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Exploring Low Uptake of Skilled Delivery Services and Postpartum Family Planning Services among Women Living in Western Kenya

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LIST OF ACRONYMS

AMPATH	Academic Model Providing Access to Health care
ANC	Antenatal Care
CPR	Contraception Prevalence Rate
CWC	Child Welfare Clinic
DHS	Demographic and Health Survey
DRH	Division of Reproductive Health
FGD	Focus Group Discussion
FP	Family Planning
HCP	Health Care Provider
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
MDG	Millennium Development Goals
MOH	Ministry of Health
MTRH	Moi Teaching and Referral Hospital
PMTCT	Prevention of Maternal-to-Child Transmission of HIV
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
WHO	World Health Organization
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund

ABSTRACT

Background. Kenya has relatively poor maternal and infant health outcomes. Despite the fact that 92 percent of Kenyan women receive antenatal care (ANC), the 2008-2009 Kenya Demographic and Health Survey indicates that only 44 percent of births in Kenya were attended by a health care professional and 44 percent of deliveries occurred in health facilities. Moreover, 26 percent of women have an unmet need for family planning (FP) and the decline in total fertility rate has stalled at about 4.6 since 1995. Little is known about how women choose where to deliver their children and how they arrive at their postpartum FP decisions. This study explores the complex confluence of factors that influence delivery and FP decision making.

Methods. A total of 20 focus group discussions (FGDs) were conducted at two sites in western Kenya — one rural site and one urban — to explore delivery choices and postpartum FP. Ten FGDs at each site were conducted with the following groups: health care providers from the formal sector, traditional birth attendants, women who attended at least four ANC visits and gave birth at home, and women who attended at least four ANC visits and gave birth in a health care facility. Three in-depth interviews were conducted at each site with a combination of women who gave birth in a facility and at home. All discussions were recorded. Data were analyzed for thematic content by four research team members.

Results. Decisions pertaining to where women give birth are influenced by socioeconomic factors, cultural practices, fear of HIV testing at the hospital, quality of service provided, access to facilities, and stigma surrounding health facilities, among other factors. Findings illustrate that FP practices are determined by spousal and extended family support, literacy and access to accurate information about FP, fear of side effects, costs of FP methods, and religion. Our findings suggest changes in health care policy, service provision, better information dissemination, education campaigns, and respect for socio-cultural practices will encourage uptake of facility-based deliveries and postpartum FP practices.

INTRODUCTION

The global community is striving to achieve eight goals for better health and lower poverty by the year 2015, outlined in the United Nation's Millennium Development Goals (MDG).[1] Goal number five is aimed at improving maternal health and goal four is aimed at reducing child mortality. Data show that complications during pregnancy and childbirth continue to pose a significant threat to women and newborns worldwide (Simkhada, Teijlingen, Porter & Simkhada, 2008). The 2005 maternal mortality report developed by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Population Fulnd (UNFPA), and the World Bank states that "of the estimated total of 536,000 maternal deaths worldwide, developing countries accounted for 99 percent (533,000) of deaths. Slightly more than half of the maternal deaths (270,000) occurred in sub-Saharan Africa region alone" (WHO, 2007). Despite relatively high female literacy rates and higher economic performance, compared to other countries in sub-Saharan Africa, Kenya has a high maternal mortality rate of 414 per 100,000 live births (Fosto JC, Ezeh A & Oronje R, 2008).[2]

The 2008-2009 Kenya Demographic and Health Survey (DHS) reports the infant mortality rate has seen substantial declines in Kenya and now ranges from 39 to 95 per 1,000 live births, depending on the province (Kenya National Bureau of Statistics & ICF Macro, 2010). According to recent estimates, Kenya ranks 44 out of 224, placing Kenya among the top 20 percent highest infant mortality rates worldwide (Central Intelligence Agency, 2011). Furthermore, the importance of maternal and infant health care is underscored by the high burden of HIV among women in Kenya. The total prevalence in Kenya is 7.4 percent among adults age 14-49 with women accounting for nearly 9 percent compared to 5.5 percent among men (National AIDS and STI Control Programme, Ministry of Health, 2008). Given the high HIV prevalence among women, it is critical to ensure safe and sanitary deliveries through prevention of maternal-to-child transmission of HIV (PMTCT).

BACKGROUND AND PURPOSE

To achieve the MDG target of reducing by three quarters the maternal mortality ratio from 1990 to 2015, along with the MDG target of decreasing infant mortality, the international community has placed an emphasis on increasing antenatal care (ANC) and increasing skilled attendance during delivery (Perkins et al., 2009). Although the emphasis is generally placed on ANC and increasing skilled deliveries, postpartum care can also play a critical role in decreasing the morbidity and mortality of mothers and babies (Safe Motherhood Demonstration Project, University of Nairobi & Population Council, 2005). While Kenya has high rates of ANC attendance, there are fairly low rates of facility-based/skilled deliveries and about half of Kenyan women do not receive postnatal care (Kenya National Bureau of Statistics & ICF Macro, 2010).

[1] The goals can be found at: http://www.un.org/millenniumgoals/.

[2] The 2008-2009 Kenya DHS reports a maternal death ratio of 488 per 100,000, which is statistically insignificant from 414 per 100,000 that was estimated for the 10-year period prior to the 2003 Kenya DHS. Therefore, it is impossible to say there has been a change in the maternal death rate.

A woman who delivers in the absence of a skilled attendant places herself and her baby at risk of adverse outcomes (van Eijk et al., 2006). While modest increases in skilled deliveries have been reported in Kenya during recent years, 44 percent of deliveries are assisted by a health professional (doctor, nurse, or midwife) with 28 percent attended by a traditional birth attendant (TBA), 21 percent attended by relatives and friends, and seven percent of women deliver alone. Moreover, 43 percent of deliveries occur in health facilities (Kenya National Bureau of Statistics & ICF Macro, 2010). There is evidence that women who deliver with a skilled birth attendant are more likely to seek early postpartum care. Similarly, of those who deliver outside a health facility, more than 80 percent do not receive postnatal care (Safe Motherhood Demonstration, 2005). According to DHS 2008-2009, 53 percent of women in Kenya do not receive any postnatal care.

While the statistics on ANC coverage appear encouraging, with 92 percent of Kenyan women receiving ANC from a medical professional, the frequency and timing of visits vary. WHO recommends four ANC visits for uncomplicated pregnancies, starting in the first trimester, but only 15 percent of Kenyan women receive ANC in the first trimester—most wait until about the sixth month. Also, the proportion of women who make an ANC visit four or more times has decreased from 52 percent to 47 percent since the 2003 DHS. Moreover, while there are many benefits to ANC attendance, evidence that uptake of ANC leads to increased likelihood of seeking skilled assistance at delivery remains inconclusive (Kenya National Bureau of Statistics & ICF Macro, 2010).

Promoting and encouraging FP is one approach used to address high maternal and child mortality rates in sub-Saharan Africa. The promotion of family planning carries other potential benefits, including decreasing the number of people living in poverty, empowerment of women, and improving environmental sustainability by curtailing population growth (Cleland, Bernstein, Ezeh, Faundes, Glasier & Innis, 2006). The use of FP creates the possibility of preventing 32 percent of all maternal death and nearly 10 percent of childhood deaths (Cleland et al., 2006).

Kenya's total fertility rate (TFR) has largely stagnated during the last decade. In 1998-2003, the TFR rose very slightly from 4.7 to 4.9, but in the years preceding the 2008-2009 DHS the TFR has decreased to 4.6. It is important to note the large urban/rural disparity in fertility rates with urban areas reporting 2.9 and rural areas reporting 5.2 children (Kenya National Bureau of Statistics & ICF Macro, 2010). The "ever use" of FP had increased to 73 percent in the 2008-2009 DHS. Still, 26 percent of women had an unmet need for FP (Kenya National Bureau of Statistics & ICF Macro, 2010). Meeting FP needs is linked to the achievement of MDGs as it is also a cost-effective way of preventing the majority of global abortion and obstetric related issues (Cleland et al., 2006).

LITERATURE REVIEW

Why do women in Kenya seek ANC services, but choose not to give birth in a health facility or with a skilled attendant? Moreover, why are fertility trends nearly stagnant with more than a quarter of women reporting with an unmet need for FP? The following provides a brief review of the literature relevant pertinent to delivery and FP choices in Kenya.

Where Women Deliver. There exists some research on the factors associated with the uptake of ANC services and the use of skilled maternity care in Kenya, though this body of literature is largely quantitative. These factors include (but are not limited to) cost, perceived quality of care, distance, transportation, gender issues, education, and cultural norms that influence home birth versus facility-based care (Perkins et al., 2009; van Ejik et al., 2006, Simkhada et al., 2008). These studies are largely based on hospital statistics, which fail to provide a complete picture of the situation since more than half of the deliveries in Kenya occur outside of a facility (Magadi, Madise & Diamond, 2001). The 2008-2009 DHS asked women who delivered outside of a facility why they did so and their answers were the following: the facility was too far away, there was no transport to get to the facility, both of the first two answers, and that it was not necessary (Kenya National Bureau of Statistics & ICF Macro, 2010).

One qualitative study by Izugbara, Ezeh and Fosto (2009), attempted to explore these factors through a secondary analysis of data from focus groups that were conducted with TBAs living and working in slums outside of Nairobi. This study provided an urban perspective and offered insight into TBA beliefs and practices that help to explain why so many women shy away from facility-based care. Still, the authors of the study lamented "it would have been nice to compare perspectives of women, TBAs and professional providers" and pointed out this is "fertile ground for future research." (Izugbara, Ezeh & Fostos, 2009).

Family Planning. Kenya did not have a national FP program until 1967. The idea behind this plan was to integrate FP into the maternal and child health divisions of the Kenya Ministry of Health (MOH). The Kenyan government approved a set of population policy guidelines to assist in the implementation of the program in 1984. In 2000, these guidelines were modified to reflect the 1994 International Conference on Population and Development (Ojakaa, 2008). Kenya has experienced progress in terms of decreasing the fertility rate and increasing contraceptive prevalence rates; however, progress has stagnated, particularly in the late 1990s and early 2000s.

According to the DHS 2008-2009, 46 percent of married Kenyan women were currently using some method of contraception, a modest increase from 39 percent in 1998. The most recent DHS attributes the boost in overall contraceptive use to the increased use of modern FP methods (Kenya National Bureau of Statistics & ICF Macro, 2010). Moreover, the most recent data suggests 26 percent of married women have an unmet need for FP, results equally dispersed between unmet need for spacing births and unmet need for limiting births (Kenya National Bureau of Statistics & ICF Macro, 2010). Ensuring adequate timing and spacing between pregnancies is essential to maternal and infant wellbeing (Jhpiego & ACCESS Family Planning Initiative, 2008). According to the most recent DHS, the median birth interval among Kenyan women was 33.1 months. However, the interval was shorter for children born to young women ages 15-29; children whose preceding sibling died; children in rural areas; children born to women with no education; and those born to women from poorer households (Kenya National Bureau of Statistics & ICF Macro, 2010).

STUDY DESIGN AND METHODS

The study used qualitative methods to build on the existing findings with the aim of better understanding and explaining the complex interrelationship among factors that influence women's decisions surrounding childbirth. This included exploring how women defined associated factors, which factors are most influential, and which factors ultimately shape the demand for facility-based services, skilled birth attendants, and postpartum FP.

To better understand how to decrease maternal and infant mortality, we consider two research questions. First, we examined why there is low uptake of skilled delivery services among women living in western Kenya. Specifically, we explored factors, beliefs, and perceptions (social, economic, cultural, and structural) that contribute to where women choose to deliver and who attends the delivery. Moreover, we looked at women's perceptions of "skilled" versus "unskilled" delivery care, and whether key factors, beliefs and perceptions that influence delivery choices differ significantly in urban versus rural contexts. The second major research topic explored the factors that influence postpartum FP uptake among women living in western Kenya.

Study Design

To answer these research questions, the study employed 20 semi-structured focus group discussions (FGDs) at two study sites in western Kenya (10 FGDs at each site, table 1). The FGDs were divided into the following groups: health care providers (trained nurses and trained nurse midwives, clinical officers and doctors); TBAs;[3] women who have received ANC and given birth within the past three years in a facility; and women who had received ANC and given birth in the last three years at home. The number of participants at each session ranged from seven to twelve.

Table 1. Number of Focus Group Discussions per Site, by Type of Participants

Site	Women who delivered in a health facility	Women who delivered at home	Health care providers	Traditional birth attendants
Eldoret	3	3	2	2
Port Victoria	3	3	2	2

To elicit data that further explained decisions facing women in western Kenya, the study was conducted in two types of locations; one rural (Port Victoria) and one urban (Eldoret). By conducting the study in rural and urban sites, we explored whether the factors, beliefs, and perceptions that influence where women deliver are significantly different in urban versus rural contexts. This created an opportunity to explore and contrast two different communities — one more ethnically homogenous and rural and the other more ethnically mixed and urban. The rural site, Port Victoria, is a small fishing town with a district hospital that serves some 70,000 people. The majority of the population is Luhya, with a significant number of Luos also living in the area. The urban site, Eldoret, located in the Rift valley, is Kenya's fifth largest city with

[3] TBAs are those who provide delivery services but are not associated with or recognized by the Kenyan Ministry of Health.

approximately 200,000 people, and has a population comprised of a variety of different tribes. It is also home to the Moi Teaching and Referral Hospital (MTRH). Both sites are government facilities and AMPATH (Academic Model Providing Access to Health care) sites that had preexisting relationships with Moi University School of Medicine, the School of Public Health, and George Washington University School of Public Health and Health Services.

The FGDs were conducted largely in Swahili and English, although Luhya (a local language) was used for one FGD in Port Victoria. Including providers and recipients of health care provided the multiple perspectives that were necessary to explain the complex relationship of factors surrounding childbirth. The FGDs with women who had delivered only included women over 18 years old who had attended ANC services (four or more visits[4]) at one of the two sites. This study focused on women who had already made decisions about ANC attendance and where to deliver. Hospital records made it easier to recruit women who received ANC care. Recruiting only women who attended ANC provided an opportunity to consider the relationship between ANC and delivery choices. The FGDs with women were split into two groups — those who delivered in a facility and those who delivered at home — to contrast their experiences more effectively and to ensure the perspectives of those who chose to deliver at home and those who chose a facility were represented in the study. Women brought ANC cards to the FGDs to confirm attendance of at least four visits.

In addition to the FGDs, six in-depth interviews (three at each site) were conducted to gather more information on experiences of mothers from the communities of interest. After some of the FGDs, the facilitator identified one woman between the ages of 18-25, one between 26-32, and one over 33 years old, to participate in an in-depth interview to garner more insight into the reproductive experiences of women and help identify and document specific experiences to complement the more general data from the FGDs.

Recruitment

To recruit study participants, the research team identified and trained recruitment officers to recruit women who had delivered, TBAs, and formal health care providers. In Eldoret, the recruitment officers who identified potential participants were employees of the Riley Mother Baby Hospital and Moi Teaching and Referral Hospital. They facilitated recruitment of both women that had delivered, and formal health care providers. Outreach workers from AMPATH assisted with the recruitment of TBAs. In Port Victoria, health care workers from the District Hospital and the Mukhobola Health Center aided in the recruitment of women who delivered and formal health care workers. World Vision, an international nongovernmental organization that has historically had a presence in Bunyala District, assisted in the recruitment of TBAs. Since the Kenyan MOH does not formally recognize TBAs, it was better to rely on other organizations, such as AMPATH and World Vision, for recruitment purposes.

Ethical Considerations

Prior to initiation of research activities, ethical clearance was granted by The George Washington University and Moi University. Each study participant completed a consent form (in the language of their choice) prior to participation in the study. Each participant was reminded that participation was voluntary and the discussion would remain confidential. No identifying

[4] This is the WHO recommended minimum number of visits for uncomplicated pregnancies.

information was recorded from any participant and data summaries only included descriptions of participants in aggregate form. Participants were reimbursed a small fee for transportation (200 Kshs.) and given light refreshments in the form of a soda and cupcake as appreciation for their participation.

FGDs and interviews were led by a trained facilitator (moderator) and were accompanied by a note-taker. Interviews and FGDs were recorded. In addition, demographic data were collected for all FGDs involving women who had delivered and TBAs. Collecting demographic data from formal care providers was not done because this seemed less relevant to answering the research questions and, subsequently, would not be a good use of time. The data were collected at both sites between May and July of 2010. Data management and analysis happened between July 2010 and February 2011. Study dissemination took place in February 2011 at both sites.

Data Analysis. The demographic questionnaire data was analyzed using a statistical analysis package (STATA) to generate descriptive statistics. The qualitative FGD data and in-depth interview recordings were transcribed and, if necessary, were then translated from Swahili into English. Transcribers and translators were trained professionals fluent in Luhya (when necessary), Kiswahili, and English. Once the transcripts were completed, the co-principal investigators separately coded and analyzed the data for thematic content. To illustrate participants' responses on these issues and themes, verbatim quotations have been used. Having multiple researchers code and analyze decreased personal bias.

STUDY FINDINGS

Demographic Data

TBAs and women who had delivered were asked to fill out a demographic questionnaire prior to participating in the FGDs. A similar survey was conducted with the TBAs because there is no uniform TBA training, and perceptions and practices among TBAs vary. A demographic survey with the health care providers was not necessary given the study goals. There were 175 total participants in the study with more participants from Port Victoria (94) versus Eldoret (81). The overall breakdown of participants was as follows: 31 were health care providers, 32 were TBAs, and 112 were mothers who had delivered in the past three years. Due to purposive sampling, results of the demographic surveys are not generalizable at the population level. The following will provide more specific demographic data for the TBAs and women who had delivered.

Traditional Birth Attendants. The demographic questionnaire for the TBAs included questions pertaining to age, tribe, level of education, years of experience as a TBA, the type of training they received, and if they had any other means of income generation aside from assisting births. The TBAs who participated in the study ranged in age from 25 to 71, with a mean age of 53.7. A third of all TBAs did not attend any school, roughly half completed primary school, and only one completed form 1-2. The TBAs from Eldoret were slightly more educated, but overall there was little difference in education level of TBAs between Eldoret and Port Victoria. In terms of TBA experience (or number of years assisting births) the majority (18 of 32 total TBAs) reported having 15 years of experience or more. Only two reported having less than one year of experience. The majority of TBAs were trained by a family member. Some had also received

training from select health facilities. More than half (19 of the 32) generated income from other activities besides assisting births. Other income generating activities include running a business, farming, managing poultry, and casual work.

Mothers Who Had Delivered. The mothers filled out a demographics questionnaire similar to that of the TBAs. We report on their age, tribe, relationship status, level of education, and employment status. Approximately half of the women had delivered at home and roughly half in the facility (this was a study design choice). The total mean age for women who had delivered ranged from 18 to 39 with a mean of 26.5 years. The ranges and means by site were nearly identical to the total population of women who delivered in the study. As anticipated, there was much more tribal diversity among the Eldoret population. The majority identified as Kikuyu and Luhya, followed by Kalenjin, Luo, and a few reporting Kisii, Kamba, and Meru) versus the Port Victoria population, which only reported to be Luhya and Luo.

Nearly 80 percent of the women from both sites were married, and more than 90% reported not being formally employed. In looking at reported education levels of all women in the study, only six of the 112 women reported they did not attend school, about half completed primary school (standard 4-8), nearly 20% (N= 22) women completed secondary school, and four had university education. As expected, education level among participants was, on average, higher in Eldoret than rural Port Victoria. Figure 1 shows highest level of education and where women delivered (in a facility versus at home).

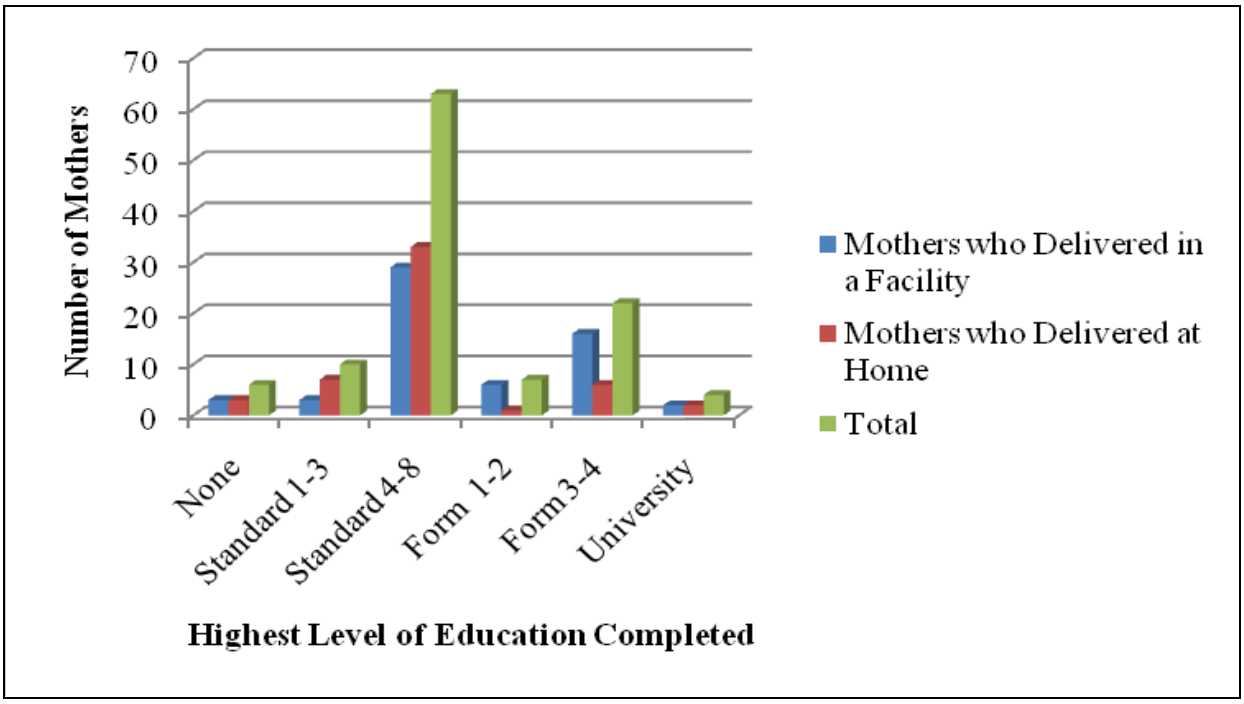

Figure 1. Mother's education level, by delivery location

Focus Group and Interview Findings

This section highlights the major findings related to where women chose to deliver, and the next section discusses decisions surrounding postpartum FP. Similar themes were found at both sites.

Care of Mother and Baby in the Prenatal Period. Before asking women about decisions surrounding delivery and post-delivery, we wanted to gain insight into perceptions and practices about what women do to prepare for the birth of a baby. The FGDs with women who delivered revealed that women engage in particular activities, and modify their behavior to help prepare for the birth of their babies. Women from both sites mentioned practicing good eating habits, exercise, modifying sexual behavior, using mosquito nets and anti-malarials, receiving an HIV test and practicing good hygiene. Women from Eldoret also included avoiding alcohol, smoking, stress, over the counter drugs, took supplements and minded their sleeping position. As mentioned in the study design section, all women who delivered in this particular study also attended at least four ANC visits in advance of delivery, making ANC part of their pregnancy "regimen." Major reasons for citing ANC attendance were to monitor the health of mother and baby (vital signs), receive advice about prenatal care including diet, exercise and to acquire additional medical care and/or health promotion materials. This includes supplements/vitamins, HIV tests, PMTCT of HIV, malaria bed nets and medication, and to receive immunizations. Women from both sites also mentioned ANC is important in the case of prenatal complications. Moreover, women who delivered at home and in a facility mentioned ANC as a time to make plans for where to deliver and what to do in the case of unexpected complications.

It is not surprising that the women who participated in the study were able to cite nearly two dozen reasons for attending ANC since they had attended four or more visits before their last delivery. However, when asked why other women may not choose to attend ANC, they mentioned a variety of reasons that significantly overlap with why women choose not to deliver in a facility. Popular reasons mentioned include fear that others would find out their HIV status, lack of money to pay for transport and services, and poor quality of care at the health facility. Other reasons include fear of vaginal exams and injections, fear of being attended to by students or young people, and distance to the facility.

Decisions Surrounding Delivery. When a mother considers where to deliver, the decision-making process can be complex. She must weigh the advice from health care providers, friends, and family. There are culturally laden gender roles that empower family members to make this decision more than the mother herself. Further, when the larger social network is involved in making delivery decisions, delays can occur and the mothers may end up delivering at home. All respondents agreed that delivery services are sought in both health facilities and home environments, however, home births are common. When a mother is in labor, she tends to rush to the nearest place where she can be assisted, even if it is a private hospital.

Port Victoria mothers reported that they delivered their babies at home, in health facilities, and on their way to the health facilities. Most mothers delivered at home or in private clinics near their homes due to easy geographical access of these options. Urban mothers were said to opt for facility care more than their rural counterparts. Mothers continue to give birth at

home for many reasons (see appendix table 1 for a list of reasons); however, study findings indicate that health facilities are considered the most ideal and safest place for delivery. Women are usually encouraged to deliver in the hospital during ANC visits. For instance, findings indicate that Eldoret mothers know it is important to deliver at the hospital, nonetheless, some choose to attend ANC then give birth at home:

You see, we usually attend to the entire clinic visits, adhere to the doctor's prescriptions for the entire required period up to the last minute. But when we remember/think that things could change in the last minutes that I need to be operated on or undergo an episiotomy, this usually puts us off or scares us a lot and we therefore become fearful and opt to deliver at home.

Woman who delivered at home, Eldoret

In another example from facility providers, they observe that irrespective of ANC attendance, many mothers prefer to deliver at home:

That is very obvious… Most women in this community will just deliver at home because there are active TBAs.

Health care provider, Port Victoria

According to the mothers that we see from the antenatal clinic, we expect all of them 100% to deliver in the hospital here. But what has come out from the statistics it's like only 40% deliver at the hospital and 60% deliver at home.

Nurse, Eldoret

The TBA discussions in both Eldoret and Port Victoria echoed the same observation: TBAs reported that they consistently told pregnant mothers the advantages associated with health facility deliveries. Such advantages were: immunization and weighing of newborns; management of complications for both mother and child; access to skilled personnel, necessary drugs, equipment, and other supplies; HIV testing and PMTCT; delivery in a hygienic environment; and official notification of births. Nonetheless, some mothers were characterized as ignorant and stubborn for choosing home births even after extensive counseling on the importance of delivering at home:

There are others who may come, she is pregnant and she tells you, "When I approach delivery I will come to you." The first thing you ask her is, "Do you go to clinic?" She says yes…. Even if we are assisting them at home, we also advise them; it's only that they refuse. We advise them to go to hospital.

TBA, Eldoret

Ignorance, some just listen to you and at the end of the day they deliver at home, they do not see the importance of going to the hospital.

TBA, Port Victoria

A key reason for popularity of home births is the high cost of utilizing health facilities. As one mother put it, facilities are expensive, hence mothers *"opt to go to the TBA. And when the TBA refers you to the hospital, you try and reason with her and persuade her to accept to help you because we can't afford the hospitals bills,"* according to an Eldoret w**o**man who delivered at home. Study findings from the four TBA FGDs suggest most mothers deliver at home even though TBAs advice them to attend ANC and deliver at the hospital. The findings suggest TBAs are increasingly encouraging mothers to opt for hospital deliveries.

> *I see the benefit of giving birth at TBAs is there but not much, because …our help is just hot sponging her. But the good way is just at the hospital.*
>
> **TBA, Port Victoria**

> *Nowadays, most women choose to deliver in hospital … because TBAs do not help. For example, if you call me to deliver, I will advise you to go to hospital because the doctors have advised against delivering at home …. It is only on emergency cases that we see that delivering at the TBAs is good. I would like to add that if a mother comes to me asking for assistance, I will take her or accompany her to hospital.*
>
> **TBA, Port Victoria**

Since the discussions revealed that expectant mothers do not independently decide where to deliver, we asked who they thought should make this decision. Eldoret mothers who delivered at home agreed that it is necessary for mothers to choose the place of delivery because they are aware of their health status and those who have attended the ANC clinic will have received ample advice. They also argued that the choice should also be left to mothers because they may have to make a quick decision should early labor occur. Similarly, Eldoret mothers who delivered at the health facility agreed that it was necessary for mothers to choose the place of delivery but that they needed encouragement to opt for hospital services. Additionally, findings showed that it is important for a mother to choose a place she feels most comfortable. Further, the amount of money at hand may influence a mother to choose a specific delivery location.

Port Victoria mothers who delivered at health facilities agreed with Eldoret mothers that it was necessary for mothers to choose the place of delivery, however, they all agreed that the mother needed to be encouraged to choose the hospital due to the benefits associated with health facility deliveries especially the PMTCT service, availability of drugs and necessary equipment, hygienic environment, skilled providers, immunization services, and minimized risks to mother and child during and immediately after delivery.

Factors that Influence Choice of Delivery Location. The mothers cited different occasions in which they should deliver at home versus a facility. Factors that encourage mothers to deliver at home are listed in table 1. In addition, findings suggest that some husbands insisted on "natural" and cheaper home deliveries that also ensure wives recuperate fast and resume their chores. Reasons for choosing a hospital delivery include any of the following factors: when a woman has anemia, prolonged pregnancy or in labor for too long, when specialists diagnose a

potential delivery problem during ANC, and when a mother has HIV and is concerned with PMTCT.

Although TBAs are popular and consequently tend to a large number of mothers, they discussed occasions when they routinely saw a need to encourage a mother to deliver at the hospital including: when a mother was sick, when a TBA had had bad experience with a mother in the past, when the mother was young and subject to complications, when complications arose during delivery, when it is a first time mother due to fear of complications, when a baby presented in an abnormal position, and fear of HIV infection during delivery. It was interesting to note some TBAs said it was obligatory for them to encourage hospital deliveries since TBAs were formally barred from delivering mothers.

Support Systems for Pregnant Mothers. A number of people counsel and support pregnant women living around Eldoret and Port Victoria. According to Eldoret mothers who delivered at home, pregnant mothers are supported by health care providers, TBAs, students on attachment (internship), mothers-in-law, elderly women, friends, and female church leaders. Eldoret mothers who delivered at health facilities reported that they are counseled and supported by doctors, nurses, mothers, friends, sisters, student trainees, and social workers. Other sources of useful information include schools and teachers, television, radio, and women's group forums. In the Port Victoria region, mothers reported similar support systems as the Eldoret group, including health providers, TBAs, grandmothers, other women (peers and older mothers), community health workers, and husbands.

After discussing who constitutes the support system for pregnant women, we asked the women what type of *support they needed or wanted at the time of delivery*. The women described diverse types of support including informational, emotional, economic, logistical, medical, nutritional, and physical bodily support.

During time of delivery, Eldoret mothers who delivered at home *wished for* the following: help with transportation, breathing and back support, induction to quicken labor, help with cutting the umbilical cord, words of encouragement from those present, intravenous energy boosting supplements, hot water, food, pain killer, massage therapy, episiotomy, gentleness and affection on the part of health care providers, and enough time and space for mothers to pace as much as they wish. Eldoret mothers who delivered at the health facility need instructions on the best positions to sit or lie down, words of encouragement from those around them, gentleness, affection, and good communication on the part of health care providers, general respect and understanding, and proper timely attention and coordination among the hospital staff .

When asked what type of support expectant mothers *need* at the time of delivery, Port Victoria mothers who delivered at home described transportation needs, help with home chores, access to hot water, massage therapy, care for complications, and adequate food. Other support needed includes affectionate health care providers who communicate well with the mother, free supply of basic items and drugs, freedom to wear home clothes at the hospital, freedom to choose birth position, and presence of an attendant throughout the delivery process. Port Victoria mothers who delivered at the health facility mentioned they would like doctors to closely monitor them so that should any problem occur, they can receive timely assistance. Mothers also

expressed the need for a caring and encouraging health care provider attitude, good food after delivery, hot water for the mother to bathe, a hygienic environment, transportation to the health facility, and massage during delivery as necessary.

During delivery, Eldoret women who delivered at home reported that they are usually supported by a mix of different people including their own mother, mother in-law, aunties, husbands, friends, old women, neighbors, and health care providers. Port Victoria mothers who delivered at home mentioned that the following are likely to assist in a home birth one way or another: TBAs, members of the family, neighbors, passersby, a husband, and self. Findings show that the delivery usually takes place in the mother's house or the TBA's; however, there are homes where specific cultural requirements may be observed. For example, some Port Victoria mothers are advised *"to deliver outside the house — beside the house."* Eldoret and Port Victoria mothers who delivered at the health facility are supported by TBAs, elder women, doctors in private practice and in government facilities, neighbors, retired staff, and spouses. Moreover, some women in Port Victoria are helped by an elder child or deliver themselves.

Influence of Health Care Providers and TBAs on Delivery Decisions. The uptake and use of the formal health care providers' counsel depends on individual mothers; some heed their advice while others do not. Nonetheless, there is ample indication that formal health care providers think their counsel is valued by the mothers. They see themselves as an important source of information that assists pregnant mothers in making birth plans, engaging in PMTCT, understanding the role of the National Health Insurance Fund (NHIF), and malaria prevention. Though the formal health care providers' counsel is valued by mothers, there are challenges such as economic and social limitations that hinder mothers from applying the advice given at the health facilities. Lack of resources to access the health facility was highlighted:

> *I think it has some impact on the patients. They actually follow what we tell them. I don't know because the trend in our ANC is that the clinic attendance is very high but the percentage of the mothers who actually attend the ANC compared to the ones who are from there who come to deliver in the facility is quite low, because of the economic hardships."*
>
> **Nurse, Eldoret**

Some mothers say that patronizing husbands, parents, or in-laws interfered with their utilization of information provided by health providers. Consequently, according to providers from both sites, the directives from the mothers' home network end up overriding whatever the health providers may have advised.

There is ample indication that TBAs thought their counsel is valued by the mothers they serve. Some mothers even name their children after the birth attendant. Even so, their emphasis on the importance of hospital deliveries seems to fall on deaf ears as some mothers opt for home deliveries, with or without TBA help (appendix table 1).

Perceived Value of Home Deliveries. When delivering outside of a healthy facility, deliveries are done by any person who has experience with or who has been educated on giving

birth. Respondents felt that home deliveries are widespread but not ideal. They are popular because they are cheap (or free); geographically close to the pregnant women; allow utilization of a friendlier easily available attendant; and provide an alternative for those who fear the hospital environment and procedures. The findings from in-depth interviews echoed these findings. Appendix table 1 provides all reasons for uptake of home births in Eldoret and Port Victoria.

When health care providers were asked whether they encountered certain circumstances that may require them to advise a mother to deliver away from the health facility, the discussion was two-fold: some absolutely never advised on delivery outside the hospital, while some illustrated more flexibility and thought a deviation from this norm was sometimes necessary. Those opposed to delivery outside the hospital feared that encouraging mothers to do so meant a failure on the part of the health care providers to meet their work expectations and the call for safe motherhood. Their responses suggested that they felt it was wrong to refer a mother for a home birth knowing very well that there are increased risks and dangers associated with delivering there.

In my opinion I don't think there is any circumstance where a health care provider can advise a mother to deliver away from a health facility. But you don't refer from a health facility to deliver at home. For a health care staff to refer a patient to deliver elsewhere, you must be having a psychological problem.

Health care provider, Eldoret

I think as a health worker you are not supposed to tell a mother to deliver outside the hospital. Hospital delivery, it should be absolute! So at no circumstance in my opinion should a woman be advised to deliver elsewhere! So I don't think whatever nowadays they are encouraging anyone to deliver outside a health facility. So we don't by any means encourage any delivery outside the hospital.

Nurse, Eldoret

I don't think we can encourage any mother to deliver anywhere apart from a health facility. There is no circumstance - there's nothing like that. That one is not practical in the medical set up. We have never heard. The advantages we have outlined I think they are enough to discourage them to deliver outside, instead the opposite should be encouraged.

Health care provider, Port Victoria

I think that we are advocates of safe mother hood. There outside, we don't have skilled personnel like the one that we have here in the hospital; we look at ourselves as the best. I may be biased at this level, but we look at ourselves as the best so we don't encourage opportunities of delivering outside the health facilities apart from situations like…precipitate labor which is inevitable. But otherwise, we encourage all mothers to come to us, that is why we are here for them.

Health care provider, Port Victoria

Further, according to the health care providers, the focus should not only be on whether the birth attendant is skilled or not, but also on whether the environment within which a mother delivers has all the necessary apparatus.

That skilled attendant may not be able to do what he/she will be able to do in a hospital set up. What people are emphasizing now is "skilled attendance," not a "skilled attendant," in that where you want to deliver that mother, you have the right facilities. You will agree that if you take a midwife to deliver someone at the birth stretcher you will probably not be as bad as compared to a midwife who's delivering a mother in an outside set up.

Nurse, Eldoret

Conversely, some thought that, in some circumstances, it was sensible to consider homebirths. They based their arguments on some mothers' inability to access health facilities in rural areas due to geographical distance or poor finances. Given the readily available retired skilled health providers and seasoned TBAs, referrals can be made to them for immediate assistance.

At times there are no health facilities in the rural areas, but we have skilled attendants — maybe they are retired, maybe they are just at home. We should encourage them; and at that time when you know there is a skilled birth attendant, you should be able to send the mothers to them.

Nurse, Eldoret

But when you are within the village and there is no health facility and you have known someone with good experience or learned, or someone who is probably a retired nurse or a retired midwife who is around, you can actually be able to refer that client.

Health care provider, Eldoret

In case of the domiciliary midwives, those retired midwives who are at home: They have all the skills that are required; they can be able to have sterile equipment, have gloves. For those ones, they have been given kits. Then those can conduct deliveries outside the health facility. But for the others, we may not give them the opportunity to deliver out.

Health care provider, Port Victoria

Readily available home attendants can come in handy when a mother is already in labor and cannot make it to a far hospital.

Mine is not really referring, I am talking of advising a client to deliver at home for example…we have some nurses, retired nurses and community health workers who are well established and they have been taught about handling a mother in labor, and even handling a new born. So, I would just advise a client that if such a thing happens, and maybe she gets to a second stage of labor, and maybe has no means of transport to a

nearest health facility, she should not allow herself to suffer — only if the mother is in second stage.

Health care provider, Eldoret

Yes… there might be precipitated labor. She just starts labor, while they are looking for transport for the mother to come to hospital, or for a way for the mother to come to hospital, the baby comes there in the house.

Health care provider, Port Victoria

Lastly, some mothers adamantly choose home births. They attend ANC but plan to deliver at home.

I think you can advise a mother to deliver elsewhere in a scenario where you have explained to her the importance of delivering in hospital; for example, there is a mother of seven and she tells you she has delivered all of them at home, you ask her the reason and she says, "I find that it is okay and I don't see the reason why I should come to hospital. In fact I deliver myself." I had one case like that: "It's me who is delivering myself." And then you try to explain and explain and she says, "I will not come, am coming to clinic but I will deliver at home." So in such a case you will have to explain to her the risk factors, or what she will see so that she comes to hospital and she knows in fact she was very clear that "when I bleed a lot, I will come to hospital." So in that scenario, you tell her, "Okay don't deliver yourself, get somebody to assist you because you might bleed and then you go into shock. So you look for somebody to assist you."

Health care provider, Eldoret

Study findings clearly indicate that although home deliveries are popular, facility care was considered the most ideal. However, health providers emphasized that maternity care at the facilities was characterized by numerous shortfalls including shortage of equipment, supplies, ambulances, and staff, lack of staff refresher training, poor infrastructure, and challenges associated with revealing positive HIV test results to newly diagnosed expectant women.

Health Facility Deliveries. Study participants showed an awareness of the importance of delivering at a facility. Mothers extensively discussed reasons for the growing uptake of facility care. Their opinions, in order of popularity, included available care for complicated deliveries; access to HIV care; availability of necessary drugs, equipment, other supplies and skilled personnel; hygienic facilities; immediate immunization services for babies; discovery and management of abnormalities and ill-health; access to important documents, such as ANC cards and birth certificates; access to free mosquito nets and milk; access to quality advice on postnatal care of mother and child; and some felt facilities were generally a better delivery environment compared to homes.

Since women indicated knowing the importance of delivering in a facility, we asked them to share ideas on how to improve maternity services at health facilities at their respective sites.

Potential areas for positive development are provided in appendix table 2. Some of the most popular recommendations were a call for health care providers to be more affectionate and communicate better, provision of quick and prioritized care, consideration of free delivery services and basic maternity supplies, provision of reliable electricity and water supply, and consideration for increment in number of wards and beds in the facilities. As a 22-year-old mother from Eldoret lamented, when she gave birth at the facility, she did not have a bed. *"I was so exhausted after delivery (but) I did not have a bed to rest on. So they should add more beds," she said.'*

Other potential avenues for improvements emerged during the FGDs and interviews with mothers in Eldoret and Port Victoria. Eldoret women who delivered in facilities represented the only group that discussed the need for adequate supply of drugs, provision of all-embracing personalized care immediately after delivery, the need for sound and timely counseling, better coordination of care at the facility, a need to ensure the providers were well qualified and that they received adequate salaries to motivate them. Eldoret women who delivered at home believed providers should be mature in age, be patient, and should avoid rushing mothers through the delivery process. In Port Victoria, women who delivered in facilities requested lower maternity beds since the beds they used were high and uncomfortable. They also believed mothers needed to be provided with tea in the delivery room. Mothers from the same site who delivered at home were the only group that highlighted a need for increased and improved infrastructure.

Further, TBAs proposed that we should consider a possible marriage of TBA care and facility services. In such a model, the TBAs would become level one MOH caregivers at the household level who would consistently advocate for facility deliveries and ensure a working referral system:

> *Many women here like TBAs because they usually take care of them better than* [health care providers do] *at the hospital.… Since I started delivering women, there is no person who lets me down. … There are others who will call you to take them to hospital. They pay at the hospital and also come and pay you. That is the work I normally do.*
>
> **TBA, Port Victoria**

> [Many women choose hospital delivery] *because TBAs do not help. For example, if you call me to deliver, I will advise you to go to hospital because the doctors have advised against delivering at home. … It is only on emergency cases that we see that delivering at the TBAs is good. I would like to add that if a mother comes to me asking for assistance, I will take her or accompany her to hospital.*
>
> **TBA, Port Victoria**

This concludes the section on findings related to where women choose to deliver. The next section focuses on postpartum FP perceptions and practices.

Family Planning

Postpartum FP Counseling. According to the health care providers, counseling at a health facility typically begins during the ANC period and continues, depending on the number of times a woman comes to the facility. In the case of the TBAs, they usually start FP counseling with a woman and her family – for example, they also guide a woman's daughters, sisters, and sister-in-laws. All TBAs report having successfully encouraged several mothers to use FP methods. They said they provide FP counseling often to their clients and others; that they counsel "any woman or girl" on FP, especially those who are pregnant. According to TBAs from both sites, they sometimes voluntarily visit and gently counsel women who deliver annually or those with many children and are living in poverty, accompanied by chronic sicknesses. Occasionally, some of the Port Victoria TBAs consider other approaches, such as encouraging mothers to go to church as well as to the health facility. As a Port Victoria TBA said, *"We mock others saying, whatever you are doing is a shame, just go to hospital and have FP."* Even so, not all TBAs find it easy to prompt FP in their communities. One Port Victoria group noted that they often limit their FP discussions with mothers to a bare minimum because some mothers are opposed to FP due to their partners' resistance to it.

Women in Eldoret and Port Victoria receive postpartum FP messages and counseling from various sources. Some religious groups, for example, educate women on how to use the calendar/natural method. Public media messages on FP are given on television and radio. Women also get information during ANC visits with providers or through the daily education sessions provided in facility waiting bays. According to one Eldoret group of women, it is common for women who get FP education during a health facility visit, or from other sources, to share the new knowledge with her companions.

In respect to how often HCPs counsel their clients on postpartum FP, there are several opportunities at the health facility when FP education is provided. The most popular is during ANC and as mothers are discharged home after delivery. The nurses in Eldoret said they did it at least once because of the high amount of work they handle daily. It could also be twice; during ANC and in post-delivery discharge counsel, according to nurses in an Eldoret FGD. However, an FGD of clinicians and doctors in Eldoret said frequency of counseling depended on how often the mother came to any clinic (e.g., immunization clinics and HIV clinics). They argued that it was wise for them to counsel on FP and available methods at all possible opportunities. It was clear that there were missed opportunities for FP counseling. For instance, a 28-year-old mother from Port Victoria who routinely attended ANC said she did not receive any FP counseling from the hospital. All the information she had about FP, she said, came from friends. She said she wishes to use a method that will work for her and hopes to get proper guidance in selecting one: "I want to use but I have not been told how to use them. … I only used for one year but I was not given any advice. I just used on my own."

TBAs reported that they routinely referred expectant mothers to the health facilities for FP education. Sometimes, they also escorted them to the health facilities for FP counseling and initiation. One case is illustrative:

For me, I would truly say that one woman happened to have been sent to me by her husband that I take her to the hospital so that she could start using family planning. The truth is that, I actually took her to a health facility and was issued with a family planning method, I am not quite sure what that doctor did, and it was there at the district hospital. You know, it happened that the woman conceived and so the husband send her back to me and when I saw this I again took her back to the doctor.

TBA, Eldoret

TBAs may be selective when they consider which health facility to refer mothers to because some of the private clinics do not provide comprehensive guidance to FP seekers. An example from the largest residential neighborhood in Eldoret, a low-income neighborhood, is insightful:

There are [private] *clinics that we have in Langas, and many women prefer to go there because you are not asked questions.… They will not talk to you or explain or give you advice to guide you. … If you reach there at the clinic and say, "Injection, I need injection," they inject you. If you say it is drugs, they will tell you these are the drugs; usually they don't test or explain to you the dangers involved in using family planning. They are concerned with the money. So we advise them* [women] *to go to district hospital or come to MTRH.*

TBA, Eldoret

According to some TBAs from Eldoret, when a woman came to deliver at the TBA's place, she was educated on FP and the rationale behind it. TBAs facilitated method uptake through extensive discussions on the pros and cons of family planning methods with the women separately, and also with couples according to need. TBAs discussed several FP methods that they proposed to women and to couples in their communities. Appendix Table 3 shows all the methods that are known in Eldoret and Port Victoria including Depo-Provera (injectables), pills, coil, condoms, and the calendar/natural method. TBAs usually advised couples to consider male-oriented methods such as vasectomy or condoms when the FP methods used by women resulted in undesirable side effects. Some TBAs described these methods as new due to a general lack of awareness about these options, and limited access to vasectomy clinics.

When they [women] *come complaining, "I am having a backache, this part of the body is aching" and so forth, you will advise them on the new methods for the men. Yes because they are now available.… If he really cares about the health of his wife, he should try and use it. It does not have any side effect.… You just talk with him and convince him to use it so that the woman can also rest and take care of the children for a while.*

TBA, Eldoret

A TBA illustrates how she gives FP advice in Eldoret:

Some of the women usually are free with me so they come and tell me, "Hey, I always have complications when I use family planning methods." Then I ask her, "Supposed I come and speak to your husband about, will that be ok with you?" And she consents to that. She even tells me to go at a particular time when she knows that he will be back home. Once there, you will not go straight to the point but will beat around the bush with many other stories so that your intentions are not obvious and that the husband does not know that it was his wife's plan. Maybe the women will start the talk by asking me, "How come of late you look settled, you have planned your kids properly? You know it's unfortunate for me because I try hard but these family planning methods are a problem to me, the side effects are terrible, what should I do?" Then I will say to her, "Ah! Don't get troubled, there are new methods that have come for the men. You know they were never available during our time but now they are available. In fact, they don't have any side effects because they don't penetrate. You know for us women, when we get the injection, it goes straight to the blood but it's not the case with these new methods for the men."

TBA, Eldoret

Though not as popular a method, TBAs informed individuals about the female condom when other FP methods are not ideal for specific couples or situations. The last FP method that TBAs discussed and may recommend, according to TBAs in Port Victoria, is herbal medicine.

Family Planning Advice from HCPs and TBAs. There were a number of FP methods known to mothers in Eldoret and Port Victoria. Appendix table 3 provides all the methods beginning with the most familiar five: Depo-Provera (injectables), pills, coil, condoms, and the calendar/natural method. Health care providers and TBAs in Eldoret and Port Victoria reported providing FP information and counseling on diverse topics. Facility based providers advised on the following issues (beginning with topics discussed in many health care provider FGDs): when to use FP; the importance of child spacing; the need to minimize to a manageable number of children; advantages and disadvantages of each FP method; advice on breast feeding; the need to seek help in case of danger signs; the liberty to change methods; compatibility of a method and fertility plans; compatibility of a method with the user's health conditions; each method's possibility of failure; the use of dual methods to increase FP success; importance of preventing sexually transmitted infections; demystify myths about FP; types of FP methods; the wisdom of delaying the first child; and danger signs associated with FP methods.

Similarly, TBAs advised mothers on FP issues. Beginning with the topics discussed in most of the TBA FGDs, responses included advice on: the need to keep a manageable number of children (mentioned in all TBA FGDs); advantages and disadvantages of FP methods; the need to involve male partners in FP matters; types of FP methods; and the importance of child spacing. The TBAs also refer mothers to facilities for FP counseling, tell women when to use FP, and emphasized the need to seek help in case of danger signs. Moreover, they told women that they had the liberty to change methods, talk about methods' compatibility with the user's health conditions, warn against expired FP material, and emphasize that FP is a woman's role so she should take the initiative to do it.

Health Facility FP Services. The health care providers use a client-centered approach, including history taking, medical assessment, and consultation with fellow providers or experts as necessary. The following excerpts from both sites are illustrative of this. Comments reflecting a client-centered approach are provided below.

You know usually we say that you tailor what you want to do to suit the need of the clients; and actually, most of these mothers when they come, they know what they want.

Nurse, Eldoret

We first educate them on the types of methods of family planning for her to make a choice. … After she has made her choice, we educate her more on that particular choice that she has made and then now she will be ready for that method. So we offer it if she is eligible.

Health care provider, Port Victoria

Comments reflecting history taking included the following:

First of all, you have to take their history: how many kids they have, and then we will want to know if she has any complaint, then you can now come back to the choice she would like to use.

Nurse, Eldoret

The choice will depend on the lifestyle of the mother, associated drugs, and also the choice of the mother herself. Because she might tell you, "I have tried this, it didn't work with me, I tried this, it didn't work with me," so it can also influence choice.

Health care provider, Eldoret

Comments reflecting observation and medical assessment for eligibility included the following:

I think also during the observation, you also need to look at the method you want to give to that woman because of the…complications that might arise.

Nurse, Eldoret

Then we look at the medical eligibility criteria because if they can't use hormonal contraceptives, then we give her the options that are non-hormonal. Then she can be able to make a choice from those ones.

Health care provider, Port Victoria

You as a medical personnel, you will have to influence the choice because of several reasons. One, there are some medications that this clients may be on, that actually have

an antagonistic affect with family planning methods.… You see, they may have chosen, but you see it involves you, you will do assessment. … She might have opted for a method that, maybe, does not fit her. That one we have to — to give the information.

Health care provider, Port Victoria

The following is a comment involving consultation with other specialists in the case of a client with limited consenting capacity:

You may have a client who is a known psychiatric patient; such a client can't make decisions on their own. So we involve the services of consultants; an obstetrician, and consultant psychiatrist. They decide depending on the number of children a client has.

Nurse, Eldoret

Opinions of Postpartum FP. As a 36-year-old mother in Eldoret expressed it, *"A wise woman who is intelligent will make up her mind and say, 'these children are enough and I need to look for ways of looking after them.'"* Findings overwhelmingly reveal that FP methods are known in Eldoret and Port Victoria, but not everyone uses FP. Mothers can thus be categorized into three groups. In the first category, we have many who use FP after delivery, and a second group that hesitates to pursue any postpartum FP. This happens because some mothers have never really considered FP methods. Others postpone the FP concern because they prefer to start using a FP method six months after delivery while some decide to wait until their menses resume. A third group of mothers includes those who are vaguely aware of FP methods or outright refuse to use FP. Reasons for refusal include the assurance that breastfeeding provides adequate protection from conception, disagreement with spouses, and fear of adverse side effects.

Whether FP uptake is considered immediately after delivery or postponed for a few months, there are several benefits mothers associated with FP. The top three reasons discussed popularly in women's FGD are to space their children, have a financially manageable family, and to avoid pregnancy (see appendix table 4 for all the benefits discussed).

Barriers and Ideas for Increasing Uptake of Postpartum FP. Numerous barriers that discourage uptake of FP were discussed. They included facility level-factors, as well as social, economic, personal, and medical factors. In order of dominance, the following are barriers identified and discussed by mothers in FGDs: side effects; lack of support from spouses and extended family; rumors, myths and misconceptions about FP; fear of infertility; religious beliefs; costs of FP methods and non-adherence issues; illiteracy among mothers; and failure of FP methods in the past. Appendix tables 5 and 6 provide a summary of the barriers discussed by HCPs and TBAs, beginning with the most dominant barriers. For the HCPs, the top three barriers commonly discussed were rumors and misconceptions about FP, religious beliefs, and lack of support from spouses and extended family. Other barriers also discussed in at least two HCP FGDs include side effects, issues regarding access of FP methods, conflicting health interests in the mothers, and illiteracy.

Among TBAs, the top four barriers commonly discussed in at least two FGDs included side effects; rumors, myths and misconceptions about FP; lack of support from spouses and extended family; and fear of fertility complications. Formal health care providers and TBAs in Eldoret and Port Victoria shared a lot of ideas on how the uptake of FP could be promoted.

One idea was to involve significant others, such as encouraging women to come for FP services accompanied by their spouses. They stressed how male involvement is crucial to increasing FP uptake. Women should be encouraged to talk to their spouses and agree together on a particular FP method, and then adhere to it. Further, TBAs in Eldoret stress that providers should respect and maximize household power dynamics (the power center may be the man or the woman) and finding ways of providing FP education in a participatory and chivalrous manner.

Another idea is to create awareness about FP through the mass media, community health workers, and general community involvement. HCPs mentioned the need to maximize the FP message in medical camps, church campaigns, and at chiefs' mabaraza (community meetings). Ways they mentioned to do this included door-to-door visits to educate families on FP, and holding seminars/workshops for educating women on FP, its importance, and the different methods available. TBAs suggested taking advantage of the diverse social groups that women usually attend by having somebody knowledgeable in FP attend the meetings from time to time, to help educate women.

TBAs and formal health care providers mentioned ways of improving and promoting health services including using interpreters to overcome language barriers, making FP methods affordable, and encouraging the development of youth-friendly centers. Increased training for providers was mentioned, and HCPs from both sites mentioned encouraging the government to actively support FP and to use government incentives as a way of encouraging FP. For example, the government might reward people with small families, such as providing free education for families with only two children. HCPs from both sites stressed making FP methods available consistently. Educating people and involving partners without availability of FP supplies is in vain. For instance, a TBA in Eldoret said it would be helpful if female condoms were more available:

> *I would also like to ask if there is condom for women, they could assist women with, condom that woman can wear so that it will help her not to conceive and get any infection, so I am asking the doctors to help us to look for that condom if there are drugs that affect people like, I believe that condom will not affect us.*
>
> **TBA, Eldoret**

Another idea is to promote abstinence as a natural FP method. Where feasible, TBAs suggested the use of non-medical methods that have worked well in the past:

> *Family planning was not associated with medicine or other kind of things. Family planning was done by both the husband and wife. You see like in my tribe the Tiriki, it was like immediately the woman would deliver a baby, she was not supposed to be*

anywhere near her husband. And it would be this way for a span of six months. … Those used to be good golden days with good ways of family planning unlike in our days. … Today's children can't be able to practice that. But if it were possible to practice such a method of family planning, it would have benefited them.

TBA, Eldoret

It is not surprising that TBAs from both sites recommended considering the benefits of engaging trained and paid TBAs to help promote FP. They advocated training TBAs on FP and related side effects so that they can help people in the community. TBAs were willing to continue encouraging uptake of FP in their areas of operation but they wanted more information especially on FP associated complications in order to know the right thing to say to mothers/couples who come to them for advice.

TBAs tell women to give birth at hospital. We are … working. I think if they were Godly, they could at least be helping us with something like soap. The issue of telling somebody to go for injection, pills, by the time you come from your place to their place, it takes time. Even when it comes to advising them, so it is better if you consider [paying] *the TBAs.*

TBA, Port Victoria

DISCUSSION

Choice of Delivery

Women who attend ANC are usually encouraged to deliver in a health facility. All women in this study, from both sites, attended at least four ANC visits; however, some did not deliver in a health facility. This study showed that choice of delivery is not simply influenced by low levels of knowledge about place of delivery; on the contrary, personal, social, economic, and logistical barriers matter. Moreover, some women consciously (because of their preferences or the preferences of significant others) make the decision to go against the advice of the providers.

A key difference between ANC and facility delivery in Kenya is that ANC is free while delivery is not. Those who deliver at the facilities and fail to pay are often detained. The MOH ought to consider alternative and feasible ways of meeting hospital bills, especially among poor families. Study findings reveal that cultural birth practices cannot be observed in the hospital. Considerations should be made to mesh the two belief systems (traditional and biomedical) in order to attract facility deliveries. Indeed some modifications, such as allowing delivering mothers to have companions or the safe keeping of the placenta for home burials thereafter, would require minimal input from the facility side.

What would happen if all women who are "supposed" to deliver in the hospital actually did so? It is clear from the recommendations made in this study that the facilities are few and are plagued with extensive shortcomings. The major problems include few wards and beds; rude, slow, and negligent health care providers; costly delivery services and maternity supplies; and

unreliable electricity and water supply. As such, if women are to be expected to routinely opt for facility deliveries, the government of Kenya and relevant development partners must address facility shortcomings, and implement measures to alleviate these shortcomings.

This study indicates a need to re-visit the role of the TBA in Kenya. The illegality of TBAs and the disengagement of the MOH deserve immediate attention. We need to explore all avenues that provide a possibility of a marriage of TBA and facility care in order to enhance safe motherhood. TBAs are popular because they are cheap (or free), close to the women (geographically, culturally, language-wise, and by social status), and provide a way out for those who fear facility procedures. If the TBA role or function is to be modified, it will require the MOH's recognition that TBAs are in fact informal providers who can facilitate safe motherhood in the community. Some are already exploring this option in Kenya (Mwangi & Warren, 2008). It is hoped that, ultimately, notwithstanding resource limitations, both formal and informal health systems can work together in innovative ways to facilitate safe motherhood in Kenya.

Postpartum Family Planning

Study findings show a high level of awareness about FP methods in both Eldoret and Port Victoria. FP information is available at the facilities, churches, social forums, and through the general media. However, the study indicates there are missed opportunities for FP counseling at the facility. Recent national data reveal that 88% of women who are not using FP do not discuss FP with a field-worker, or with staff at a health facility (Kenya National Bureau of Statistics & ICF Macro, 2010). Correct information about the rationale for FP, advantages of FP, and how to use the methods is needed in order to reduce anxieties regarding FP methods. FP counseling must also include ample details on side effects, each method's effectiveness and its availability and costs. There is evidence from Kenya suggesting that once women get informed about FP, uptake goes up and unmet need drops (Mwangi, Warren, Koskei & Blanchard, 2008). Possible FP awareness campaigns include medical camps, church campaigns, chiefs' mabaraza (community meetings), and various seminars or workshops. In addition, practical ways of increasing involvement of significant others in FP decision making are needed for male involvement is crucial to increased FP uptake in Kenya.

The MOH and relevant development partners should take up the challenge of FP method availability and costs. We cannot over emphasize the importance of making FP methods consistently available and affordable, while at the same time encouraging the development of youth-friendly centers to attract sexually active adolescents and young adults. Indeed, educating people on FP methods without providing quality service and goods is in vain. The need to train health care providers and TBAs on FP methods is also highlighted so that they can serve their communities in diverse ways. Given the fact that TBAs live closer to the people, are warmly accepted, accessible all days of the week, and widely known, we should explore the potential benefits of training and paying TBAs to help promote FP and facilitate a household-facility referral system and vice versa.

STUDY IMPLICATIONS

While this study has provided perspectives on issues concerning delivery and FP, it has also generated more questions, more opportunities for further research, and, most importantly, suggested alternative pathways to decrease maternal mortality and increase postpartum FP. Subsequent research should be conducted on how health care providers and TBAs could work collaboratively to improve the quality and reach of delivery services and FP services throughout Kenya. More research and findings can steer the Kenyan government to play a more active role in making sure delivery and FP education and services become readily available to all men and women.

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APPENDIX TABLES

Appendix Table 1. Reasons Why Women Choose Home Births: Opinions from Eldoret and Port Victoria

Reasons for choosing home births	Focus groups mentioning this reason
Free delivery of the very poor by TBAs	All TBA FGDs
Costs: expensive facility care compared to home deliveries	All sources
Harsh and/or negligent providers at the facility	WDH*, Eldoret, FGDs 1, 2, 3; WDHF, Port Victoria FGDs 1, 2, 3; WDH, Port Victoria, FGDs 1, 2, 3; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGD 1; All TBA FGDs
Distance to the facility and poor infrastructure	WDH, Eldoret, FGD 1; WDHF, Port Victoria FGDs 1, 2; WDH, Port Victoria, FGDs 1, 2, 3; Nurses, Eldoret, FGD 1; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGDs 1, 2
Ignorance about hospital care and a view of delivery as 'normal illness-free process' or 'dependent on God's wishes'	WDH, Eldoret FGD 1; WDH, Eldoret, FGDs 1, 2, 3; WDHF*, Port Victoria, FGD 3; WDH, Port Victoria, FGDs 1, 2; Nurses, Eldoret, FGD 1; Mixed HCPs, Port Victoria, FGD 2; Mixed HCPs, Eldoret, FGD 2
Familiarity and proximity of TBAs and other women to help in home delivery	WDH, Eldoret FGDs 1, 2; WDHF, Port Victoria FGD 1; WDH, Port Victoria FGD 3; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGD 2; TBAs, Eldoret, FGDs 1, 2
Familiar successful routines in home births	WDH, Eldoret, 3; WDHF, Port Victoria, FGDs 1, 2, 3; Nurses, Eldoret, FGD 1; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Eldoret, FGD 2; TBAs, Eldoret, FGD 1

Fear of hospital procedures	WDHF, Eldoret, FGD 1; WDH, Eldoret, FGDs 1, 2, 3; WDH, Port Victoria FGD 2; TBAs, Eldoret, FGDs 1, 2
Warm TBA attitude and gentle care	WDH, Eldoret, FGD 3; WDHF, Port Victoria, FGD 1; Mixed HCPs, Port Victoria, FGD 1; TBAs, Eldoret, FGDs 1, 2; TBAs, Port Victoria, FGD 1
Precipitate labor	WDH, Eldoret, FGD 1; WDH, Port Victoria, FGDs 1, 2, 3; TBAs, Eldoret, FGD 2; TBAs, Port Victoria, FGD 1
Preceding bad experiences at the health facility	WDH, Eldoret, FGD 3; WDHF, Eldoret, FGD 1; Nurses, Eldoret, FGD 1; Mixed HCPs, Eldoret, FGD 2; TBAs, Eldoret, FGDs 1, 2
Very young or trainee providers at the facility	WDHF, Eldoret, FGD 3; WDH, Eldoret , FGDs 1, 2, 3; WDHF, Port Victoria, FGD 1; TBAs, Eldoret, FGD 1
Several modes of TBA payment in home births	WDH, Eldoret, FGDs 1, 3; Mixed HCPs, Port Victoria, FGDs 1, 2; Nurses, Eldoret FGD 1; All TBA FGDs
Influence of decision makers other than the pregnant mothers	WDH, Port Victoria, 2; Nurses, Eldoret, FGD 1; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGD 1
Sex of the provider affects a mother's comfort: the gentle female TBA is most popular	WDHF, Port Victoria, FGD 2; WDH, Port Victoria, FGD 3; Nurses, Eldoret, FGD 1; TBAs, Eldoret, FGD 1
Fear of HIV testing and knowledge of HIV status	WDH, Eldoret, FGD 3; Mixed HCPs, Port Victoria, FGD 2; TBAs, Eldoret, FGD 2; TBAs, Port Victoria, FGD 2
Earlier training of TBAs by the government encourages home births	Mixed HCPs , Eldoret, FGD 2; TBAs, Port Victoria, FGDs 1, 2

Rumors and allied fears about facility care	Nurses, Eldoret, FGD 1; Mixed HCPs, Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGD 1
Flexible birthing position in home delivery	Nurses, Eldoret, FGD 1; TBAs, Port Victoria, FGD 1
Availability of TBA sponging and massage services	TBAs, Eldoret, FGD 1; TBAs, Port Victoria, FGD 1
Shortage of facility staff	Nurses, Eldoret, FGD 1; Mixed HCPs, Port Victoria, FGD 2
Fear of hospital procedures	WDHF, Port Victoria, FGDs 1, 2
Availability of herbal relief at home	WDHF, Port Victoria, FGD 3
Birthing rites are observed in home deliveries	Nurses, Eldoret, FGD 1
Religious beliefs prescribe care uptake	Nurses, Eldoret, FGD 1
Shortage of supplies at the facility	Nurses, Eldoret, FGD 1
Traditions: 'how they were taught by their mothers'	WDHF, Eldoret, FGD 3
'Cowardice': Stigma associated with hospital births	Mixed HCPs, Port Victoria, FGD 2
Fear of children being stolen at the health facility	WDHF, Port Victoria, FGD 1
Facilities demand for ANC cards at birth	TBAs, Eldoret, FGD 2

* WDH refers to a woman who delivered at home; WDHF refers to a woman who delivered at a health facility.

Appendix Table 2. Popular Ideas among Mothers on How To Improve Maternity Services at Health Facilities in Eldoret and Port Victoria

How to improve maternity care	Focus groups mentioning this
HCPs should be more affectionate, communicate better, and be less abusive	WDHF*, Eldoret, FGD 1; WDH, Eldoret, FGDs 1, 2, 3; WDHF, Port Victoria FGD 1; WDH*, Port Victoria, FGD 2; TBAs, Eldoret, FGD 2; TBAs, Port Victoria, FGD 1
HCPs should provide quick and prioritized care	WDHF, Eldoret, FGDs 1, 3; WDH, Eldoret, FGD 1; WDHF, Port Victoria, FGD 1; WDH, Port Victoria, FGDs 1, 3
Have free delivery services	WDH, Eldoret, FGD 1; WDHF, Port Victoria, FGD 2; WDH, Port Victoria, FGDs 1, 3
Reliable electricity and water supply	WDHF, Port Victoria, FGDs 1, 2, 3; WDH, Port Victoria, FGD 3
Mothers should get basic maternity supplies for free	WDHF, Port Victoria FGD 2; WDH, Port Victoria, FGDs 1, 3
Increase number of wards and beds in the facilities	WDHF, Eldoret, FGD 1; WDHF, Port Victoria, FGD 1; WDH, Port Victoria, FGD 2
Have reduced costs for delivery services	WDHF, Eldoret, FGD 3; TBAs, Eldoret, FGD 2
Provide free transportation before and/or after delivery	WDH, Eldoret, FGD 2; WDHF, Port Victoria, FGD 2
Student/trainees should be supervised and they should not exhaust mothers	WDHF, Eldoret, FGD 1; WDH, Eldoret, FGDs 1, 3
Employ more staff	WDHF, Eldoret, FGD 3; WDH, Port Victoria, FGD 2
Increase number of facilities	WDH, Eldoret, FGD 1; WDH, Port Victoria, FGD 2
Provide adequate and well cooked food	WDHF, Port Victoria, FGDs 1, 2
Supply hot water for bathing	WDHF, Port Victoria, FGDs 1, 3

Improve facility fittings and hygiene	WDHF, Port Victoria, FGDs 1, 3
Increase maternity privacy in the wards	WDHF, Port Victoria, FGD 1; WDH, Port Victoria, FGD 2
Eradicate corruption at the facility	WDHF, Port Victoria, FGD 1; WDH, Port Victoria, FGD 2
HCPs should not show favoritism	WDHF, Eldoret, FGD 1;WDHF, Port Victoria, FGD 1
HCPs should be more alert and identify babies appropriately	WDHF, Eldoret, FGD 3; WDH, Eldoret, FGD 1

* WDH refers to a woman who delivered at home; WDHF refers to a woman who delivered at a health facility.

Appendix Table 3. Popular FP Methods among Mothers in Eldoret and Port Victoria

FP methods known to mothers	FGDs that discussed the method
Depo Provera	All FGDs
Pills	All FGDs
Coil	All FGDs except WDHF*, Eldoret, FGD 1
Condoms	All FGDs except WDH*, Eldoret, FGD 3 & Port Victoria, WDHF, FGD 1
Calendar or natural method	All FGDs except WDHF, Port Victoria, FGD 1 & WDH, Port Victoria, FGD 2
Traditional methods and herbal options	WDHF, Eldoret, FGDs 2, 3; WDH, Eldoret, FGDs 1, 2, 3; WDHF, Port Victoria, FGDs 1, 2, 3; WDH, Port Victoria, FGD 2
Norplant	WDHF, Eldoret, FGDs 1, 2, 3; WDH, Eldoret, FGDs 1, 2, 3; WDHF, Port Victoria, FGDs 1, 3
Tubal ligation	WDHF, Eldoret, FGDs 2, 3; WDH, Eldoret, FGDs 1, 2; WDHF, Port Victoria, FGDs 2, 3
Breastfeeding eight hours a day	WDH, Port Victoria, FGDs 1, 2
Vasectomy	WDHF, Eldoret, FGDs 2, 3
Chinese tablets (taken monthly)	WDHF, Eldoret, FGD 3
Withdrawal method	WDHF, Eldoret, FGD 1

* WDH refers to a woman who delivered at home; WDHF refers to a woman who delivered at a health facility.

Appendix Table 4. Reasons Why Mothers Consider Postpartum Uptake of FP in Eldoret and Port Victoria

Reason	Focus groups mentioning this reason
To space their children	WDHF*, Eldoret, FGD 2; Port Victoria, WDHF, FGD 2; Port Victoria, WDH, FGDs 1, 2, 3
To have a financially manageable family	WDHF, Eldoret, FGD 2; WDH*, Eldoret, FGD 1; Port Victoria, WDH, FGDs 1, 3
To avoid pregnancy	WDHF, Eldoret, FGD 2; Port Victoria, WDHF, FGD 1; Port Victoria, WDH, FGD 1
When they have had desired number of children	WDHF, Eldoret, FGD 2; Port Victoria, WDH, FGD 2
Conception maybe antagonistic to a mother's medical condition	WDHF, Eldoret, FGD 3
To avoid weakening a HIV infected body through pregnancy	WDHF, Port Victoria, FGD 2
To protect mothers who have become weak due to many deliveries	Port Victoria, WDH, FGD 1
Presence of an irresponsible husband	Port Victoria, WDH, FGD 3
Nature of a mother's employment	Port Victoria, WDH, FGD 2

* WDH refers to a woman who delivered at home; WDHF refers to a woman who delivered at a health facility.

Appendix Table 5. Barriers to Uptake of Postpartum FP Services in Eldoret and Port Victoria: HCPs' Perspectives

Barrier	Focus groups mentioning this barrier
Rumors, myths and misconceptions about FP	All HCP FGDs
Religious beliefs	All HCP FGDs
Lack of support from spouses and extended family	All HCP FGDs
Side effects	Mixed HCPs, Port Victoria, FGD 1*;* Mixed HCPs, Port Victoria, FGD 2
Inaccessibility and unavailability of some FP services	Nurses, Eldoret, FGD 1; Mixed HCPs , Eldoret, FGD 2
Conflicting health interests when considering FP options for clients	Mixed HCPs , Eldoret, FGD 2; Mixed HCPs, Port Victoria, FGD 1
Illiteracy	Nurses, Eldoret, FGD 1; Mixed HCPs , Eldoret, FGD 2
Cost	Nurses, Eldoret, FGD 1
Patronizing staff attitude towards youthful clients	Nurses, Eldoret, FGD 1
Lack of supplies	Nurses, Eldoret, FGD 1
Limited competence among the staff	Nurses, Eldoret, FGD 1
Language barrier	Mixed HCPs , Eldoret, FGD 2
Minimal male involvement	Nurses, Eldoret, FGD 1
Conflicting provider-user view points	Mixed HCPs, Port Victoria, FGD 2
Non-adherence	Mixed HCPs, Port Victoria, FGD 2
Fear of HIV testing	Mixed HCPs, Port Victoria, FGD 1
Limited training of providers	Mixed HCPs, Port Victoria, FGD 1

Appendix Table 6. Barriers to Uptake of Postpartum FP Services in Eldoret and Port Victoria: TBAs' Perspective

Barrier	Focus groups mentioning this barrier
Side effects	All TBA FGDs
Rumors, myths and misconceptions	TBAs, Eldoret, FGD 1, 2; TBAs, Port Victoria, FGD 2
Lack of support from spouses and extended family	Port Victoria, FGD 1, 2
Fear of infertility	TBAs, Eldoret, FGD 1; TBAs, Port Victoria, FGD 2
Competing herbal and 'supernatural' FP alternatives	TBAs, Eldoret, FGD 2
Religion	TBAs, Eldoret, FGD 2
Cost	TBAs, Eldoret, FGD 2
Ignorant and adamant mothers' wish for more children	TBAs, Port Victoria, FGD 2
The wish to deliver and culturally name children after family members	TBAs, Eldoret, FGD 2
Inaccessibility and unavailability of some FP services	TBAs, Eldoret, FGD 2
Known FP failure	TBAs, Port Victoria, FGD 1
Fear of HIV testing	TBAs, Port Victoria, FGD 2
Quack providers	TBAs, Eldoret, FGD 1