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'So we just look at the well-being of the baby and not the money required,' exploring experiences and perceptions of quality of maternity care amongst women in Nairobi's informal settlements and how they influence the women's choice of health facility: A qualitative study

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Abstract

Objective To examine how women, living in Nairobi's informal settlements, perceive the quality of maternity care received during delivery experiences and how it influences their choice of a health facility

Design Qualitative study

Settings Dandora, an informal settlement, Nairobi City.

Participants Six focus group discussions with 40 purposively selected women aged between 18 and 49 years at six health facilities.

Results Four broad themes were identified: 1) Perceived quality of delivery care services, 2) financial access to delivery service, 3) physical amenities at the health facility, 4) The 2017 health workers strike.

The four facilitators that influenced women toward the choice of a private health facility were: 1) interpersonal treatment at health facilities, 2) the quality of clinical services, 3) financial access to health services at the facility, 4) the physical amenities at the health facility. The three barriers to the choice of a private health facility were: 1) poor quality clinical services at low-cost health facilities, 2) shortage of specialist Doctors 3) referral to public health facilities during an emergency

The facilitators that influenced women toward the choice of a public health facility were 1) physical amenities for dealing with obstetric emergencies at public health facilities 2) early referral to public maternity during antennal care services. The six barriers to the choice of a public health facility were 1) perception of poor quality clinical services 2) security of newborns at tertiary health facilities 3) Mistreatment of women during delivery 4) use of unsupervised trainee doctors for deliveries and 5) Poor quality of physical amenities

Conclusion The study provides insights into decision making pathways used by women when choosing a delivery health facility. It also identifies critical attributes of the health facility that women find valuable how these perceptions help influence their choice of a delivery health facility.

Article summary

Strengths and limitations of the study

The study employed focus group discussions with women to understand a complex contextual issue through their lived experiences.

The women recruited into the study were purposively selected, and data collection conducted until saturation of themes.

The data was collected from a variety of health facilities ranging from private both for-profit low cost and not-for-profit (mission health facilities) to public health facilities (both at health center level and secondary maternities)

The data quality was assured by having enumerators trained in qualitative research methods. Data was collected data from a private setting at the health facilities to ensure privacy and confidentiality.

The main limitation was the inability to recruit women who had delivered at home with the help of traditional birth attendants. The views from these women would have provided unique insights regarding their choices for a place of delivery.

Key words: Experiences Quality of Maternity Care Informal settlements

Background

Far too many women die while trying to give birth, and 66% of all maternal deaths globally occur in sub-Saharan Africa (1). The maternal mortality rate in sub-Saharan Africa is estimated at 546 deaths per 100 000 live births (2). Most deaths occur during the immediate time of delivery and are preventable. The WHO has established skilled birth attendance during delivery and high-quality obstetric care at a health facility as the most definitive way of reducing maternal mortality (3),(4).

Kenya's current maternal mortality ratio stands at 342 for every 100,000 live births, a figure that remains unacceptability high (5). Evidence evaluating the factors influencing place of delivery point to women identifying distance or lack of transport as the predominant reason for delivering outside a health facility. Women in Kenya also identified other factors such as deeming the delivery services not necessary (20.5%), abrupt delivery (18.5%) and cost (11%) as barriers towards facility-based delivery(6). To reduce the high maternal mortality, national policies have been put in place to substantively address the significant barriers of cost and distance to accessing skilled delivery care. In June 2013, the Kenyan Government initiated a free maternity services policy that ensured delivery services for all public health facilities nationwide without user-fees (7). Additionally, selected private health facilities with National Health Insurance Fund (NHIF) accreditation could provide free maternity services with a voucher dubbed *Linda Mama*. This policy directly addressed the cost barrier and resulted in a sudden and substantial increase in women utilizing health facilities for delivery within the country, particularly in urban settings (8).

The corresponding barrier of geographic access to a facility has been addressed by both the public and private sectors. There has been an increase in the total number of public and private health facilities registered in Kenya. As a consequence, a majority of Kenyan women now live within 5km of a health center (9) However, in cities like Nairobi, a significant proportion of women (88.7%) of women deliver at a health facility, confirming that addressing cost and distance has not been sufficient to deter the rising maternal mortality (9). Studies within informal settlements in Nairobi have shown that the women in such settings face higher mortality rates, with one study estimating 700 deaths for every 100,000 live births (10).

Additionally the introduction of the free maternity service came with some unintended consequences, such as concerns about a reduction in the quality of services delivered (11). Recent studies also demonstrate challenges with the implementation of the free maternity services such as stock out of essential drugs and lack of ambulances for referral of women with obstetric emergencies to higher levels of care, and delays in the reimbursement of the health facilities and hospitals (11-13). Sadly, the free maternity policy has not demonstrated significant reductions in maternal mortality (14). These challenges are likely to be further exacerbated by trends of rapid urbanization in Kenya particularly in informal settlements.

Studies assessing access to facility based-delivery conducted in informal settlements in Kenya have mostly focused on maternal health utilization trends, and experiences with obstetric emergencies (15-16). A few studies have examined what women think of as quality, quantifying women's satisfaction with delivery care services (15),(17). Some studies identified that women valued low-cost unregulated health facilities because of their response to women's socio-cultural sensitivities (18). However, what is less understood is how a women's lived experiences and perceptions of quality of delivery care services influence their choices of health facility. Women in informal settlements have choices, they actively choose to deliver in a facility that they perceive as having better quality of delivery services. We sought to explore women's experiences and perceptions of quality care when choosing a delivery health facility. These findings can offer insights for policymakers and program managers to improve of the quality of care at health facility services, particularly in informal settlements within urban areas.

Methods

Study Setting and sampling

This qualitative study was part of formative research to establish women's preferences for place of delivery in the informal settlements of Dandora in Embakasi-North sub-county in East of Nairobi City. Dandora is characterized by residents who belong to the lowest wealth quintile in Kenya, and there is widespread poverty and high unemployment in this setting. Dandora, which constitutes four of the administrative units in Embakasi-North, including the City of Nairobi's garbage dump. The presence of the garbage dump has led to high criminal activity and general insecurity. The health system consists of four public health centers, Njiru health center, Dandora health center 2, and 3, Kariobangi-North Health Centre. There are several low-cost private health facilities and mission health facilities. The main referral health facility is a short distance away in the neighboring Embakasi-West.

Data collection

Study design, recruitment, and participants

We used a phenomenological descriptive qualitative study to explore the lived experiences of women during delivery service at six different health facilities. The data were collected in January 2018 by enumerators trained in qualitative research methods. The facilities were purposively selected to represent a diverse set of health facilities such as public (both health centers and secondary maternities) and private, for-profit and mission health facilities. We recruited women during immunization clinics. The inclusion criteria were women who were aged between 18 and 49 and had delivered their babies within the informal settlements.

We began the study by mentioning the purpose of the study to the women. We informed them they intended for them to share their experiences around the decision making on selecting a delivery health facility. We obtained written consent from all the women and informed the participants of the potential benefits and risks of their involvement in the study. We used a semi-structured focus group discussion guide to lead the interviews. (See Appendix 1) and conducted the interviews in Kiswahili, a language commonly spoken by women in this setting. The discussions were tape-recorded, transcribed, and translated into English by research assistants and the first author, who is a native speaker of Kiswahili. The focus group discussions were all conducted in private rooms within the health facilities to safeguard privacy. We obtained ethical review from AMREF Ethics and Scientific Review Committee (ESRC). Permission to conduct the research was obtained from The National Commission on Science Technology and Innovation (NACOSTI).

Data Analysis

We started the data analysis by reading all the transcripts repeatedly to gain an in-depth understanding of the transcripts. We triangulated the data using the interview transcripts and field notes to aid understanding of the interviews. Two of the authors MA and JOA, coded the data. A coding scheme was developed from the Focus Group Discussion guides and using conceptual frameworks from the literature on facility-based delivery. During the process of data analysis the main author JOA met with members of the research team with extensive qualitative and clinical experience (MA) to discuss the emerging codes and categories as well as the interpretation of the emerging themes hence combining insights. We used a thematic analysis framework to classify identified key themes (19). We compared the themes identified to the standards of quality of care contained in the WHO conceptual framework for improving the quality of care for mothers and newborns (20).

Patient and public involvement

The women in this setting were consulted and participated in the design of the study instruments by suggesting relevant questions to be included in the focus group discussion guide with regard to their perceptions on the quality of services and choice of health facility within their setting.

Results

We interviewed a total of 40 women, and each focus group discussion was composed of between six and eight women. Table 1 shows the sociodemographic characteristics of the respondents. Respondents were mainly on average 22 years, and 65% were multiparous with between two and three children. About 30% delivered at health facilities classified as private

Characteristics	Informal setting N (%)
Age: mean	22
Age of children	2
Parity	
Primiparous	14 (35)
Multiparous	26 (65)
Delivery facility	
Public hospital	9 (23)
Public health center	10 (25)
Mission health facility	9 (23)
Private Facility	12 (30)
Total	40

Themes identified

We identified three themes that led women to the choice of a private health facility; the first theme was the perceived quality of care. We re-classified the theme on perceived quality of care into two sub-themes; interpersonal treatment at the health facility and quality of clinical care. The second theme was financial access to delivery service, with one sub-theme; the free maternity services policy. The third theme was the availability of physical amenities at the health facility. All barriers related to the choice of a private health facility fell under the theme of perceived quality of care. We identified three sub-themes; poor quality clinical services at some low cost private health facilities, shortage of specialist Doctors at some private health facilities, and referrals to public hospitals.

We identified three themes that led to the choice of public health facilities. The first theme was on perceived quality of care. Under the perceived quality of care, we identified two main sub-themes 1) Good quality clinical services in public health facilities to deal with obstetric emergencies, 2) early referral for complications during antenatal (ANC) services. The second theme was on financial access to delivery service. The third theme, sociocultural context and lastly the availability of physical amenities at the health facility.

We classified the barriers to choice of a public health facility identified under the themes of perceived quality of care into the following five different sub-themes: 1) perceived poor quality clinical and non-clinical services 2) security of newborns, 3) mistreatment of women during facility-based birth 4) use of unsupervised trainee Doctors, 5) understaffing at health facilities. The second theme of financial access to

delivery service only had one sub-theme on the free maternity policy, acting as a barrier to delivery at public health facilities. The third theme of the 2017 health workers strike was identified as a theme that acted as a barrier to the choice of public health facilities. For a clear illustration of the themes and sub-themes that served as facilitators and barriers to access of delivery service at both private and public health facilities, see Table 2.

Table 2. Showing the themes and sub-themes generated from focus group discussions with women in an informal settlement in Embakasi-north.

Choice of health facility	**Themes**	**Sub-themes**	
		Facilitators	**Barriers**
Private health facilities	Perceived quality of care	Good interpersonal treatment at the health facility	Shortage of specialist Doctors
		Good quality clinical and non-clinical services.	Poor quality clinical services
	Financial access to health care at the facility	Free maternity services policy.	
	Physical amenities at health facility		Poor physical amenities at low-cost private health facilities.
Public health facilities	Perceived quality of care	Availability of physical amenities (medical equipment for cesarean section and neonatal complications)	Poor quality clinical services
		Early referral for delivery to public maternity during ANC	Security of newborns.
			Mistreatment of women during delivery
			Use of unsupervised trainees Doctors at tertiary health facilities
			Inadequate staffing at health facilities

	Financial access to health care		The free maternity policy
	Physical amenities		Poor physical amenities at public health facilities.
	The 2017 health workers strike.		Acted as a barrier to the choice of public health facilities

Facilitators to the choice of delivery at private health facilities

Perceived quality of delivery care at the health facility

We identified four key facilitators of delivery at private health facilitators under the theme of perceptions of quality of delivery care. They are discussed below.

Good interpersonal treatment at the health facility. The women reported that one of the key facilitators for delivery at a private health facility was the good interpersonal treatment they received at private hospitals. The women described receiving good treatment by the health facility staff at private hospitals and compared it to the bad treatment at public hospitals illustrated by the quotes below;

"…They treated us well. Like me personally, that is why I go to private hospitals because I know they will treat me well there…"

"... You know, the first thing is I have previously given birth in a public hospital, and when I went there, they would chase me, and at that time, I am almost due, and I am in so much pain. So the suffering I went through made me decide not to go to a public hospital again. I decided to go to a private hospital because you know where you use your money so you will be treated well. And when I went to a private health facility A, I was treated well, and that is why I went there again, I have given birth to two children there."

They went on to speak about how the private hospitals where they delivered provided accompaniment and close monitoring during labor, at the delivery itself and after the birth. At the private hospitals, the women mentioned that there is the constant presence of a Doctor. They said the Doctors stayed with them from the commencement of labor through to the delivery time. They reported that how they were treated at a health facility was a key determinant in whether they would access services at a health facility again. They mentioned that the health care providers (both nurses and Doctors) during their delivery

who attended to them were “very caring," "respectful," "very welcoming," " very concerned about you," "very understanding," and "would make you feel safe." They explained that they did not feel abandoned at any one time during the delivery, especially when they are in pain, unlike in public hospitals. They describe the experience below;

“… They are very careful, and they attend to patients well. Then something else that makes someone happy is immediately when you walk in how someone will speak to you would make you feel safe. They are respectful and very welcoming, and so it makes it easy to express yourself. You can go somewhere and how they welcome you makes you have low morale. That was one thing I saw with them, they are welcoming, and they speak to you well. And the doctors there are very keen on what they are doing…”

“…But there are some other hospitals let's say like public, you will just be left there and last minute when the baby is out that is when they will come. But in private hospitals, they are usually very caring...”

"...The doctor would come and check up on me to see how my baby was doing. Then after giving birth, they would stay there with you, not just leaving you alone like how they do in public hospitals, whereby you have to be in so much pain before you call a doctor to help you. Here, they are just there with you…"

Quality of clinical and non-clinical services. The Women described having received excellent quality services and specified clinical delivery services provided by nurses and Doctors at private health facilities. They subsequently recommended private health facilities to other women in their family or friends based on their perceptions of the quality of services they receive during delivery, as seen in the quote below.

“...I am her mother, but I am the one who advised her to go to Private health facility B because, but it would be better if she was the one speaking, but I also have something to say. I have taken two women to Private health facility B, and I had seen that the clinical service there is good and that is why I preferred to take her to Private health facility B. Also for her when I took her there she can say what she thought of Private health facility B…”

Financial access to delivery services.

The Free maternity Services policy. Some women were informed by their friends and relatives that there were vouchers for a free maternity service from the Government, including private health facilities. This voucher program called *Linda mama* allowed them to start attending antenatal health services at the health facility to have their subsequent deliveries at the same health facility as illustrated by the quote below;

"...First, there is a friend of mine who will live in the same plot, and she was pregnant. She went to Private health facility B. I don't even know who told her to go to Private health facility B, but when she went there, she said to me that a Private health facility was giving out vouchers for giving birth I think 'Linda Mama.' So she told me to start attending my clinic there, but before I was attending a clinic at Mission health facility A. So I left here ..."

Women who had health insurance through the national scheme, The National Health Insurance Fund (NHIF) used their cards to access care at private hospitals that were accredited by the Government, and this determined if the women could deliver at a private health facility. They saw this as an opportunity to opt-out of care at public health facilities that they would have otherwise had used. This resulted in making access to maternity services affordable to them as seen in the quotes below;

"...again, I saw that they accept NHIF card, we had asked before, and they told us they do and you know that is something that is mostly with private hospitals but here they take it. So we saw that I did not have to struggle to go to National Referral hospital A or Maternity hospital B because they would take the card here, and that is what I used..."

Physical amenities at the health facility

Health facility cleanliness. Women in this setting described the most important amenity to them as facility cleanliness. This experience was universal across all focus groups, and there was a mutual agreement that the private health facilities that they attended had clean health facilities in comparison to the public health facilities in the area. They described wanting to deliver in a generally clean health facility. They described wanting clean beds where the beddings were replaced after every delivery as well as cleaning of toilets and bathrooms regularly as seen in the quotes below;

"...Even the bed. Like if you sleep here today, tomorrow they will change the sheets..."

"...A hospital needs to be clean. Because there are some other hospitals that you go to, you can find the toilet is slippery, it is dirty, and then again, you are not treated well, and that is why we also prefer private hospitals because they are clean…."

Availability of hot water and good food. The women also spoke extensively about the need to provide items such as hot water for showering after the delivery, occasional tea, and good food. The women repeatedly mentioned these items as essential elements to what was perceived by women as constituting excellent service during delivery seen in the quote below;

"…But treating people, giving people water to bathe we were even given hot water, tea, I can say their services are okay…"

Barriers to the choice of private health facilities

We identified three key barriers to delivery at private health facilities. First, women reported experiences that reflected the fact that low cost private health facilities provided poor quality delivery care. Secondly, the shortage of specialist clinicians at private health facilities and thirdly the referral of women with complications during obstetric emergencies to the public health system. We discuss them in detail below;

Perceived quality of care at health facilities

Poor quality clinical services at low-cost private health facilities. Some women described poor quality care at some of the low-cost private health facilities within the setting where some women reported injuries on newborns during delivery. One woman described a bad experience of a woman who switched her delivery decision from a low-cost private health facility to one with a slightly higher cost. She went on to say this experience made her distrust private health facilities and the bad experiences generally discouraged her from delivering at private health facilities as seen in the narration below;

"...I have a friend; I had not started going for the clinic when I was five months, and she went somewhere, I do not want to mention the name of that hospital, but it is within Dandora. She went there, and I had gone for one clinic check up there. She went to deliver there, and her baby was 4.1kg when she was giving birth, the doctors pulled the baby, and now the mother has a problem with her leg, she stayed for two months without walking. When I saw that, I told myself I could not go and deliver there because they did not give

her a tear; instead, they just pulled the baby even though the baby is big. So that scared me, and that is why I decided to come to Health facility B …"

Shortages of specialists Doctors. Women described a situation where some of the private health facilities lacked specialist Doctors who had surgical skills and who could provide cesarean section surgeries in the event of an obstetric emergencies. They described a situation where they had to wait and in the process risk their lives, and in some cases, they needed to pay upfront for the Doctor to come to the private health facilities.

"…They need to have all types of Doctors, even the ones for CS. Like you see, when I went to this health facility. I really waited because they were hiring doctors for cash, you have to send them money so that they can come. Without sending them money, they will not come. So they need to have all the doctors present, even the ones for CS, so that in case of an emergency, you do not have to wait…"

Referral to public health facilities during obstetric complications

Some women described poor amenities at some of the low-cost private health facilities situated within the informal settlement. They reported that the health facilities lacked essential amenities such as theatres for cesarean sections, and equipment for neonatal resuscitation. Therefore in the event of an obstetric emergency, women who went to deliver at private hospitals described that they were referred back to the public maternities that they were trying to avoid in the first place because almost all referral health facility including for all private health facilities in the area was the public referral health facility. The two quotes below illustrate the referral circumstances described.

"…Let's say like for me, I went to public health facility A, they told me that I could not give birth even there, they just referred me to big hospitals like Major Maternity A and B, but when I went there, they were on strike. They are the ones who also told me with the first child I cannot deliver in a private hospital…"

"…Then again, I can add when I went to deliver at Private hospital A, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a referral to the main national referral hospital, and that is where they attended to me. But at the national referral hospital, there was also a lot of complications.

Facilitators to the choice of public health facilities

The women spoke of two main facilitators to delivering at a public health facility; the physical amenities in the form of the availability of medical equipment for cesarean section during an obstetric emergency and referral during antenatal care services to delivery at higher level tertiary health facilities.

Availability of physical amenities

Medical equipment for cesarean sections. Women described public hospitals as having all the necessary equipment, particularly for dealing with obstetric emergencies such as a theatre for a cesarean section within the same public hospital. They expressed awareness that some of the private hospitals and smaller public health facilities did not have access to cesarean section, hence in the case of an obstetric complication they would have a referral if complications arose as described below;

"...Others feel if they go to those hospitals, they have the equipment and everything else. If things go wrong with the normal delivery, they will just be taken for a cesarean section (CS) because everything is just under one environment. Because you know not all private hospitals can conduct a CS, so if a complication arises, you are told to go to a public hospital…"

Referral for delivery to public maternity during ANC. Women described having advantages of been screened early for possible complications and then been referred for the index child during antenatal care clinics.

"...Maybe if you go to the clinic, they can tell you like with the first child that you cannot give birth in a private hospital, and you should go to public hospitals because of complications. So you will just have to go to a public hospital like Maternity A…."

The barriers to the choice of public health facilities

Perceived poor quality of care at public health facilities

The barriers to the choice of public health facilities were mainly related to the poor quality of care received at the health facilities. We describe six key barriers identified by the women that influenced their choice

of the public health facilities ; poor quality clinical care leading unnecessary cesarean sections, the security of newborns, mistreatment of women, use of unsupervised trainee Doctors, poor physical amenities, and inadequate staffing. They are discussed in detail below;

Poor quality clinical care leading to unnecessary cesarean sections. Women in this setting described sharing experiences of delivery with each other, and some women advised other women that Maternity hospitals in the area would subject them to unnecessary cesarean sections. This suggested a lack of use of evidence-based care by health care workers as well as poor communication between healthcare workers and women. Women also described lack of consent for cesarean sections within this setting, and these experiences of the women (or their friends) rendered the women afraid of delivering at the public maternities as seen in the quote below;

"...Like for me, when I had my first pregnancy, there was a lady who told me since it was my first pregnancy, I should not go to Major Maternity A because if I go there they will just take me to the theatre and operate on me and so I was very afraid…"

Security of newborns. Women described been informed by other women based on their experiences that there was a possibility that their new newborns would be stolen or exchanged if they delivered at the larger public maternity hospitals. This particularly made women switch their delivery from public maternities to private health facilities where they perceived the security of their newborns would be upheld as described below;

"...And they also told me if I gave birth to my child, they would steal it if I went to Maternity A or Maternity B. They told me to go to a private hospital. So I looked around and thought of which private hospital to go "...because you know I was new to Nairobi, and I did not know where to go. So now I was told to either go to the new Nursing home or health facility A. I didn't even know those hospitals. I was told if I boarded a matatu 36 (public transportation), it will take me to health facility A, so I just went to health facility A…"

Mistreatment of women. There were many forms of mistreatment described by women during labor and delivery at public health facilities and hospitals. The manifestations ranged from verbal abuse, physical abuse to neglect, and abandonment during childbirth. Women also described discrimination based on

ethnicity and age. Women, particularly young women, described verbal abuse and termed nurses at the public health facilities as having 'unnecessary rudeness'. They described been yelled at and chased based during labor on accusations that they had come to the health facility too early. They also described the health workers using language that was 'bad' as seen in the quote below;

"...You know people say that is the best because they have all the equipment, but then you see when I went there, they kept chasing me telling me I was not yet due. Others tell you to go and sit down, or you go back to your place because they don't baby people there. The language they use is very bad..."

Women described experiences where they witnessed fellow women been abandoned and neglected during care at public hospitals as seen below;

"...I just saw that it was a nice place to give birth because if you go to a place like Major maternity hospital B, there was a time I had a problem. I was taken to Major Maternity hospital B, and when I went there, I saw a lady who had pushed, and the baby's head was out. Still, the doctor was not even bothered; they were just walking and talking, so I said I wouldn't go there. I would rather go to a private hospital than a public hospital..."

Some women described instances of physical abuse by the Doctors and nurses during labor and delivery as seen in the quote below;

"...The way you will be treated by those doctors because some of them are usually very harsh. You can find when you are in labor, you need to walk around, but you find some of them become very tough with you. if a complication happens, you find others even beat you..."

Use of unsupervised trainees Doctors. Women described been referred to the tertiary hospitals and been attended to by trainee Doctors. They described these trainee Doctors as been inadequately prepared to attend to them and prone to error. One of the women described an experience whereby the trainee Doctor interfering with her bladder during surgery and creating the need for another Doctor to be called in to repair the damage done. We describe this experience in the quote below that narrates that experience;

"*…Then again, I can add when I went to deliver at health facility B, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a transfer to Tertiary hospital A, and that is where they attended to me. But in Tertiary hospital A, there were also a lot of complications. First, the Doctor who was a trainee interfered with my bladder, and they had to put a catheter for two weeks. Second, they did it poorly, and they had to call in another doctor. You see, when you go for a theatre in a public hospital, and more so if the line is long they will take trainees to attend to you, and they are not competent, so you find complications are a lot…"*

Inadequate staffing. Women described situations where there were insufficient nurses to accompany them during labor and delivery at the public health maternities. They described situations where they felt abandoned and were frequently forced to deliver their babies on their own. They also described long waiting times for services as a result of the inadequate staff. The long waits ensued even in the event of an obstetric emergency as seen in the quote below;

"*...The way they will welcome you. You see sometimes it is an emergency, so they should just take you and start attending to you, but sometimes you find yourself just going there and waiting in line for so long before someone comes to assist you so if you are an angry person you become mad and say you will never go back there again…"*

Financial access to delivery service.

Effects of the free maternity service policy. This policy was also seen as a barrier to public health facilities. Some women described experiences where they were treated poorly, and they perceived the bad treatment because the delivery service was free. They expressed their suffering as a result of this treatment and said they would rather pay for delivery and get services that safeguard their health and that of their babies, as seen in the quote below.

"…Like I told you, I have delivered in those hospitals offering free maternity, I did not even remove a shilling, but I was not happy. When I got there, and they started chasing me, telling me that I was not due yet, and I had dilated 4 cm. A doctor was examining us, and one told me to rest on the bed because I had dilated 7 cm, and then another one came to chase me, telling me I am 3cm. I suffered when I went there. You know sometimes it is not about the money, you can go like that, and then you are being told to go here and there and maybe you have no one to help you. So we just look at the well-being of the baby and not money …"

Others reinforced this view that in the private hospitals, ' people are treated well primarily because of the money you pay, and they wished they could be handled better at the public health facilities.

"...Then again, you find some doctors that are not keen when you have labor pains instead of them taking care of you. They just tell you to walk around. They need to treat us the same way we would be treated in private hospitals because you know in private hospitals they treat you well because of the money you pay. But we would like to see the same services in public because you people are better than private…."

The public medical workers Strike in 2017.

A few months into the start of this study (in 2017), there was a public medical workers' strike that lasted for 100 days. This strike greatly impacted the ability of the health system to provide public delivery services. Some women described been referred to their relatives to alternative private health facilities as detailed below

"...I knew before, and I went there for my clinic when I was about two months. During the third month, because I had a problem, I had to go to a public hospital in phase I where I had to go for a scan, which lied to me that I was ten months, and it was 11 months because I was counting days. They referred me to Public Maternity A, but when I got there, the people there were rude, just shouting at everyone and telling people to go back home because there was no space, and the doctors were on strike. I was in so much pain, so I just left there and came back home and told my mother that I had decided just to go and deliver at Private health facility A…"

"...I went to Major maternity hospital B, but I found that the nurses were on strike, so I had a relative who had given birth at Health facility C before, and their services were good, so they referred us there. So when I went, I found that there was this initiative, and I also got lucky…"

Recommendations by women for better quality care at health facilities

We asked the women to provide key recommendations for improving the health system (both public and private). The most mentioned item was the need for healthcare workers to show empathy towards women, especially during labor. They also said that healthcare workers needed to improve their communications and have "Polite language." Secondly, almost all women asked for clean health facilities as well as uphold basic standards of care such as warm blankets post-delivery, tea, hot showers, and regular provision of

meals. Thirdly they asked that health facilities Organize for timely admissions. They pleaded with healthcare workers to reconsider, making women wait under challenging positions such as labor pains. Lastly, they asked for the health workers to reduce the focus on the payments (at private health facilities) and (procedures at public health facilities) and focus primarily on safeguarding the well-being of the babies and mother.

DISCUSSION

We report on a qualitative study aimed at understanding informal settlements women's delivery experiences, their perceptions of quality of care, and how they influence their choice of a delivery health facility. We compared women who chose to deliver at private health facilities to those who delivered at public health facilities. We found out that the women in this informal settlement reported more facilitators for delivery at private health facilities, suggesting a more favorable user experience, relative to the numerous barriers raised for delivery at public health facilities. We used the WHO framework on improving quality care for maternal and newborns in a health facility to assess our findings (20).

Facilitators and barriers to delivery at private health facilities

Women described private health facilities as providers of high-quality services (both clinical and non-clinical). They described healthcare workers at these health facilities as treating women well. The women used terms such as "respectful," "caring," and "kind" to describe the healthcare workers at the private health facilities. This finding has been described before in literature confirming that women have a preference for private health facilities because they are responsive to their socio-cultural and economic sensitivities. (16);(17) When asked about the high quality services at private health facilities, the women suggested that the health workers in the for-profit health facilities were competent because of their for-profit status. These perceptions led them to experience a level of competence that encouraged them to continue choosing private health facilities over public health facilities. Competent systems where high-quality delivery care is provided has been described by the Lancet report on quality health systems in the era of sustainable development goals. (21).

Another theme that was brought up by the women was financial access to care, with the national policy of free maternity services recently introduced in 2013 influencing choices (6). This policy abolished all user-fees for delivery services at public health facilities and at selected gazetted private health facilities for women with health insurance. This subsequently allowed the women to access care at private health facilities that they would have otherwise foregone because of the delivery fees. As a result of this policy,

there was an overall increase in the number of women in the informal settlement accessing skilled birth attendance. A similar increase in women accessing skilled birth attendance has previously been reported in urban settings in Kenya and in 10 sub-Saharan African countries that removed their user-fees (22,23).

A third facilitator to private health facilities was the condition of the physical amenities at private health facilities. This was primarily centered on the conditions such as health facility cleanliness in the labor and delivery wards and other service provision elements such as the provision of hot water for bathing and good food during meal times. These basic amenities have been previously identified by similar studies set in informal settlements in Nairobi as lacking for women during the delivery (21). This is despite the fact that standards identified for the Kenya Quality model of care for health facilities in Kenya explicitly identify a clean work environment as a key standard (24). Such low-cost, basic amenities such as having a clean ward and delivery rooms need to be put by health facilities in place to ensure women's satisfaction with the delivery experience.

In terms of barriers to delivery at private health facilities, the women spoke of a few low-cost private health facilities as providers of poor quality clinical services and lacking specialist Doctors to perform surgeries. This consequently led women to perceptions of low-quality care and acted as barriers to the choice of a private health facility. Previous studies in informal settlements have identified such facilities and labeled them "inappropriate" in terms of staffing, equipment, and drugs, posing a barrier to high-quality delivery service in informal settlements (14).

Some women in this setting also mentioned the physical amenities at low-cost private health facilities that directly influenced the state of referrals to public health facilities as a significant barrier. They provided experiences of obstetric emergencies situations that necessitated referral and stated that the only referral facilities that could handle emergencies were public hospitals. They noted that the private health facilities lacked sufficient specialized equipment to deal with obstetric complications hence putting private health facilities at a disadvantage. They also described an ineffective referral process, characterized by communications and transportation challenges. Previous studies assessing the state of obstetric care in slums have identified private health facilities within slums been inadequately equipped and are unable to handle emergencies well (15).

Facilitators and Barriers to delivery at public health facilities

The key theme that arose that aided their choice of public health facilities was the presence of physical amenities at the major maternity hospitals. This was explicitly attributed to the presence of a functioning theater and resuscitation equipment for newborns, which bestowed them an ability to handle obstetric complications. This has subsequently led to women choosing public health facilities over private health facilities. This finding should be taken with caution, though, recent studies in Kenya have described the availability of emergency equipment might not necessarily lead to quality delivery at some health facilities. This might be due to the functionality of the equipment, and the provision of life-saving services might depend on other factors such as staffing (22). The second facilitator was the process of early screening for complications during antenatal care services that allowed women referred for delivery at maternity with specialized staff. They mentioned that this allowed them to choose higher-level maternities that could handle complications.

Most of the barriers to delivery at public health facilities were related to the perceived poor quality of care at public health facilities. Women described unnecessary cesarean sections because of the availability of the equipment. They described situations where no consent was obtained regarding the procedures and over-medicalization of the process of childbirth, a finding that has been described in several contexts in a systematic review (23). A few women described having been attended to by trainee Doctors, particularly at tertiary teaching institutions, a situation that exacerbated the already low quality of care described. Safety concerns such as theft of newborns at tertiary health facilities were described at tertiary health facilities. There were concerns about incompetent systems with basic and affordable facility items such as cleanliness in the facility, hot water for showering, curtains for privacy and food after delivery we're missing elements of a competent health system. These standards of care demonstrate experiences of care that are contrary to WHO standards for a high-quality health system that recommends the health system should have components such as safety effectiveness, equity (20).

We described the theme of financial access, primarily concerning the new free maternity service that was aimed at increasing access to maternity services. Women described the implementation of free maternity as been flawed. They shared experiences suggesting that the policy only covered 24-hour vaginal births and not providing for possible post-birth complications at the health facilities. They also described overcrowding and poor quality service. This led to the belief that because the maternity service was free, the health workers were unconcerned with their well-being and that of their babies. The childbirth experience subsequently led to a trade-off between the costs of childbirth and concerns of their well-being and that of their babies. Even women who didn't have insurance such as the NHIF, were willing to make out of pocket payments to ensure that they received the caliber of quality of care they deemed highly

effective and safe. Diverse implementation challenges have been described regarding the free maternity in different settings within Kenya (10),(11). This calls for improved implementation of guidelines that can assist with enforcing standards for quality care for the free maternity service.

Process indicators of quality of care were identified with mistreatment of women by healthcare identified by most of the women who delivered at public health facilities. This finding is supported by qualitative research in several contexts in Kenya that confirm that mistreatment during facility-based care in Kenya is a growing problem. (15),(25),(26). Some studies have measured, and found frequencies of physical abuse reported ranging from 20% and verbal abuse 56% (27). This mistreatment implied that women would choose their subsequent delivery at a private health facility where they would hope for better quality of care. Globally measurement of mistreatment during delivery has improved with recent studies spanning four countries that utilized observations confirming that physical and verbal abuse peaked 30 minutes before birth and 15 minutes after birth. Previous studies have called for health provider empathy, particularly in informal settlements (21). Global calls have now been put forward for accountability for mistreatment by health systems (28).

Lastly, the 2017 medical workers strike that lasted 100 days resulted in women switching from public health facilities to seek delivery services at private health services. Recent evidence investigating the impact of medical strikes suggests that they can lead to a crippling of healthcare delivery in the public sector (32). Hence the private sector that absorbs the capacity needs to be competent and capable of providing the necessary services to avert the potential morbidity and mortality that comes with a medical worker strike.

Study limitations and areas for future research

Our main weakness was in not interviewing women who delivered at home or with the help of a traditional birth attendant. We however strengthened our study by having focus group discussions with women who delivered at a range of health facilities, including private facilities (both profit and not-for-profit), including low-cost private facilities. We also interviewed at both levels (primary and tertiary) of public health facilities; to get a wide range of experiences from women. Areas for future research include interviewing women who had a delivery at a health facility and had a subsequent delivery at home. Additionally, women who switched between private and public health facilities and why they changed their facility preference would provide insights on attributes of a health facility that women find important in making their choice of place of delivery.

Conclusion

Understanding why women choose certain types of delivery health facilities in informal settlements is important. It can help contribute policy recommendations that address inequalities in quality of care at health facilities and provide useful toward the implementation of the free maternity service policy. Women's experiences at health facilities inform their perceptions and eventually preferences for the standards of maternity service they expect. Identification of patient-centered aspects of quality of care at health facilities will be critical to improve maternal health outcomes and reduce maternal mortality in informal settings in the long term.

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Author Contributions.

JOA conceived and designed the study, contributed to the data collection, MA participated in the data analysis. JOA drafted the manuscript. JOA and MA provided interpretation for the findings .GK and FW revised the transcript for clarity. All authors read and approved the final version of the transcript.

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APPENDIX 6: FGD GUIDE

Exploring attributes of women's preferences for place of delivery in Dandora, Embakasi-North sub-County.

Purpose of FGD

The purpose of this Focus Group Discussion is to try and understand where women residing within Dandora, *Embakasi-North* deliver their babies and why they prefer these specific facilities. The study intends to specifically elucidate the following;

1) What women's preferences are with regard to place of delivery
2) Why they choose certain places or health facilities over the other
3) To determine attributes of the health system that they deem important
4) To determine possible attribute levels of the attributes identified

Logistical arrangements

I would like to go over a few logistical arrangements before we begin the interview: Thank you for joining me today. My name is Jackline Aridi and I am a PhD student registered at Strathmore University at the Institute of Healthcare Management at the Strathmore Business School in Nairobi. The interview will last approximately 30- 45 minutes. I have obtained Ethical clearance to conduct this research from Strathmore University's Institutional Review Board (IRB) and permission to conduct research within Nairobi and Nakuru County from the National Science and Technology Research Institute (NACOSTI)

Everything we discuss during this interview will be kept in strict confidence and your real name will not appear in any of our results. As such, please make every effort to be open and honest when responding to the questions. I will provide you with a consent form which you will read and sign if you find it agreeable with you. For data capture purposes, this interview will be recorded using a mobile phone device. Start tape recording if consent is granted: (Facilitator to switch recorder on)

FGD Discussion Questions

The questions fall into five key categories: Follow the guide below to lead the focus group discussion on the 5 key themes.

Key questions	Probes
1. Birthing Experience -What are the things that make for a good birthing experience?	Describe your dream birthing experience. Who needs to be present? What needs to be present? What are your worries or concerns? Are there cultural traditions that need to be followed judiciously? What makes you feel safe during the process? What would absolutely make it a bad experience?
2. Place of delivery -How did you and your family decide where to deliver?	What are the options for places to deliver?

	Who were involved in the decision making process as to where to deliver? Are you usually involved in deciding where to deliver? If so, what did you have to consider in making that decision? (cost, distance, risks, benefits) What makes the delivery place a good or bad experience? Were you treated nicely and with respect? Give examples.
3. Recommendation to friends- What would you tell your friends about where they should deliver and why?	Is it culturally appropriate to share your experiences with your friends? Does your opinion have an impact on where your pregnant friend delivers her baby? Does the Chief/leaders in your community recommend/suggest that you deliver at certain places? If you hear something negative about a place to deliver, does it affect where you choose to deliver?
4. Family Involvement -How did your family show support for you during pregnancy and delivery?	Is your husband and extended family usually involved in the birthing experience? Which family members are actively involved in delivery? What roles do they play in the delivery process?
5. Newborn Care -What are the things you believe make for the best environment for the newborn immediately after delivery?	What are the traditional customs on how to handle and care for newborns? Does anyone help you care for the newborn? What makes them qualifies to do so? What do you believe is the best way to feed your newborn? And the timeline to starting solid foods? How do you keep your newborn warm? Do siblings play a role in taking care of newborns? If so, as soon as when? And how?

Deriving Attribute Levels

Having delivered in health facilities and hospitals within Embakasi-North or Naivasha. Can you please speak on what you thought was the most important factors in selection of the facility where you choose to deliver. If I were to ask you to rank the list below, which of these factors did you think were most important in the selection of the health facility?

(Rank: Very important, somewhat Important, Not important)

a. Cost of the health facility
b. Availability of drugs
c. Distance of the health facility
d. Health provider attitude
e. Quality of care (cleanliness etc.)
f. Whether or not abuse and disrespect occurs during the delivery
g. Time spent waiting for service
h. Cost of transportation

Reporting checklist for qualitative study.

Based on the SRQR guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

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		Reporting Item	Page Number
Title			
	#1	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	4
Abstract			
	#2	Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Introduction			
Problem formulation	#3	Description and signifcance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	3

Purpose or research question	#4	Purpose of the study and specific objectives or questions	4
Methods			
Qualitative approach and research paradigm	#5	Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenolgy, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.	4
Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
Context	#7	Setting / site and salient contextual factors; rationale	4
Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5
Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	5
Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative	5

		process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	
Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5
Units of study	#12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	6
Data processing	#13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5
Data analysis	#14	Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5
Techniques to enhance trustworthiness	#15	Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5
Results/findings			
Syntheses and interpretation	#16	Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6
Links to empirical data	#17	Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	8
Discussion			
Intergration with prior work, implications, transferability and contribution(s) to the field	#18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application /	19

		generalizability; identification of unique contributions(s) to scholarship in a discipline or field	
Limitations	#19	Trustworthiness and limitations of findings	22
Other			
Conflicts of interest	#20	Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	22
Funding	#21	Sources of funding and other support; role of funders in data collection, interpretation and reporting	22

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"…We just look at the well-being of the baby and not the money required…", exploring experiences of quality of maternity care amongst women in Nairobi's informal settlements in Kenya: A qualitative study.

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Abstract

Objective To examine how women, living in Nairobi's informal settlements, perceive the quality of maternity care received during delivery experiences and how it influences their choice of a health facility.

Design Qualitative study.

Settings Dandora, an informal settlement, Nairobi City in Kenya.

Participants Six focus group discussions with 40 purposively selected women aged between 18 and 49 years at six health facilities.

Results Four broad themes were identified: 1) Perceived quality of delivery care services, 2) financial access to delivery service, 3) physical amenities at the health facility, 4) The 2017 health workers strike.

The four facilitators that influenced women toward the choice of a private health facility were: 1) interpersonal treatment at health facilities, 2) the quality of clinical services, 3) financial access to health services at the facility, 4) the physical amenities at the health facility. The three barriers to the choice of a private health facility were: 1) poor quality clinical services at low-cost health facilities, 2) shortage of specialist Doctors 3) referral to public health facilities during an emergency

The facilitators that influenced women toward the choice of a public health facility were 1) physical amenities for dealing with obstetric emergencies at public health facilities 2) early referral to public maternity during antennal care services. The six barriers to the choice of a public health facility were 1) perception of poor-quality clinical services 2) security of newborns at tertiary health facilities 3) Mistreatment of women during delivery 4) use of unsupervised trainee doctors for deliveries and 5) poor quality of physical amenities 6) inadequate staffing.

Conclusion The study provides insights into decision making pathways used by women when choosing a delivery health facility. It also identifies critical attributes of the health facility that women find valuable how these perceptions help influence their choice of a delivery health facility.

Article summary

Strengths and limitations of the study

The study employed focus group discussions with women to understand a complex contextual issue through their lived experiences.

The women recruited into the study were purposively selected, and data collection conducted until saturation of themes.

The data was collected from a variety of health facilities ranging from private both for-profit low cost and not-for-profit (mission health facilities) to public health facilities (both at health center level and secondary maternities)

The data quality was assured by having enumerators trained in qualitative research methods. Data was collected data from a private setting at the health facilities to ensure privacy and confidentiality.

The main limitation was the inability to recruit women who had delivered at home with the help of traditional birth attendants. The views from these women would have provided unique insights regarding their choices for a place of delivery.

Key words: Women's Experiences, Quality of Maternity Care, Informal settlements, Kenya.

Background

Far too many women die while trying to give birth, and 66% of all maternal deaths globally occur in sub-Saharan Africa .(1) The maternal mortality rate in sub-Saharan Africa is estimated at 546 deaths per 100 000 live births. (2) Most deaths occur during the immediate time of delivery and are preventable. The WHO has established skilled birth attendance during delivery and high-quality obstetric care at a health facility as the most definitive way of reducing maternal mortality. (2)(3)(4)

Kenya's current maternal mortality ratio stands at 342 for every 100,000 live births, a figure that remains unacceptability high. (5) Evidence evaluating the factors influencing place of delivery point to women identifying distance or lack of transport as the predominant reason for delivering outside a health facility. Women in Kenya also identified other factors such as deeming the delivery services not necessary (20.5%), abrupt delivery (18.5%) and cost (11%) as barriers towards facility-based delivery. (6) To reduce the high maternal mortality, national policies have been put in place to substantively address the significant barriers of cost and distance to accessing skilled delivery care. In June 2013, the Kenyan Government initiated a free maternity services policy that ensured delivery services for all public health facilities nationwide without user-fees. (7) Additionally, selected private health facilities with National Health Insurance Fund (NHIF) accreditation could provide free maternity services with a voucher dubbed *Linda Mama*. This policy directly addressed the cost barrier and resulted in a sudden and substantial increase in women utilizing health facilities for delivery within the country, particularly in urban settings. (8)

The corresponding barrier of geographic access to a facility has been addressed by both the public and private sectors. There has been an increase in the total number of public and private health facilities registered in Kenya. As a consequence, a majority of Kenyan women now live within 5km of a health center. (5) However, in cities like Nairobi, a significant proportion of women (88.7%) of women deliver at a health facility, confirming that addressing cost and distance has not been sufficient to deter the rising maternal mortality. (5) Studies within informal settlements in Nairobi have shown that the women in such settings face higher mortality rates, with one study estimating 700 deaths for every 100,000 live births. (9)

Additionally the introduction of the free maternity service came with some unintended consequences, such as concerns about a reduction in the quality of services delivered. (10) Recent studies also demonstrate challenges with the implementation of the free maternity services such as stock out of essential drugs and lack of ambulances for referral of women with obstetric emergencies to higher levels of care, and delays in the reimbursement of the health facilities and hospitals.(10)(11)(12) Sadly, the free maternity policy has not demonstrated significant reductions in maternal mortality. (13) These challenges are likely to be further exacerbated by trends of rapid urbanization in Kenya particularly in informal settlements.

Studies assessing access to facility based-delivery conducted in informal settlements in Kenya have mostly focused on maternal health utilization trends, and women's experiences with obstetric emergencies. (14),(15,16) A few studies have examined what women think of as quality, quantifying women's satisfaction with delivery care services. (15),(17) Some studies identified that women valued low-cost unregulated health facilities because of their response to women's socio-cultural sensitivities. (17) However, what is less understood is how a women's lived experiences and perceptions of quality of delivery care services influence their choices of health facility. Women in informal settlements have choices, they actively choose to deliver in a facility that they perceive as having better quality of delivery services. We sought to explore women's experiences and perceptions of quality care when choosing a delivery health facility. These findings can offer insights for policymakers and program managers to improve of the quality of care at health facility services, particularly in informal settlements within urban areas.

Methods

Study Setting and sampling

This qualitative study was part of formative research to establish women's preferences for place of delivery in the informal settlements of Dandora in Embakasi-North sub-county in the East of Nairobi City. Dandora is characterized by residents who belong to the lowest wealth quintile in Kenya, and there is widespread poverty and high unemployment in this setting. Dandora constitutes four of the administrative units in Embakasi-North, including the City of Nairobi's garbage dump. The presence of the garbage dump has led to high criminal activity and general insecurity. The health system consists of four public primary health facilities namely; Njiru health center, Dandora health center 2, and 3, Kariobangi-North Health Centre. There are several low-cost private health facilities and a few mission health facilities. The main referral health facility is a secondary hospital a short distance away in the neighboring Embakasi-West.

Data collection

Study design, recruitment, and participants

We used a phenomenological descriptive qualitative study to explore the lived experiences of women during delivery service at six different health facilities. The data were collected in January 2018 by enumerators trained in qualitative research methods. We selected facilities that cover the spectrum of choices available to women in Dandora. We identified health facilities to represent both the primary care and referral maternity services both in the public and private sector. (See Appendix 1 Table 1) Women were recruited from, public, and private facilities in order to represent the range of facility choices in the Dandora informal settlement region. It is important to note that each type of facility catered to the local women, thus reflecting the range of both cost and quality available to women in Dandora. In Kenya,

mission (faith based) facilities are considered private facilities according to government licensing criteria. Therefore, the private facilities we utilized included both mission and for-profit facilities. At each facility recruitment was done with the assistance of the health care workers in charge of the maternity. The women were identified during their child welfare clinics, these typically occur on a specific day of the week. We specifically targeted women who had just delivered and were coming for postnatal care visit which was typically 4 to 6 weeks postpartum. The inclusion criteria were women who were aged between 18 and 49 and had delivered their babies within the informal settlements. We targeted a sample size of twenty women for each type of health facility. We targeted at least 20 women from each type of health facilities public or private-which includes both mission and other non-public facilities totaling to 40 interviews. Previous studies assessing similar topic have used a similar sample size.(18),(19)

We began the study by mentioning the purpose of the study to the women. We informed them they intended for them to share their experiences around the decision making on selecting a delivery health facility. We obtained written consent from all the women and informed the participants of the potential benefits and risks of their involvement in the study. We used a semi-structured focus group discussion guide to lead the interviews and conducted the interviews in Kiswahili, a language commonly spoken by women in this setting. (See Appendix 2) The discussions were tape-recorded, transcribed, and translated into English by research assistants and the first author, who is a native speaker of Kiswahili. The focus group discussions were all conducted in private rooms within the health facilities to safeguard privacy. We obtained ethical review from AMREF Ethics and Scientific Review Committee (ESRC). Permission to conduct the research was obtained from The National Commission on Science Technology and Innovation (NACOSTI).

Data Analysis

We started the data analysis by reading all the transcripts repeatedly to gain an in-depth understanding of the transcripts. We triangulated the data using the interview transcripts and field notes to aid understanding of the interviews. Two of the authors MA and JOA, coded the data. A coding scheme was developed from the focus group discussion guides and using conceptual frameworks from the literature on facility-based delivery. During the process of data analysis, the main author JOA met with members of the research team with extensive qualitative and clinical experience (MA) to discuss the emerging codes and categories as well as the interpretation of the emerging themes hence combining insights. We used a thematic analysis framework by Braun and Clarke to classify identified key themes.(20) We compared the themes identified to the standards of quality of care contained in the WHO conceptual framework for improving the quality of care for mothers and newborns. (21)

Patient and public involvement

The women in this setting were consulted and participated in the design of the study instruments by suggesting relevant questions to be included in the focus group discussion guide with regard to their perceptions on the quality of services and choice of health facility within their setting.

Results

We interviewed a total of 40 women, and each focus group discussion was composed of between six and eight women. Table 1 shows the sociodemographic characteristics of the respondents. Respondents were mainly on average 22 years, and 65% were multiparous with between two and three children. About 30% delivered at health facilities classified as private.

Table 1. Characteristics of women participants in the focus group discussions

Characteristics	Informal setting N (%)
Age: mean	22
Age of children	2
Parity	
Primiparous	14 (35)
Multiparous	26 (65)
Delivery facility	
Public hospital	9 (23)
Public health center	10 (25)
Mission health facility	9 (23)
Private Facility	12 (30)
Total	40

Themes identified

We identified three themes that led women to the choice of a private health facility; the first theme was the perceived quality of care. We re-classified the theme on perceived quality of care into two sub-themes; interpersonal treatment at the health facility and quality of clinical care. The second theme was financial access to delivery service, with one sub-theme; the free maternity services policy. The third theme was the availability of physical amenities at the health facility. All barriers related to the choice of a private health facility fell under the theme of perceived quality of care. We identified three sub-themes; poor quality clinical services at some low-cost private health facilities, shortage of specialist Doctors at some private health facilities, and referrals to public hospitals.

We identified three themes that led to the choice of public health facilities. The first theme was on perceived quality of care. Under the perceived quality of care, we identified two main sub-themes 1) Good quality clinical services in public health facilities to deal with obstetric emergencies, 2) early referral for complications during antenatal (ANC) services. The second theme was on financial access to delivery service. The third theme, sociocultural context and lastly the availability of physical amenities at the health facility.

We classified the barriers to choice of a public health facility identified under the themes of perceived quality of care into the following five different sub-themes: 1) perceived poor quality clinical and non-clinical services 2) security of newborns, 3) mistreatment of women during facility-based birth 4) use of unsupervised trainee Doctors, 5) understaffing at health facilities. The second theme of financial access to delivery service only had one sub-theme on the free maternity policy, acting as a barrier to delivery at public health facilities. The third theme of the 2017 health workers strike was identified as a theme that acted as a barrier to the choice of public health facilities. For a clear illustration of the themes and sub-themes that served as facilitators and barriers to access of delivery service at both private and public health facilities, see Table 2.

Table 2. Showing the themes and sub-themes generated from focus group discussions with women in an informal settlement in Embakasi-north.

Choice of health facility	**Themes**	**Sub-themes**	
		Facilitators	**Barriers**
Private health facilities	Perceived quality of care.	Good interpersonal treatment at the health facility.	Shortage of specialist Doctors.
		Good quality clinical and non-clinical services.	Poor quality clinical services.
	Financial access to health care at the facility.	Free maternity services policy.	
	Physical amenities at health facility.		Poor physical amenities at low-cost private health facilities.

Public health facilities	Perceived quality of care.	Availability of physical amenities (medical equipment for cesarean section and neonatal complications).	Poor quality clinical services.
		Early referral for delivery to public maternity during ANC.	Security of newborns.
			Mistreatment of women during delivery.
			Use of unsupervised trainees Doctors at tertiary health facilities.
			Inadequate staffing at health facilities.
	Financial access to health care.		The free maternity policy.
	Physical amenities.		Poor physical amenities at public health facilities.
	The 2017 health workers strike.		Acted as a barrier to the choice of public health facilities.

Facilitators to the choice of delivery at private health facilities

Perceived quality of delivery care at the health facility

We identified four key facilitators of delivery at private health facilitators under the theme of perceptions of quality of delivery care. They are discussed below.

Good interpersonal treatment at the health facility. The women reported that one of the key facilitators for delivery at a private health facility was the good interpersonal treatment they received at private hospitals. The women described receiving good treatment by the health facility staff at private hospitals and compared it to the bad treatment at public hospitals illustrated by the quotes below;

"…They treated us well. Like me personally, that is why I go to private hospitals because I know they will treat me well there…"

(22-year-old first-time mother at a private HF A)

"... You know, the first thing is I have previously given birth in a public hospital, and when I went there, they would chase me, and at that time, I am almost due, and I am in so much pain. So, the suffering I went through made me decide not to go to a public hospital again. I decided to go to a private hospital because you know where you use your money so you will be treated well. And when I went to a private health facility A, I was treated well, and that is why I went there again, I have given birth to two children there."

They went on to speak about how the private hospitals where they delivered provided accompaniment and close monitoring during labor, at the delivery itself and after the birth. At the private hospitals, the women mentioned that there is the constant presence of a Doctor. They said the Doctors stayed with them from the commencement of labor through to the delivery time. They reported that how they were treated at a health facility was a key determinant in whether they would access services at a health facility again. They mentioned that the health care providers (both nurses and Doctors) during their delivery who attended to them were "very caring," "respectful," "very welcoming," " very concerned about you," "very understanding," and "would make you feel safe." They explained that they did not feel abandoned at any one time during the delivery, especially when they are in pain, unlike in public hospitals. They describe the experience below;

"… They are very careful, and they attend to patients well. Then something else that makes someone happy is immediately when you walk in how someone will speak to you would make you feel safe. They are respectful and very welcoming, and so it makes it easy to express yourself. You can go somewhere and how they welcome you makes you have low morale. That was one thing I saw with them, they are welcoming, and they speak to you well. And the doctors there are very keen on what they are doing…"

"...But there are some other hospitals let's say like public, you will just be left there and last minute when the baby is out that is when they will come. But in private hospitals, they are usually very caring..."

"...The doctor would come and check up on me to see how my baby was doing. Then after giving birth, they would stay there with you, not just leaving you alone like how they do in public hospitals, whereby you have to be in so much pain before you call a doctor to help you. Here, they are just there with you…"

Quality of clinical and non-clinical services. The Women described having received excellent quality services and specified clinical delivery services provided by nurses and Doctors at private health facilities. They subsequently recommended private health facilities to other women in their family or friends based on their perceptions of the quality of services they receive during delivery, as seen in the quote below.

"...I am her mother, but I am the one who advised her to go to Private health facility B because, but it would be better if she was the one speaking, but I also have something to say. I have taken two women to Private health facility B, and I had seen that the clinical service there is good and that is why I preferred to take her to Private health facility B. Also, for her when I took her there, she can say what she thought of Private health facility B…"

Financial access to delivery services.

The Free maternity Services policy. Some women were informed by their friends and relatives that there were vouchers for a free maternity service from the Government, including private health facilities. This voucher program called *Linda mama* allowed them to start attending antenatal health services at the health facility to have their subsequent deliveries at the same health facility as illustrated by the quote below;

"...First, there is a friend of mine who will live in the same plot, and she was pregnant. She went to Private health facility B. I don't even know who told her to go to Private health facility B, but when she went there, she said to me that a Private health facility was giving out vouchers for giving birth I think 'Linda Mama.' So, she told me to start attending my clinic there, but before I was attending a clinic at Mission health facility A. So, I left here ..."

Women who had health insurance through the national scheme, The National Health Insurance Fund (NHIF) used their cards to access care at private hospitals that were accredited by the Government, and this determined if the women could deliver at a private health facility. They saw this as an opportunity to opt-out of care at public health facilities that they would have otherwise had used. This resulted in making access to maternity services affordable to them as seen in the quotes below;

"...again, I saw that they accept NHIF card, we had asked before, and they told us they do and you know that is something that is mostly with private hospitals but here they take it. So, we saw that I did not have to struggle to go to National Referral hospital A or Maternity hospital B because they would take the card here, and that is what I used..."

Physical amenities at the health facility

Health facility cleanliness. Women in this setting described the most important amenity to them as facility cleanliness. This experience was universal across all focus groups, and there was a mutual agreement that the private health facilities that they attended had clean health facilities in comparison to the public health facilities in the area. They described wanting to deliver in a generally clean health facility. They described wanting clean beds where the beddings were replaced after every delivery as well as cleaning of toilets and bathrooms regularly as seen in the quotes below;

"...Even the bed. Like if you sleep here today, tomorrow they will change the sheets..."

"...A hospital needs to be clean. Because there are some other hospitals that you go to, you can find the toilet is slippery, it is dirty, and then again, you are not treated well, and that is why we also prefer private hospitals because they are clean...."

Availability of hot water and good food. The women also spoke extensively about the need to provide items such as hot water for showering after the delivery, occasional tea, and good food. The women repeatedly mentioned these items as essential elements to what was perceived by women as constituting excellent service during delivery seen in the quote below;

"...But treating people, giving people water to bathe we were even given hot water, tea, I can say their services are okay..."

Barriers to the choice of private health facilities

We identified three key barriers to delivery at private health facilities. First, women reported experiences that reflected the fact that low cost private health facilities provided poor quality delivery care. Secondly,

the shortage of specialist clinicians at private health facilities and thirdly the referral of women with complications during obstetric emergencies to the public health system. We discuss them in detail below;

Perceived quality of care at health facilities

Poor quality clinical services at low-cost private health facilities. Some women described poor quality care at some of the low-cost private health facilities within the setting where some women reported injuries on newborns during delivery. One woman described a bad experience of a woman who switched her delivery decision from a low-cost private health facility to one with a slightly higher cost. She went on to say this experience made her distrust private health facilities and the bad experiences generally discouraged her from delivering at private health facilities as seen in the narration below;

"...I have a friend; I had not started going for the clinic when I was five months, and she went somewhere, I do not want to mention the name of that hospital, but it is within Dandora. She went there, and I had gone for one clinic check up there. She went to deliver there, and her baby was 4.1kg when she was giving birth, the doctors pulled the baby, and now the mother has a problem with her leg, she stayed for two months without walking. When I saw that, I told myself I could not go and deliver there because they did not give her a tear; instead, they just pulled the baby even though the baby is big. So that scared me, and that is why I decided to come to Health facility B ..."

Shortages of specialists Doctors. Women described a situation where some of the private health facilities lacked specialist Doctors who had surgical skills and who could provide cesarean section surgeries in the event of an obstetric emergencies. They described a situation where they had to wait and, in the process, risk their lives, and in some cases, they needed to pay upfront for the Doctor to come to the private health facilities.

"...They need to have all types of Doctors, even the ones for CS. Like you see, when I went to this health facility. I really waited because they were hiring doctors for cash, you have to send them money so that they can come. Without sending them money, they will not come. So, they need to have all the doctors present, even the ones for CS, so that in case of an emergency, you do not have to wait..."

Referral to public health facilities during obstetric complications

Some women described poor amenities at some of the low-cost private health facilities situated within the informal settlement. They reported that the health facilities lacked essential amenities such as theatres for cesarean sections, and equipment for neonatal resuscitation. Therefore in the event of an obstetric emergency, women who went to deliver at private hospitals described that they were referred back to the public maternities that they were trying to avoid in the first place because almost all referral health facility including for all private health facilities in the area was the public referral health facility. The two quotes below illustrate the referral circumstances described.

"…Let's say like for me, I went to public health facility A, they told me that I could not give birth even there, they just referred me to big hospitals like Major Maternity A and B, but when I went there, they were on strike. They are the ones who also told me with the first child I cannot deliver in a private hospital…"

"…Then again, I can add when I went to deliver at Private hospital A, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a referral to the main national referral hospital, and that is where they attended to me. But at the national referral hospital, there was also a lot of complications.

Facilitators to the choice of public health facilities

The women spoke of two main facilitators to delivering at a public health facility; the physical amenities in the form of the availability of medical equipment for cesarean section during an obstetric emergency and referral during antenatal care services to delivery at higher level tertiary health facilities.

Availability of physical amenities

Medical equipment for cesarean sections. Women described public hospitals as having all the necessary equipment, particularly for dealing with obstetric emergencies such as a theatre for a cesarean section within the same public hospital. They expressed awareness that some of the private hospitals and smaller public health facilities did not have access to cesarean section, hence in the case of an obstetric complication they would have a referral if complications arose as described below;

"...Others feel if they go to those hospitals, they have the equipment and everything else. If things go wrong with the normal delivery, they will just be taken for a cesarean section (CS) because everything is just under

one environment. Because you know not all private hospitals can conduct a CS, so if a complication arises, you are told to go to a public hospital…"

Referral for delivery to public maternity during ANC. Women described having advantages of been screened early for possible complications and then been referred for the index child during antenatal care clinics.

"...Maybe if you go to the clinic, they can tell you like with the first child that you cannot give birth in a private hospital, and you should go to public hospitals because of complications. So, you will just have to go to a public hospital like Maternity A…."

The barriers to the choice of public health facilities

Perceived poor quality of care at public health facilities

The barriers to the choice of public health facilities were mainly related to the poor quality of care received at the health facilities. We describe six key barriers identified by the women that influenced their choice of the public health facilities; poor quality clinical care leading unnecessary cesarean sections, the security of newborns, mistreatment of women, use of unsupervised trainee Doctors, poor physical amenities, and inadequate staffing. They are discussed in detail below;

Poor quality clinical care leading to unnecessary cesarean sections. Women in this setting described sharing experiences of delivery with each other, and some women advised other women that Maternity hospitals in the area would subject them to unnecessary cesarean sections. This suggested a lack of use of evidence-based care by health care workers as well as poor communication between healthcare workers and women. Women also described lack of consent for cesarean sections within this setting, and these experiences of the women (or their friends) rendered the women afraid of delivering at the public maternities as seen in the quote below;

"...Like for me, when I had my first pregnancy, there was a lady who told me since it was my first pregnancy, I should not go to Major Maternity A because if I go there they will just take me to the theatre and operate on me and so I was very afraid…"

Security of newborns. Women described been informed by other women based on their experiences that there was a possibility that their new newborns would be stolen or exchanged if they delivered at the larger public maternity hospitals. This particularly made women switch their delivery from public maternities to private health facilities where they perceived the security of their newborns would be upheld as described below;

"...And they also told me if I gave birth to my child, they would steal it if I went to Maternity A or Maternity B. They told me to go to a private hospital. So, I looked around and thought of which private hospital to go "...because you know I was new to Nairobi, and I did not know where to go. So now I was told to either go to the new Nursing home or health facility A. I didn't even know those hospitals. I was told if I boarded a matatu 36 (public transportation), it will take me to health facility A, so I just went to health facility A..."

Mistreatment of women. There were many forms of mistreatment described by women during labor and delivery at public health facilities and hospitals. The manifestations ranged from verbal abuse, physical abuse to neglect, and abandonment during childbirth. Women also described discrimination based on ethnicity and age. Women, particularly young women, described verbal abuse and termed nurses at the public health facilities as having 'unnecessary rudeness'. They described been yelled at and chased based during labor on accusations that they had come to the health facility too early. They also described the health workers using language that was 'bad' as seen in the quote below;

"...You know people say that is the best because they have all the equipment, but then you see when I went there, they kept chasing me telling me I was not yet due. Others tell you to go and sit down, or you go back to your place because they don't baby people there. The language they use is very bad..."

Women described experiences where they witnessed fellow women been abandoned and neglected during care at public hospitals as seen below;

"...I just saw that it was a nice place to give birth because if you go to a place like Major maternity hospital B, there was a time I had a problem. I was taken to Major Maternity hospital B, and when I went there, I saw a lady who had pushed, and the baby's head was out. Still, the doctor was not even bothered; they were

just walking and talking, so I said I wouldn't go there. I would rather go to a private hospital than a public hospital…"

Some women described instances of physical abuse by the Doctors and nurses during labor and delivery as seen in the quote below;

"…The way you will be treated by those doctors because some of them are usually very harsh. You can find when you are in labor, you need to walk around, but you find some of them become very tough with you. if a complication happens, you find others even beat you…"

Use of unsupervised trainees Doctors. Women described been referred to the tertiary hospitals and been attended to by trainee Doctors. They described these trainee Doctors as been inadequately prepared to attend to them and prone to error. One of the women described an experience whereby the trainee Doctor interfering with her bladder during surgery and creating the need for another Doctor to be called in to repair the damage done. We describe this experience in the quote below that narrates that experience;

"*…Then again, I can add when I went to deliver at health facility B, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a transfer to Tertiary hospital A, and that is where they attended to me. But in Tertiary hospital A, there were also a lot of complications. First, the Doctor who was a trainee interfered with my bladder, and they had to put a catheter for two weeks. Second, they did it poorly, and they had to call in another doctor. You see, when you go for a theatre in a public hospital, and more so if the line is long, they will take trainees to attend to you, and they are not competent, so you find complications are a lot…"*

Inadequate staffing. Women described situations where there were insufficient nurses to accompany them during labor and delivery at the public health maternities. They described situations where they felt abandoned and were frequently forced to deliver their babies on their own. They also described long waiting times for services as a result of the inadequate staff. The long waits ensued even in the event of an obstetric emergency as seen in the quote below;

"*...The way they will welcome you. You see sometimes it is an emergency, so they should just take you and start attending to you, but sometimes you find yourself just going there and waiting in line for so long before someone comes to assist you so if you are an angry person you become mad and say you will never go back there again…"*

Financial access to delivery service.

Effects of the free maternity service policy. This policy was also seen as a barrier to public health facilities. Some women described experiences where they were treated poorly, and they perceived the bad treatment because the delivery service was free. They expressed their suffering as a result of this treatment and said they would rather pay for delivery and get services that safeguard their health and that of their babies, as seen in the quote below.

"…Like I told you, I have delivered in those hospitals offering free maternity, I did not even remove a shilling, but I was not happy. When I got there, and they started chasing me, telling me that I was not due yet, and I had dilated 4 cm. A doctor was examining us, and one told me to rest on the bed because I had dilated 7 cm, and then another one came to chase me, telling me I am 3cm. I suffered when I went there. You know sometimes it is not about the money, you can go like that, and then you are being told to go here and there and maybe you have no one to help you. So, we just look at the well-being of the baby and not money …"

Others reinforced this view that in the private hospitals, ' people are treated well primarily because of the money you pay, and they wished they could be handled better at the public health facilities.

"...Then again, you find some doctors that are not keen when you have labor pains instead of them taking care of you. They just tell you to walk around. They need to treat us the same way we would be treated in private hospitals because you know in private hospitals, they treat you well because of the money you pay. But we would like to see the same services in public because you people are better than private…."

The public medical workers Strike in 2017.

A few months into the start of this study (in 2017), there was a public medical workers' strike that lasted for 100 days. This strike greatly impacted the ability of the health system to provide public delivery services. Some women described been referred to their relatives to alternative private health facilities as detailed below

"...I knew before, and I went there for my clinic when I was about two months. During the third month, because I had a problem, I had to go to a public hospital in phase I where I had to go for a scan, which lied to me that I was ten months, and it was 11 months because I was counting days. They referred me to Public Maternity A, but when I got there, the people there were rude, just shouting at everyone and telling people to go back home because there was no space, and the doctors were on strike. I was in so much pain, so I just left there and came back home and told my mother that I had decided just to go and deliver at Private health facility A…"

"...I went to Major maternity hospital B, but I found that the nurses were on strike, so I had a relative who had given birth at Health facility C before, and their services were good, so they referred us there. So, when I went, I found that there was this initiative, and I also got lucky…"

Recommendations by women for better quality care at health facilities

We asked the women to provide key recommendations for improving the health system (both public and private). The most mentioned item was the need for healthcare workers to show empathy towards women, especially during labor. They also said that healthcare workers needed to improve their communications and have "Polite language." Secondly, almost all women asked for clean health facilities as well as uphold basic standards of care such as warm blankets post-delivery, tea, hot showers, and regular provision of meals. Thirdly they asked that health facilities organize for timely admissions. They pleaded with healthcare workers to reconsider, making women wait under challenging positions such as labor pains. Lastly, they asked for the health workers to reduce the focus on the payments (at private health facilities) and (procedures at public health facilities) and focus primarily on safeguarding the well-being of the babies and mother.

DISCUSSION

We report on a qualitative study aimed at understanding informal settlements women's delivery experiences, their perceptions of quality of care, and how they influence their choice of a delivery health facility. We compared women who chose to deliver at private health facilities to those who delivered at public health facilities. We found out that the women in this informal settlement reported more facilitators for delivery at private health facilities, suggesting a more favorable user experience, relative to the numerous barriers raised for delivery at public health facilities. We used the WHO framework on improving quality care for maternal and newborns in a health facility to assess our findings. (21)

Facilitators and barriers to delivery at private health facilities

Women described private health facilities as providers of high-quality services (both clinical and non-clinical). They described healthcare workers at these health facilities as treating women well. The women used terms such as “respectful," "caring," and "kind" to describe the healthcare workers at the private health facilities. This finding has been described before in literature confirming that women have a preference for private health facilities because they are responsive to their socio-cultural and economic sensitivities. (17) When asked about the high-quality services at private health facilities, the women suggested that the health workers in the for-profit health facilities were competent because of their for-profit status. These perceptions led them to experience a level of competence that encouraged them to continue choosing private health facilities over public health facilities. Competent systems where high-quality delivery care is provided has been described by the Lancet report on quality health systems in the era of sustainable development goals.(22) Another plausible explanation for the women’s perception that private health facilities in this area provided high quality care is the presence of low volume of deliveries. Hence the attentiveness and responsiveness that they described above during delivery at the private health facilities it is possible that the quality of care received was a function of staff having to serve fewer women and pay more attention to them. Evidence from studies including other sub-Saharan countries have found that health facilities that have low volumes of deliveries have been associated with higher quality of care. (23)

Another theme that was brought up by the women was financial access to care, with the national policy of free maternity services recently introduced in 2013 influencing choices. (7) This policy abolished all user-fees for delivery services at public health facilities and at selected gazetted private health facilities for women with health insurance. This subsequently allowed the women to access care at private health facilities that they would have otherwise foregone because of the delivery fees. As a result of this policy, there was an overall increase in the number of women in the informal settlement accessing skilled birth attendance. A similar increase in women accessing skilled birth attendance has previously been reported in urban settings in Kenya and in 10 sub-Saharan African countries that removed their user-fees. (8),(24)

A third facilitator to private health facilities was the condition of the physical amenities at private health facilities. This was primarily centered on the conditions such as health facility cleanliness in the labor and delivery wards and other service provision elements such as the provision of hot water for bathing and good food during meal times. These basic amenities have been previously identified by similar studies set in informal settlements in Nairobi as lacking for women during the delivery. (25)This is despite the fact that standards identified for the Kenya Quality model of care for health facilities in Kenya explicitly identify

a clean work environment as a key standard. (26) Such low-cost, basic amenities such as having a clean ward and delivery rooms need to be put by health facilities in place to ensure women's satisfaction with the delivery experience.

In terms of barriers to delivery at private health facilities, the women spoke of a few low-cost private health facilities as providers of poor-quality clinical services and lacking specialist Doctors to perform surgeries. This consequently led women to perceptions of low-quality care and acted as barriers to the choice of a private health facility. Previous studies in informal settlements have identified such facilities and labeled them "inappropriate" in terms of staffing, equipment, and drugs, posing a barrier to high-quality delivery service in informal settlements. (15)

Some women in this setting also mentioned the physical amenities at low-cost private health facilities that directly influenced the state of referrals to public health facilities as a significant barrier. They provided experiences of obstetric emergencies situations that necessitated referral and stated that the only referral facilities that could handle emergencies were public hospitals. They noted that the private health facilities lacked sufficient specialized equipment to deal with obstetric complications hence putting private health facilities at a disadvantage. They also described an ineffective referral process, characterized by communications and transportation challenges. Previous studies assessing the state of obstetric care in slums have identified private health facilities within slums been inadequately equipped and are unable to handle emergencies well. (17)

Facilitators and Barriers to delivery at public health facilities

The key theme that arose that aided their choice of public health facilities was the presence of physical amenities at the major maternity hospitals. This was explicitly attributed to the presence of a functioning theater and resuscitation equipment for newborns, which bestowed them an ability to handle obstetric complications. This has subsequently led to women choosing public health facilities over private health facilities. This finding should be taken with caution, though, recent studies in Kenya have described the availability of emergency equipment might not necessarily lead to quality delivery at some health facilities. (27) This might be due to the functionality of the equipment, and the provision of life-saving services might depend on other factors such as staffing. The second facilitator was the process of early screening for complications during antenatal care services that allowed women referred for delivery at maternity with specialized staff. They mentioned that this allowed them to choose higher-level maternities that could handle complications.

Most of the barriers to delivery at public health facilities were related to the perceived poor quality of care at public health facilities. Women described unnecessary cesarean sections because of the availability of the equipment. They described situations where no consent was obtained regarding the procedures and over-medicalization of the process of childbirth, a finding that has been described in several contexts in a systematic review. (28) A few women described having been attended to by trainee Doctors, particularly at tertiary teaching institutions, a situation that exacerbated the already low quality of care described. Safety concerns such as theft of newborns at tertiary health facilities were described at tertiary health facilities. There were concerns about incompetent systems with basic and affordable facility items such as cleanliness in the facility, hot water for showering, curtains for privacy and food after delivery we're missing elements of a competent health system. These standards of care demonstrate experiences of care that are contrary to WHO standards for a high-quality health system that recommends the health system should have components such as safety effectiveness, equity. (21)

We described the theme of financial access, primarily concerning the new free maternity service that was aimed at increasing access to maternity services. Women described the implementation of free maternity as been flawed. They shared experiences suggesting that the policy only covered 24-hour vaginal births and not providing for possible post-birth complications at the health facilities. They also described overcrowding and poor-quality service. This led to the belief that because the maternity service was free, the health workers were unconcerned with their well-being and that of their babies. The childbirth experience subsequently led to a trade-off between the costs of childbirth and concerns of their well-being and that of their babies. Even women who didn't have insurance such as the NHIF, were willing to make out-of-pocket payments to ensure that they received the caliber of quality of care they deemed highly effective and safe. Diverse implementation challenges have been described regarding the free maternity in different settings within Kenya. (11),(12) This calls for improved implementation of guidelines that can assist with enforcing standards for quality care for the free maternity service.

Process indicators of quality of care were identified with mistreatment of women by healthcare identified by most of the women who delivered at public health facilities. This finding is supported by qualitative research in several contexts in Kenya that confirm that mistreatment during facility-based care in Kenya is a growing problem.(29),(30),(31)Some studies have measured, and found a prevalence of 20% for physical abuse (32). This mistreatment implied that women would choose their subsequent delivery at a private health facility where they would hope for better quality of care. In order to better understand mistreatment, recent studies aimed at measuring mistreatment during delivery across four countries has

improved understanding of mistreatment. This study confirmed that physical and verbal abuse peaked 30 minutes before birth and 15 minutes after birth. (33) These observations have provided vital information for policy makers to suggest strategies of reducing mistreatment. Other Kenyan studies have suggested strategies such as health provider empathy, particularly in informal settlements. (30)Global calls have now been put forward for accountability for mistreatment by health systems.(34), (35)

Lastly, the 2017 medical workers strike that lasted 100 days resulted in women switching from public health facilities to seek delivery services at private health services. Recent evidence investigating the impact of medical strikes suggests that they can lead to a crippling of healthcare delivery in the public sector.(36) Hence the private sector that absorbs the capacity needs to be competent and capable of providing the necessary services to avert the potential morbidity and mortality that comes with a medical worker strike.

Evidence shows that women are unable to accurately assess technical aspects of quality care. (37) Perceptions of quality care such as dignified and respectful treatment may or may not lead to improved outcomes if there is a lack of technical quality care. Studies assessing the quality of services across five African countries suggests that primary health facilities with low patient volumes often exhibit low quality of services because of their inability to deal with obstetric emergencies. (23)This is congruent with our findings. Women reported that private health facilities with good processes of care were often unable to provide emergency obstetric care and referral services. Choosing a private health facility would result in an emergent transfer to the public health facilities in the event of an obstetric emergency during delivery, something women wanted to avoid.

Study limitations and areas for future research

Our main weakness was in not interviewing women who delivered at home or with the help of a traditional birth attendant. We however strengthened our study by having focus group discussions with women who delivered at a range of health facilities, including private facilities (both profit and not-for-profit), including low-cost private facilities. We also interviewed at both levels (primary and tertiary) of public health facilities; to get a wide range of experiences from women. Areas for future research include interviewing women who had a delivery at a health facility and had a subsequent delivery at home. Additionally, women who switched between private and public health facilities and why they changed their facility preference would provide insights on attributes of a health facility that women find important in making their choice of place of delivery.

Conclusion

Understanding why women choose certain types of delivery health facilities in informal settlements is important. It can help contribute policy recommendations that address inequalities in quality of care at health facilities and provide useful toward the implementation of the free maternity service policy. Women's experiences at health facilities inform their perceptions and eventually preferences for the standards of maternity service they expect. Identification of patient-centered aspects of quality of care at health facilities will be critical to improve maternal health outcomes and reduce maternal mortality in informal settings in the long term.

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Author Contributions.

JOA conceived and designed the study, contributed to the data collection, MA participated in the data analysis. JOA drafted the manuscript. JOA and MA provided interpretation for the findings. GK and FW revised the transcript for clarity. All authors read and approved the final version of the transcript.

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Patient Consent for publication not required**.**

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Data Availability statement. De-identified data are available upon reasonable request to the corresponding author

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Appendix 1 table 1. Study sites operational characteristics and common features

Demographic features	Health facility 1	Health facility 2	Health facility 3	Health facility 4	Health facility 5	Health facility 6
Type of health facility	Private	Private	Private	Public	Public	low-cost private
Owned and managed	Faith based	Private	Private	Government	Government	Private
Level of care	Secondary	Primary	Secondary	Secondary	Primary	Primary
Designation	Peri-Urban	Peri-Urban	Peri-Urban	Urban	Peri-Urban	Peri-Urban
Volume of deliveries	>500	<500	>1000	>5000	<500	<500
Service departments	Maternity, OPD, PMTCT, HIV/AIDS counselling, ANC, PNC, CWC, CHU, Full Lab, Theatre able to perform C-sections 24/7, Sick Newborn Care Unit, Inpatient Wards	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, HIV/AIDS counselling, Basic Lab, Inpatient Wards	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, Basic Lab, Inpatient Wards, HIV/AIDS counselling, performs C-sections	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, CCC, Full Lab, Theatre able to perform C-sections 24/7, Sick Newborn Care Unit, Inpatient Wards, HIV/AIDS counselling	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, Basic Lab, HIV/AIDS counselling	Maternity, PMTCT, OPD, ANC, PNC, Family Planning, CHU, Basic Lab, Inpatient Wards, HIV/AIDS counselling, Sick Newborn Care Unit
Professional staff	Doctor, nurses, clinical officer	Nurse	Doctors, nurses, clinical officers	Doctor, clinical officer,nurses	Nurse	Nurse
Electricity	Available	Available	Available	Available	Available	Available
Water	Available	Available	Available	Available	Available	Available
Hours of operation	24 Hours	24 Hours	24 Hours	24 Hours	8am-4pm	24 Hours
Legend:						
* All secondary health facilities have ceaserean section capacity						
OPD - Outpatient Department						
PMTCT - Preventative Mother to Child Transmission						
ANC - Antenatal Care						
PNC - Postnatal Care						
CWC - Child Welfare Clinic						
CCC - Comprehensive Care Center for HIV						
CHU - Community Health Unit						

APPENDIX 2: FGD GUIDE

Exploring attributes of women's preferences for place of delivery in Embakasi-North sub-County.

Purpose of FGD

The purpose of this Focus Group Discussion is to try and understand where women residing within *Embakasi-North* deliver their babies and why they prefer these specific facilities. The study intends to specifically elucidate the following;

1) What women's preferences are with regard to place of delivery
2) Why they choose certain places or health facilities over the other
3) To determine attributes of the health system that they deem important
4) To determine possible attribute levels of the attributes identified

Logistical arrangements

I would like to go over a few logistical arrangements before we begin the interview: Thank you for joining me today. My name is Jackline Aridi and I am a PhD student registered at Strathmore University at the Institute of Healthcare Management at the Strathmore Business School in Nairobi. The interview will last approximately 30- 45 minutes. I have obtained Ethical clearance to conduct this research from Strathmore University's Institutional Review Board (IRB) and permission to conduct research within Nairobi and Nakuru County from the National Science and Technology Research Institute (NACOSTI)

Everything we discuss during this interview will be kept in strict confidence and your real name will not appear in any of our results. As such, please make every effort to be open and honest when responding to the questions. I will provide you with a consent form which you will read and sign if you find it agreeable with you. For data capture purposes, this interview will be recorded using a mobile phone device. Start tape recording if consent is granted: (Facilitator to switch recorder on)

FGD Discussion Questions

The questions fall into five key categories: Follow the guide below to lead the focus group discussion on the 5 key themes.

Key questions	Probes
1. Birthing Experience -What are the things that make for a good birthing experience?	Describe your dream birthing experience. Who needs to be present? What needs to be present? What are your worries or concerns? Are there cultural traditions that need to be followed judiciously? What makes you feel safe during the process? What would absolutely make it a bad experience?
2. Place of delivery -How did you and your family decide where to deliver?	What are the options for places to deliver? Who were involved in the decision making process as to where to deliver?

	Are you usually involved in deciding where to deliver? If so, what did you have to consider in making that decision? (cost, distance, risks, benefits) What makes the delivery place a good or bad experience? Were you treated nicely and with respect? Give examples.
3. Recommendation to friends- What would you tell your friends about where they should deliver and why?	Is it culturally appropriate to share your experiences with your friends? Does your opinion have an impact on where your pregnant friend delivers her baby? Does the Chief/leaders in your community recommend/suggest that you deliver at certain places? If you hear something negative about a place to deliver, does it affect where you choose to deliver?
4. Family Involvement -How did your family show support for you during pregnancy and delivery?	Is your husband and extended family usually involved in the birthing experience? Which family members are actively involved in delivery? What roles do they play in the delivery process?
5. Newborn Care -What are the things you believe make for the best environment for the newborn immediately after delivery?	What are the traditional customs on how to handle and care for newborns? Does anyone help you care for the newborn? What makes them qualifies to do so? What do you believe is the best way to feed your newborn? And the timeline to starting solid foods? How do you keep your newborn warm? Do siblings play a role in taking care of newborns? If so, as soon as when? And how?

Deriving Attribute Levels

Having delivered in health facilities and hospitals within Embakasi-North or Naivasha. Can you please speak on what you thought was the most important factors in selection of the facility where you choose to deliver. If I were to ask you to rank the list below, which of these factors did you think were most important in the selection of the health facility?

(Rank: Very important, somewhat Important, Not important)

a. Cost of the health facility
b. Availability of drugs
c. Distance of the health facility
d. Health provider attitude
e. Quality of care (cleanliness etc.)
f. Whether or not abuse and disrespect occurs during the delivery
g. Time spent waiting for service
h. Cost of transportation

Reporting checklist for qualitative study.

Based on the SRQR guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the SRQRreporting guidelines, and cite them as:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. Acad Med. 2014;89(9):1245-1251.

		Reporting Item	Page Number
Title			
	#1	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	4
Abstract			
	#2	Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Introduction			
Problem formulation	#3	Description and signifcance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	3

Purpose or research question	#4	Purpose of the study and specific objectives or questions	4
Methods			
Qualitative approach and research paradigm	#5	Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenolgy, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.	4
Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
Context	#7	Setting / site and salient contextual factors; rationale	4
Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5
Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	5
Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative	5

		process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	
Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5
Units of study	#12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	6
Data processing	#13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5
Data analysis	#14	Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5
Techniques to enhance trustworthiness	#15	Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5
Results/findings			
Syntheses and interpretation	#16	Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6
Links to empirical data	#17	Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	8
Discussion			
Intergration with prior work, implications, transferability and contribution(s) to the field	#18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application /	19

		generalizability; identification of unique contributions(s) to scholarship in a discipline or field	
Limitations	#19	Trustworthiness and limitations of findings	22
Other			
Conflicts of interest	#20	Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	22
Funding	#21	Sources of funding and other support; role of funders in data collection, interpretation and reporting	22

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"We just look at the well-being of the baby and not the money required": A qualitative study exploring experiences of quality of maternity care amongst women in Nairobi's informal settlements in Kenya.

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"We just look at the well-being of the baby and not the money required": A qualitative study exploring experiences of quality of maternity care amongst women in Nairobi's informal settlements in Kenya.

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Abstract

Objective To examine how women living in an informal settlement in Nairobi perceive the quality of maternity care and how it influences their choice of a delivery health facility.

Design Qualitative study.

Settings Dandora, an informal settlement, Nairobi City in Kenya.

Participants Six focus group discussions with 40 purposively selected women aged 18 to 49 years at six health facilities.

Results Four broad themes were identified: 1) perceived quality of the delivery services, 2) financial access to delivery service, 3) physical amenities at the health facility, and 4) the 2017 health workers strike.

The four facilitators that influenced women to choose a private health facility were: 1) interpersonal treatment at health facilities, 2) perceived quality of clinical services, 3) financial access to health services at the facility and 4) the physical amenities at the health facility. The three barriers to choosing a private facility were: 1) poor quality clinical services at low-cost health facilities, 2) shortage of specialist doctors and 3) referral to public health facilities during emergencies.

The facilitators that influenced women to choose a public facility were 1) physical amenities for dealing with obstetric emergencies and 2) early referral to public maternity during antenatal care (ANC) services. Barriers to the choosing a public facility were 1) perception of poor-quality clinical services 2) concerns over security for newborns at tertiary health facilities 3) fear of mistreatment during delivery 4) use of unsupervised trainee doctors for deliveries and 5) poor quality of physical amenities and 6) inadequate staffing.

Conclusion The study provides insights into decision making processes for women when choosing a delivery facility by identifying critical attributes that they value and how perceptions of quality influence their choices.

Article summary

Strengths and limitations of the study

The study employed focus group discussions with women to understand a complex contextual issue through their lived experiences.

The women recruited into the study were purposively selected, and data collection conducted until saturation of themes.

Data was collected from a variety of health facilities ranging from private, both for-profit low cost and not-for-profit (faith-based health facilities) to public health facilities (both at health center level and secondary maternities)

The data quality was assured by having enumerators trained in qualitative research methods. Data was collected data from private locations at the health facilities to ensure privacy and confidentiality.

The main limitation was the inability to recruit women who had delivered at home with the help of traditional birth attendants. The views from these women would have provided unique insights regarding their choices for a place of delivery.

Key words: Women's Experiences, Quality of Maternity Care, Informal settlements, Kenya.

Background

Far too many women die while trying to give birth, and 66% of all maternal deaths globally occur in sub-Saharan Africa (1). The maternal mortality ratio in sub-Saharan Africa is estimated to be 546 deaths per 100 000 live births (2). Most deaths occur during the immediate time of delivery and are preventable. According to the WHO, skilled birth attendance and high-quality obstetric care at a health facility are the two most effective ways of reducing maternal mortality (2-4).

Kenya's current maternal mortality ratio is estimated to be roughly 342 for every 100,000 live births, a figure that remains unacceptability high (5). Previous evidence evaluating the factors influencing choice of a place of delivery identified distance to a facility or lack of transport as the predominant reason for delivering outside a health facility. Women in Kenya also identified other factors such as deeming the delivery services unnecessary (20.5%), abrupt delivery (18.5%) and cost (11%) as barriers towards facility-based delivery (6).To reduce the high maternal mortality, national policies have been put in place to substantively address the significant barriers of cost and distance to accessing skilled delivery care. In June 2013, the Kenyan Government introduced the free maternity services (FMS) policy that eliminated user fees for delivery services at all public health facilities (7). Additionally, selected private health facilities with National Health Insurance Fund (NHIF) accreditation would provide free maternity services against a voucher dubbed *Linda Mama*. This policy directly addressed the cost barrier and resulted in a sudden and substantial increase in women utilizing health facilities for delivery, particularly in urban areas (8).

The corresponding barrier of geographic access to a facility has been addressed with an overall increase in the total number of public and private health facilities in Kenya. The majority of Kenyan women now live within 5km of a health facility. (5) However, in cities like Nairobi, a significant proportion of women (88.7%) deliver at a health facility, suggesting that addressing cost and distance may not be sufficient to deter the rising maternal mortality (5). Studies have shown that the women in informal settlements in Nairobi face higher mortality rates, with one study estimating 700 deaths for every 100,000 live births (9).

The introduction of the free maternity services policy is reported to have some unintended consequences, including a reduction in the quality of services delivered (10). Implementation challenges included stock out of essential drugs, absence of ambulances for emergency obstetric referrals and delayed reimbursement of the health facilities by the Government (10-12). Sadly, the free maternity policy has not demonstrated significant reductions in maternal mortality (13). These challenges are likely to be further exacerbated by trends of rapid urbanization in Kenya particularly in informal settlements.

Studies assessing access to facility based-delivery in informal settlements have mostly focused on maternal health utilization trends, and women's experiences with obstetric emergencies (14-16).Few studies examine what women perceive as quality, with regard to delivery services (15),(17). Some studies discovered that women who valued low-cost unregulated facilities did so because of their responsiveness to the women's socio-cultural sensitivities (17). What is less understood is how a women's lived experiences and perceptions of quality of delivery care services influence their facility choices. Women in informal settlements have choices, they actively choose to deliver in a facility that they perceive as having better quality of delivery services. We sought to explore women's past experiences and perceptions of quality of care and how these influence their choice of a delivery facility.These findings can offer insights for policymakers and program managers on strategies for improving the quality of care of delivery services in facilities particularly in informal settlements within urban areas.

Methods

Study

Setting and sampling

This qualitative study was part of a broader project seeking to establish women's preferences for place of delivery in the informal settlements of Dandora in Embakasi-North sub-county in Nairobi City. Dandora is characterized by residents who belong to the lowest wealth quintile in Kenya, with the area having widespread poverty and high unemployment. Dandora is also home to the City of Nairobi's largest garbage dump. The presence of the garbage dump is known to harbor criminal activity and has general insecurity. The health system consists of four public primary health facilities, several low-cost private health facilities and a few faith-based health facilities. The main referral health facility is a secondary hospital situated in the neighboring Embakasi-West sub-County.

Data collection

Study design, recruitment, and participants

We used a phenomenological descriptive qualitative study to explore the lived experiences of women during delivery service at six different health facilities. The data were collected in January 2018 by trained qualitative researchers. We selected facilities that cover the spectrum of choices available to women in Dandora. We identified health facilities to represent both the primary care and referral maternity services both in the public and private sector. (See Appendix 1 Table 1) Women were recruited from, public, and private facilities in order to represent the range of facility choices in the Dandora informal settlement region. It is important to note that each type of facility catered to the local women,

thus reflecting the range of cost and perceived quality options available to women in Dandora. Therefore, the private facilities we utilized included both faith-based and for-profit facilities. At each facility recruitment was done with the assistance of the health care worker in charge of the maternity. The women were identified during child welfare clinics, which occur on specific days of the week. We targeted women who had just delivered and were coming for postnatal visit which is usually 4 to 6 weeks after delivery. The inclusion criteria were women aged 18 to 49 and had delivered within the informal settlements. We targeted a sample size of twenty women for each type of health facility. We targeted at least 20 women from public and 20 from private facilities totaling to 40 interviews. Previous studies assessing similar topic have used a similar sample size (18),(19).

We obtained written consent from all participants after providing information on the purpose of the study potential benefits and risks. We used a semi-structured focus group discussion (FGD) guide to lead the interviews and conducted the interviews in Kiswahili, a language commonly spoken by women in this setting. (See Appendix 2) The FGDs were tape-recorded, transcribed, and translated into English by research assistants and the first author, who is a native speaker of Kiswahili. The focus group discussions were all conducted in private rooms within the health facilities to safeguard privacy. We obtained ethical review from AMREF Ethics and Scientific Review Committee (ESRC). Permission to conduct the research was obtained from The National Commission on Science Technology and Innovation (NACOSTI).

Data Analysis

We started the data analysis by reading all the transcripts repeatedly to gain an in-depth understanding of the transcripts. We triangulated the data using the interview transcripts and field notes to aid understanding of the interviews. Two of the authors MA and JOA, coded the data. A coding scheme was developed from the focus group discussion guides and using conceptual frameworks from the literature on facility-based delivery. During the process of data analysis, the main author JOA met with members of the research team with extensive qualitative and clinical experience (MA) to discuss the emerging codes and categories as well as the interpretation of the emerging themes hence combining insights. We used a thematic analysis framework by Braun and Clarke to classify identified key theme (20). We compared the themes identified to the standards of quality of care contained in the WHO conceptual framework for improving the quality of care for mothers and newborns (21).

Patient and public involvement

The women in this setting were consulted and participated in the design of the study instruments by suggesting relevant questions to be included in the focus group discussion guide with regard to their perceptions on the quality of services and choice of health facility within their setting.

Results

We interviewed a total of 40 women, and each focus group discussion was composed of between six and eight women. Table 1 shows the sociodemographic characteristics of the respondents. Respondents were mainly on average 22 years, and 65% were multiparous with between two and three children. About 30% delivered at health facilities classified as private.

Table 1. Characteristics of women participants in the focus group discussions

Characteristics	Informal setting N (%)
Age: mean	22
Age of children	2
Parity	
Primiparous	14 (35)
Multiparous	26 (65)
Delivery facility	
Public hospital	9 (23)
Public health center	10 (25)
Mission health facility	9 (23)
Private Facility	12 (30)
Total	40

Themes identified

We identified three themes that led women to the choice of a private health facility; perceived quality of delivery care, financial access to delivery service and availability of physical amenities. We re-classified the first theme on perceived quality of delivery care into interpersonal treatment at the health facility and quality of clinical care. The second theme was financial access to delivery service, with one sub-theme; the free maternity services policy. The third theme was the availability of physical amenities at the health facility. All barriers related to the choice of a private health facility fell under the theme of perceived quality of delivery care. We identified three sub-themes; poor quality clinical services at some low-cost private health facilities, shortage of specialist doctors at some private health facilities, and referrals to public hospitals.

We identified three themes that led to the choice of public health facilities. The first theme was on perceived quality of care. Under the perceived quality of care, we identified two main sub-themes; good quality clinical services and early referral for complications during antenatal (ANC) services. The second and third

theme was financial access to delivery service and availability of physical amenities at the health facility respectively.

We classified the barriers to choice of a public health facility identified under the themes of perceived quality of care into six different sub-themes: 1) perceived poor quality clinical services 2) security of newborns, 3) fear of mistreatment during delivery, 4) use of unsupervised trainee doctors, 5) poor quality physical amenities and 6) understaffing at health facilities. The second theme of financial access to delivery service only had one sub-theme on the free maternity policy, acting as a barrier to delivery at public health facilities. The third theme of the 2017 health workers strike was identified as a theme that acted as a barrier to the choice of public health facilities. For a clear illustration of the themes and sub-themes that served as facilitators and barriers to access of delivery service at both private and public health facilities, see Table 2.

Table 2. Showing the themes and sub-themes generated from focus group discussions with women in an informal settlement in Embakasi-north.

Choice of health facility	Themes	Sub-themes	
		Facilitators	**Barriers**
Private health facilities	Perceived quality of care.	Good interpersonal treatment at the health facility.	Shortage of specialist Doctors.
		Good quality clinical and non-clinical services.	Poor quality clinical services.
	Financial access to health care at the facility.	Free maternity services policy.	
	Physical amenities at health facility.		Poor physical amenities at low-cost private health facilities.
Public health facilities	Perceived quality of care.	Availability of physical amenities (medical equipment for cesarean section and neonatal complications).	Poor quality clinical services.
		Early referral for delivery to public maternity during ANC.	Security of newborns.
			Mistreatment of women during delivery.
			Use of unsupervised trainees Doctors at tertiary health facilities.
			Inadequate staffing at health facilities.
	Financial access to health care.		The free maternity policy.
	Physical amenities.		Poor physical amenities at public health facilities.
	The 2017 health workers strike.		Acted as a barrier to the choice of public health facilities.

Facilitators to the choice of delivery at private health facilities

Perceived quality of delivery care at the health facility

We identified four key facilitators of delivery at private health facilitators under the theme of perceptions of quality of delivery care. They are discussed below.

Good interpersonal treatment at the health facility. The women reported that one of the key facilitators for delivery at a private health facility was the good interpersonal treatment they received at private hospitals. The women described receiving good treatment by the health facility staff at private hospitals and compared it to the bad treatment at public hospitals illustrated by the quotes below;

"…They treated us well. Like me personally, that is why I go to private hospitals because I know they will treat me well there…"

(mother of two who delivered at a private facility A)

"*... You know, the first thing is I have previously given birth in a public hospital, and when I went there, they would chase me, and at that time, I am almost due, and I am in so much pain. So, the suffering I went through made me decide not to go to a public hospital again. I decided to go to a private hospital because you know where you use your money so you will be treated well. And when I went to a private health facility A, I was treated well, and that is why I went there again, I have given birth to two children there."*

(mother of three who delivered at a private facility A)

They went on to speak about how the private hospitals where they delivered provided accompaniment and close monitoring during labor, at the delivery itself and after the birth. At the private hospitals, the women mentioned that there is the constant presence of a Doctor. They said the Doctors stayed with them from the commencement of labor through to the delivery time. They reported that how they were treated at a health facility was a key determinant in whether they would access services at a health facility again. They mentioned that the health care providers (both nurses and Doctors) during their delivery who attended to them were "very caring," "respectful," "very welcoming," " very concerned about you," "very understanding," and "would make you feel safe." They explained that they did not feel abandoned at any one time during the delivery, especially when they are in pain, unlike in public hospitals. They describe the experience below;

"… They are very careful, and they attend to patients well. Then something else that makes someone happy is immediately when you walk in how someone will speak to you would make you feel safe. They are respectful and very welcoming, and so it makes it easy to express yourself. You can go somewhere and how they welcome you makes you have low morale. That was one thing I saw with them, they are welcoming, and they speak to you well. And the doctors there are very keen on what they are doing…"

(Mother of three who delivered at a private facility D)

"…But there are some other hospitals let's say like public, you will just be left there and last minute when the baby is out that is when they will come. But in private hospitals, they are usually very caring..."

(Mother of two who delivered at a private facility C)

"...The doctor would come and check up on me to see how my baby was doing. Then after giving birth, they would stay there with you, not just leaving you alone like how they do in public hospitals, whereby you have to be in so much pain before you call a doctor to help you. Here, they are just there with you…"

(Mother of two who delivered at a private facility A)

Quality of clinical and non-clinical services. The Women described having received excellent quality services and specified clinical delivery services provided by nurses and Doctors at private health facilities. They subsequently recommended private health facilities to other women in their family or friends based on their perceptions of the quality of services they receive during delivery, as seen in the quote below.

"...I am her mother, but I am the one who advised her to go to Private health facility B because, but it would be better if she was the one speaking, but I also have something to say. I have taken two women to Private health facility B, and I had seen that the clinical service there is good and that is why I preferred to take her to Private health facility B. Also, for her when I took her there, she can say what she thought of Private health facility B…"

(Mother of one who delivered at private facility B)

Financial access to delivery services.

The Free maternity Services policy. Some women were informed by their friends and relatives that there were vouchers for a free maternity service from the Government, including private health facilities. This voucher program called *Linda mama* allowed them to start attending antenatal health services at the health facility to have their subsequent deliveries at the same health facility as illustrated by the quote below;

"...First, there is a friend of mine who will live in the same plot, and she was pregnant. She went to Private health facility B. I don't even know who told her to go to Private health facility B, but when she went there, she said to me that a Private health facility was giving out vouchers for giving birth I think 'Linda Mama.' So, she told me to start attending my clinic there, but before I was attending a clinic at Mission health facility A. So, I left here ..."

(Mother of two who delivered at private facility B)

Women who had health insurance through the national scheme, The National Health Insurance Fund (NHIF) used their cards to access care at private hospitals that were accredited by the Government, and this determined if the women could deliver at a private health facility. They saw this as an opportunity to opt-out of care at public health facilities that they would have otherwise had used. This resulted in making access to maternity services affordable to them as seen in the quotes below;

"...again, I saw that they accept NHIF card, we had asked before, and they told us they do and you know that is something that is mostly with private hospitals but here they take it. So, we saw that I did not have to struggle to go to National Referral hospital A or Maternity hospital B because they would take the card here, and that is what I used..."

(Mother of three delivered at private facility C)

Physical amenities at the health facility

Health facility cleanliness. Women in this setting described the most important amenity to them as facility cleanliness. This experience was universal across all focus groups, and there was a mutual agreement that the private health facilities that they attended had clean health facilities in comparison to the public health facilities in the area. They described wanting to deliver in a generally clean health facility. They described wanting clean beds where the beddings were replaced after every delivery as well as cleaning of toilets and bathrooms regularly.

"...Even the bed. Like if you sleep here today, tomorrow they will change the sheets..."

(Mother of one who delivered at a private facility A)

"...A hospital needs to be clean. Because there are some other hospitals that you go to, you can find the toilet is slippery, it is dirty, and then again, you are not treated well, and that is why we also prefer private hospitals because they are clean...."

(Mother of two who delivered at a private facility B)

Availability of hot water and good food. The women also spoke extensively about the need to provide items such as hot water for showering after the delivery, occasional tea, and good food. The women repeatedly mentioned these items as essential elements to what was perceived by women as constituting excellent service during delivery seen in the quote below;

"…But treating people, giving people water to bathe we were even given hot water, tea, I can say their services are okay…"

(Mother of one who delivered at a private facility B)

Barriers to the choice of private health facilities

We identified three key barriers to delivery at private health facilities. First, women reported experiences that reflected the fact that low cost private health facilities provided poor quality delivery care. Secondly, the shortage of specialist clinicians at private health facilities and thirdly the referral of women with complications during obstetric emergencies to the public health system. We discuss them in detail below;

Perceived quality of care at health facilities

Poor quality clinical services at low-cost private health facilities. Some women described poor quality care at some of the low-cost private health facilities within the setting where some women reported injuries on newborns during delivery. One woman described a bad experience of a woman who switched her delivery decision from a low-cost private health facility to one with a slightly higher cost. She went on to say this experience made her distrust private health facilities and the bad experiences generally discouraged her from delivering at private health facilities as seen in the narration below;

"...I have a friend; I had not started going for the clinic when I was five months, and she went somewhere, I do not want to mention the name of that hospital, but it is within Dandora. She went there, and I had gone for one clinic check up there. She went to deliver there, and her baby was 4.1kg when she was giving birth, the doctors pulled the baby, and now the mother has a problem with her leg, she stayed for two months without walking. When I saw that, I told myself I could not go and deliver there because they did not give her a tear; instead, they just pulled the baby even though the baby is big. So that scared me, and that is why I decided to come to Health facility B …"

(Mother of three who delivered at public health facility A)

Shortages of specialist doctors. Women described a situation where some of the private health facilities lacked specialist Doctors who had surgical skills and who could provide cesarean section surgeries in the event of an obstetric emergencies. They described a situation where they had to wait and, in the process, risk their lives, and in some cases, they needed to pay upfront for the Doctor to come to the private health facilities.

"...They need to have all types of Doctors, even the ones for CS. Like you see, when I went to this health facility. I really waited because they were hiring doctors for cash, you have to send them money so that they can come. Without sending them money, they will not come. So, they need to have all the doctors present, even the ones for CS, so that in case of an emergency, you do not have to wait..."

(Mother of two who delivered at public Health Centre C)

Referral to public health facilities during obstetric complications

Some women described poor amenities at some of the low-cost private health facilities situated within the informal settlement. They reported that the health facilities lacked essential amenities such as theatres for cesarean sections, and equipment for neonatal resuscitation. Therefore in the event of an obstetric emergency, women who went to deliver at private hospitals described that they were referred back to the public maternities that they were trying to avoid in the first place because almost all referral health facility including for all private health facilities in the area was the public referral health facility. The two quotes below illustrate the referral circumstances described.

"...Let's say like for me, I went to public health facility A, they told me that I could not give birth even there, they just referred me to big hospitals like Major Maternity A and B, but when I went there, they were on strike. They are the ones who also told me with the first child I cannot deliver in a private hospital..."

(Mother of one who delivered at public health facility D)

"...Then again, I can add when I went to deliver at Private hospital A, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a referral to the main national referral hospital, and that is where they attended to me. But at the national referral hospital, there was also a lot of complications.

(Mother of two who delivered at a private facility C)

Facilitators to the choice of public health facilities

The women spoke of two main facilitators to delivering at a public health facility; the physical amenities in the form of the availability of medical equipment for cesarean section during an obstetric emergency and referral during antenatal care services to delivery at higher level tertiary health facilities.

Availability of physical amenities

Medical equipment for cesarean sections. Women described public hospitals as having all the necessary equipment, particularly for dealing with obstetric emergencies such as a theatre for a cesarean section within the same public hospital. They expressed awareness that some of the private hospitals and smaller public health facilities did not have access to cesarean section, hence in the case of an obstetric complication they would have a referral if complications arose as described below;

"...Others feel if they go to those hospitals, they have the equipment and everything else. If things go wrong with the normal delivery, they will just be taken for a cesarean section (CS) because everything is just under one environment. Because you know not all private hospitals can conduct a CS, so if a complication arises, you are told to go to a public hospital…"

(Mother of two delivered at a private facility B)

Referral for delivery to public maternity during ANC. Women described having advantages of been screened early for possible complications and then been referred for the index child during antenatal care clinics.

"...Maybe if you go to the clinic, they can tell you like with the first child that you cannot give birth in a private hospital, and you should go to public hospitals because of complications. So, you will just have to go to a public hospital like Maternity A…."

(Mother of one who delivered at private facility C)

The barriers to the choice of public health facilities

Perceived poor quality of care at public health facilities

The barriers to the choice of public health facilities were mainly related to the poor quality of care received at the health facilities. We describe six key barriers identified by the women that influenced their choice of the public health facilities; poor quality clinical care leading unnecessary cesarean sections, the security

of newborns, mistreatment of women, use of unsupervised trainee Doctors, poor physical amenities, and inadequate staffing. They are discussed in detail below;

Poor quality clinical care leading to unnecessary cesarean sections. Women in this setting described sharing experiences of delivery with each other, and some women advised other women that Maternity hospitals in the area would subject them to unnecessary cesarean sections. This suggested a lack of use of evidence-based care by health care workers as well as poor communication between healthcare workers and women. Women also described lack of consent for cesarean sections within this setting, and these experiences of the women (or their friends) rendered the women afraid of delivering at the public maternities.

"...Like for me, when I had my first pregnancy, there was a lady who told me since it was my first pregnancy, I should not go to Major Maternity A because if I go there they will just take me to the theatre and operate on me and so I was very afraid…"

(Mother of two, who delivered at private facility B)

Security of newborns. Women described been informed by other women based on their experiences that there was a possibility that their new newborns would be stolen or exchanged if they delivered at the larger public maternity hospitals. This particularly made women switch their delivery from public maternities to private health facilities where they perceived the security of their newborns would be upheld as described below;

"...And they also told me if I gave birth to my child, they would steal it if I went to Maternity A or Maternity B. They told me to go to a private hospital. So, I looked around and thought of which private hospital to go "...because you know I was new to Nairobi, and I did not know where to go. So now I was told to either go to the new Nursing home or health facility A. I didn't even know those hospitals. I was told if I boarded a matatu 36 (public transportation), it will take me to health facility A, so I just went to health facility A…"

(Mother of two, who delivered at a private facility A)

Fear of mistreatment during delivery. There were many forms of mistreatment described by women during labor and delivery at public health facilities and hospitals. The manifestations ranged from verbal abuse, physical abuse to neglect, and abandonment during childbirth. Women also described discrimination based on ethnicity and age. Women, particularly young women, described verbal abuse and termed nurses

at the public health facilities as having 'unnecessary rudeness'. They described been yelled at and chased based during labor on accusations that they had come to the health facility too early. They also described the health workers using language that was 'bad' as seen in the quote below;

"...You know people say that is the best because they have all the equipment, but then you see when I went there, they kept chasing me telling me I was not yet due. Others tell you to go and sit down, or you go back to your place because they don't baby people there. The language they use is very bad..."

(Mother of one who delivered at a private facility C)

Women described experiences where they witnessed fellow women been abandoned and neglected during care at public hospitals as seen below;

"...I just saw that it was a nice place to give birth because if you go to a place like Major maternity hospital B, there was a time I had a problem. I was taken to Major Maternity hospital B, and when I went there, I saw a lady who had pushed, and the baby's head was out. Still, the doctor was not even bothered; they were just walking and talking, so I said I wouldn't go there. I would rather go to a private hospital than a public hospital..."

(Mother of two who delivered at a private facility D)

Some women described instances of physical abuse by the Doctors and nurses during labor and delivery as seen in the quote below;

"...The way you will be treated by those doctors because some of them are usually very harsh. You can find when you are in labor, you need to walk around, but you find some of them become very tough with you. if a complication happens, you find others even beat you..."

(Mother of two who delivered at a public facility A)

Use of unsupervised trainees doctors. Women described been referred to the tertiary hospitals and been attended to by trainee Doctors. They described these trainee Doctors as been inadequately prepared to attend to them and prone to error. One of the women described an experience whereby the trainee Doctor interfering with her bladder during surgery and creating the need for another Doctor to be called in to repair the damage done. We describe this experience in the quote below that narrates that experience;

"*…Then again, I can add when I went to deliver at health facility B, there was a complication when I went for my CS. I wanted a qualified doctor because you never know what will happen. Then again, I was given a transfer to Tertiary hospital A, and that is where they attended to me. But in Tertiary hospital A, there were also a lot of complications. First, the Doctor who was a trainee interfered with my bladder, and they had to put a catheter for two weeks. Second, they did it poorly, and they had to call in another doctor. You see, when you go for a theatre in a public hospital, and more so if the line is long, they will take trainees to attend to you, and they are not competent, so you find complications are a lot…"*

(Mother of two referred to public facility A)

Inadequate staffing. Women described situations where there were insufficient nurses to accompany them during labor and delivery at the public health maternities. They described situations where they felt abandoned and were frequently forced to deliver their babies on their own. They also described long waiting times for services as a result of the inadequate staff. The long waits ensued even in the event of an obstetric emergency as seen in the quote below;

"*...The way they will welcome you. You see sometimes it is an emergency, so they should just take you and start attending to you, but sometimes you find yourself just going there and waiting in line for so long before someone comes to assist you so if you are an angry person you become mad and say you will never go back there again…"*

(Mother of two who delivered at a private facility D)

Financial access to delivery service.

Effects of the free maternity service policy. This policy was also seen as a barrier to public health facilities. Some women described experiences where they were treated poorly, and they perceived the bad treatment because the delivery service was free. They expressed their suffering as a result of this treatment and said they would rather pay for delivery and get services that safeguard their health and that of their babies, as seen in the quote below.

"…Like I told you, I have delivered in those hospitals offering free maternity, I did not even remove a shilling, but I was not happy. When I got there, and they started chasing me, telling me that I was not due yet, and I had dilated 4 cm. A doctor was examining us, and one told me to rest on the bed because I had dilated 7 cm, and then another one came to chase me, telling me I am 3cm. I suffered when I went there. You know sometimes it is not about the money, you can go like that, and then you are being told to go

here and there and maybe you have no one to help you. So, we just look at the well-being of the baby and not money …"

(Mother of three who delivered at a private facility A)

Others reinforced this view that in the private hospitals, people are treated well primarily because of the money you pay, and they wished they could be handled better at the public health facilities.

"...Then again, you find some doctors that are not keen when you have labor pains instead of them taking care of you. They just tell you to walk around. They need to treat us the same way we would be treated in private hospitals because you know in private hospitals, they treat you well because of the money you pay. But we would like to see the same services in public because you people are better than private…."

(Mother of one who delivered at public facility B)

The public medical workers Strike in 2017.

In 2017, there was a public medical workers' strike that lasted for 100 days. This strike greatly impacted the ability of the health system to provide public delivery services. Some women described been referred to their relatives to alternative private health facilities.

"...I knew before, and I went there for my clinic when I was about two months. During the third month, because I had a problem, I had to go to a public hospital in phase I where I had to go for a scan, which lied to me that I was ten months, and it was 11 months because I was counting days. They referred me to Public Maternity A, but when I got there, the people there were rude, just shouting at everyone and telling people to go back home because there was no space, and the doctors were on strike. I was in so much pain, so I just left there and came back home and told my mother that I had decided just to go and deliver at Private health facility A…"

(*Mother of one who delivered at a private facility A)*

"...I went to Major maternity hospital B, but I found that the nurses were on strike, so I had a relative who had given birth at Health facility C before, and their services were good, so they referred us there. So, when I went, I found that there was this initiative, and I also got lucky…"

(Mother of one who delivered at a private facility C)

Recommendations by women for better quality care at health facilities

We asked the women to provide key recommendations for improving the health system (both public and private). The most mentioned item was the need for healthcare workers to show empathy towards women, especially during labor. They also said that healthcare workers needed to improve their communications and have "Polite language." Secondly, almost all women asked for clean health facilities as well as uphold basic standards of care such as warm blankets post-delivery, tea, hot showers, and regular provision of meals. Thirdly they asked that health facilities organize for timely admissions. They pleaded with healthcare workers to reconsider, making women wait under challenging positions such as labor pains. Lastly, they asked for the health workers to reduce the focus on the payments (at private health facilities) and (procedures at public health facilities) and focus primarily on safeguarding the well-being of the babies and mother.

DISCUSSION

We report on a qualitative study aimed at understanding informal settlements women's delivery experiences, their perceptions of quality of care, and how they influence their choice of a delivery health facility. We compared women who chose to deliver at private health facilities to those who delivered at public health facilities. We found out that the women in this informal settlement reported more facilitators for delivery at private health facilities, suggesting a more favorable user experience, relative to the numerous barriers raised for delivery at public health facilities. We used the WHO framework on improving quality care for maternal and newborns in a health facility to assess our findings (21).

Facilitators and barriers to delivery at private health facilities

Women described private health facilities as providers of high-quality services (both clinical and non-clinical). They described healthcare workers at these health facilities as treating women well. The women used terms such as "respectful," "caring," and "kind" to describe the healthcare workers at the private health facilities. This finding has been described before in literature confirming that women have a preference for private health facilities because they are responsive to their socio-cultural and economic sensitivities (17). When asked about the high-quality services at private health facilities, the women suggested that the health workers in the for-profit health facilities were competent because of their for-profit status. These perceptions led them to experience a level of competence that encouraged them to continue choosing private health facilities over public health facilities. Competent systems where high-quality delivery care is provided has been described by the Lancet report on quality health systems in the era of sustainable development goals (22). Another plausible explanation for the women's perception that private health

facilities in this area provided high quality care is the presence of low volume of deliveries. Hence the attentiveness and responsiveness that they described above during delivery at the private health facilities it is possible that the quality of care received was a function of staff having to serve fewer women and pay more attention to them. Evidence from studies including other sub-Saharan countries have found that health facilities that have low volumes of deliveries have been associated with higher quality of care (23).

Another theme that was brought up by the women was financial access to care, with the national policy of free maternity services recently introduced in 2013 influencing choices (7). This policy abolished all user-fees for delivery services at public health facilities and at selected gazetted private health facilities for women with health insurance. This subsequently allowed the women to access care at private health facilities that they would have otherwise foregone because of the delivery fees. As a result of this policy, there was an overall increase in the number of women in the informal settlement accessing skilled birth attendance. A similar increase in women accessing skilled birth attendance has previously been reported in urban settings in Kenya and in 10 sub-Saharan African countries that removed their user-fees (8),(24).

A third facilitator to private health facilities was the condition of the physical amenities at private health facilities. This was primarily centered on the conditions such as health facility cleanliness in the labor and delivery wards and other service provision elements such as the provision of hot water for bathing and good food during meal times. These basic amenities have been previously identified by similar studies set in informal settlements in Nairobi as lacking for women during the delivery (25).This is despite the fact that standards identified for the Kenya Quality model of care for health facilities in Kenya explicitly identify a clean work environment as a key standard (26). Such low-cost, basic amenities such as having a clean ward and delivery rooms need to be put by health facilities in place to ensure women's satisfaction with the delivery experience.

In terms of barriers to delivery at private health facilities, the women spoke of a few low-cost private health facilities as providers of poor-quality clinical services and lacking specialist Doctors to perform surgeries. This consequently led women to perceptions of low-quality care and acted as barriers to the choice of a private health facility. Previous studies in informal settlements have identified such facilities and labeled them "inappropriate" in terms of staffing, equipment, and drugs, posing a barrier to high-quality delivery service in informal settlements (15).

Some women in this setting also mentioned the physical amenities at low-cost private health facilities that directly influenced the state of referrals to public health facilities as a significant barrier. They

provided experiences of obstetric emergencies situations that necessitated referral and stated that the only referral facilities that could handle emergencies were public hospitals. They noted that the private health facilities lacked sufficient specialized equipment to deal with obstetric complications hence putting private health facilities at a disadvantage. They also described an ineffective referral process, characterized by communications and transportation challenges. Previous studies assessing the state of obstetric care in slums have identified private health facilities within slums been inadequately equipped and are unable to handle emergencies well (17).

Facilitators and Barriers to delivery at public health facilities

The key theme that arose that aided their choice of public health facilities was the presence of physical amenities at the major maternity hospitals. This was explicitly attributed to the presence of a functioning theater and resuscitation equipment for newborns, which bestowed them an ability to handle obstetric complications. This has subsequently led to women choosing public health facilities over private health facilities. This finding should be taken with caution, though, recent studies in Kenya have described the availability of emergency equipment might not necessarily lead to quality delivery at some health facilities (27). This might be due to the functionality of the equipment, and the provision of life-saving services might depend on other factors such as staffing. The second facilitator was the process of early screening for complications during antenatal care services that allowed women referred for delivery at maternity with specialized staff. They mentioned that this allowed them to choose higher-level maternities that could handle complications.

Most of the barriers to delivery at public health facilities were related to the perceived poor quality of care at public health facilities. Women described unnecessary cesarean sections because of the availability of the equipment. They described situations where no consent was obtained regarding the procedures and over-medicalization of the process of childbirth, a finding that has been described in several contexts in a systematic review (28). A few women described having been attended to by trainee Doctors, particularly at tertiary teaching institutions, a situation that exacerbated the already low quality of care described. Safety concerns such as theft of newborns at tertiary health facilities were described at tertiary health facilities. There were concerns about incompetent systems with basic and affordable facility items such as cleanliness in the facility, hot water for showering, curtains for privacy and food after delivery we're missing elements of a competent health system. These standards of care demonstrate experiences of care that are contrary to WHO standards for a high-quality health system that recommends the health system should have components such as safety effectiveness, equity (21).

We described the theme of financial access, primarily concerning the new free maternity service that was aimed at increasing access to maternity services. Women described the implementation of free maternity as been flawed. They shared experiences suggesting that the policy only covered 24-hour vaginal births and not providing for possible post-birth complications at the health facilities. They also described overcrowding and poor-quality service. This led to the belief that because the maternity service was free, the health workers were unconcerned with their well-being and that of their babies. The childbirth experience subsequently led to a trade-off between the costs of childbirth and concerns of their well-being and that of their babies. Even women who didn't have insurance such as the NHIF, were willing to make out-of-pocket payments to ensure that they received the caliber of quality of care they deemed highly effective and safe. Diverse implementation challenges have been described regarding the free maternity in different settings within Kenya (11),(12). This calls for improved implementation of guidelines that can assist with enforcing standards for quality care for the free maternity service.

Process indicators of quality of care were identified with mistreatment of women by healthcare identified by most of the women who delivered at public health facilities. This finding is supported by qualitative research in several contexts in Kenya that confirm that mistreatment during facility-based care in Kenya is a growing problem (29-31)., Some studies have measured, and found a prevalence of 20% for physical abuse (32). This mistreatment implied that women would choose their subsequent delivery at a private health facility where they would hope for better quality of care. In order to better understand mistreatment, recent studies aimed at measuring mistreatment during delivery across four countries has improved understanding of mistreatment. This study confirmed that physical and verbal abuse peaked 30 minutes before birth and 15 minutes after birth (33). These observations have provided vital information for policy makers to suggest strategies of reducing mistreatment. Other Kenyan studies have suggested strategies such as health provider empathy, particularly in informal settlements. (30)Global calls have now been put forward for accountability for mistreatment by health systems (34-35).

Lastly, the 2017 medical workers strike that lasted 100 days resulted in women switching from public health facilities to seek delivery services at private health services. Recent evidence investigating the impact of medical strikes suggests that they can lead to a crippling of healthcare delivery in the public sector (36). Hence the private sector that absorbs the capacity needs to be competent and capable of providing the necessary services to avert the potential morbidity and mortality that comes with a medical worker strike.

Evidence shows that women are unable to accurately assess technical aspects of quality care (37). Perceptions of quality care such as dignified and respectful treatment may or may not lead to improved outcomes if there is a lack of technical quality care. Studies assessing the quality of services across five African countries suggests that primary health facilities with low patient volumes often exhibit low quality of services because of their inability to deal with obstetric emergencies (23).This is congruent with our findings. Women reported that private health facilities with good processes of care were often unable to provide emergency obstetric care and referral services. Choosing a private health facility would result in an emergent transfer to the public health facilities in the event of an obstetric emergency during delivery, something women wanted to avoid.

Study limitations and areas for future research

Our main weakness was in not interviewing women who delivered at home or with the help of a traditional birth attendant. We however strengthened our study by having focus group discussions with women who delivered at a range of health facilities, including private facilities (both profit and not-for-profit), including low-cost private facilities. We also interviewed at both levels (primary and tertiary) of public health facilities; to get a wide range of experiences from women. Areas for future research include interviewing women who had a delivery at a health facility and had a subsequent delivery at home. Additionally, women who switched between private and public health facilities and why they changed their facility preference would provide insights on attributes of a health facility that women find important in making their choice of place of delivery.

Conclusion

Understanding why women choose certain types of delivery health facilities in informal settlements is important. It can help contribute policy recommendations that address inequalities in quality of care at health facilities and provide useful toward the implementation of the free maternity service policy. Women's experiences at health facilities inform their perceptions and eventually preferences for the standards of maternity service they expect. Identification of patient-centered aspects of quality of care at health facilities will be critical to improve maternal health outcomes and reduce maternal mortality in informal settings in the long term.

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Author Contributions.

JOA conceived and designed the study, contributed to the data collection, MA participated in the data analysis. JOA drafted the manuscript. JOA and MA provided interpretation for the findings. GK and FW revised the transcript for clarity. All authors read and approved the final version of the transcript.

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Patient Consent for publication not required**.**

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Appendix 1 table 1. Study sites operational characteristics and common features

Demographic features	Health facility 1	Health facility 2	Health facility 3	Health facility 4	Health facility 5	Health facility 6
Type of health facility	Private	Private	Private	Public	Public	low-cost private
Owned and managed	Faith based	Private	Private	Government	Government	Private
Level of care	Secondary	Primary	Secondary	Secondary	Primary	Primary
Designation	Peri-Urban	Peri-Urban	Peri-Urban	Urban	Peri-Urban	Peri-Urban
Volume of deliveries	>500	<500	>1000	>5000	<500	<500
Service departments	Maternity, OPD, PMTCT, HIV/AIDS counselling, ANC, PNC, CWC, CHU, Full Lab, Theatre able to perform C-sections 24/7, Sick Newborn Care Unit, Inpatient Wards	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, HIV/AIDS counselling, Basic Lab, Inpatient Wards	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, Basic Lab, Inpatient Wards, HIV/AIDS counselling, performs C-sections	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, CCC, Full Lab, Theatre able to perform C-sections 24/7, Sick Newborn Care Unit, Inpatient Wards, HIV/AIDS counselling	Maternity, OPD, PMTCT, ANC, PNC, CWC, Family Planning, CHU, Basic Lab, HIV/AIDS counselling	Maternity, PMTCT, OPD, ANC, PNC, Family Planning, CHU, Basic Lab, Inpatient Wards, HIV/AIDS counselling, Sick Newborn Care Unit
Professional staff	Doctor, nurses, clinical officer	Nurse	Doctors, nurses, clinical officers	Doctor, clinical officer,nurses	Nurse	Nurse
Electricity	Available	Available	Available	Available	Available	Available
Water	Available	Available	Available	Available	Available	Available
Hours of operation	24 Hours	24 Hours	24 Hours	24 Hours	8am-4pm	24 Hours
Legend:						
* All secondary health facilities have ceaserean section capacity						
OPD - Outpatient Department						
PMTCT - Preventative Mother to Child Transmission						
ANC - Antenatal Care						
PNC - Postnatal Care						
CWC - Child Welfare Clinic						
CCC - Comprehensive Care Center for HIV						
CHU - Community Health Unit						

APPENDIX 2: FGD GUIDE

Exploring attributes of women's preferences for place of delivery in Embakasi-North sub-County.

Purpose of FGD

The purpose of this Focus Group Discussion is to try and understand where women residing within *Embakasi-North* deliver their babies and why they prefer these specific facilities. The study intends to specifically elucidate the following;

1) What women's preferences are with regard to place of delivery
2) Why they choose certain places or health facilities over the other
3) To determine attributes of the health system that they deem important
4) To determine possible attribute levels of the attributes identified

Logistical arrangements

I would like to go over a few logistical arrangements before we begin the interview: Thank you for joining me today. My name is Jackline Aridi and I am a PhD student registered at Strathmore University at the Institute of Healthcare Management at the Strathmore Business School in Nairobi. The interview will last approximately 30- 45 minutes. I have obtained Ethical clearance to conduct this research from Strathmore University's Institutional Review Board (IRB) and permission to conduct research within Nairobi and Nakuru County from the National Science and Technology Research Institute (NACOSTI)

Everything we discuss during this interview will be kept in strict confidence and your real name will not appear in any of our results. As such, please make every effort to be open and honest when responding to the questions. I will provide you with a consent form which you will read and sign if you find it agreeable with you. For data capture purposes, this interview will be recorded using a mobile phone device. Start tape recording if consent is granted: (Facilitator to switch recorder on)

FGD Discussion Questions

The questions fall into five key categories: Follow the guide below to lead the focus group discussion on the 5 key themes.

Key questions	Probes
1. Birthing Experience -What are the things that make for a good birthing experience?	Describe your dream birthing experience. Who needs to be present? What needs to be present? What are your worries or concerns? Are there cultural traditions that need to be followed judiciously? What makes you feel safe during the process? What would absolutely make it a bad experience?
2. Place of delivery -How did you and your family decide where to deliver?	What are the options for places to deliver? Who were involved in the decision making process as to where to deliver?

	Are you usually involved in deciding where to deliver? If so, what did you have to consider in making that decision? (cost, distance, risks, benefits) What makes the delivery place a good or bad experience? Were you treated nicely and with respect? Give examples.
3. Recommendation to friends- What would you tell your friends about where they should deliver and why?	Is it culturally appropriate to share your experiences with your friends? Does your opinion have an impact on where your pregnant friend delivers her baby? Does the Chief/leaders in your community recommend/suggest that you deliver at certain places? If you hear something negative about a place to deliver, does it affect where you choose to deliver?
4. Family Involvement -How did your family show support for you during pregnancy and delivery?	Is your husband and extended family usually involved in the birthing experience? Which family members are actively involved in delivery? What roles do they play in the delivery process?
5. Newborn Care -What are the things you believe make for the best environment for the newborn immediately after delivery?	What are the traditional customs on how to handle and care for newborns? Does anyone help you care for the newborn? What makes them qualifies to do so? What do you believe is the best way to feed your newborn? And the timeline to starting solid foods? How do you keep your newborn warm? Do siblings play a role in taking care of newborns? If so, as soon as when? And how?

Deriving Attribute Levels

Having delivered in health facilities and hospitals within Embakasi-North or Naivasha. Can you please speak on what you thought was the most important factors in selection of the facility where you choose to deliver. If I were to ask you to rank the list below, which of these factors did you think were most important in the selection of the health facility?

(Rank: Very important, somewhat Important, Not important)

a. Cost of the health facility
b. Availability of drugs
c. Distance of the health facility
d. Health provider attitude
e. Quality of care (cleanliness etc.)
f. Whether or not abuse and disrespect occurs during the delivery
g. Time spent waiting for service
h. Cost of transportation

Reporting checklist for qualitative study.

Based on the SRQR guidelines.

Instructions to authors

Complete this checklist by entering the page numbers from your manuscript where readers will find each of the items listed below.

Your article may not currently address all the items on the checklist. Please modify your text to include the missing information. If you are certain that an item does not apply, please write "n/a" and provide a short explanation.

Upload your completed checklist as an extra file when you submit to a journal.

In your methods section, say that you used the SRQRreporting guidelines, and cite them as:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. Acad Med. 2014;89(9):1245-1251.

		Reporting Item	Page Number
Title			
	#1	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	4
Abstract			
	#2	Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Introduction			
Problem formulation	#3	Description and signifcance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	3

Purpose or research question	#4	Purpose of the study and specific objectives or questions	4
Methods			
Qualitative approach and research paradigm	#5	Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenolgy, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.	4
Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
Context	#7	Setting / site and salient contextual factors; rationale	4
Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5
Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	5
Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative	5

		process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	
Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5
Units of study	#12	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	6
Data processing	#13	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5
Data analysis	#14	Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5
Techniques to enhance trustworthiness	#15	Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5
Results/findings			
Syntheses and interpretation	#16	Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6
Links to empirical data	#17	Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	8
Discussion			
Intergration with prior work, implications, transferability and contribution(s) to the field	#18	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application /	19

		generalizability; identification of unique contributions(s) to scholarship in a discipline or field	
Limitations	#19	Trustworthiness and limitations of findings	22
Other			
Conflicts of interest	#20	Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	22
Funding	#21	Sources of funding and other support; role of funders in data collection, interpretation and reporting	22