or Marani. That is one of the things that make the people feel like that the services are not free since they expect everything is from the government therefore it should not be charged."* – Clan Elder *"This is because when they come to Nyagoto and find there is no doctor, so the other women will just let her stay in the house until she delivers at home. That is one of the reasons, that there is only one doctor who stay the entire day and leaves at night and when the mothers come, they only find the watchman who cannot meet their medical needs."* – Clan Elder

Theme 2: Respectable, Culturally Sensitive Maternal Care

When asked to describe respectful, culturally sensitive maternal care, participants most often stated it is care that acknowledges the intrinsic value of the individual and incorporates the individual's cultural practices and beliefs. Across the board, participants reported that there is great room for improvement in this area for the Nyagoto Health Facility. They reported long wait times, mistreatment, lack of privacy and even beatings as common occurrences. They also reported that they are not allowed to perform any cultural practices at the facility.

Theme Constructs	Illustrative Quotes
Respectable	
Honesty – participants report being asked for money, even for services that are supposed to be free (i.e. Linda Mama)	*"To be honest, in terms of respect there are times they do not match to it. However, the major contributor is the fact that we only have one doctor at the facility who is overwhelmed by this work. If it possible to add another one, their work will be much easier. Also, sometimes when we come to be attended to, we are asked to pay some money. So they should also be honest as the doctor has said."* – Clan Elder *"Others prefer to give birth at home since, even if they it is said the hospital offers free services, once you get there they usually ask for "something small"."* – Mother who Delivered in Health Facility
Privacy	*"I believe KIKOP has come to make services better. In this facility, there is no secrecy, a lot of people know a lot about others. For instance, now, all the people who are HIV positive, are known by the community since there is no secrecy. This makes a lot of people to opt to go to Karachuonyo so as to ensure their privacy. So we would encourage there to be some secrecy that is why the consultation room has a door so that one can discuss their issues with a doctor at a personal level. So I would like to ask secrecy to be kept*." – Clan Elder
Non-discriminatory	*"To be honest, there is selectivity in service provision. If i go to the clinic, as a teacher, a nurse will leave the patients who arrived before me because she knows i will give her even 500 ksh. So, she leaves those who came first to see me."* – CHV
Culturally Sensitive	
Inclusion of safe traditional birth practices such as ululation in facility delivery	*"Yes, we are aware of them especially if your husband is seeing other women out of the marriage, you are supposed to be given some something called rirongo so that if your husband comes to see you do not die. We would love to ask if they can have it at the hospital so that we can take it (rirongo) so that we do not die if*

	they come to visit since we cannot tell if they are faithful or not." – Mother who Delivered in Health Facility
Traditional Kisii Birth Customs • Ululation after child is born • Amasangi – soil and water – crossing a delivering mother's blood • Ogotakera – if the mother is giving birth and children are dying, the newborn child is taken to the crossroads • Herbs - given to women to encourage fertility, given to maintain healthy pregnancy and delivery (i.e. sugarroot given to , given to neonate instead of vaccines, placed on umbilical cord to promote healing • The baby's first shave should be done by the grandmother • Ekenenge/Rirongo- baby must be delivered headfirst, if mother delivers baby feet first, vegetables in her garden dry and she can't drink milk because the cow will stop producing milk • Male provider is not acceptable • Delivery accompaniment – husband and father in-law should not accompany wife, mother in-law can • Children named according to location/activity at birth (i.e. Makori/Nyanchera – born on the road, Manoti – born when mother has been paid) • If a woman is only having girls, she goes to a woman who has sons and gets a charm to change her next child's gender • An early neonate who dies is buried at the cooking place of the house • Egeturera igoro, Omotakere, Abuncha, Ogotakeru, Ensio, enyandori, egwagwa	**Facilitator:** *"entamama* and *ensio,* are you aware of such?" **Participant**: "*yeah, those are put on the infants clothe to prevent incidences like being looked at with evil eyes (ebibiriri)"* – Mother who Delivered at Home *"When it is taking long for it (Placenta) to come out, you usually take the ash from the fireplace, called ' omokoriko' then mix it with water then give it to the mother to drink……..even when you have taken long in labor, for instance, in my case, while we were waiting for the nurse to respond, I started bleeding slightly, so my sister in law mixed that for me to drink. Then afterwards the bleeding stopped, and the amniotic fluid come out"* – Mother who Delivered at Home *"Another practice I saw in the facility in Maarani, I was in the ward when a certain woman's husband came then she started becoming weak gradually. Some women went and got some soil and mixed it with water and gave her to drink and she recovered."* ***Facilitator****: what is the name of that practice?* ***Participant****: Amasangia* – Clan Elder *"Also, when the mothers have given birth to a lot of girls, they usually say they will go find egetukuro from a certain person to make them give birth to baby boys. That is another tradition that is affecting us."* – Clan Elder *"Another tradition is that, it is believed it is a bad omen if the child is born with the legs coming out first…..I am not aware what happens thereafter but it is said not to be a good sign."…."what usually happens is, if the mother of the child goes to a vegetable farm or plucks vegetables, they dry up soon afterwards."…"she cannot be given cow milk as well since the cow will stop producing milk. And she is not allowed into a vegetable farm. If she is not given some sort of medicine called rirongo, the cow will stop producing milk."* – Clan Elder

Theme 3: Ways to Improve Health Facility Use

It is evident that focus group participants recognize the importance of pregnant women in the community receiving maternal care in the facility instead of at home. Factors cited as key in promoting health facility delivery include additional staffing, facility expansion, night services, and health education.

Theme Constructs	Illustrative Quotes
In progress – • CHV registration of pregnant women • LLITN provision following facility delivery • Improved customer service (shorter wait times) • Health education regarding free maternity and importance of facility delivery during barazas,	*"Previously we had a problem with providers, but since the county government began the facility now has providers. Education is also key. When women come to the hospital for ANC services, they are told the importance of coming to the hospital when pregnant, so we usually educate them to come for those services. At home we have also worked to register those who are pregnant and ensure that we monitor them from the first ANC up to deliver."* – CHEW *"My work is to create awareness from the hospital to the village and vice versa. For example, if there is a Cholera outbreak, or any diarrheal disease the doctor may call you and let you know that a person is sick in the community. Our job is then to create awareness in the community through a Baraza and if there is a breakout the doctors may come to the baraza to treat or do a Mobile Clinic"* - CHV
Desired – • CHV to educate community on maternal and child health • More staff in facility with provider specifically for OB care • 24/7services • Incentives for delivering mothers, CHV's, CHEW's and TBA's, • Clan elder involvement in health promotion • Improved customer service - prompt and respectful attention, privacy, no beatings, allow mothers to choose birth positions, assigned provider, less vaginal exams, • Adequate supplies/equipment • Inclusion of traditional practices	*"I would suggest they* (CHV) *be rewarded as the previous organization used to appreciate them to motivate then to do their job. If they get rewarded, they will do their job better."* – Clan Elder *"During that time, the clan elders we not involved since we used to leave this to the community health workers. However, now that we know that the loss is suffered by the whole community, we will be working hand in hand with them or even follow up once they make such visits to encourage the mothers to come to the facility."* – Clan Elder *"I would like to add that the nurses should attend to the women in labor pain well and also gift them with things like lessos after giving birth since most women go to other facilities where they know they are going to be given presents like towels therefore claiming they are given better care elsewhere. Also, there are mothers who are not hygienic, the nurses should not make fun of them since they would not like to come back again if that is the case. If the nurses receive you well and tell you what you are supposed to do, they will go back and say they would like to come back again."* – Clan Elder

	"Our facility is good but does not have most of the medicine. Most of the time we are told to go buy the prescribed medicine because they are not in the hospital. So that discourages most of the people from coming to the facility since they will be told to go to buy elsewhere. So, they will prefer to go to a facility that has enough medicine. It is hard to determine when the medicine was restocked last since every time, they are out of them. That is why we do not trust our facility that much; we are not sure if they are given little supply of medicine always. There is medicine that is very expensive, but they are not found here, that leaves us questioning and thinking the facility is okay but is not supplied with medicine. We would like to come knowing that if we go to that facility we would be treated and be medicated without being referred to go buy medicine elsewhere. Most of the time you would just be given Panadol and be told to go find the rest of the drugs." – Clan Elder *"What I can say is, if there is a way you can communicate with those who are in-charge of sending doctors to the facility, you can tell them to send more doctors so that to solve that issue. Because the one doctor that we have mentioned works alone most of the time and if he get help from the junior staff it is minimal. If they can add more doctors, there would be better services."* – Clan Elder

Theme 4: U2 Malnutrition Contributing Factors and Solutions

Nutrition is directly correlated to U-2 mortality. Social factors such as poverty and substance abuse were cited as contributors to stunting. In addition, participants did mention that parents with stunted children will often hide them at home instead of seeking help. Education was mentioned as the key intervention for reduction of malnutrition and stunting.

Theme Constructs	Illustrative Quotes
Contributing Factors • Poverty • Shame • Substance Abuse • Husbands demanding sexual rights	*"What contributes as well is our husbands, you would have given birth after a like one month they would want to have sex and if you tell them they are not ready they would tell you that they deserve their right. This then leads to another pregnancy and another one. So from my view, both parents should be advised on how to do family planning. This misunderstanding is also a contributing factor to children being born at a close range."* – Clan Elder
Solutions **Education** • **Nutrition** - Kitchen Gardening - Exclusive breastfeeding	*"That is what we do in the community. We encourage them to have a variety of food through kitchen gardening. There they can plant different vegetables and fruits. We also discourage use of packaged foods such as biscuits. Traditionally, women used to feed children food from their gardens and that's what we*

- Handwashing - Nutritional value of foods • **Family Planning** - Child Spacing - Birth Control • **Health Providers/CHVs** - Nutrition assessment and growth monitoring - Supplement provision - Mass nutrition screening - Food distribution - In-house nutritionist	*encourage them to continue practicing. And also we tell them to do exclusive breastfeeding and not introduce food too early." ……. "We also use CHV to educate them regarding various foods. Women should not sell beans to buy mandazi or kangumu. So we educate them regarding the various types of foods available in the village that can improve their children's nutrition." ..... "And also for them to come for growth monitoring so the status of their child is known. The child is also given supplements" …. "Many people love business more than themselves. You may find a woman has given birth, but instead of taking care of her children and preparing food for them she goes back to her business. As my peer said, you may find she has harvested alot of beans but instead of using it for food, she sells it and buys meat instead. So as much as they're practicing kitchen gardening, they're also misusing the produce they get from that garden. So they don't have time for their children for them to eat on time and also balanced diet."* – CHEW *"First of all we would need to be taught by the community health workers and the signs of those affected so that can identify them. The learning might not be enough, so we would suggest if there is any way you can offer us any assistance. Since some of us may not be in a position to raise the kids with what we earn so through this NGO, if it is possible they can help these parents to take care of these children after they have agreed that indeed these children need to be helped."* – Clan Elder

Theme 5: Desired KIKOP Contribution

Incentives, partnership and collaboration and health facility capacity building were provided as the desired contributions from KIKOP in this effort of reducing maternal and child mortality.

Theme Constructs	Illustrative Quotes
Promote collaboration between health facility staff, CHVs, TBAs, CHEWs, and Clan Elders - Provide CHV's with monitoring and reporting tools	*"Through this organization, plus the community health workers it would be easy to work together in order to ensure the services reach the women."* – Clan Elder *"To answer that question, we would need the clan elders and community health workers to work together so that the public can be enlightened and encouraged to go to hospital for child delivery."* - Clan Elder *"To add on that I would like to say, now that we have seen you we have believed and we have faith that this facility will be functional because since we expect it*

	will improve and we would ask you to help us to work together. There before as clan elders we did not work together but now since you have brought us together, we will begin working together. These community health workers should come visit the villages so that we can tell them where we have a problem then we work together to convince the women to come to hospital. Once they find you here you tell them what they need to follow." – Clan Elder
Provide incentives - Mothers – basins, diapers, sanitary towels, LLITN, etc. - CHV's/CHEWs/Clan Elders/TBAs – gumboots, umbrellas, transport, soap, leso's, etc.	*"As a CHV i think we need uniforms because sometimes people may think we are TBA's. So i think having a uniform will be helpful so that when the community sees us, they know who we are. The uniform will also help with our safety when we go to someone's house, they know exactly why we're there."* – CHV *"We need a lot of things, but mainly the topography of this area is challenging so it makes it difficult to reach the households that are in the interior. If we can receive some financial help to pay for transport, that would be helpful. At the same time, CHV's often prioritize their personal work over home visits so maybe if they are given a motivating stipend, they will do their work better."* – CHEW *"Honestly, something that will help us help our peers, uniform first, gumboots, and a little payment to help keep us motivated"* – CHV *"I would suggest, for the mothers to be motivated to give birth in hospital, we should reintroduce the practice of gifting the mothers with things like basins and Lessos, since when that was being practiced the mothers used to be accompanied even by their husbands."* – Clan Elder
Health facility capacity building - Night staff - Staff quarters - Maternity wing/supplies /equipment - Ambulance services - Assist with ANC/HIV/TB defaulter tracing and follow-up - Health seminars - Promote patient privacy - Mobile clinics	*"Additionally, if this organization can provide additional providers for our facility, it would be really helpful. We also need our facility to build a structure that is good for maternal care."* – CHEW *"As my colleague has mentioned, this facility is quite far, therefore we would like to ask for mobile clinics in areas that look like are very much affected so that the villagers can be helped."* – Clan Elder *"This organization will also help us to do follow-ups for defaulter tracing since our goal is to ensure reduction of maternal and child mortality. It is often hard for us to trace, for example a mom who begins antenatal care but has begun going somewhere else, especially if they are outside Kitutu Chache North Sub-County. If there is a way that this organization will helps us ensure that any woman who begins care in Nyagoto, even if they go to Nairobi, they initiate services."* – CHEW

	"You can help us by visiting when we have Barazas and talk to the mothers on their health and how they can improve their health and that of their children." – Clan Elder *"Another challenge is, our facility is good but we do not have doctors. And for the one who is there, they do not reside nearby. In an instance where one wants to give birth at night, this becomes hard since you cannot go call the doctor from their place and also manage to retain the baby until the doctor arrives. That is why most cases people give birth at home or along the way using midwives who did not go to school ending up to mess with your body. If we had doctors living nearby and emphasize on community health workers to visit all those who are pregnant and keep a record. Also tell them the advantages of giving birth in the health facility and at home."* – Clan Elder *"Another thing is, the hospital should be clean. Firstly, it should be neat, there should be beds, there should be medicine as well so that the patients cannot be sent to get them from outside. The hospital should be fully equipped a well by the government. There should be food also so that the patient can eat well after giving birth because you might find they did not eat from home. There should be doctors always at the facility to attend to people day and night. If this is implemented, our hospital will grow."* – Clan Elder

G. Discussion

The goal of this formative research was to obtain information on the current state of maternal and child health in Nyagoto in order to determine the most effective means of project implementation. It is evident that the target community recognizes the importance of women receiving maternal care in health facilities; however, there remain barriers that must be addressed. Our results indicate that the two main social barriers to health facility use are poverty and poor services at the health facility. Poverty was cited as a key barrier to health facility use because mothers often can't afford transport, supplies, and facility use costs. Compounding to this problem is provider mistreatment that causes mothers, especially those who are poor, to opt to deliver at home instead of going to the hospital where they will be judged and treated with despise. Though KIKOP does not have the economic capability to alleviate the poverty of women in the catchment, these results indicate that provision of supplies such as basins, blankets, diapers, and sanitary towels at the health facility will encourage women to use the health facility for delivery services. Mothers must also be informed that Linda Mama covers all maternal care expenses, thus no health facility staff should ask for payment. Additionally, provider sensitization regarding patient treatment is paramount. Providers must be educated on the importance of providing excellent customer service in the form of prompt and respectful

attention, privacy, inclusion of traditional birth practices, allowing mothers to choose birth positions and elimination of beatings.

Health facility capacity strengthening is another key finding of our study. Research participants repeatedly mentioned that the Nyagoto dispensary currently operates at sub-par conditions. It has a poorly equipped delivery room and two nurses who only provide services during the day. These few staff often must see many patients, thus contributing to long wait times. Expectant mothers thus opt to go to other well-equipped facilities where they are sure to be seen in a timely manner and to receive quality care. Efforts must thus be made to furnish the facility with supplies, construct a maternity unit, increase the number of staff, and expand to 24-hour service provision. Since this is a government facility, improving its condition will require collaboration between the Ministry of Health (MOH) and KIKOP; a feasible endeavor as evidenced by the success in other project catchment areas where facility capacity strengthening has reduced home-based deliveries, U-2 malnutrition, and maternal and neonatal mortality. The capacity building action plan that has worked in these areas can be customized to fit the unique needs and challenges of this new catchment area.

Although focus group participants recognize that promotion of maternal and child health in their community will require a collaborative effort between CHVs, TBAs, KIKOP staff, Health Facility Staff, MOH and Clan Elders, there was resounding, collective demand for incentives. CHVs and CHEWs requested cash for transport, gumboots and even umbrellas; citing these as motivators for work completion. Incentives for mothers were also mentioned as a solution to encouraging women to deliver in the health facility. Participants stated that if women know they will be given something for delivering in the hospital, they will be more likely to come than when they will receive nothing. The provision of incentives is a challenge, primarily since KIKOPs model is geared toward community ownership. Education regarding the disadvantage of incentive use for program participation is necessary as the community needs to know that participation in this project is for their long-term benefit, not for short-term organizational data. It is thus evident that a multi-factorial approach must be utilized to encourage health facility delivery in this community.

H. Limitations

Although the findings of this study are useful for project implementation, there are limitations within which our findings must be understood. First, interviews were conducted by KIKOP staff which may have influenced participant responses. Participants focused their responses on maternal and child health issues, even when asked questions that were not specifically geared toward maternal and child health. For example, when asked about their role, some respondents focused their responses on what they do concerning maternal and child health, omitting other responsibilities. Secondly, facilitators were reading from English questionnaires and translating them to the group's preferred language. This presents a lack of consistency among groups and introduces facilitator bias. Participants often sought clarification when asked the question about respectable maternal care, thus indicating that there may have been a barrier in understanding some words and questions. This is also the case for transcription since the audio files were transcribed from the recorded language to English; some messages may have been lost

in translation. Some focus groups also had many participants, beyond the recommended 6 to 12, indicating that some participants may not have had the opportunity to voice their opinions due to reservation or having a different voice from the collectives.

I. Conclusion

The results of this formative research indicate that Nyagoto would greatly benefit from KIKOP's involvement in their community. They also have clear implications for Kisii Konya Oroiboro Project's (KIKOP) implementation in Nyagoto. These findings will help KIKOP develop a program that is culturally appropriate, respectful, and inclusive of the needs and desires of the people of Nyagoto.

Appendix A: GROUP INTERVIEW GUIDE/CONSENT FORM

Group (or Individual) Interview

Interview/Discussion Data	
Place:	**Date:**
Start time:	**End time:**
Facilitator(s)	**Attendees (name and health facility)**

Introduction, Informed Consent, and Interview Instructions

Hello. My name is _____ (name of speaker). I work with the Kisii Konya Oroiboro Project (KIKOP) which is partnering with your community to help create sustainable health improvements. This is [name(s) of other members of the interview team and for whom they work.], who will be helping me with this interview.

Thank you for your willingness to speak with us. The purpose of this interview is to help us understand what we can do to improve maternal and newborn care in Kisii County, so mothers can have safe deliveries and so that their newborns may survive and thrive. We will take the information you provide and work with the Ministry of Health to create a project that will reduce maternal and newborn deaths in Kisii County. So, you will be making a very important contribution to the well-being of your family, your community, and the County.

This will be what is called a Group Interview. I will ask a series of questions, and we would like each of you in turn to answer the question to the best of your ability. There are no right or wrong answers - only honest answers that truly express your opinions, observations, and beliefs. While we would like every one of you to answer each question, you are not required to respond if you do not feel comfortable doing so. If another participant has already expressed what you intended to say, you can simply indicate that. The interview will take no longer than 1 ½ hours.

Your participation is entirely voluntary, and you are free to stop your participation and/or leave at any moment without any negative consequences to yourself. What you say will be completely confidential. No person outside this group will know what you have said. We will take notes during the interview and record the interview, but your name will not appear in any document or report and what you say will be completely anonymous. We will keep our notes and the recordings and the transcripts of the recordings safely under lock and key so only we have access to it. Therefore, as a participant in this group, we ask that you also keep confidential what the others in this group have said.

Do you understand what a Group Interview is and the purpose of this interview? If you do, please raise your hand. Do we have your consent to continue with the interview? If we do, please raise your hand.

Before we begin, I would like for us to agree to follow these rules:

- We will speak courteously and treat each other with respect.
- Only one person at a time will speak. We will not interrupt each other.
- If we have something to say, we will raise our hand.
- We will not repeat to anyone outside this group what any of us has said.
- We will respond to the questions honestly.
- If we do not understand a question we will request clarification.
- We will turn off or silence our mobile phones.

Do we all agree to these rules? Are there any other rules you feel that we should add?

We are now ready to begin. If you have not already done so, please turn off or silence your mobile phone. Thank you.

Appendix B: Interview Questions

I. **Duties and Responsibilities (including challenges, successes, and help needed)**

i. **Clan Elders/CHVs/CHEWs -** Please describe your work as Clan Elders/CHV/; describe your duties and responsibilities.

1. Tell us about some of your successes.
2. Tell us about your challenges [If not mentioned, inquire about lack of salary or incentives, high workload, lack of supervision, travel/transport issues, low morale, resources/work materials].
3. What help do you need? What do you need to be more effective in your work?

ii. **TBA's –** Please describe your work as a TBA.

1. What is your role during the pregnancy, childbirth and postpartum period?
2. How did you become a TBA? What training did you receive to become a TBA?
3. How did you establish a relationship with a pregnant woman and her family?
4. What fees do you charge for your services?
5. Is this your only work? Or do you have other work?
6. What are the challenges you face in your work?
7. Have you ever had a newborn death or a stillbirth? What was the cause?
8. Have you ever had a maternal death? What was the cause?

iii. Nyagoto Clinic Staff – Please describe your work and your duties and responsibilities. Please tell us about the services you provide for antenatal care, deliveries, post-partum care, and attention to obstetric emergencies. -- What specifically are the challenges at your clinic/hospital to providing quality maternal/newborn care and attention to obstetric emergencies?

1. If not discussed, probe about staffing staff skills, training and supervision, equipment, supplies, stock-outs, infrastructure (building maintenance, electricity, telephone/internet, water, sanitation), funding, staff turnover/retention, staff vacancies, absenteeism, staff motivation

2. What do you need to improve your maternal/newborn care services?

3. If not already mentioned: Probe about the status of ambulance services to Level 3 and 4 facilities? How can these services be improved?

4. If not already mentioned: Probe about the referral systems between the facility and the communities and between the facility and the referral hospitals for attending to obstetric emergencies. How can the referral systems be improved?

II. Reasons for Home Delivery

i. Clan Elders/CHVs/CHEWs/Nyagoto Clinic Staff – Why are women in Kisii County still delivering at home? Why are they not getting emergency obstetric care? What are the barriers?

1. **[**If not mentioned, probe about social influences, cultural traditions, previous birth experiences, costs/poverty, transportation/distance from health facilities, health knowledge or lack thereof, quality of health services]
2. Generally, who makes the decision about where a woman will deliver or if she will immediately seek help for an obstetric emergency?
3. What is being done so more women delivery in health facilities and promptly seek help for obstetric emergencies?
4. What seems to be working for getting women to delivery in a health facility and seeking emergency obstetric care?
5. What challenges are you encountering?
6. What help do you need?

ii. **TBAs –** Why do women deliver at home with a TBA rather than in a health facility?

1. What influences the decision [If not mentioned, probe about: advice and influence of family or friends; advice and influence of health providers/CHV/TBA; cultural traditions; previous childbirth experiences; distance from the health facility; transportation, costs; risks of childbirth; quality of care]
2. Who makes the final decision of the place of delivery?

iii. **Nyagoto Clinic Staff –** What specifically are the challenges at your clinic/hospital to providing quality maternal/newborn care and attention to obstetric emergencies?

1. If not discussed, probe about staffing staff skills, training and supervision, equipment, supplies, stock-outs, infrastructure (building maintenance, electricity, telephone/internet, water, sanitation), funding, staff turnover/retention, staff vacancies, absenteeism, staff motivation
2. What do you need to improve your maternal/newborn care services?
3. If not already mentioned: Probe about the status of ambulance services to Level 3 and 4 facilities? How can these services be improved?
4. If not already mentioned: Probe about the referral systems between the facility and the communities and between the facility and the referral hospitals for attending to obstetric emergencies. How can the referral systems be improved?

III. Respectful/Culturally Sensitive Maternal Care

i. **Clan Elders/CHVs/CHEWs/Nyagoto Clinic Staff –** How would you describe respectful maternal care? How would you describe culturally sensitive maternal care?

1. Do you believe that Nyagoto provides respectful maternal care?
2. If yes, how so? How are the services respectful? [If not discussed, probe about informed consensual care, dignified treatment, privacy

and confidentiality, non-denial of services for nonpayment, lack of any discrimination based on ethnicity/poverty/age]

3. If not, how so?
4. How can maternal services be made more respectful?
5. What are local Kisii birth customs?
6. Do the services at [name of health facility] respect and include these customs? How? Which customs?
7. How can maternal services be made more culturally sensitive?

ii. **TBAs –** When women go to the health facilities to delivery, are they treated with dignity and respect?

1. If so, how?
2. If not, how not?
3. Do you provide respectful care? How?
4. How can the health facilities provide dignified respectful care?

iii. **TBAs** – Tell us about traditional birth customs in Kisii County.

1. The women you deliver – can they and their families practice the traditional birth customs? What customs do they practice?
2. Do the health facilities allow these customs? Should they allow them? Which customs could they allow?

IV. Child Malnutrition and Stunting

i. **Clan Elders/CHVs/CHEWs/Nyagoto Clinic Staff –** What is being done in your community to reduce child malnutrition, especially stunting in under-2 children?

1. What successes have you had – What seems to be working to improve child nutrition?
2. What challenges are you encountering?
3. What is being done to address these challenges?
4. What help do you need?

V. Partnership and Collaboration

i. **Clan Elders/CHVs/CHEWs/Nyagoto Clinic Staff –** How are you working with the communities you serve/ [name of clinic] to encourage health facility deliveries/seek attention for obstetric emergencies and to improve child nutrition?

1. What seems to be working well?
2. What are the challenges?
3. How can you and the communities/ [name of clinic] work more effectively together to encourage health facility deliveries/women to seek attention for obstetric emergencies and improve child nutrition?

VI. Project Needs

i. **Clan Elders/CHVs/CHEWs/Nyagoto Clinic Staff –** How can this project help you address the challenges you are facing reducing maternal and neonatal mortality and improving child nutrition?

VII. TBA Relationship with CHEWs/CHVs/Health Facility

i. Tell us about your relationship with the health facilities, and with the CHEWs and CHVs.

1. Do you ever refer women to the health facilities? Why? When?
2. Do you think women should deliver in a health facility? Why or why not?
3. Do you think women with an obstetric emergency should seek help in a health facility? Why? Or why not?

ii. Do you think it would be possible for you to work in partnership with the health facilities?
1. If yes, how can this be done?
2. If no, why not?

VIII. Mothers Who Delivered in a Health Facility/At Home

i. **Most recent childbirth experience –** Tell us about your most recent childbirth experience
1. If not mentioned, probe about what they did when the labor started; who they contacted; who attended their delivery; costs involved; if their family had a birth plan.
2. Tell us about your experience at [name of clinic/hospital]. Who attended to you? Did you feel welcome at the health facility? Were the staff attentive to your needs? How long were you there? Were your husband/family member (s) allowed to be present?
3. Did you have a complication or obstetric emergency? If so, what was it and what treatment did you receive?
4. Did you have help from a TBA? What support did she provide during the pregnancy, birth and after the birth?

ii. **Reason for selected choice –** Why did you deliver at home/health facility rather than in a health facility/home?
1. If not mentioned, probe about; advice and influence of family or friends; advice and influence of health providers/CHV/TBA; cultural traditions; previous childbirth experiences; distance from the health facility; transportation; costs; risks of childbirth; quality of care
2. Have you been to [health facility name] before? If so, what was your experience like?

iii. **Decision making –** Who was involved in making the decision to deliver at home?
1. Who started the conversation about the decision?
2. What was discussed?
3. Who made the final decision?
4. Where you in agreement with the decision? Why or why not?

iv. **Respect and Dignity** – What does it mean to you to be treated with respect and dignity?
1. Home – Tell us how you would want to be treated at a health facility if you were to go there for childbirth. How can the health facilities treat you with dignity and respect?
2. Facility – Do you feel that the staff at [clinic/hospital where women delivered] treated you with respect and dignity? If yes, what exactly did they do to treat you with respect and dignity? If

no, what exactly did they do to show disrespect and poor treatment? Tell us how you want to be treated at a health facility during childbirth. How can the health facilities show you dignity and respect?

v. **Traditional child-birth related customs in Kisii County –** Tell us about traditional childbirth-related customs in Kisii County
    1. Home – Did you and your family practice these customs during your delivery at home? What customs do you think should be allowed at the health facilities during and after childbirth?
    2. Facility – Were you allowed to practice these customs during your delivery at [name of facility]? What customs were you allowed to practice? What customs did you think should be permitted at the health facilities during and after childbirth?
vi. **Preference –** We have heard that many women still deliver at home rather than in a health facility, why do you think they deliver at home?
    1. If you have another child, where will you deliver? Why?
vii. **What do you think we can do so that more women deliver in health facilities and seek help for obstetric emergencies?**

Appendix C: Topical Code Book

Parent Code	Sub Code	ID	Decision Rules
Reasons for Home Delivery	Barriers to Health Facility Delivery	1.0	Applies anytime a participant mentions factors that cause women to have their babies at home instead of the Health Facility
	Social	1.1	Applies anytime a participant mentions cultural, economic, or behavioral reasons for lack of facility use
	Environmental	1.2	Applies anytime a participant attributes physical surroundings as a reason for home delivery
	Facility	1.3	Applies anytime a participant mentions health facility deficits as a reason for delivering at home
Respectful, Culturally Sensitive Maternal Care		2.0	Applies anytime a participant describes maternal care that acknowledges the intrinsic value of the individual and incorporates Kisii cultural beliefs and practices
	Kisii Customs	2.1	Applies anytime a participant mentions indigenous cultural practices that are observed during pregnancy and childbirth
Facility Delivery Promotion		3.0	Applies anytime a participant describes activities to encourage women to deliver at the Health Facility
	In progress	3.1	Applies anytime a participant describes activities that are currently being done to promote health facility use
	Desired	3.2	Applies anytime a participant mentions activities that should be done in the future to promote health facility use
U2 Malnutrition Promotion		4.0	Applies anytime a participant mentions activities taking place to prevent malnutrition and stunting in children under the age of 2
	Contributing Factors	4.1	Applies anytime a participant describes causative factors for child malnutrition and stunting
	Solutions	4.2	Applies anytime a participant describes desired interventions to reduce child malnutrition and stunting
Desired KIKOP Contribution		5.0	Applies anytime a participant describes activities the community desires KIKOP

			to undertake in order to improve maternal mortality and child nutrition
	Collaboration	5.1	Applies anytime a participant describes desired KIKOP contribution activities that involve teamwork between key stakeholders
	Incentives	5.2	Applies anytime a participant mentions a concession or payment as a desired KIKOP contribution
	Health Facility Capacity Building	5.3	Applies anytime a participant describes activities that KIKOP can perform to improve conditions of Nyagoto Health Facility