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"You just endure": Maternal and Child Healthcare Utilization in Iganga, Uganda

By

Master of Public Health

Global Health

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Fauzia Aman Malik
Committee Chair

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"You just endure": Maternal and Child Healthcare Utilization in Iganga, Uganda

By

Debra Kozlowski

Bachelor of Science
Virginia Commonwealth University
2008

Thesis Committee Chair: Fauzia Aman Malik

An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Global Health
2016

Abstract

"You just endure": Maternal and Child Healthcare Utilization in Iganga, Uganda
By Debra Kozlowski

Background: High maternal mortality ratios and under-5 mortality rates plague Uganda. The use of maternal and child healthcare services is very low in the nation's rural Eastern district of Iganga. Research in the community is used to create evidence based interventions that may increase utilization of services within the region.

Objectives: The study aimed to identify obstacles to accessing maternal and child healthcare, motivations for seeking out this care, and attitudes towards the health care facilities in the Iganga region. The study captured individual community members' points of view to assist stakeholders in planning to improve access to and quality of local maternal and child care.

Methods: The study utilized qualitative in-depth exit interviews to question participants on their experiences with the care provided during recent antenatal visits, deliveries, and child health visits to understand how and why they have received maternal or child care. The twenty-two interviews completed at four health facilities in Iganga aimed to capture participants' motivations, beliefs, and personal stories of maternal and child healthcare. Data from the interviews were conceptualized through deep descriptions and comparisons for analysis.

Results: The path of maternal and child healthcare utilization includes many factors that either encourage or impede the eventual successful receipt of care. Ideally, an individual would move from pregnancy to antenatal care to delivery care and child care uninterrupted. However, complications arise as first, second, or third delays along this path. This study revealed a pattern of behaviors in which individuals were influenced before attempting to receive care by encouragement or discouragement from husbands, mothers-in law, and community members. Individuals that successfully utilized maternal and child health services had two things in common: a belief that a visit to a health facility would be beneficial and an ability to persevere.

Discussion: Endurance is the key factor that can lead individuals to overcome obstacles related to the Three Delays and find the care they need. Encouragement from friends and family, pregnancy and birth planning, financial saving, and a positive perception of the health care facilities contribute to the successful utilization of maternal and child care in Iganga.

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Table of Contents

Glossary of terms:

Maternal mortality is the death of a woman while pregnant or within the 42 days of termination of pregnancy, irrespective of cause of death (International Classification of Diseases Version 10)

Maternal mortality ratio (MMR) is the number of maternal deaths per 100,000 live births (*Trends in maternal mortality: 1990 to 2015*, 2015)

Under-five mortality rate (U5MR) is the number of deaths of children under the age of fiver per 1,000 births. (*Country Progress Snapshot: Uganda*)

A disability-adjusted life year (DALY) is one lost year of "healthy" life due to premature mortality and disability in a population. ("Health statistics and information systems,")

Postpartum Hemorrhage is maternal blood loss of 500 ml or more within 24 hours of birth. (*WHO recommendations for the prevention and treatment of postpartum haemorrhage*, 2012)

Obstructed Labor occurs when the presenting part of the fetus cannot progress into the birth canal, despite strong uterine contractions. (International Classification of Diseases Version 10)

Birth Asphyxia is the lack of breathing at birth. (*Children: reducing mortality*, 2016)

Preterm Birth Birth before 37 completed weeks of gestation (International Classification of Diseases Version 10)

Sepsis occurs when pathogenic bacteria gain access into the blood stream causing overwhelming general infection (John, David, Mathias, & Elizabeth, 2015)

SAFE Safe Mothers, Safe Babies

I. Healthcare Services Utilization and Maternal and Child Mortality in Iganga, Uganda

Introduction and Rationale

The maternal mortality ratio (MMR) in Sub-Saharan Africa is estimated to be 546 maternal deaths per 100,000 live births (*Trends in maternal mortality: 1990 to 2015*, 2015). This region has the highest MMR in the world, more than half of all of the world's maternal deaths occur here (*Maternal Mortality Fact Sheet No. 348* 2015). In 2015 Uganda, an East African nation of nearly 35 million people (*National Population and Housing Census 2014 Provisional Results*, 2014), faced an MMR of 343. This is an approximate 50% reduction from the 1990 MMR of 687 (*Trends in maternal mortality: 1990 to 2015*, 2015). The main causes of maternal deaths are direct: hemorrhage, hypertension, obstructed labor, and infection; other causes are indirect: malaria, diabetes, hepatitis, and anemia during pregnancy (*Roadmap for Accelerating…, 2007-2015*). These causes of maternal death have not changed for nearly 100 years (Pacagnella, Cecatti, Osis, & Souza, 2012). As the world evaluates individual nation's success in reaching the improved health outcomes set forth by Millennium Development Goals, Uganda has been deemed a nation that was "Making Progress" towards Millennium Development Goal 5a at the time of their completion. Goal 5a was to improve maternal health by a three quarters reduction between 1990 and 2015 the maternal mortality ratio (*Millennium Development Goals and Beyond 2015*).

Young children in Uganda also face troubling health outcomes. The Maternal, Newborn, and Child Survival Countdown to 2015 Uganda Report estimates the nation's Under-Five Mortality Rate (U5MR) at 55 per 1,000 live births (*Countdown to 2015 Maternal, Newborn, and Child Survival: Uganda.*). Millennium Development Goal 4 was to reduce by two thirds, the under-five mortality rate (*Millennium Development Goals and Beyond 2015*). The U5MR was

178 per 1,000 births in 1990, and while this reduction is significant, Uganda remains classified as a “moderate mortality” nation (*Country Progress Snapshot: Uganda*). The main causes of under-five mortality are: pneumonia, asphyxia, preterm birth, diarrhea, injuries, sepsis, and malaria (*Countdown to 2015 Maternal, Newborn, and Child Survival: Uganda.*). Together perinatal and maternal conditions account for approximately 20% of the nation’s total burden of disease (Namazzi, et al., 2015).

The Sustainable Development Goals (SDGs) create a global agenda to continue the unfinished work to reach, and ultimately surpass, the goals of the MDGs into the year 2030. The scope of the SDGs has been broaden from its predecessor and aims to tackle global poverty and inequality (*Sustainable Development Goals*). The SDGs have continued to address the importance of maternal and child health in global development. Goal 3 addresses human health and well-being, specifically targeting maternal and child health by aiming to reduce global MMR to less than 70 per 100,000 births and under-5 mortality to 25 per 1,000 live births by 2030 (*Sustainable Development Goals*). While Uganda, and the Sub-Saharan African region at large, achieved strong reductions in these negative outcomes during the Millennium Development Goal era from 1990-2015, room for improvement remains. The SDGs will guide the world towards greater equality with a heightened prioritization of the importance of social justice.

Within Uganda there are differences in regional maternal and child health outcomes. The national coverage of delivery care exemplifies this inequity, while nearly 76% of urban women give birth at a health facility, only 36% of rural women do (*Roadmap for Accelerating..., 2007-2015*). Overall, the Kampala District, named for and containing the Ugandan capital city, has better maternal and child health outcomes than other districts (*Uganda Demographic and Health Survey 2011*, 2012). The U5MR in Kampala is 66 and in the East Central region it is 106

(*Uganda Demographic and Health Survey 2011*, 2012). Similarly, 61% of women in Kampala reported having received postnatal care, defined as a checkup within the first two days after birth, while only 24.5% of women in the East Central District received this service (*Uganda Demographic and Health Survey 2011*, 2012). This underutilization is troubling because the majority of postpartum deaths occur in the first 24 hours after delivery (*Roadmap for Accelerating…, 2007-2015*).

In the East Central region 91% of pregnant women had attended at least one antenatal care visit yet only 29% had a postnatal checkup (*Uganda Demographic and Health Survey 2011*, 2012). Additional recent research in Eastern Uganda exhibits that prenatal care is utilized more frequently than delivery and postnatal care, however little to no research could be found to explain why this may be and what can be done to increase the number of women that receive care at delivery and throughout the 1000 days after birth (Izudi & Amongin, 2015).

Safe Mothers, Safe Babies (SAFE) is a global health organization dedicated to reducing maternal and child mortality in the Eastern Uganda District of Iganga. They work with communities to improve health outcomes for pregnant women, new mothers, and their young children. SAFE's programs are based in a commitment to the community in which it works. SAFE's research and programs are rooted in an understanding of the Three Delays Models (*Knocking Out the Three Delays: Maternal and Child Survival*, 2015). The Three Delays Model developed by Sereen Thaddeus and Deborah Maine has provided a framework to aid researchers in understanding contributions to maternal mortality for nearly two decades. The three delays highlight common key setbacks along the path towards care. The first is a delay in deciding to seek care, the second is a delay in arriving at a health facility, and the third is a delay in the provision of adequate care (Thaddeus & Maine, 1994).

Map 1. District Map of Uganda (*Uganda Demographic and Health Survey 2011*, 2012)

First delay obstacles are addressed by engagement with the men and women of Iganga through community groups. These groups are focused on open discussion of pressing health issues, women's empowerment tools, and men's participation in the maternal and child health realm. The second delay is tackled via delivery savings plans for families and a motorcycle ambulance for maternal and child emergency referrals. And finally, SAFE confronts the third delay in providing education for health workers and solar power for facilities. SAFE conducts community based research to improve existing programs, understand the needs from the community and develop new tools for improving community health (*Knocking Out the Three Delays: Maternal and Child Survival*, 2015).

SAFE identified the need for a thorough qualitative research study through its community engagement efforts. This study, comprised of exit interviews and observations, was created to compliment a large scale survey conducted in SAFE's service area and beyond. Together these two methods were analyzed to better understand the burden of maternal and child illness in the region, how individuals utilize care, and potentials points of intervention for SAFE.

A recent study completed in the East Central region of Uganda, and more specifically the Iganga District, Dr. Waiswa and his research team modified the Three Delays Model to analyze neonatal deaths. They found half of the analyzed neonatal deaths were related to hesitations surrounding the first delay, the decision to seek care (Waiswa, Kallander, Peterson, Tomson, & Pariyo, 2010). Understanding gaps in care within the terms of The Three Delays Model is useful as it is an easily understood and widely applicable framework.

While much quantitative and qualitative research has been conducted around Uganda's maternal and child health status, there is a gap in the knowledge of how an individual's experience with antenatal, delivery, or child health services impacts healthcare decision making. Recent Demographic Health Survey data show Eastern Uganda trailing the rest of the nation on many important maternal and child health indicators (*Uganda Demographic and Health Survey 2011*, 2012). Understanding the experiences and circumstances that lead people to seek healthcare services is key to improving maternal and child health utilization in Eastern Uganda. In-depth interviews designed to explore the role a patient's perceived quality of care, impression of health care facilities, and contributing external factors may help identify ways to encourage greater service utilization in the region.

Problem Statement

High maternal mortality ratio and under-5 mortality rate plague Sub-Saharan African nations (*Trends in maternal mortality: 1990 to 2015*, 2015). Increased use of maternal and child healthcare services in Eastern Uganda may improve these outcomes in this region. According to the Road Map for Reduction of Maternal and Neonatal Morality and Mobility this can be achieved in part by "improving availability of, access to, and utilization of quality" maternal and child health services, particularly at the sub-county level (*Roadmap for Accelerating…, 2007-2015*). Increased use of maternal and child healthcare services may reduce the burden of maternal and child mortality in Eastern Uganda.

It is understood that individuals and families living in impoverished and rural settings face obstacles when pursuing adequate care at the time of healthcare decision making, trying to reach a healthcare facility, and in their experiences with healthcare providers (Pacagnella et al., 2012). The people who experience these obstacles may also provide researchers and organizations with important insight on what can be done to improve this situation. Learning individual's experiences and perceptions of delays in receiving maternal and child care can provide an important step in creating health solutions for the specific local context. Hearing from the community members that have received care may identify strategies that could aid others in the successful receipt of care.

In addition to the intrinsic value of saving lives, a reduction in maternal and child mortality in the Iganga District could lead to many community-level gains: less family dissolution, increased confidence in the community's healthcare options, and fewer children living as orphans. There are also larger societal benefits to be had, a reduction in disability-adjusted life years, increased life expectancy, and improved gender equity.

Purpose Statement

This study used interviews from the men and women of Iganga and observational data to understand how and why they have received maternal and child care. The study aimed to identify obstacles to be overcome, motivations for seeking care, and attitudes towards the health care facilities in the region. The study was designed to assist stakeholders in their planning to improve access to and quality of maternal and child care.

Research Question

How do individuals seek out and receive maternal and child healthcare services in Iganga, Uganda?

Significance statement

In order for community health programs to successfully improve maternal and child healthcare, it is vital to deeply understand the positive and negative experiences those in the community have surrounding these issues. Data from the 2011 Demographic Health Survey and other large survey sources show Uganda's need for improved maternal and child health outcomes. However, not all districts or sub-counties encounter the same situations and challenges, therefore stakeholders must engage with those they aim to serve to fully understand the problem at hand.

II. Literature Review

Understanding Maternal and Child Healthcare Service Utilization in Iganga, Uganda through the Three Delays Model

This review includes quantitative and qualitative research of maternal and child health issues, mainly focusing on the East African context, drawing only a few other examples from other rural, low-resource settings. Many studies presented here are explorations of who is involved, how obstacles arise, and why trouble is encountered with maternal and child healthcare. Aside from the original Thaddeus & Maine article from 1994, literature reviewed is no more than five years old.

The Three Delays Model, introduced to the world of public health in 1994 by Thaddeus and Maine, has provided a framework for understanding experiences that contribute to maternal mortality (Thaddeus & Maine, 1994). Their seminal article "Too far to walk: maternal mortality in context" has provided a framework for much of the research surrounding maternal mortality, and increasingly other public health problems including newborn mortality and obstetric emergencies, over the past thirty years (Pacagnella et al., 2012). Because of the wide acceptance and understanding of The Three Delays, it is relevant to explore the poor state of maternal and child health in the Iganga region of Uganda through this framework as well.

The Problem of Inadequate Maternal and Child Care

Without appropriate antenatal, delivery, and child care services women and children face an assortment of risks: sepsis (John et al., 2015), hemorrhage (Braddick et al., 2015), and death (Rutaremwa, Wandera, Jhamba, Akiror, & Kiconco, 2015). Newborns face sepsis, pneumonia, preterm birth and birth asphyxia as leading causes of death (Waiswa et al., 2010). These

dangerous health outcomes, just a few of many, are all linked to the absence of maternal and child care.

A comprehensive meta-synthesis of qualitative studies showed women all over the world that had experienced severe maternal morbidity faced poor mental and physical health outcomes throughout their lives (Norhayati, Surianti, & Nik Hazlina, 2015). This research demonstrates that damage done as a result of poor maternal care can negatively impact a woman well beyond her reproductive years and the context of motherhood.

The need for proper maternal healthcare begins early on in pregnancy. Cross sectional research from rural Eastern Uganda showed a link between a mother's antenatal care and her newborn's health (John et al., 2015). Women that attended antenatal visits had superior breast feeding and newborn health outcomes than those who did not (John et al., 2015). Pregnant women can take action in the early stages of pregnancy to increase the likelihood of having a healthy newborn.

Perhaps the most critical time for a woman is during labor. Circumstances surrounding multiple cases of obstructed labor, a large contributor to maternal mortality and morbidity, were explored in depth in Western Uganda. Qualitative research found first delay barriers as some women were reluctant to seek care when labor complications occurred. Additionally, the research team found that women identified the hospital referral system as was weak which created third delay problems for birthing mothers (Kabakyenga, Östergren, Emmelin, Kyomuhendo, & Odberg Pettersson, 2011).

Quality care after giving birth is vital as well. In nearly fifty qualitative interviews completed in Central and Western Uganda, a research team found very few participants were aware that postpartum care was available in their community or of the potential benefits from

these services (Nabukera et al., 2006). Training more providers in delivering postpartum care and educating families that postpartum care can handle complications, nutrition problems, and timely vaccinations for the new mother and her newborn will be necessary for improved uptake (Nabukera et al., 2006).

Barriers to Maternal and Child Care in East Africa

In rural Kenya researchers implemented a quasi-experimental community based intervention and found women that had interacted with community health workers were more knowledgeable about services at their local health facilities and more likely to give birth at one instead of at home than those that had not spoken with a health workers (Adam et al., 2014), showing that community health workers can help women overcome first delay obstacles. A systematic review found lay health workers to have a positive impact on maternal and child health in many locations (Glenton et al., 2013). These types of health workers have the potential to play an important role in reducing first and second delay barriers.

In recent years, more attention has been given to the impact men have in maternal and child health utilization. Male focus groups conducted in Western Kenya informed researchers that while many men may support antenatal and delivery care at health facilities in theory, actual use of the services remained low in the community (Kwambai et al., 2013). As to why this is the case, men stated that maternal and child care are women's issues, healthcare workers were unfriendly towards men, and services were not geared towards couples (Kwambai et al., 2013). If public health efforts increasingly aim to mobilize men to take a more active role in this realm, communities could see wider health benefits.

A survey conducted in Southwestern Uganda investigated how birth preparedness and birth location decision-making can impact whether a woman gives birth with the assistance of a

skilled birthing attendant or not. Giving birth with a skilled birth attendant can greatly reduce woman's risk of morbidity or mortality during childbirth (Kabakyenga, Östergren, Turyakira, & Pettersson, 2012). Findings showed that women with higher education, more antenatal care attendance, and seeking input on where to deliver were all correlated with a greater likelihood of giving birth with a skilled birthing attendant (Kabakyenga et al., 2012).

In a similar survey completed in Kenya, investigators established that individuals were more likely to seek care for delivery or a sick child depending upon which grade of health facility was nearby, not simply that any facility is near (O'Meara et al., 2014). This work has interesting implications for understanding how barriers associated with the second and third delay interact, health facility location and distance to travel may not be the two most important factors.

Through qualitative interviews, women in Western Uganda identified multiple issues in receiving adequate antenatal and newborn care at health facilities. Researchers found a discrepancy between the information provided to pregnant women during their antenatal visits and their actual preparedness for childbirth and newborn care (Ayiasi et al., 2013). This research demonstrates a clear third delay, despite attending antenatal visits as recommended, women encountered poor quality of care at the health facilities. A cross sectional study in Eastern Uganda found poor utilization of early postnatal care (Izudi & Amongin, 2015), preventing women from being exposed to vital information about pregnancy, delivery, and newborn care.

Another example of third delay barriers to adequate care was exemplified in a mixed methods study conducted to assess a Ugandan hospital's adherence to postpartum hemorrhage care guidelines. Researchers found adherence to be low and a contributing factor to maternal

deaths (Braddick et al., 2015). Providing poor quality maternal care to women will likely not improve their health outcomes.

Photovoice, a community-based participatory photography research method, was utilized in Central Uganda to document barriers to care through the eyes of young people living in the region. This project identified both establish and emerging barriers across the delays. Established barriers included: lack of transport, great distances, long wait times, and poor quality of care. Emerging ones were: domestic violence, low contraception use, and low women's income (Musoke, Ekirapa-Kiracho, Ndejjo, & George, 2015).

The Case in Eastern Uganda

The risks of not receiving appropriate maternal and child care are clear. Research in Eastern Uganda and more specifically the Iganga District highlight the severity of the problem there. Further analysis of district data from the 2011 Uganda Demographic Health Survey data show which demographic and socio-economic characteristics were associated with ideal use of maternal health services, meaning attendance of at least four antenatal visits, delivery in a health facility, and a post natal check within two days of delivery (Rutaremwa et al., 2015). Higher maternal education and income were linked with better utilization of services throughout districts in Uganda (Rutaremwa et al., 2015). Women in Eastern Uganda had the lowest log odds of using the recommended maternal health services in the country. Additionally, "rural residence, being a Muslim and being married significantly reduced the chances of utilizing moderate maternal health services package" (Rutaremwa et al., 2015).

A thorough stakeholder analysis, which included new mothers, healthcare workers, local leaders, and senior decision makers, of a proposed maternal and child health intervention in four Eastern Ugandan districts revealed concerns of sustainability, use of local resources, and supply

barriers (Namazzi et al., 2013). These larger, systems oriented issues must be considered within the framework of the Three Delays as well. The key informants identified priorities in addition to their concerns; they sought to improve the quality of maternal and newborn health services, increase male involvement in the process, and improve accessibility of the services (Namazzi et al., 2013). These interviews revealed that stakeholders accurately reflect the issues of their community and while there was a general consensus of vocalized support, not all stakeholders are empowered to act (Namazzi et al., 2013).

Qualitative research in Eastern Uganda designed to explore why some families do not seek care for newborns found social and cultural practices have a big impact on this process (Nalwadda et al., 2015). Common practice leads some mothers and their newborns to be isolated during the weeks after birth, out of a concern for their health, however this practice can lead to unintentional negative consequences; interventions and programs designed to increase newborn care utilization must incorporate the existing cultural practices to be effective (Nalwadda et al., 2015).

Eastern Ugandan men's roles in maternal health explored through focus groups and questionnaires produced findings that exemplified traditional gender roles (Singh, Lample, & Earnest, 2014), reminiscent of Kwambai et al. Men expressed their involvement in maternal health through financial support, but women reported a desire for more active engagement from their male partners in attending antenatal appointments and childbirth (Singh et al., 2014). This divide between genders can determine whether or not a woman will choose to seek services, first delay, or if she can reach a facility, second delay. A shift from traditional gender roles with an increased positive role of men in the maternal and child healthcare process could encourage utilization of these vital services in Eastern Uganda.

In two rural Eastern Ugandan districts newborn deaths were investigated through the lens of the Three Delays (Waiswa et al., 2010). Using social autopsy, most of the newborn deaths that occurred at homes and health facilities could be attributed to either first (household) or third (health system) delays (Waiswa et al., 2010). As a result of this formative data and supportive research, the Uganda Newborn Study (UNEST), a two year community-based health facility improvement intervention (Waiswa et al., 2012) incorporating district level hospital and health facility staff training, supervision, and mentoring to build capacity for maternal and child healthcare was created. The results from this intensive intervention showed healthcare workers had improved maternal and child health knowledge and facility based deliveries increased. However, stock outs and lack of supplies persisted as large problems for the facilities (Namazzi et al., 2015). These mixed results show that a community-based approach can have a great impact, however third delay barriers that plague low-resource settings remain challenging to overcome.

The UNEST study was quickly taken up at the national level after success in Eastern regions of Uganda (Waiswa, Namazzi, Kerber, & Peterson, 2015). Key to the success of the UNEST study was developing policies and programs simultaneously with different agencies and key stakeholders involved throughout implementation. Data collection and consistent presentation back to stakeholders in order to adapt the intervention to the appropriate setting alongside quarterly monitoring plans contributed to the eventual larger scale uptake (Waiswa, Namazzi, et al., 2015).

Further evaluation of the community health worker component of the UNEST project was done to understand how this element, as a part of a health system strengthening project, impacted newborn care-seeking behaviors (Waiswa, Pariyo, et al., 2015). Community health

workers visited mothers five times, twice during pregnancy, and three times after birth providing education, basic care, and referrals if warranted in the intervention villages. Researchers found the poorest recipients had most benefit from this program and that community health workers struggle to be truly effective without health facility improvement (Waiswa, Pariyo, et al., 2015). The UNEST study is solidly rooted in strong research and operates with the necessary stakeholder and community support. The multi-prong approach of the UNEST study is a promising evidence based comprehensive approach to tackling the poor state of maternal and child health in Eastern Uganda.

Common barriers associated with each of the Three Delays in low-resource settings are well documented: socioeconomics, geography, financial circumstances and quality of care (Pacagnella et al., 2012). Many of these widely understood obstacles and other first, second, and third delay factors face individuals seeking maternal and child care in rural Eastern Uganda. Based on recent geographically relevant research, public health interventions have found some success in addressing problems associated with each of the Three Delays. Community health workers are reaching isolated individuals with information about care in the region (Waiswa, Pariyo, et al., 2015), newborn deaths are better understood (Waiswa et al., 2010), and women are beginning to encourage their husbands to take a more active role in maternal and child health (Singh et al., 2014). However, the complex and interrelated nature of maternal and child health problems necessitates comprehensive responses that incorporate social and cultural elements in addition to clinical care.

Exploring barriers to maternal and child care with high quality qualitative data will provide context and nuance to the alarming DHS statistics analyzed by Rutaremwa, et al. In looking forward these authors indicate:

> "Given the complex and varied settings within which the maternal health programs are offered in Uganda, it is important to view any interventions within their demographic, socio-economic, political and geographic settings. The nature and scope of the population groups that are most affected by poor maternal health service delivery needs to be understood."

The suggestion in their conclusion lends itself well to the type of information that qualitative interviews can unearth. It is known that maternal and child care saves lives and it is known that the use of these services is low, erratic, or non-existent in Eastern Uganda. What remains unknown is how some individuals are able to overcome obstacles and delays and receive the best care available to them while others cannot.

III. Methodology

Research design

Exit interviews have been used in many settings to collect a variety of data: post-abortion care in Pakistan (Azmat, Shaikh, Mustafa, Hameed, & Bilgrami, 2012), access to maternal health services in South Africa (Silal, Penn-Kekana, Harris, Birch, & McIntyre, 2012), and breast feeding counseling in Kenya (Israel-Ballard, Waithaka, & Greiner, 2014) are a few. Qualitative, or open-ended, exit interviews aim to gather personal stories about the process of receiving care. This design is intended to be iterative, allowing for tweaking and improving interview questions or areas of interest as the research progresses.

Population and sample

Study participants were individuals between the ages of 15-49 that received maternal or child healthcare services in the Iganga region of Eastern Uganda. They fall into one of these three

categories: pregnant women that have used antenatal services at a health facility in the past seven days; women who have delivered a baby using the delivery services at a health facility within seven days of the interview; or caregivers of sick children under the age of two who have been cared for at the health facility within the seven days preceding the interview. Caregivers must either be the parent of the sick child or a caregiver age 18 or over. Based on feedback from programs implemented by SAFE and qualitative research on the topic, saturation was anticipated to be met in the content matter at approximately 18-24 interviews.

Figure 1. Participant Characteristics

Health Facility		**Service Utilized**		**Gender of Participant**	
Lubira	7	Antenatal	10	Female	21
Iganga Hospital	6	Sick Child	7	Male	1
Ibalanku	5	Delivery	5		
Nawandala	4			*Total*	*22*

Study Aims:

(1) Assess perceived quality of care among people using antenatal, delivery, and sick child health care services at health facilities located in the Iganga Region of Uganda and how this intersects with healthcare decision making.

(2) Use the understanding of perceived quality of care's interaction with decision making to provide recommendations for increasing MCH service utilization in the first 1,000 days of life.

The study utilized qualitative in-depth exit interviews to question participants on their experiences with the care provided during antenatal visits, deliveries, and child health visits. Qualitative interviews were appropriate for this research in order to understand the complexity and nuances involved in the entire process of seeking and receiving health care services. The interviews aimed to capture participants' motivations, beliefs, and personal stories. The interviewers were trained to use an in-depth interview guide in a semi-structured fashion in order to encourage participants to discuss the issues most important to them and to have the space to expand upon these themes.

Interviews were completed at four health facilities in Iganga, each facility serves a different geographic region of Iganga. Three of these facilities are within the SAFE intervention area and one is not. It is of interest to SAFE to collect data from facilities inside and outside of their program area.

Researchers completed observation at the health facilities where the in-depth interviews were completed. Observation was done to supplement the data from the interviews and more thoroughly understand the experiences of participants at these locations.

Procedures

First, participants were approached at the regional health facilities and presented with information regarding the research. The interviewer confirmed the inclusion and exclusion criteria, and then interested individuals were presented with the informed consent. After discussing and obtaining consent, the participant answered a few short questions regarding their personal background and the services they used during their visit that day. Next, participants

were interviewed using a semi-structured in-depth interview guide containing a series of qualitative questions regarding the participant's experience and perceptions about the care they (or their child) received. The participants were interviewed at health centers regarding their use of antenatal, delivery, or child health services. Interviews took place in person between the participant and a trained interviewer. Face-to-face interviews were used because the region is rural with little or no electricity, making this the only feasible way to connect with people. The qualitative interviews were recorded with a digital audio recorder, if consent was given.

Study Instruments

This study used three separate but similar in-depth interview guides. The Antenatal Care In-Depth Exit Interview Guide (Appendix A) was used to interview pregnant women to collect information about their experiences with antenatal care services before giving birth. In addition to this, the Delivery and Post-Partum Care In-Depth Exit Interview Guide was used to interview new mothers. This instrument has a series of questions that focus on a woman's most recent birthing experience. The scope and wording of these two instruments are similar, therefore the latter is not included in the appendix; having separate interview guides assisted interviewers in phrasing questions appropriately for the participant. The third instrument, the Sick Child In-Depth Exit Interview was used to interview caregivers utilizing health care facilities for their children. The information collected by this instrument includes the nature of the child's visit to the facility, household demographics, and the caregiver's experience in accessing care for the child.

Instruments were initially developed in English. SAFE staff translated the interview guides from English to Lusoga with feedback from the research team. All interviews were conducted in Lusoga and audio recorded. The recordings of these interviews were translated into English by

bilingual SAFE staff during the transcription process. While this process was not ideal, Lusoga is not often written; therefore all transcripts exist only in English.

Data analysis

Data analysis was focused on identifying patterns in participants' experiences using health facilities for antenatal, delivery, or sick child services. Thematic analysis was done using MAXQDA11 software. All transcripts were read, re-read, and memo-ed. Using the ideas generated through the memos, a thorough coding scheme was created to identify important ideas that came from the data itself. Inductive and deductive codes were identified, defined, and applied to the transcripts. Approximately 25 unique codes were created, more were deductive than inductive codes. "Perceptions of health facilities" was a frequently applied code, used to code how a participant feels about the health facility(ies) overall or how the participants things others may feel about them, to include both positive and negative perceptions. For example, a section of text that read "some people have gotten good things out of this hospital, if you come here for help and then somebody helps you out. Hasn't that been good?" was coded as "perceptions of health facilities." A second commonly used code was "gender roles," which was used to code for ideas about how men and women felt they and those of other genders ought to act in regards to maternal and child healthcare, pregnancy, and health care decision making. One participant explained men and women's roles in child care by saying in "most cases they [mothers] are the ones who spend most of the time with the children at home. Fathers usually come home at night." A third reoccurring code was labeled "financial uncertainty." This cade marked participants' lack of money to do something he or she thinks ought to be done such as: pay for healthcare, purchase items to prepare for birth, or take transport to a health facility. A participant expressed concern for a safe delivery as she "was worried where [she] was going to

get the money for operation." A codebook was developed for recurrent themes and the data were labeled accordingly; the codebook aided in maintaining consistency in the open coding process. Descriptive analysis and constant comparison across interviews highlight commonalities and differences among participants based on the interview location and the type of service received. The observational data provided supplementary examples of some key issues identified by participants. Notes from observation were referred to for supporting ideas during analysis.

Ethical considerations

Emory IRB determined this project did not require IRB review. The project was not considered human subject research because it was meant to provide feedback to the host organization, not to be generalized to other populations. Researchers worked to protect each participant's identity by using randomly assigned numbers to identify interviewers and de-identifying the content of the transcripts. All interviewers were thoroughly trained on properly consenting and protecting participants.

Limitations and delimitations

Some of the limitations of this study are related to social norms in Eastern Uganda. There may be a hesitancy from the participants to speak negatively about the health centers. Patients may fear reprisal from frustrated healthcare workers if they share negative opinions. Also, some women may not be comfortable sharing their honest point of view or opinions on these topics as some of them may not be used to being asked open-ended questions about such matters. The study is also limited by potential participant fatigue. Interviews take place after an individual has traveled to a health facility, waited in line, and been visited by healthcare workers. By the time the interview begins some participants may be tired, uninterested or unwilling to participate.

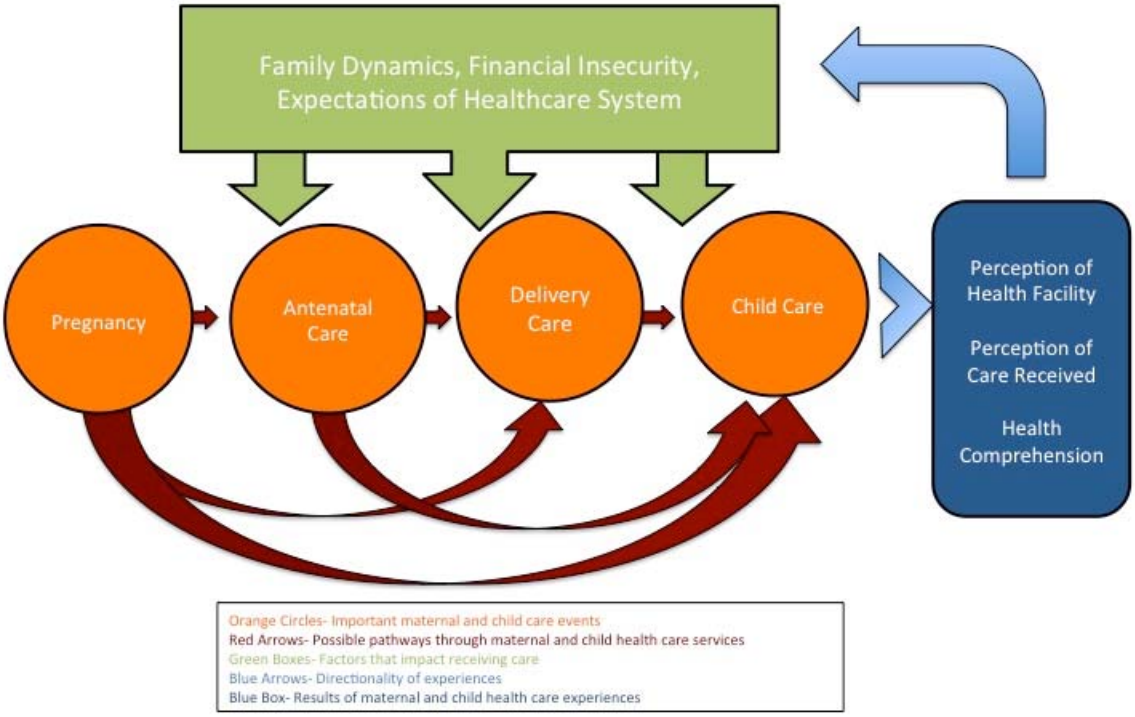
Delimitations of the study keep the research focused on the experiences and behaviors of those that seek healthcare services in Iganga and will not include those who have not received care. In an attempt to reduce inaccuracies with participant recall interviews are conducted at the health centers immediately following their services.

IV. Results

Navigating maternal and child healthcare services

The process of maternal and child healthcare utilization, as seen below in Figure 2, is a course in which family dynamics, financial insecurity, and expectations of the healthcare system act to encourage or impede the eventual successful receipt of care. Ideally, an individual would move along the path from pregnancy to antenatal care to delivery care and child care uninterrupted. However, complications arise as first, second, or third delays along this path. It is necessary to understand the factors that participants identified as having an impact on receiving care in order to improve the process. They can impede the receipt of care at any point along the path of maternal and child care. These factors may be overcome or ultimately prevent appropriate care from being received. Once an individual has received care, the culmination of this experience along with external influences can impact future healthcare seeking behavior in a positive or negative fashion.

Figure 2. Process of Maternal and Child Healthcare Utilization in Iganga, Uganda



The first important factor to consider is the family dynamics of the individual seeking care. Family composition varied drastically among participants. Some were first time mothers, while one participant was pregnant for her eighth time. Some women were living with children and no spouse, and others lived with large extended families including in-laws and co-wives with their children. All participants were influenced by their family to some extent and mentioned at least one family member's involvement in the process of receiving healthcare services. Maternal and child care were widely seen as issues in which one's parents, siblings, co-wives, and in-laws had a valuable opinion to offer. The first delay was avoided when family members had positive

opinions of the maternal and child care offered by the heath facilities and a decision to seek out care was made.

Many women that sought out antenatal and delivery care were advised by their husband's mother on which facility or services to use. Participants mentioned a mother in-laws' influence repeatedly. Mothers in-law were seen as women with experience and a good source of advice. A woman receiving antenatal care explained that when she, "was a visitor here, it was my mother-in-law who brought me" to the health facility. They also accompanied women to antenatal visits and during their deliveries, providing comfort, guidance, and assistance in dealing with healthcare workers. A mother in-law's influence was more involved than simply providing her daughter-in-law with helpful input in a few cases; a mother-in-law chose the facility their daughter in-law would go to in a few situations and organized transportation and escorted another woman to two different facilities when her labor pains started early.

Additionally, many participants identified that a "husband's responsibilities" impact maternal and child healthcare. Women believed that "the man should take care" of his wife and family. This responsibility worked to encourage in some cases, but impede healthcare utilization in others. A participant receiving antenatal care noted that, "my husband has always been on my side. If I felt sick or my children, he always takes us to the facility for treatment." More participants reiterated this sentiment. A different woman seeking antenatal care said her husband, "was the one who has brought me, he had not been a bad man. He's always providing, he's giving me food, before getting pregnant." In these cases husbands were supportive of their families utilizing the health facilities when needed and assisted them in accessing care.

However, not all married or partnered women felt support from their husbands or male partners. One participant receiving childcare services believed men saw their role in the family,

"only to impregnate their wives and not to care for their children." In a similar vein, another woman seeking care for her sick child said, "when I called my husband, he only started quarreling that he doesn't have any single coin that he will send to us, yet I don't have any money with me and the children are continuing to fall sick." In another instance a woman seven months into her pregnancy attending an antenatal care visit had a "husband that didn't give her transport and had to foot" to the facility. A fourth participant spoke generally of the "husband's responsibilities:"

> And our husbands sometimes, you find one who can consider your life, but right now some husbands don't consider lives of their women when they are pregnant, they want their wives to work, they want them to move, sometimes we even miss lunch, we've gone hungry the whole day.

These circumstances highlight the expectations a pregnant woman or new mother has of her husband or partner. When the husband does not live up to his responsibilities a woman has to rely on other means to receive healthcare. This failing was described differently by participants, some spoke of it in terms of finances, and others referred to cultural expectations related to gender roles. No matter how it was discussed, the failing of a "husband's responsibilities" was distressing to the family it impacted.

The second factor to impact one's ability to receive care was the stress of financial insecurity. The combination of illness and poverty puts individuals at risk for chronic poor health. At this point, an individual desiring care may not be able to reach it, thus being foiled by the second delay. One participant getting care for her sick child astutely noted that "a disease cannot know whether you have money or not, but it just attacks you and you go to the hospital."

The majority of individuals interviewed mentioned a lack of money as a major barrier to receiving appropriate care. For example, a woman receiving antenatal care mentioned that she has known other women to “ask for money from their husbands and they don’t give them, then she says, I’ll not go to the facility.”

Transportation difficulties were closely linked to the nature of financial insecurity. Many participants repeated this theme. Distances from homes to health facilities in the rural areas can be great. The region’s roads are impassable at times and frequently challenging for those with or without vehicles. Despite having the desire to receive care a woman that had recently delivered her child at a facility described how money and transportation interact:

> If you have it [money], it is easy. The problem is, one day I moved on foot from there when I was pregnant, but I didn’t have the strength and I wasn’t feeling good, as you know when are you pregnant you cannot move, I moved but could sit and rest on the way, but I wanted to come to the hospital for ANC.

Some participants indicated that having money allowed an individual to choose to receive care from a private facility, which carried an implication of superior quality. An antenatal participant would have preferred to give birth at a private clinic, “since they want money, they care about you so much more than in the government facilities.” Those without money have to go to the government run facilities, which were frequently associated with poor quality. One woman receiving antenatal care described how an individual’s financial status impacts where care is sought:

> This is the facility that was put for us, the poor, to come and get free treatment. It is the reason why I’m going to deliver here. But those

> with money will deliver in private facilities. But like us, the poor, the president put this for us. You always have to rush and they help you.

A caregiver of a sick child echoed the sentiment that poverty restricts healthcare choices when her children fall ill; “so I have to come back because I don’t have money to go to private facilities. I have to return back here if they are not fine.”

And while the system of government facilities providing free care to those in need is true in theory, in practice it does not always reach these goals. An individual’s expectations of the way the healthcare system will work have an impact on their utilization. These obstacles comprise the third delay. Participants told stories of government-run facilities not being funded sufficiently to run adequately. Staff was on strike or refused to work until back pay was met. Government facilities did not have the medications women and children needed and caregivers were forced to buy medications that should be provided at no cost, such as this caregiver, “but for me to have a patient and I have to buy the medicine, then it means it is not good at that time.” A woman that had delivered in a government facility said, “sometimes there are no tablets and other supplies like the ones used by women like pads, globes, and they are sent later.” Even after individuals reach a facility adequate care cannot be guaranteed.

After one has overcome at least the first two delays, and possibly the third, to have an experience at the health facility his or her perceptions of the facility in general, perceptions of the actual care received, and comprehension of his or her health will became a new factor that impacts future healthcare decision making. Participants described their perceptions of health facilities in many different ways. These perceptions were positive and negative; they were based in knowledge, experiences, and stories from both individual and community points of view. As

seen in Figure 2, the accumulation of these perceptions and experiences becomes a new factor impacting the receipt of adequate maternal and child healthcare.

Participants explained the community's perceptions of the health facilities as places where treatment and care are unreliable and inconsistent. One woman receiving antenatal care summarized her interpretation of the community's attitude toward the government health centers:

> Some people have gotten good things out of this hospital, if you come here for help and then somebody helps you out. Hasn't that been good? There are some people who come, and they are not attended to, and this person may think that they have only neglected him, by telling him that there is no treatment, yet it is around. Some people think that way, because of the pain he is feeling minus being worked on. So, some person will be talking ill about the facility because of that.

The idea that experiences at the facilities are not the same for all individuals was also felt by a woman that had just delivered her baby, "I used to hear that the health workers don't care for the patients, but for me when I came, I saw that they care, and for me, they cared about me." While a negative story may impact an individual's idea of what to expect at a health facility, it is ultimately his or her own experience which carries more weight in determining future facility utilization. A positive experience at the health facility can act as a way to overcome the first delay.

Perceptions based on stories or word of mouth impacted the participant's opinion of the government health facilities. Some participants retold stories of other patients being abused or neglected by healthcare workers. One woman seeking care for her sick child, "had been told when you come when you don't have a petticoat or you have not dressed well the health

providers abuse you." A woman that had recently delivered at a facility said others in the community told her, "the health workers don't care about their patients, they shout at them." She also speculated that other women in the community do not utilize the facilities because the healthcare workers "are rude to them."

In addition to stories of abuse, a woman seeking care for her child had heard that community members believed healthcare workers "treat them badly and do not give them medicine." A woman receiving antenatal services recalled from a friend's past experience that, "you can bring a patient and fail to get treatment because there is no medicine." Others receiving care had also heard stories of substandard or missing treatment. Stories of abuse and poor care worried many participants and sometimes caused fear or anxiety in seeking out care. Stories, whether true or not, of abuse and poor treatment act as a contributing factor to the first delay.

Overcoming the barriers to care

However, the reason that some individuals are not dissuaded from using the health facilities after hearing negative stories is an underlying belief that the "facility knows what to do." This is a strong motivator in overcoming the first delay. One individual with a sick child rationalized, "because when you get sick, you go to the hospital to be treated and when you get better you go back home." A woman seeking antenatal care indicated, "you find yourself being fine because these people are trained so they will see what is the problem and you will be helped out."

Tied in with the concept that the "facility knows what to do" is the understanding that in times of illness it is often necessary to "rush to the facility." Despite substantial financial or transportation problems, knowledge that expediency is necessary in some maternal and child

illnesses encouraged individuals to find ways to manage these obstacles. A woman attending an antenatal care visit acknowledged that:

> If you find out at home that you are sick, you should hurry up to the facility. If you feel you have malaria, you should always hurry up to the facility for help. That is what I see, because in the village there is no one who can advise you beyond traditional means, that even can harm you, so with that I think we should rush to the facility.

A woman seeking care for her child felt that, "if you have a sick child, always hurry up and take the child to the facility." Another participant defined the way to take good care of another is to "rush the person to the facility, that's where they will know what to do." In another situation a woman explained why she was seeking care for her sick child at the facility:

> When people come for treatment they get treated immediately. So when I came to give birth they treated me very well and I got the interest to keep coming here for whenever my children get sick.

A past positive interaction with the health facility is a strong factor is driving individuals to return to receive more maternal and child care services. The individuals that utilized the health facilities did so because they believe that it is the best option available in times of need.

The perceptions of the specific care an individual received at the facilities were important influencers of future utilization as well. A woman receiving antenatal care spoke of her plans to deliver from the same facility. She explained her positive interactions with the healthcare worker:

> She is polite and good and always handles you with care…She is also very fast at cutting the umbilical cord and providing the necessary care…I even

> delivered my first child from here. And she handled me very well and therefore whenever it comes time for deliver I just go here.

Despite a past negative experience, one woman utilizing delivery services said, “I can’t stop using the facility because I know when I come back to the health center I can find another health worker who can do what I expect.” One woman receiving care for her child was encouraged that, “the health workers have no problem, they don’t shout at us, they don’t do anything bad, even if you found them eating they leave their eating then they come and work up on you.” These individuals understand that the health facilities may not be ideal. But a personal determination to be well and a belief in the aid of the health facility work together to motivate individuals to advocate for their own care to the greatest extent possible.

Observations and other findings:

Some participants demonstrated a hesitancy to respond to the interview questions. At the beginning of many interviews the participants were slow to offer responses. Comments such as, “I have failed that one,” or “I don’t know how” were common. Simple rapport building questions were responded to vaguely. These types of responses may indicate that an individual was not familiar with being asked his or her opinion. Or it could mean that although participants agreed to be interviewed, they were not comfortable being forthcoming about the research topic.

Responses such as: “I don’t want things that will report me,” or “I suggest you ask another person” imply a concern of reprisal from the healthcare workers should the participants be identified as having spoken poorly of the facility. Perhaps these respondents were concerned that their speaking honestly about the conditions at the facilities would somehow impact future care or treatment they hoped to receive. It is unclear if this idea stems from personal experiences or stories from the community.

Additionally, when asked to speculate or explain other's views or opinions, many participants were unsure of how to respond or what was being asked of them. Many individuals were unwilling or unable to attempt explaining why people in their community acted in certain ways. This hesitancy represents a challenge in working to understand the points of view of individuals that have been traditionally underrepresented or marginalized.

Some of the participants with experience receiving maternal and child healthcare expressed their wishes for the health facilities. Even when an individual was mostly satisfied with the care received from the health facility he or she had ideas about how individual care, or the system at large, could be improved. These wishes come from direct patient experience. Most of these wishes were related to the third delay. No respondents wished for improvements in factors related to the first or second delay such as family support, money, or transportation. One individual wished that the facility "increase the number of providers and midwives" after she had experienced long waiting times to see a healthcare worker while in labor because another woman was experiencing an emergency. Another participant wished for the government to properly "supply tablets and other supplies" for treatment, safe deliveries, and overall functionality of the health facility.

Because these individuals are the ones utilizing maternal and child healthcare services, and some have made a great effort to do so, they are uniquely positioned to recommend reasonable improvements.

Summary of Findings

Seen within the framework of The Three Delays, negative opinions from family or community members contribute to the first delay, occurring when individuals do not decide to seek care although it may be needed. A poor reputation, stemming from stories of bad treatment,

no supplies, or harmful events at the government health facilities contributes to the first delay as well. Study participants identified more pressing first delay obstacles than any other. Individuals' repeatedly said they were strongly influenced by those around them and held convictions that the health facilities would be helpful. Once the decision to seek care was made, individuals were willing to go to great lengths to receive it. A lack of finances and the interrelated problem of limited access to transportation are main contributors to the second delay, the inability to reach a health facility after the decision to seek care has been made. While these obstacles are serious, study participants found ways around them by borrowing money, walking or cycling long distances, and choosing facilities to use based on proximity. Finally, mistreatment from staff, a lack of appropriate staff, and missing supplies create the third delay, the inability to access adequate care at the health facility after finally overcoming the first two delays. Although participants had faced trying situations at the health facilities none reported circumstances so challenging that they refused to return. This finding suggests that the Third Delay is not the most influential for the study's participants. Despite the many obstacles to receiving adequate maternal and child care there are individuals in Iganga that persevere and receive the best care within their reach.

When questioned how she was able to overcome obstacles and ultimately deliver her first baby safely at the health facility a new mother responded: "I endured." And this is what it takes for many individuals to beat the obstacles that inhibit receiving care. Individuals that successfully utilized maternal and child health services had two important things in common: a shared a belief that health facility care would be beneficial and an ability to persevere. The belief that the facility would help acted as a driving force for individuals to seek care. It overrode negative opinions from family or community members, stories of bad experiences from others,

and the absence of easily accessible transportation. Each case of successful receipt of care highlighted an individual's perseverance through a lack of family support, insufficient finances, and interactions with unreliable healthcare workers.

The interrelated nature of the common barriers to utilization: transportation, poor opinions of healthcare workers, and less than optimal health knowledge cannot be understated (Nabukera et al., 2006). Because these obstacles do not exist in isolation it becomes even more vital that faith in health facilities and perseverance are present in order for individuals to endure the challenges in their path.

V. Discussion

The Iganga community faces both situationally unique and more universal barriers to providing adequate maternal and child health. A family's opinion of health facilities, lack of financial resources, and one's own expectations of health facilities have a strong impact on how an individual seeks out care and reacts to it. These factors function most clearly in personal, home, and community contexts. They are most likely to interrupt the process of seeking care at the level of a first or second delay. In line with recent work in the region (Waiswa, Namazzi, et al., 2015) (Rutaremwa et al., 2015), this project revealed a pattern of behaviors in which individuals were influenced before even attempting to receive care by encouragement or discouragement from husbands, mothers-in law, and community members.

Most individuals reported having heard of at least one negative experience at a health facility from someone else. Interestingly, despite having heard stories of abuse or poor care, individuals maintained beliefs that they would be helped at the facilities and typically did not let these stories sway them from seeking care. An individual's own interaction at a health facility

carried more weight in choosing to seek care again than anecdotes from others. These findings, while truly rooted in this particular study's data and not intended to be generalized broadly, reflect the ideas described by Andersen's Behavioral Model (Andersen, 1995) most clearly in the Phase 4 update of the original model. This model, used by sociologists and public health researchers for decades, shows the interaction between the environment, population characteristics, health behaviors, and outcomes. It also highlights that the process of accessing care looks more like a loop than a linear pathway; outcomes affect factors such as the perceived need for services that dictate future health behavior (Andersen, 1995).

Broad health facility and health systems level problems including under- trained health workers, charging patients for free supplies, and patients' needs exceeding the facility's capacity result in a lack of confidence in the health care facilities and are important in understanding the barriers to care. While an individual may not recognize all of the pieces of the larger health system that must work together, they do know when this system fails. Participants' reports of insufficient number or ability of healthcare workers, supply and medicine stock outs, and long wait times certainly contribute to obstructions at point of the third delay. These concerns are echoed by the photos taken by community members in Western Uganda showing women falling asleep in long lines for antenatal visits, contaminated water sources at health facilities, and empty pharmacy shelves. (Musoke et al., 2015) and with qualitative work done to understand why there was such low use of post-natal care in two other Ugandan villages (Nabukera et al., 2006).

Despite limited resources, many low and middle income nations have made great strides in improving maternal and child health outcomes. WHO attributes at least part of these successes to even larger scale qualities of a nation: engagement of multiple sectors, partnerships across

society, and establishment of guiding principles focused the improvement of women and children's health (Bulletin of WHO, 2014).

After navigating the health facilities and the process of receiving care in Iganga individuals create an overall reflection on their experience. This reflection is comprised of their general perception of the health facility, the perception of the recent care they received, and their health knowledge. It can be positive, negative, or more likely, lie somewhere in between the two ends of the dichotomy.

The process of seeking and receiving maternal and child care in Iganga works like a feedback loop, the reflection of the experience with its distinct components then becomes an influencer on receiving care in the future. This loop is a simplified representation of the complicated interactions of factors that contribute to the proper or improper functioning of a health system as its basic level, the receipt of care by an individual. These data reflect a small portion of the entire process represented by the causal loop diagrams (Rwashana, Nakubulwa, Nakakeeto-Kijjambu, & Adam, 2014) created in recent Kampala-based research attempting to understand neonatal mortality in a health systems framework. This research team found delays in safe deliveries, post-natal care, and trust in the healthcare service. These ideas are consistent with participants' experiences in Iganga.

Endurance is the key factor that can motivate individuals to overcome obstacles related to the Three Delays and find the care they need. Encouragement from friends and family, some pregnancy and birth planning, financial saving, and a positive perception of the health care facilities contribute to the successful utilization of maternal and child care in Iganga. When an individual received antenatal, delivery, or sick child care many obstacles had been endured. Individuals had to interpret other's opinions and stories for themselves, travel long distances

through difficult terrain, spend money that they hadn't intended to and manage difficult interactions at the health facilities. All of these experiences show a strong sense of tenacity is necessary to successful utilization of maternal and child health services.

VI. Recommendations

WHO recommendations on health promotion interventions for maternal and child health 2015

This study produced data that indicate SAFE has an opportunity to implement programs that co-inside with current WHO maternal and child health intervention recommendations. The first opportunity relates to Recommendation 4, the creation of Maternity Waiting Homes (MWHs) (WHO, 2015). MWHs serve as a temporary safe space for women nearing delivery to stay close to an adequate health facility so that when labor begins, she can be quickly taken to the facility. This way her delivery is far more likely to be attended by a qualified healthcare worker. This eliminates some of the pregnancy related second delay barriers identified in this study: poor infrastructure and no availability of transport when labor begins. With additional funding, SAFE could establish such a home; utilizing SAFE staff as well as village health team members and volunteers to be jointly responsible for promoting and maintaining the house in order to promote community ownership of the program.

WHO acknowledges that the impact of MWHs needs further evaluation. According to the recommendations on health promotion interventions for maternal and newborn health these homes have been created and run differently in various locations and their true effectiveness in reducing maternal and child mortality is not conclusive (WHO, 2015). This innovative program could be proposed to community members within the SAFE service area and, if accepted,

initiated by SAFE with the ultimate goal of sustainability coming from within the community itself.

Secondly, Recommendation 11 calls for community participation in quality-improvement processes (WHO, 2015). SAFE was created in and continues to employ a community-based participatory research ethos. Community involvement in defining and assessing quality is strongly recommended as an avenue to improved maternal and child health (WHO, 2015). Data from this study reveal that individuals feel there is no appropriate mechanism for reporting problems encountered at health facilities.

SAFE program managers regularly meets with District Health Office officials, academics, clinicians, and other key stakeholders in Iganga. SAFE could invite members of their community groups to be directly engaged with these stakeholders because the organization is so deeply rooted and respected in the rural communities they serve. SAFE would be a strong liaison between community members and stakeholders, two groups that do not interact frequently. A commitment to the inclusion of women served by SAFE programs and men involved with the Men for Mamas initiative would give a voice to community members impacted by poor maternal and child healthcare. Increased community participation in quality improvement processes could contribute to the identification of the most current local third delay obstacles.

Roadmap for Reduction of Maternal & Neonatal Mortality and Morbidity (Roadmap)

The steps laid out by the Roadmap propose government and NGO/non-profit collaboration. An area in which SAFE may be able to contribute to these goals is in Priority 2, the availability, accessibility and utilization of maternal and newborn health services (*Roadmap for Accelerating…, 2007-2015*). More specifically, SAFE would be an excellent partner in addressing the activity level need to strengthen youth friendly sexual and reproductive health

services. SAFE's program management staff in Iganga have strong ties to youth empowerment efforts in the region, there is growing momentum behind this movement. SAFE could expand their community groups beyond the adult men and women of Iganga to include the youth. The Roadmap calls for the training of "peer providers for adolescent friendly sexual and reproductive health issues" (*Roadmap for Accelerating…. 2007-2015*). The children of the adult community group members or those involved in the youth empowerment movement could be recruited as peer providers. The infrastructure to hold community group meetings, trainings, and action plans already exists and could be adapted for adolescent suitability.

While SAFE has worked more directly in maternal and child (as opposed to adolescent) health in the past, participants in this study demonstrated only a basic understanding of pregnancy and maternal health. Individuals may benefit from being educated on these topics earlier in life. Some women also indicated that they had little to no sexual health education and got pregnant before they were ready or without even knowing how it happened. This opportunity to tackle one task of the Roadmap's priority areas could improve SAFE's positive reputation and strengthen its impact in the Iganga community. Effective adolescent programming could reduce barriers related to the first delay if promotion of healthy sexual behaviors and health facility use were successful.

Additional Research

In the future, additional qualitative research projects could be done to explore the perspectives of individuals that do not successfully receive care. It may benefit SAFE and Iganga's maternal and child health stakeholders to understand stories from individuals living in the same region that do not seek care and compare those to these data. Additionally, purposive sampling of more male participants and mothers-in law may be helpful in gathering important

information about first and second delay barriers. They may better address some of the interview questions that women speculated or hesitated to answer.

Existing SAFE Programs

SAFE could incorporate the stories of individuals that have successfully received care in the region to inspire others in their community-based women's groups and the Men for Mamas initiative. The stories could be presented by those who have received care, if they are willing to participate. The stories could also be retold by group members or even acted out as dramas to share helpful information and encourage others. Those that exhibited high levels of endurance throughout the process of utilizing maternal and child care services could have a powerfully positive impact on their friends, family, and neighbors.

Despite encountering difficult barriers and delays, individuals employed endurance and tenacity in their pursuit of maternal and child care services. At times it seems as though financial, familial, and community forces work too strongly against individuals, but one's reflection upon the health care seeking process and endurance can create conditions favorable to utilizing care. Hopefully these individuals will be able to show their community successful stories and enlighten the stakeholders that work diligently to improve maternal and child healthcare.

APPENDIX A: ANTENATAL CARE EXIT INTERVIEW

ANTENATAL CARE EXIT INTERVIEW
SAFE MOTHERS, SAFE BABIES

INTRODUCTION AND INFORMED CONSENT (SECTION 1)

INTERVIEWER READ THE FOLLOWING TO RESPONDENT:

Hello, my name is _____ and I am working with a nonprofit organization called Safe Mothers, Safe Babies.

INSTRUCTIONS TO INTERVIEWER: CIRCLE PARTICIPANT'S RESPONSES.

I1: Are you between the ages of 15 and 49? YES……1 NO……→**2** **END**

I2: Have you received antenatal care in this facility in the past 7 days? YES……1 NO……→**2** **END**

Thank you. I am working with an organization called Safe Mothers, Safe Babies that seeks to improve maternal and child health in Uganda. Today, my team and I are interviewing pregnant women and new mothers to better understand their experiences using antenatal care services in this region. Our goal is to use the information we collect to improve the quality of care provided at health facilities in Iganga District. If you participate, I will ask you about your feelings regarding the care provided in health facilities to pregnant women, and your opinions about maternal and child health in general. Then I will ask you a series of short questions about your pregnancy, and the type of services you received during your antenatal care visits. The interview will take around 45-60 minutes to complete.

Your privacy is very important to us. We will not record your name and we will keep your responses private. The only people who will have access to the information you share is our research team.

Because our goal is to improve health services in this area, we truly want to hear your views. There is no right or wrong answer. If you don't understand a question, please ask and I can try to explain it better. You can ask me to repeat or expand on the questions. You can also ask me to skip a question if you don't want to answer something. Answering these questions is entirely voluntary. You don't have to participate if you don't want to, and we can stop the interview at any time. I would like to record this part of the interview so that the rest of my team can hear what you have to say. Only the researchers involved with this project will have access to the interview. The recording and data from this research will be kept locked and protected by the researchers.

INSTRUCTIONS TO INTERVIEWER: CIRCLE PARTICIPANT'S RESPONSES.

I3: Do you have any questions about the interview? YES……→1 NO……2
END

I4: Are you willing to participate in the interview? YES……→1 NO……2
END

I5: Is it okay if I record this part of the interview? YES……→1 NO……2
BEGIN, DO NOT RECORD

↓

BEGIN

Signature of Interviewer: _____ Date: _____

Warm-Up Questions

(1) Tell me a little bit more about yourself.
   a. Tell me about your family.
   b. Who lives with you in your household?
(2) Tell me about this pregnancy.
   a. How have you been feeling?
   b. How does your family feel about the pregnancy?
   c. Have you prepared for the pregnancy or the birth? How?
(3) How are decisions about healthcare made in your household?

Health Facility Questions

(4) How did you learn about this health center and the services it offers?
(5) What was your impression of the health center before this visit?
   a. Knowledge of services offered
   b. Past experiences with this facility
   c. Other people's experience with the health facility

Quality of ANC:

(6) Why do you get antenatal care?
   a. Did any other people impact your decision to get ANC? How?
      i. Probe: Husband/partner? Mother-in-law? Other family? Friends? Neighbours? Religious leaders? Health providers?
(7) Describe the services that you used at your recent ANC visit at the health center.
   a. What services did you get?
   b. Who provided the service?
(8) How did you feel about the quality of the services that you received?
   a. Probes: Wait time, interactions with medical staff, availability of supplies
(9) How do you feel about the way that the healthcare provider treated you?
   a. What about his/her communication style?
   b. Were your questions addressed?
(10) What feelings do you have about your overall experience in this health facility?
   a. How would your experience today affect your likelihood to use this facility in the future?

(11) Where do you intend to deliver your baby?

   a. Did any other people impact your decision of where to deliver How?
      a. Probe: Husband/partner? Mother-in-law? Other family? Friends? Neighbours? Religious leaders? Health providers?

(12) Have you done anything to prepare for the delivery?
   a. Probe: Have you purchased item for the delivery, or do you plan to? What items? Where did you/will you get those items?
   b. Have you planned who will take care of your other children? Will anyone accompany you to the delivery? Who?

(13) IF SHE INTENDS TO DELIVER IN FACILITY: Have you decided what type of transportation you will use to get the facility when it is time to deliver?
IF YES: What type of transportation will you use? What will it cost (if anything)? Do you know how to call for that transport?

Access to Care

(14) How did you access the health facility for this visit?
   a. Availability of transportation? Cost of transport? Accessibility of roads?
   b. How long does it take you to get to the facility? What type of transport do you use?

Closing Questions

(15) What do you think are reasons that some women from you community might not seek care at the clinic?

(16) Do you think that it is convenient for women in the community to access the services at the health center?
   a. Probes: Cost? Accessibility? Community perceptions of health center?

(17) What does your community think about this health facility?

(18) How could health services for pregnancy women and new mothers in this region be improved?
   a. At the district level?
   b. At the health center?
   c. At the community level?
   d. At the family level?

INTERVIEWER SAY TO RESPONDENT: Thank you so much for all this information. Before we end the interview, is there anything else would you like to tell me about pregnancy, birth, or the services provided in this health facility?

INTRODUCTION TO SURVEY QUESTIONS (SECTION 2)

INTERVIEWER READ THE FOLLOWING TO RESPONDENT:

Thank you for answering those questions. Now I will ask you a series of short questions about your family, your health and the services you received during your visit here to the health center. Your privacy is very important to us. We will not record your name, and we will keep your responses private. The only people who will have access to the information

you share is our research team. You can ask me to repeat questions. You can also ask me to skip a question if you don't want to answer something. Answering these questions is entirely voluntary. You don't have to participate in this part of the interview.

INSTRUCTIONS TO INTERVIEWER: CIRCLE PARTICIPANT'S RESPONSES.

I6: Do you have any questions about this part of the interview? YES……1
NO……2

I7: Are you willing to participate in this part of the interview? YES……1
NO……2 **END**

INSTRUCTIONS TO INTERVIEWER

Instructions for specific questions are given to you in all capital letters under each specific question when applicable. In general, please follow these guidelines:

- After reading a question, do **NOT** read responses unless specifically instructed. **Never** read the options "DON'T KNOW" or "DECLINES TO ANSWER"; these answers should be selected only if the respondent provides the answer herself.
- If a respondent provides an answer that is not given and there is an answer choice that says "other", make sure to write in their answer above the word SPECIFY. If the respondent gives more than one unlisted answer choice, record the added responses in the "Notes and Additional Answers" section at the end of the survey, listing the question number (e.g. A7, C8, etc.) next to the responses.
- Unless otherwise indicated, only one response choice is possible.
- In the first Section (Modueles A-C) there are two types of answers: (1) NUMBER CHOICES that are provided, in which you should circle the number corresponding to the response(s) given by the respondent; and (2) BOXES in which you are asked to record the numerical response given by the respondent.
- If the answer choice that you selected is bolded and/or next to an arrow that points down or to the right, this indicates a skip pattern. Skip to the question indicated next to or underneath the arrow only if the answer you selected indicates that you should do so.
- Please write the unique identifier found at the top of this page at the bottom of EVERY page in this survey.

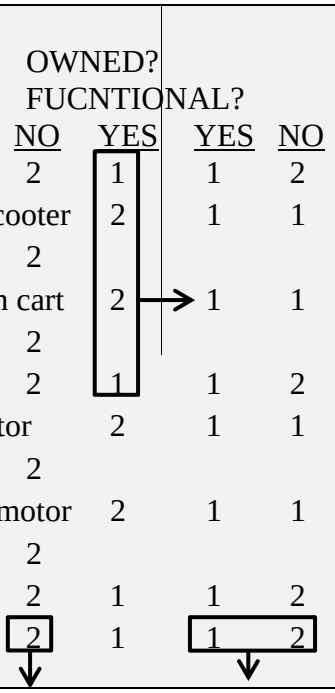
A. RESPONDENT BACKGROUND INFORMATION

INTERVIEWER SAY TO RESPONDENT: To get started, I would like to ask you a few questions about your background and your household.

NO	Questions and Filters	Coding Categories	Skip
A1	How old are you? ENTER AGE IN YEARS.	AGE..... ☐☐ → **A2** DON'T KNOW .....**98** → **A1_a** DECLINES TO ANSWER.....**99** → **A2**	

A1_a	IF RESPONDENT DOESN'T KNOW AGE, PROBE TO IDENTIFY APPROXIMATE AGE AND SELECT CORRESPONDING AGE RANGE.	15 – 19 YEARS .....1 20 – 24 YEARS .....2 25 – 29 YEARS .....3 30 – 34 YEARS .....4 35 – 39 YEARS .....5 40 – 44 YEARS .....6 45 – 49 YEARS .....7 50 YEARS OR OLDER 8	
A2	What is your religion?	CATHOLIC .....1 PROTESTANT.....2 MUSLIM .....3 PENTECOSTAL .....4 SEVENTH DAY ADVENTIST.....5 OTHER _____.....9 7..... (SPECIFY) DECLINES TO ANSWER.....99	
A3	What is your tribe?	MUGANDA .....1 MUNYANKOLE .....2 MUSOGA.....3 MUKIGA.....4 ATESO .....5 OTHER _____.....9 7..... (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A4	Have you ever attended school?	YES.....**1** → **A5** NO .....**2** DECLINES TO ANSWER.....**99** → **A6**	
A5	What is the highest level of school you **completed**?	SOME PRIMARY.....1 PRIMARY .....2 SOME SECONDARY.....3 SECONDARY.....4 UNIVERSITY OR HIGHER .....5 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A6	Aside from your own housework, have you done any work in the past 12 months for which you received monetary or non-monetary payment?	YES.....**1** → **A7** NO .....**2** DON'T KNOW .....9**8** → **A8** DECLINES TO ANSWER.....**99**	

A7	What has been your primary occupation while doing that work?	PROFESSIONAL/MANAGERIAL.....1 CLERICAL.....2	

		SALES AND SERVICES .....3 SKILLED AGRICULTURE, FORESTRY, FISHERY .....4 CRAFT AND RELATED TRADE WORK .....5 PLANT MACHINE OPERATOR/ASSEMBLER.....6 ELEMENTARY OCCUPATION .....7 OTHER _____.....9 7..... (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A8	Does any member of your household own the following: (A) Bicycle (B) Motorcycle/scooter (C) Animal-drawn cart (D) Car/truck (E) Boat with motor (F) Boat with no motor (G) Radio (H) Mobile phone		
A9	How many people live in your household, that is, how many people do you share your meals with on a daily basis?	NUMBER OF PEOPLE ..... ☐☐	
A10	What is your marital status?	NEVER MARRIED/LIVED WITH MAN AS IF MARRIED .....1 → **B** CURRENTLY MARRIED.....**2** LIVING AS MARRIED.....**3** → **A11** MARRIED BUT SEPARATED.....**4** DIVORCED .....**5** WIDOWED .....**6** → **B** OTHER _____.....**9** **7**..... (SPECIFY)	

		DECLINES TO ANSWER.....**99**	
A11	Do you reside in the same homestead as your mother-in-law?	YES.....**1** NO .....**2** DECLINES TO ANSWER.....**99**	
A12	How old were you when you began your first marriage/live-in relationship?	AGE IN COMPLETED YEARS.... ☐☐ DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A13	How old is your (HUSBAND/PARTNER)?	AGE IN COMPLETED YEARS.... ☐☐ DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A14	Did your (CURRENT/LAST) (HUSBAND/PARTNER) ever attend school?	YES.....**1** → **A14** NO .....**2** DON'T KNOW .....**98** → **A15** DECLINES TO ANSWER.....**99**	
A15	What is the highest level of school your partner **completed**?	SOME PRIMARY.....1 PRIMARY.....2 SOME SECONDARY.....3 SECONDARY.....4 UNIVERSITY OR HIGHER .....5 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
A16	Does/did your (HUSBAND/PARTNER) have other wives or does he live with other women as if married?	YES.....**1** → **A17** NO .....**2** DECLINES TO ANSWER.....**99** → **B**	
A17	Including yourself, how many wives or live-with partners does/did your (HUSBAND/PARTNER) have?	ONE.....1 TWO.....2 THREE .....3 FOUR .....4 OTHER _____.....9 7..... (SPECIFY) DECLINES TO ANSWER.....99	
A18	Are/were you the first, second…. wife/live-in partner?	FIRST WIFE .....1 SECOND WIFE .....2 THIRD WIFE .....3 FOURTH WIFE .....4 OTHER _____.....9 7..... (SPECIFY) DON'T KNOW 98	

		DECLINES TO ANSWER.....99	

B. INFORMATION ABOUT ANC VISIT

INTERVIEWER SAY TO RESPONDENT: Now, I would like to ask you some questions about your pregnancy and your experience with antenatal care services.

NO	Questions and Filters	Coding Categories	Skip
B1	Have you been pregnant before, regardless of the outcome, or is this your first pregnancy?	I HAVE BEEN PREGNANT BEFORE.....1 THIS IS MY FIRST PREGNANCY .....2 DECLINES TO ANSWER.....99	
B2	How old were you when you got pregnant for the first time?	AGE IN YEARS: ..... ☐☐ → **B3** DON'T KNOW .....**98** → **B2_a** DECLINES TO ANSWER.....**99** → **B3**	
B2_a	IF RESPONDENT DOESN'T KNOW AGE AT FIRST PREGNANCY, PROBE TO IDENTIFY APPROXIMATE AGE AND SELECT CORRESPONDING AGE RANGE.	10 – 14 YEARS .....1 15 – 19 YEARS .....2 20 – 24 YEARS .....3 25 – 29 YEARS .....4 30 – 34 YEARS .....5 35 – 39 YEARS .....6 40 – 44 YEARS .....7 45 – 49 YEARS .....8 50 YEARS OR OLDER 9	
B3	Including this pregnancy, how many times have you been pregnant?	NUMBER OF PREGNANCIES: ... ☐☐ DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B4	How many babies have you delivered?	NUMBER OF BIRTHS:..... ☐☐ DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B5	How many living children do you currently have?	NUMBER OF LIVING CHILDREN: ☐☐ ..... DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B6	Do you have an antenatal care card, blue book, or a vaccination card with you today? IF YES: ASK TO SEE THE CARD/BOOK.	YES.....1 NO .....2 DECLINES TO ANSWER.....99	
B7	CHECK THE ANC CARD BOOK OR VACCINATION CARD. INDICATE WHETHER THERE IS ANY NOTE OR	YES, 1 TIME.....1 YES, 2 TIMES.....2 YES, 3 OR MORE TIMES .....3 NO RECORD 96	

	RECORD OF THE CLIENT HAVING RECEIVED TETANUS TOXOID.		
B8	HOW MANY WEEKS PREGNANT IS THE CLIENT, ACCORDING TO THE MOST RECENT ENTRY IN THE ANC CARD, BOOK, OR VACCINATION CARD? RECORD NUMBER EXACTLY AS GIVEN IN BOOK. CIRCLE THE NUMBER CORRESPONDING TO THE UNITS (WEEKS OR MONTHS) AND WRITE IN NUMERICAL VALUE.	WEEKS .....1 ☐☐ MONTHS .....2 ☐☐ NO RECORD 96	
B9	CHECK THE ANC CARD, BOOK OR VACCINATION CARD. INDICATE WHETHER THERE IS ANY NOTE OR RECORD OF THE CLIENT HAVING RECEIVED IPT.	YES, 1 TIME.....1 YES, 2 TIMES.....2 YES, 3 TIMES.....3 YES, 4 TIMES OR MORE .....4 NO RECORD 96	
B10	Was this your first antenatal visit for this pregnancy? IF THIS IS NOT THE FIRST VISIT, ASK: How many times have you visited an antenatal clinic for this pregnancy? RECORD THE NUMBER OF **THIS** VISIT.	FIRST VISIT .....1 SECOND VISIT .....2 THIRD VISIT.....3 FOURTH VISIT .....4 MORE THAN FOURTH VISIT .....5 DECLINES TO ANSWER.....99	
B11	During this visit (or previous visits), were any of the following done at least once? (A) Were you weighed? (B) Was your blood pressure measured? (C) Did you give a urine sample? (D) Did you give a blood sample?	YES NO DK (A) WEIGHED.....1 2 98 (B) BP.....1 2 98 (C) URINE .....1 2 98 (D) BLOOD.....1 2 98	
B12	During this visit (or previous visits) did a provider give you iron pills, folic acid pills, or iron with folic acid pills, or give you a prescription for them? SHOW THE RESPONDENT AN IRON PILL, A FOLIC ACID PILL, OR A COMBINATION PILL.	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B13	During this visit (or previous visits) did a provider give you pills to prevent you from getting malaria?	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	

	SHOW THE RESPONDENT AN SP-BASED DRUG.		
B14	During this visit (or a previous visit) did a provider advise you to sleep under a mosquito net that has be entreated with an insecticide?	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B15	During this visit (or a previous visit) did a provider talk to you about nutrition, that is about what is good for you to eat during your pregnancy?	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B16	During this visit (or a previous visit) did a provider talk to you about any danger signs, that is signs of complications that could indicate a problem with the pregnancy?	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B17	Please tell me any of the signs of complications that you know of. CIRCLE ALL RESPONSES GIVEN BY THE RESPONDENT; DO NOT GIVE HINTS. YOU MAY PROBE WITHOUT USING SPECIFIC ANSWERS GIVEN ON RIGHT (E.G., "ANYTHING ELSE?")	VAGINAL BLEEDING.....1 FAST/DIFFICULTY BREATHING.....2 HIGH FEVER .....3 SEVERE ABDOMINAL PAIN .....4 HEADACHE OR BLURRED VISION .....5 CONVULSIONS OR LOSS OF CONSCIOUSNESS .....6 FOUL SMELLING DISCHARGE OR FLUID FROM VAGINA.....7 BABY STOPS MOVING.....8 LEAKING BROWN OR GREEN FLUID FROM THE VAGINA.....9 PROLONGED LABOR .....10 OTHER _____...97 (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B18	What did the provider advise you to do if you experienced any of the signs of complications? CIRLCE ALL RESPONSES GIVEN BY THE RESPONDENT; DO NOT GIVE HINTS. YOU MAY PROBE WITHOUT USING SPECIFIC ANSWERS GIVEN ON RIGHT (E.G., "ANYTHING ELSE?")	SEEK HELP AT A HEALTH FACILITY.1 REDUCE PHYSICAL ACTIVITY.....2 CHANGE DIET .....3 DRINK MORE LIQUIDS.....4 PROVIDER DID NOT ADVISE ANYTHING .....5 OTHER _____...97 (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B19	During this visit (or a previous visit) did a provider talk to you about the things you should have in preparation for this delivery?	YES.....1 NO .....2 DON'T KNOW 98	

	This may include planning in case of emergency, things you should bring to the health facility, or things you should prepare at home for the delivery.	DECLINES TO ANSWER.....99	
B20	Please tell me some of the things you know of that you should have in preparation for the delivery? CIRCLE ALL RESPONSES GIVEN BY THE RESPONDENT; DO NOT GIVE HINTS. YOU MAY PROBE WITHOUT USING SPECIFIC ANSWERS GIVEN ON RIGHT (E.G., "ANYTHING ELSE?")	EMERGENCY TRANSPORT.....1 MONEY .....2 DISINFECTANT/SOAP .....3 GLOVES .....4 STERILE BLADE OR SCISSORS TO CUT CORD .....5 COTTON ROLL .....6 GAUZE.....7 MAAMA KIT.....8 CANDLE OR PARAFIN FOR LIGHT .....9 BLANKET FOR BABY.....10 PROVIDER DID NOT ADVISE ANYTHING .....11 OTHER _____...97 (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B21	Do you have any money set aside for the delivery or expenses related to the delivery? IF YES: Do you think you have enough?	YES.....1 YES, BUT NOT ENOUGH .....2 NO 3	
B22	How much money have you set aside for the delivery?	AMOUNT SAVED (IN SHILLINGS) ☐☐☐☐☐☐☐	
B23	During your visit (or previous visits) did a provider talk to you about where you plan to deliver your baby?	YES.....1 NO .....2 DON'T KNOW .....98 DECLINES TO ANSWER.....99	
B24	Have you decided where you will deliver this baby? IF YES, PROBE FOR WHETHER THE PLAN IS TO DELIVER IN A FACILITY OR AT HOME.	AT A HEALTH FACILITY.....1 AT A HOSPITAL.....2 AT HOME .....3 AT TRADITIONAL BIRTH ATTENDANT'S HOME .....4 OTHER _____...97 (SPECIFY) DON'T KNOW .....98 DECLINES TO ANSWER.....99	

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