



A Qualitative Exploration of Access and Utilization of Focused Antenatal Care among Pastoral Community in North Eastern Kenya

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Authors' contributions

This work was carried out in collaboration among all authors. Author IA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors IM and OA mentored and supervised the corresponding author. All authors read and approved the final manuscript.

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ABSTRACT

Background: Ministry of Health Kenya has adopted new guidelines for FANC services emphasizing on four antenatal care visits, birth planning and emergency preparedness. In North eastern Kenya predominately occupied by Somali pastoralist Communities only 37% of women of reproductive age receive ANC service at least 4 times during pregnancy, which is considerably lower than the national rate of 58%. There is limited utilization of healthcare services among nomadic pastoralist compared to general population, this is due to several constraints stemming from their migratory way of life, poor social services and spatial disparities. Limited studies have adopted qualitative approaches to explore access and utilization FANC among pastoralist communities. The study explored access and utilization of FANC service among pastoralist community of North Eastern Kenya.

Methodology: The study is an exploratory qualitative study, using a purposive sampling method forty eight women who give birth two years prior to the study were selected, sixteen male

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partners and three ANC providers. Data was collected using FGDs and KII and analyzed thematically.

Results: There is low utilization of FANC among pastoralist communities, the proportion of respondents who had utilized was 83.3% but only few 39.6% had utilized the required four visits (FANC). There is delayed initiation of uptake of FANC services where majority respondents 55.0% had attended ANC in their second trimester while only 17.5% had utilized in their first trimester as recommended. Barrier that hampered FANC uptake are: long distance to health centre, transport cost, low level of FANC knowledge, TBAs practice, low income and harmful cultural practices. Major facilitators identified are free FANC charges, good attitude of a care giver and fear of pregnancy complication. Access challenges range from inadequate infrastructure, lack of skilled health attendants and logistical constraints to harmful cultural practices.

Conclusion: There is need to reduce travelling time to the health facility by conducting regular outreach services targeting nomads with no near facility, improve culturally sensitive FANC to increase accessibility, involving all health stakeholders and community representatives to increase cultural acceptability and also help priorities policies that increases FANC service uptake.

Keywords: Focused antenatal care; pastoralist; Kenya and women.

ABBREVIATIONS

FANC	: Focused antenatal care
FGD	: Focus Group Discussion
KDHS	: Kenya Demographic Health Survey
KII	: Key Informant Interview
KNBS	: Kenya National Bureau Statistic
NACOSTI	: National Commission for Science, Tech & Innovation
SERU	: Scientific Ethics Review Units
WHO	: World Health Organisation

1. INTRODUCTION

The sustainable development goal 3.1 targets to reduce global maternal mortality ratio to less than 70 per 100 000 livebirths by 2030. Similarly, Target 3.2 aims to end preventable deaths of newborns and children under 5 years of age by 2030, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 livebirths and under-5 mortalities to at least as low as 25 per 1000 livebirths. Approximately 810 women died daily in 2017 from preventable causes related to pregnancy and childbirth, 94% of this deaths occurred in low-resource setting, Sub-Sahara Africa accounted for approximately 86% [1]. Kenya's maternal mortality rate is high at 362 maternal death 2017, the three pastoralist Counties of North eastern Kenya are among fifteen Counties that accounted for 60% of maternal death in Kenya with Mandera County leading with highest maternal mortality of 3795 deaths per 100,000 live births [2]. Most of this maternal deaths could have been prevented if a women had accessed Focused Antenatal care (FANC), it is an opportunity for prevention and management of existing and potential causes of

maternal and newborn mortality and morbidity. FANC can help women prepare for delivery and understand danger warning signs during pregnancy.

The FANC model recommends four and above ANC visits which should take place before 12 weeks (First trimester), at 26 weeks (second trimester), at 32 weeks, and between 36 and 38 weeks, the model recognizes that first ANC visits is a key entry point for many women into the health care system and integrates ANC with care and counseling related to several other health conditions [3]. Women are immunized against tetanus and tested and treated for anemia as well as vitamin A or iodine deficiencies, they also receive testing and treatment for HIV/AIDS, STIs, malaria, and tuberculosis [4]. In addition to a reduction in the possible visits from sixteen under the traditional model to four under FANC, the new model actively incorporates families and spouses into the process and encourages two-way communication through interactive counseling as opposed to the one-way health education of traditional ANC [5]. FANC recommends that all pregnant women should have a minimum of four scheduled comprehensive ANC visits during pregnancy which is guided by five principles: Quality of care, individualized care, disease detection contrary to risk categorization, evidence based practices, and birth/complication readiness [6]. FANC is client based and place of service delivery is not limited to a health facility, this allows for the provision of tailored services at times and places most convenient and accessible to clients. This model approach would reduce non-uptake of ANC, improve access to

rural and venerable women and enhance quality of the care [5]. The World Health Organization (WHO) recommends a minimum of four ANC visits by pregnant mothers. Each visit incorporate care that is appropriate to the woman's overall condition and stage of pregnancy and facilitates preparation for safe birth newborn care [7]. However, WHO revised its recommended minimum number of ANC visits doubling from four to eight visits in 2016 following recent evidence that increased number of contacts between a pregnant woman and a skilled health attendant reduced perinatal mortality and improved women's experience of care [8].

Globally 86% of pregnant women access ANC at least once but only two in three 65% at least four antenatal visits [9]. Regions with high maternal mortality and morbidity like Sub-Sahara Africa and South Asia record fewer women who have utilized four ANC visit [9]. ANC coverage had increased in Africa with over two-thirds of pregnant women have at least one ANC visits. However, to achieve the full life-saving potential there is need to utilized FANC service of four visits which provide essential evidence based intervention to prevent maternal and neonatal mortality [7].

Pastoralists are nomadic way of live necessitate them to migrate from one grazing land to other moving into different areas in such of pasture and water while semi-pastoralists have semi-sedentary residence and mobility patterns [10]. Pastoral communities have very little access to health care services and faces number of health related conditions ranging from vaccine-preventable diseases to sexually transmitted diseases, Pastoral communities are marginalized in terms of health, infrastructure and other social services [11]. Maternal health top in priority of health services, however due to pastoralist migratory way of life, high illiteracy level and drawbacks of the policies, pastoral communities have very limited access to FANC and skilled delivery services [12].

In Kenya over 95% of all the pregnant women had received at least one ANC service from a skilled provider, about less than 20% of the pregnant women had their first ANC visit in the first trimester as recommended and only 58% received recommended four FANC [13]. North Eastern Kenya is far less developed than other part of Kenya with less endowed social amenities including health facilities and face high levels of poverty due to limited economic opportunities,

girls are married at a younger age -in line with the Somali culture- and some undergo female genital mutilation [14]. In North Eastern Kenya, estimates show that about 43% of pregnant women attend FANC clinics at least four times [13]. Few studies depict comprehensive maternal health care through the course of ANC to delivery in pastoralist communities [15]. Limited studies have employed qualitative approaches to explore factors that influence utilization of FANC [16]. These studies highlight the importance of understanding context-specific factors for FANC attendance among pastoralist. There limited literature on factors that influence FANC utilization among pastoralist communities of Kenya. Meticulous understanding of local barriers and facilitating of FANC utilization is a prerequisite for designing and implementing interventions that aim to improve uptake.

2. METHODOLOGY

2.1 Study Design

The study adopted qualitative study design. Using a purposive sampling method, forty eight women who give birth two years prior to the study who consented to the study were selected, sixteen male partners and three ANC providers.

2.2 Study Site

Mandera County was randomly selected out of three Counties of North eastern region. It is one of the three Counties of North Eastern part of Kenya. The County borders Ethiopia Country to the north, Somalia Country to the east and Wajir County to the south. Pastoralism and agro-pastoralism are the main means of livelihood to many residents of the region.

2.3 Data Collection

Data was collected using Focus Group Discussion (FGD) and Key Informant Interview (KII). FGDs were conducted in local languages while KIIs were conducted in English and lasted 45-60 minutes. Recording was conducted using a digital device and notes were taken to capture important information. Permission to make audio recordings was obtained from study participants prior before commencing interviews. Eight focus group discussions and Three KIIs were conducted as follow: Six FGD composed of only Women and two of only Male partners, KII was conducted with midwives and Nurses who

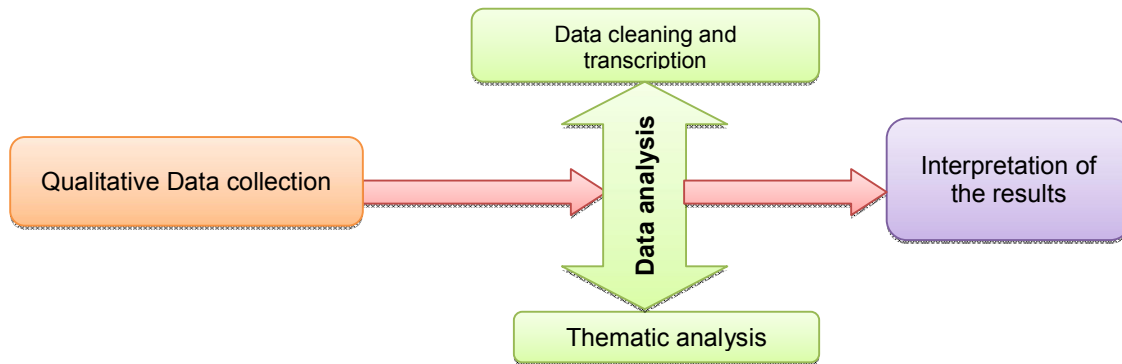


Chart 1. Data collection, analysis and interpretation process

provide ANC services in selected communities. The discussion explored women’s experiences of pregnancy, FANC services received, facilitators, barriers of FANC uptake and sociocultural practices related to maternal health service utilization. Interview focused on the health-care system capacity; availability, accessibility and affordability of FANC services and recommendations to improve uptake. The sample size was achieved upon data saturation.

2.4 Data Analysis

The data collected were transcribed verbatim combining the coded transcribed handwritten notes. Comparison across the collected data by source of information was made while collating similar and varied opinions of the themes per the objectives. The transcribed datasets were checked for coherence, consistency and coded. Meaningful codes were grouped into basic themes and ordered into organizing themes. The researchers used thematic analysis to analyze the data. Themes were identify, interpreted and reported in patterns that exist across a dataset and which represent observations, experiences and beliefs of the participants in relation to FANC services.

2.5 Data Limitation

Being a qualitative study there is limited number of participants who were selected for the study. However, the researchers used sampling frame to sample respondents for fairly distribution to fully represent the view of general population.

3. RESULTS AND DISCUSSION

3.1 Results

The study explored qualitatively access and utilization of FANC service among pastoralist

community of North Eastern Kenya. It informs all stakeholders on the best way to address both constraining and facilitating factors to increase FANC uptake. World Health Organization had recently revised its recommendation of FANC from previous four visits to a minimum of eight visits initiated during the first trimester of pregnancy to reduce perinatal mortality and improve women’s experience of care.

3.1.1 Themes

Themes from focus group and interview datasets were compared and contrasted, and emerging findings were discussed to facilitate further interpretation and refinement of themes and concepts. Overarching themes were collectively agreed upon by the research team and are presented below. Three sub-themes were interpreted within the narratives around FANC utilization, while three core themes were interpreted within the narratives around FANC access and two sub-themes on cultural influences as shown in Table 1.

3.1.2 Demographic characteristics of respondents

A total of 48 women were interviewed. Interviews lasted 45-60 minutes on average. Participants aged between 18-24 years, those with no formal education, married, with low monthly income and high parity are majority as summarized in Table 2.

3.1.3 Utilization of FANC among pastoralist women of north eastern Kenya

The study established that less than half of the participants have utilized FANC services (Four visits) at 19 (39.6%), about 21 (43.7%) have utilized ANC (1-3 visits) while 8 (16.7%) have not utilized ANC at all as show in Fig. 1.

Table 1. The core themes and sub themes interpreted within the narratives around FANC utilization and access

Theme	Sub-themes
FANC Utilization	FANC Uptake and non-uptake Barrier to utilization of FANC services Enablers to utilization of FANC services
FANC Coverage	Availability Affordability Accessibility
Cultural influence on FANC uptake	Cultural belief on FANC Uptake Male partner involvement in FANC Uptake

Table 2. Socio-demographic characteristics of the respondents

Variables	Category	Frequency (n=348)	Percentage (%)
Age	18-24	28	58.3
	25-29	10	20.8
	30-34	7	14.6
	>35	3	6.3
Education	No formal education	34	70.8
	Primary	12	25.0
	Secondary	2	4.2
Marital Status	Married	29	60.4
	Widowed	9	18.8
	Divorced	10	20.8
Monthly income	Below 15,000	23	47.9
	15,000-25,000	16	33.3
	25,000-35,000	6	12.5
	35,000 above	3	6.3
Parity	One	9	18.8
	Two	12	25.0
	Three	17	35.4
	Four and above	10	20.8

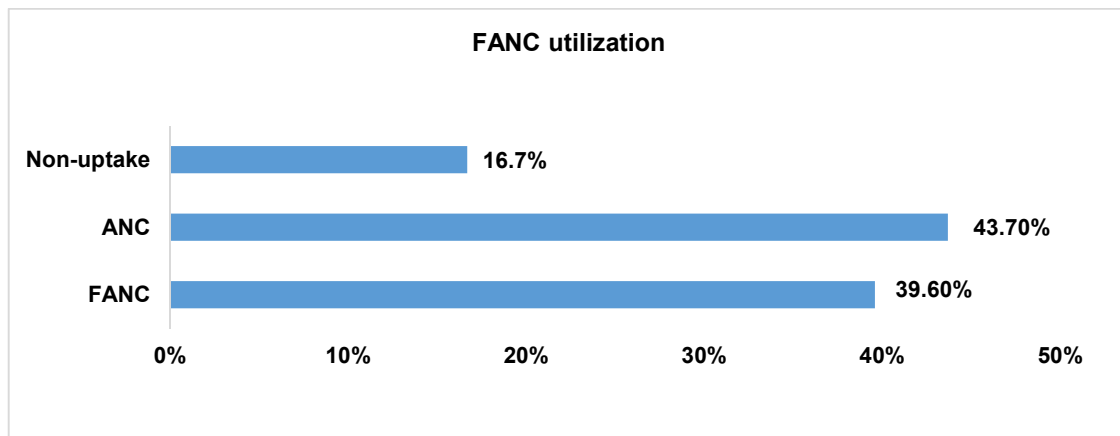


Fig. 1. Utilization of FANC among pastoralist women of North Eastern Kenya

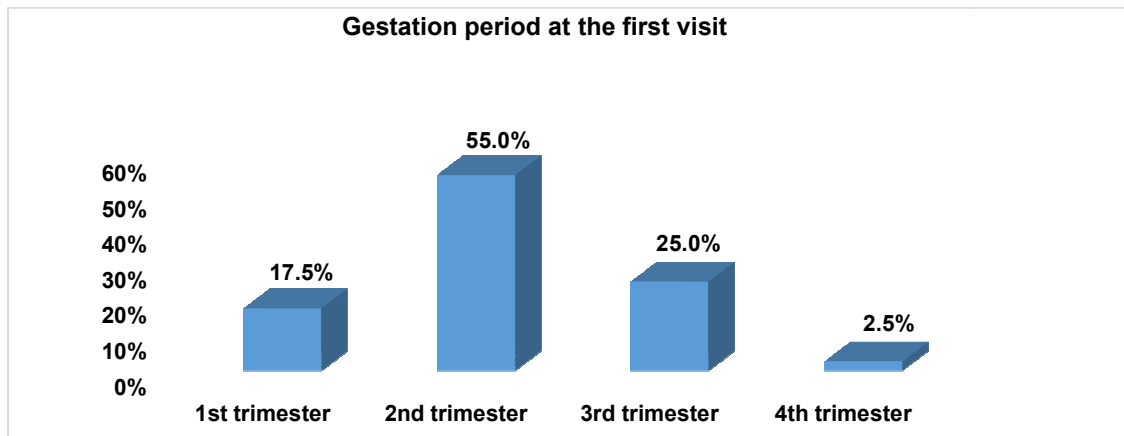


Fig. 2. Gestation period at the first visit for ANC service

3.1.4 Gestation period at the first visit for ANC service

Majority of ANC user 22 (55.0%) had made first visit during second trimesters, only seven (17.5%) have made recommended first visit during first trimester, 10 (25.0%) have visited ANC during third trimester and 1 (2.5%) made first visit at fourth trimester as shown in Fig. 2.

“Most pregnant women in this area start ANC on 5th Months of their pregnancy, in fact they did not see need of attending ANC clinic in the first trimester” KII1.

Finding is similar to other studies that there is low uptake of FANC service among mobile pastoralists than general population, the participants who had utilized FANC are 39% compared to 43% of general population reported by KNBS, 2015 in North Eastern Kenya despite devolution since 2013 and general improvement of health indicators in the region [13]. Similarly another study done in Kenya cited nomadic pastoralists healthcare services utilization is very limited compared to the general population, this has been attributed to several constraints stemming from their environment and their way of life and spatial disparities [17].

3.2 Discussion

3.2.1 Focused Antenatal care uptake among pastoralist women of north eastern Kenya

Utilization of FANC service is low among the pregnant women and there is delayed initiation of uptake of FANC services. There is also delayed timing and initiation of FANC utilization as recommended to begin in the first trimester. This is consistent with a study done in Ethiopia which stated low utilization of FANC among pastoralist [11]. All participants were aware of the importance of FANC, but the perceived level of importance varied. Some participants had limited knowledge of ANC especially among older women, In contrast, others had better understanding of FANC service and were able to provided examples of danger exposed to when not attending services as shown in this verbatim.

“I attend ANC only when I had complications, my last pregnancy is ok, I only had malaria once where I attended hospital”FGP11.

“I am a young mother of first born and if I don't attend ANC services I know dangers like premature babies, abortions and other complications.” FGDP1.

3.2.2 Barrier to utilization of FANC services

The study sought to explore the perceptions, views and experiences of pregnant women that act as system-induced barriers, and which hinder the use of ANC services among women. Major challenge reported was distance to health facility and transport costs. Distance has a high inhibition to health care seeking behavior and very pervasive rural areas. Pastoralist lack permanent address as they migrate with their animals to grazing land making it difficult to access health facilities easily. Some pastoralists live rural area farther away from towns with high concentration of health facilities. Some seek services from Traditional Birth Attendants (TBAs) as alternate to FANC service citing comfort ability with Female TBAs. Some women preferred looking after their animals rather than seeking ANC service when they had less than 5 months

pregnancy in order to provide for their families, this signifies that socio-economic is indeed another factor affecting decision to start ANC early.

“Our village don’t have nearby hospital, we are forced to visit next town for ANC services and we rarely get vehicle or ambulance for transport” FGDP5.

“Most hospitals have male attendants, it is in appropriate and we feel shy to explain our problem to them” FGDP6.

“I don’t like male skilled attendants, my mother is a good TBA and she attended to me well during pregnancy”FGDP8.

The finding is consistent with a study which argue that many pregnant women find it distressing to walk long distance or hire vehicle to a health facility; therefore, they tend to utilize ANC services less regularly than those who live close by Onasoga et al. [18]. Similarly, According to Kenyan Demographic and Health Survey report 2015, 42% of Kenya women who delivered at home cited distance and lack of transport as main reasons for not delivering in a health facility [13].

3.2.3 Enablers to utilization of FANC services

There were number of enablers which include free fee charges, improved service and outreach services as cited. In some facilities, attitude of caregivers was perceived to have stimulated the rate of ANC utilization. Most respondents described the attitude of Nurses as calm, friendly and conducive due to the warm reception, this encouraged and strengthened their urge to use ANC services whenever the need arose. Worries of uncertainty and pregnancy complications were reasons for earlier initiation of ANC visits, respondents believed that early ANC attendance gives pregnant women an opportunity to be tested and advised to improve health and prevent harm to both mother and baby.

As stated:

“ANC services are free of charge, we just photocopy women identity card for government to process payment through National Hospital Insurance Fund (NHIF)” KII3.

“Health workers visits us in biweekly outreaches to provide ANC services” FGDP22.

Other studies had similar findings that previous or ongoing health problems related to pregnancy prompted women to seek care at a health facility in early pregnancy, women with a history of pregnancy complications, caesarean deliveries and those who understand pregnancy danger signs were more likely to initiate ANC early [3]. Another study find that women perceptions of quality of care and ANC providers’ good attitude strengthen their relationship and contribute to a positive experience of ANC [16].

3.2.4 Availability, affordability and accessibility of FANC services

Major accessibility challenges reported ranged from lack of skilled health attendants, inadequate infrastructure, harmful cultural practices and logistical constraints. A major challenge confronting the implementation of FANC in Pastoralist was attributed to migratory nature of the nomadic lives with no permanent residence.

Health facilities lack well-equipped laboratory which impede healthcare delivery especially ANC services. A critical component of the FANC is to conduct laboratory investigations and screening for pregnant women, lack of a functioning diagnostic laboratory facility among pastoralists community in north eastern Kenya posed a challenge to the implementation of FANC.

There is challenges of accessibility which hampered provision of FANC services: inadequate and the lack of essential infrastructure, inadequate or sometime short of essential supplies, lack of essential equipment and technology. The provision of FANC services is also hampered by lack of logistics, ambulance during emergency and long distance to health facilities. There is also few health specialist to respond to emergency or personnel like radiologists operate some equipment like ultrasound machines. However, there is effort by both County government and non-government to provide weekly outreach services for FANC and other health need to pastoralist communities.

There is no major affordability challenges reported as FANC services are provided free of charge for those with legal identity card to process government fee payment however, some lack identity card especially underage mothers.

As opined by a respondent,

“Major challenges we encounter during outreach to give ANC service to pastoralists

with no nearby health facilities, laboratory services and ambulance which is crucial FANC package” KII3.

“We have serious challenging in accessing pregnant women in pastoralist community due to it is migratory nature with no physical address” KII1.

“We wait for long time in a queue to be served by only one nurse and sometimes referred to private facilities to buy medicines” FGDP25.

The study is consistent with another one done in Sahel which cited poor infrastructures have the potential to render the provision of FANC services ineffective. Poor roads, inaccessible pastoralists’ mobile communities and lack of ambulance as well as poor communication channel were serious obstacles to health service provision and FANC services in some of the communities covered [12].

3.2.5 Cultural influence on FANC uptake

There is cultural gender disparities where women has little or no say or their bodies and pregnancies. With high illiteracy level many women are inclined to traditional norm of lack of autonomy to make decision. Lack of autonomy and waiting for permission from spouse or male relatives had effected FANC leading to late registration or no uptake of NAC.

Single mothers who get pregnant out of wedlock is considered abomination hence cannot seek essential FANC services for fear of reprisal. It has also led to illegal abortions harming both mother and the fetus. In a FGD follow up question a mother wish her daughter death than been found pregnant with legal marriage.

There is evidence of harmful cultural practices which hampered FANC utilization. There is issue of an “evil eye” where primgravid women should not hasten to reveal their pregnancy status to prevent “evil spirit” form envious eyes which may expose mother and fetus to danger. This negative cultured has discouraged mother from confirming their pregnancy status earlier leading to late registration and attendance of ANC.

Males have reported minimal involvement in FANC services, some consider pregnancy female issues while other reported to have been held up at work or busy looking after their

animals in grazing land. There was overall positive perception among male towards ANC services. However, they preferred their spouses to be attend by female skilled attendants.

As reported in following verbatim,

“I have to seek permission from my husband and when he is not around I consult my relatives before seeking health services” FGDP8.

“I would rather have her death than wittiness my daughter pregnant without legal husband” FGDP19.

“I have no objection for my wife to attend FANC but I am busy to accompany her to hospital” FGDP34.

A study done in western Kenya had similar finding that sociocultural dogmatism appeared to be another significant bottleneck hampering FANC uptake among pastoralists. Cultural practices such as hidden primigravida pregnancy and puerperium quarantine for a specified period of time (six months) to avoid an evil eye could explain some of the variations by region or county as a determinant of receiving timely FANC and postnatal care, especially among pastoral communities in the Coast, Upper Rift, and North Eastern regions of Kenya [16].

4. CONCLUSION

The findings revealed that there is low utilization of FANC among pastoralist communities of North eastern Kenya due to constraining factors like distance to health facilities, transport cost, low level of FANC knowledge, TBAs practice, poverty and harmful cultural practices. Major facilitators identified are free FANC services, good attitude of a care giver and fear of pregnancy complication.

Access challenges range from inadequate infrastructure, shortage of skilled health attendants and logistical constraints to harmful cultural practices.

To foster more equal coverage between urban residents and mobile pastoralists of North Eastern Kenya, these results suggest that particular attention must be paid to distance to health facility, shortage transport means, maternal education, cultural sensitivity service and socio-economic improvement.

There is need to reduce travelling time to the health facility by conducting regular outreach services targeting nomads with no near facility and no permanent residence. Delivery of FANC services through mobile clinics is recognized as the best way to provide care to continuously moving pastoralist communities. Mobile clinics may be more cost-effective than fixed facilities.

Improving culturally sensitive ANC services accessibility by increasing number of female skilled health attendants.

Adapted information campaigns for illiterate men and women targeting specific cultural barriers of mobile pastoralist as well as rural settled populations are required to increase FANC service acceptability in these communities.

Initiation of participatory process bringing together all relevant stakeholders and community representatives would contribute to increase acceptability and also help priorities actions towards greater ANC service contact.

Implementing current community health worker strategy of the Ministry of Health would be an appropriate option to increase coverage and reduce inequalities.

Designing effective FANC service delivery programme with monitoring and evaluation methods that involve beneficiaries to improve the uptake of health service.

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this paper.

ETHICAL APPROVAL

The study obtained Ethical clearance from Scientific Ethics Review Unit (SERU) of KEMRI. Research permit was obtained from NACOSTI and research authorization from County Health Director, County Education Director and Ministry of Interior and Coordination. Participation was voluntary with full informed consent. Protection of privacy, anonymity and confidentiality of the study participants was guaranteed by assigning serial codes.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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