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CLINICAL ARTICLE

Obstetrics

A qualitative exploration of barriers to health-facility-based delivery in Bomachoge-Borabu and Kaloleni, Kenya

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Abstract

Objective: To explore barriers to utilization of health-facility-based delivery in Kenya, use of which is associated with reduced maternal mortality.

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Methods: In April 2017, a qualitative study utilizing key informant interviews (KIIs) and focus group discussions (FGDs) was carried out in Bomachoge-Borabu and Kaloleni, Kenya. Twenty-four KIIs were performed including health service providers, community health workers, religious leaders, local government representatives, Ministry of Health representatives, and representatives of women's organizations. Sixteen FGDs were held separately with adolescent females, adult females, adult males, and Community Health Committee members. Data were transcribed, coded, and categorized thematically to illustrate supply-side and demand-side barriers to use of health-facility-based delivery services.

Results: Supply-side barriers included staff shortages, inadequate supplies and space, poor interpersonal relations, few trained staff, long distance to services, poor transport infrastructure, and limited service hours. Demand-side barriers included financial constraints, limited spousal support, observance of birthing traditions, limited knowledge on importance of health-facility-based delivery, and fear of health-facility procedures. **Conclusions:** Diverse barriers continue to influence use of health-facility-based delivery services in Kenya. Practical, integrated interventions are urgently needed to reduce barriers noted, to further reduce the maternal mortality rate.

KEYWORDS

Access to care, Barriers to care, Childbirth, Facility-based delivery, Kenya, Maternal health

1 | INTRODUCTION

Maternal health services cover pregnancy, labor, delivery, and the postpartum period, which can extend up to 6 weeks.¹ In order to improve maternal health outcomes, barriers to accessing quality maternal health services need to be identified and addressed.²⁻⁴ In Kenya, the maternal mortality ratio is 362 maternal deaths per 100 000 live births.⁵ Currently, the maternal mortality ratio in Kilifi County is 488

per 100 000 live births, $^{\rm 6}$ but Kisii County reports 27 per 1000 live births. $^{\rm 7}$

The review by Moyer and Mustafa⁸ shows that barriers can generally be grouped into two types: supply side and demand side. However, most of the research reviewed focused on the demand side and it is suggested that this is because of high use of household-provided data.⁸ Supply-side barriers have focused on three overlapping areas including geographical isolation, poor



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transportation infrastructure, and poor delivery of care at the health facility. $^{9\cdot15}$

Several demand-side barriers have been identified centering on financial means, family factors, and cultural influences.^{1,2,4,9,10,12,16-19}

In an effort to address the high maternal mortality rates in Kenya, all maternity health services in public health facilities were declared free of charge on June 1, 2013.¹⁵ It is important to continue engaging stakeholders to further examine diverse barriers—besides health-facility costs—influencing access to health-facility-based deliveries. Using qualitative data from the Access to Quality Care through Extending and Strengthening Health Systems (AQCESS) Project, the present study focuses on two distinct Kenyan counties, Kilifi and Kisii, to examine supply-side and demand-side obstacles impeding utilization of health-facility delivery services.

2 | MATERIALS AND METHODS

2.1 | Study design and setting

AQCESS is a Maternal, Newborn and Child Health (MNCH) project supported by the Aga Khan Foundation Canada. It is implemented in Kenya, Mali, Mozambique, and Pakistan in partnership with local agencies of the Aga Khan Development Network and in collaboration with local authorities. AQCESS aims to improve the availability, quality, and utilization of essential health services for pregnant women, newborns, and children under 5 years of age across select geographies in four countries. Encouragement of health-facility delivery is one of the key health indicators that the project hopes to improve on, as a way of improving maternal and child health outcomes.

In Kenya, the AQCESS project focuses on Kilifi (Kaloleni subcounty) and Kisii (Kisii South and Bomachoge-Borabu sub-counties) counties. Kaloleni, is a coastal region and one of the poorest areas in Kenya. The dominant culture is Mijikenda and the majority are Muslims or Christians. There are limited health services and high maternal mortality rates of 488 per 100 000 live births. Only 43.8% of all deliveries are attended by skilled birth attendants.⁶ Bomachoge-Borabu is in Kisii County, a highly populated rural area in western Kenya. Most inhabitants are Abagusii and Christian in religion. The region has an absolute poverty rate of 49.6%. Most public health facilities lack personnel and adequate drug supplies. However, recent reports show skilled deliveries stand at 88% because of the availability of free maternity care.⁷

The AQCESS project conducted a qualitative gender assessment in 2016–17 to examine gender issues related to access and use of MNCH services. The domains from the assessment used in this article include: (1) MNCH services available to the local community, (2) community members' perception on availability and responsiveness of health services to their needs, (3) barriers faced by women seeking health-facility delivery services, and (4) reasons why some women did not deliver in health facilities.

2.2 | Study participants and recruitment

This study used key informant interviews (KIIs) and focus group discussions (FGDs). The KIIs had to be community members who were in a position to know the community in depth, and able to articulate and discuss the issues at hand extensively. The FGD participants were local residents purposively recruited from villages at the two study sites. KIIs were purposively sampled with the support of local AQCESS project implementation teams. Twelve KIIs were held in each sub-county (24 in total) and included two health service providers, two community health workers, two local religious leaders, two local government representatives, two Ministry of Health representatives, and two representatives of local women's organizations (Table 1).

Eight FGDs with between five and eleven participants were held in each county with female adolescents aged 15–19 years (two sessions), women aged 20–49 (two sessions), men aged 20–49 years (two sessions), and members of community health committees comprised of both adult men and women (two sessions) (Table 1). At each site, participants were identified and recruited by health-facility liaisons and community health outreach workers.

2.3 | Data collection and data management procedures

Data collection was conducted in April 2017. The fieldwork research personnel included two investigators from the Aga Khan University and local AQCESS Project Managers from the two implementation sites. Two local research assistants (per site), one male and one female, were recruited and trained to facilitate data collection in

TABLE 1	Composition of study participants in the exploration of
barriers to h	ealth-facility-based delivery in Bomachoge-Borabu and
Kaloleni, Ke	nya

Focus group discussion	Number of participants	
participants	Bomachoge-Borabu	Kaloleni
Women		
≤19 y, session 1	7	10
≤19 y, session 2	5	7
≥20 y, session 1	10	11
≥20 y, session 2	9	7
Men (20-49 y)		
Group 1	7	10
Group 2	7	6
Community Health Committee		
Group 1	8	8
Group 2	5	6
Key informants	12 (7 female)	12 (9 female)
Total	70	77

2.4 | Data analysis

Audio recordings were transcribed and translated into English for coding. Each transcript was coded independently by two analysts and reviewed by a coding supervisor. The data were analyzed using a continuous iterative process of reading the transcripts, applying codes, and then integrating emerging findings into logical thematic categories for analysis.

2.5 | Ethical considerations

Research ethics approval was obtained from the Aga Khan University Ethics Review Board and the National Commission for Science Technology and Innovation. All respondents provided written informed consent before participating in the study. For minors (below 18 years of age), both assent and consent were sought. Administrative approval was obtained from county officials and administrators in charge of health facilities.

3 | RESULTS

A total of 147 participants were involved in the study with 77 from Bomachoge-Borabu and 70 from Kaloleni (see Table 1). Figure 1 provides a summary of identified barriers associated with low maternal healthcare use at the two study sites. Both supply-side and demand-side barriers for health-facility use in Bomachoge-Borabu and Kaloleni were identified. We provide all the coded barriers reported from both sites and by specific categories of participants in the supplementary material (Appendices S1 and S2).

3.1 | Supply-side barriers

There are few health facilities offering maternity services in Bomachoge-Borabu and Kaloleni. As a result, community members had to cover long distances to reach delivery services. This was difficult for those living in remote areas. A female leader from Kaloleni expressed these frustrations:

There is an area that is so remote that when someone falls sick at night, he is taken to the hospital carried like a corpse.

(Kaloleni, Women's Organization Leader 2)

Poor infrastructure and limited modes of transportation also made it difficult to transport women to the health facility during labor.

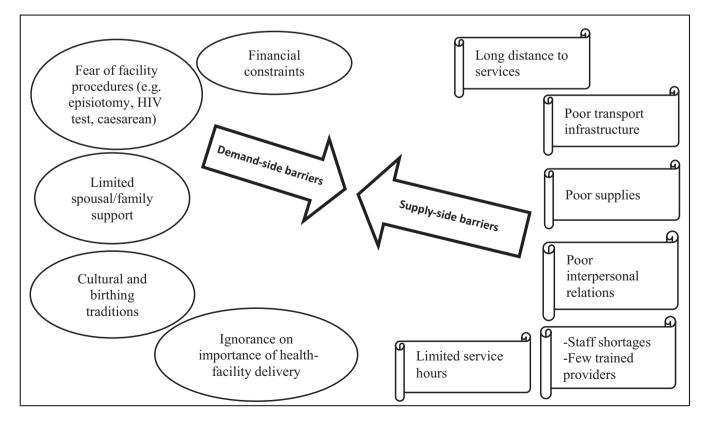


FIGURE 1 Supply-side and demand-side barriers to health-facility-based delivery in Bomachoge-Borabu and Kaloleni, Kenya

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Unpaved, muddy roads made some areas inaccessible to vehicles. Some women had to walk to the health facilities or use motorbikes when cars were unavailable. Stretchers (simple wooden frameworks) and wheelbarrows had also been used before motor bikes were introduced in some communities:

> Less than five years ago, people from Ibencho were only carried using beds or wheelbarrows to Sengera... The ambulance is not helpful to us during rainy seasons; you will find it packed because it cannot drive through the mud. It will take us six hours to transport a pregnant woman to the nearest hospital.

> > (Bomachoge-Borabu, Man, FGD 2)

Transport is the first problem... If she is not in much pain, she will use bodaboda (motorbike)... Matatu (public mini buses) don't go there, it's bad infrastructure.

(Kaloleni, Women's Organization Leader 2)

Participants also reported the lack of a conventional ambulance service to ferry needy community members to the health facility and wished this particular need could be addressed soon to ensure that women and children could easily access health care whenever they needed it—day or night.

Due to shortages or unavailability of medical supplies and drugs, some clients were asked to buy commodities such as cotton wool and disinfectant that were used during labor and delivery. Shortages of other basic requirements such as food and water were also mentioned, as illustrated in Kaloleni:

...You can find a woman who is in labor carrying a jerrican of water on her head going to the hospital. Simply because she knows there is no water at the hospital... It is usually so inconveniencing.

(Kaloleni, Man FGD 1)

There were also reports about inadequate ward space and maternity bed amenities. These factors discouraged clients because some ended up giving birth on the floor, with limited privacy and under unhygienic conditions. One woman from Kaloleni explained:

The beds in the labour ward should be added. The wards are also small. Some women wait to give birth while lying on the floor because the beds are occupied... When I was delivering, I gave birth lying on the floor because the beds were occupied... I knelt and the baby came.

(Kaloleni, Women >20 y FGD 2)

Some participants reported poor attitudes of providers or abuse of women as a common complaint. Health worker corruption and favoritism during service delivery was of special note in Bomachoge-Borabu. These attitudes and behaviors discouraged future use of health-facility delivery services because these experiences were likely to be shared in the community. A Ministry of Health representative illustrates this observation in Bomachoge-Borabu:

For delivery barriers, I can say the facility staff—the way they handle these mothers—somebody may harass the mother and... when she goes back she will go with a bad picture and say, 'I can't go back to that facility; they do not handle people properly, they use very abusive words.'

(Bomachoge-Borabu, Ministry of Health representative 1)

The harassment by providers was sometimes associated with prenatal care clinic card and stamp requirement because women who had missed prenatal care visits were harshly reprimanded. One FGD with women participants from Kaloleni shared about some women refusing to deliver at the health facility because of fear about potential abuse by providers, showing how these stories discouraged health-facility deliveries:

> There's a woman who ... completely refused to deliver in the hospital and I was forced to push her because she feared being abused in the hospital. (Kaloleni, Women >20 y FGD 2)

Female adolescents reported being treated in a particularly harsh way in Bomachoge-Borabu. Young women were often unfamiliar with the labor and delivery processes. For first-time deliveries, they needed a lot of guidance. They did not get the necessary support and management that would be ideal for first-time young mothers.

Participants disliked the exercises required of women during labor and they were concerned about neglect of the needs of women during labor, delivery, or afterwards by providers and other maternity staff. The failure to monitor the labor process resulted in some women delivering on their own. In addition, inadequate postpartum care was noted, especially among women who had cesarean deliveries, or those with excessive bleeding. As one woman explained:

> Those who gave birth through cesarean section have a problem because when you ask for help from the nurses—because you don't have energy—she tells you, 'Whatever was disturbing you is out, what else do you want?' Workers who clean the floor will tell you to wipe it if you stain it.

> > (Bomachoge-Borabu, Women >20 y, FGD 2)

Staff shortages at health facilities also discouraged health-facility use because clients did not receive the level of attention they anticipated, nor did they get served promptly. Complaints about poor patient flow, long queues, and slow service were reported. Additionally, during health worker strikes, clients were discouraged from health-facility delivery because they would arrive and find understaffed maternity units with no one to help them deliver.

In addition, there were complaints about the limited number of qualified staff and the use of underqualified staff, such as student health workers, to support deliveries. Some facilities had limited service hours and some were better staffed during day time or were only open during business hours (Monday to Friday), so women who often needed delivery services at night or during the weekend were less likely to use health facilities.

3.2 | Demand-side barriers

Even with the change to free maternity services in Kenya, financial constraints remained a challenge for women who desired to deliver at the health facility. For example, the cost of transport to distant facilities was still prohibitive for many women who lived in remote villages. This could result in extreme outcomes, including death. In addition, when women needed specialized care that was not available at one health facility, they were sent to higher-level health facilities. Women were often asked to pay for fuel for health-facility vehicles and ambulances for transport to the referral sites. Many women could not afford it as illustrated below:

> A woman will start labouring in the middle of the night and when you call the hospital, they will tell you there is a vehicle but without fuel...

> > (Kaloleni, CHC FGD 1)

In our hospitals, there are no drugs and we are told services are free... the ambulances there are paid for [by patients and their families] before they can refer you to a bigger hospital...

(Bomachoge-Borabu, Women >20 y, FGD 2)

When pregnant women get into a serious condition, the ambulance is called but at a cost... Even for referrals from small facilities to bigger facilities... one has to pay for fuel... so, when a woman is not in a serious condition, we use motorbikes, sacks, and beds as means of transport.

(Bomachoge-Borabu, Men, FGD 2)

Limited family support during labor and delivery also countered efforts towards health-facility delivery. Women who lacked escorts could opt for home deliveries. Spousal support was highly regarded but those who were irresponsible or who were ignorant about benefits of skilled delivery were less likely to help their spouse access the health facility: GYNECOLOGY

The roads are not good, it's at night, there is no money to hire a vehicle and the husband is a drunkard. He will tell you, 'Deliver like other women, it's a normal thing.' (Bomachoge-Borabu, Women >20 y, FGD 2)

The fear of health-facility clinical procedures and requirements also kept some women away. Exercises required of women in labor were unpopular and there were fears of receiving episiotomy, cesarean section, and HIV testing. Others feared reprisal for not attending prenatal care or not having their prenatal care documents. Female adolescents and older women also feared stigma and discrimination associated with pregnancy and birth at their respective ages due to often hostile attitudes, both within the community and health facilities. Young women were fearful about being pregnant at an early age, and some felt ashamed to go to the hospital for prenatal care or delivery. There were also women who became pregnant at an older age who were apprehensive of delivering in the hospital because of societal expectations that they should have stopped giving birth as they got older.

Two final barriers were centered on religious beliefs and birthing traditions. When combined with limited understanding of the benefits of skilled delivery, such notions could discourage women from using the health facility. For example, in Bomachoge-Borabu, some religious groups recommended spiritual healing and prohibited seeking health care in facilities even in the event of complications:

> My cousin was about to give birth. She was told not to go to hospital, so the church came with the drums singing and running around the house till she gave birth... They sing round the house *mobere neri kindi* [the body is a lump of soil]. She gave birth well, but mother and baby both died later.

> > (Bomachoge-Borabu, Women <19 y, FGD 2)

According to some birthing traditions, herbal care was essential and the umbilical cord had to be buried in a specific way at home—for good karma and maintenance of fertility. Moreover, some mothers-inlaw wanted to maintain the tradition of having the first-born babies delivered in their homes. However, participants mentioned that these beliefs and traditions were slowly fading away as more families were using health-facility care.

4 | DISCUSSION

This study explored barriers to health-facility-based delivery in Bomachoge-Borabu and Kaloleni. These two sites demonstrated extensive overlap in the various supply-side and demand-side barriers to using health-facility delivery services. This suggests that these obstacles to maternal health care may be more generalizable to many communities in Kenya, even if addressing them may involve more localized, community-level action to provide solutions that address local culture and traditions.

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Consistent with previous research, the supply-side barriers generally centered on geography, transportation infrastructure, and health facilities and their interconnectedness. Long distances combined with a scarcity of delivery services require women to traverse long geographical stretches to access facilities.^{1,3} Moreover, distance becomes an even greater barrier when transport costs and poor transportation options are considered [24]. ^{9,20-22} Unsuitable infrastructure also means that emergency services cannot access areas within an appropriate response time. Others encounter delays in reaching higher referral services and receiving appropriate facility-based care promptly.²³

Several structural and human resources for health barriers at the health facility were also identified including insufficient supplies, too few trained healthcare workers, limited hours of operation, and disrespectful maternity care. Previous research in Ghana confirms that health-facility operating hours can discourage use of maternity services.¹¹ There is also evidence that disrespectful care is a barrier to seeking maternal health care in low- and middle-income countries, although there are existing recommended guidelines on respectful maternity care that can be implemented globally.^{1,4,13,14,17} Positive steps that could result in useful interventions have recently been noted in both counties, including recruitment of sufficient human resources for health, development of a medical supply chain management system, and establishment of emergency ambulance services.^{6,7}

Demand-side barriers encompassed a wide array of factors including financial, family, stigma, and cultural norms that impeded health-facility delivery. Even with free maternity care, there remain significant financial constraints, such as the cost of transportation,⁹ and insufficient money to buy drugs and consumables that may be out of stock at facilities, so requiring patients to procure them through private sources.^{1,16} In regions like Kaloleni and Bomachoge-Borabu where the poverty rates are high, these costs can easily deter health-facility deliveries.^{20,21}

Similar to other studies, the present study reports fear of facing social stigma at the health facility and undergoing clinical procedures and HIV testing. People are inherently fearful of finding out their HIV status or undergoing surgery and suturing.²⁰ Moreover, religion, traditional beliefs, and socio-cultural norms continue to affect maternal health service utilization.^{1,20} Cultural birth practices cannot be easily observed in health facilities, even though, for instance, allowing safe-keeping of the placenta for clients who wish to have them buried at home can be considered by health workers. The use of traditional birth attendants—although they are currently prohibited in Kenya—appeases many local community members.^{1,18-20} They can be acknowledged and encouraged to take up the referral-companion role so that they can accompany women to delivery.

Lastly, similar to past studies, this assessment showed that facility-based delivery is unlikely where there are ignorant and unsupportive social networks. The support of male partners and mothers-in-law, who are key decision makers on health matters, is particularly important.^{1,17-19} So, while appreciating local birth traditions and social roles, there is a need to educate local communities on the value of health-facility-based delivery.

The principal strengths of the present study are the diverse categories of participants—this allows for varying viewpoints to better triangulate findings—as well as the use of two dissimilar counties. Regarding limitations, as participants described delivery experiences and their observations, it was not always possible to determine to which health facilities they were referring (e.g. public versus private, or tier of care). A second limitation is that of transferability as some of these results may not be applicable outside the two counties. However, the common barriers to health-facility delivery found across both sites suggest that they may be applicable to other areas in Kenya and sub-Saharan Africa more generally.

In conclusion, the Kenyan government implemented a free maternal health care program in 2013 to eliminate the financial barriers to receiving health-facility-based care. While this program has increased health-facility delivery rates, other supply and demand barriers to care persist. These barriers continue to discourage safe maternity practices in Bomachoge-Borabu and Kaloleni, Kenya. The barriers identified overlapped extensively across the two regions and also aligned with previous research in low- and middle-income countries. This suggests that these obstacles may be generalizable to many communities in Kenya and perhaps beyond. Addressing them requires localized, community-level action to provide solutions that address local cultures and traditions. Purposeful interventions should be implemented to mitigate these barriers, increase the use of health-facility delivery services, and further reduce the maternal mortality rate in Kenya.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest.

AUTHOR CONTRIBUTIONS

VN, RP, LM, KM and MT contributed to the design of the study protocol. VN implemented data collection and ensured exhaustive analyses of data. VN and TW drafted the initial draft of this

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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