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PROVISION OF ANTENATAL CARE SERVICES AND LEVEL OF UTILIZATION AT MIGOSI SUB-COUNTY HOSPITAL, WESTERN KENYA

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ABSTRACT

Effective utilization of ANC services presents an opportunity to revert maternal deaths of 7,700 and 150,000 women each year from perinatal outcomes and other birth complications in Kenya and sub-Saharan Africa respectively. For effective utilization of ANC services, there is a need to assess the supply and demand of services. To assess this, a descriptive cross-sectional study design was adopted on 285 post-natal mothers at Migosi sub-County Hospital in Kisumu County, Kenya. Purposive sampling technique was used and data was collected using structured questionnaires. Our findings show that a total of 225 (78.95%), mothers completed the recommended four and above ANC visits and confirmed receipt of 90% of the ANC services provided during the visits. However, 60 (21.05%) did not complete the 4 ANC visits due to various reasons, of which personal factors 32 (53.3%) are pointed out as the main reason. Among the services offered; emergency obstetric care 108 (37.9%), PMTCT 133 (46.7%), STI screening and condom use 138 (48.4%) recorded below 50% of services received by mothers during their ANC visits. The study provides critical information on the interplay between the provision and utilization of ANC services for better health outcomes of the mother and baby. In addition, it provides an insight on the reasons that impede full utilization of ANC services especially to the health care providers that includes the ministry of health and other stakeholders.

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INTRODUCTION

Antenatal care (ANC) helps to diagnose diseases or complicating obstetric conditions without symptoms, and provides information about life style, pregnancy and delivery (Villar, Carroli, *et al.*, 2001). However, to achieve the desired outcome, four visits providing essential evidence based interventions or a package often called focused antenatal care are required (Villar, Ba'aqeel, *et al.*, 2001). The ANC promotes the use of skilled attendance at birth and healthy behaviours such as breastfeeding, early postnatal care, planning for optimal pregnancy spacing among others, (Ikamari, 2004).

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Despite the usefulness of ANC, low level of utilization exists among different groups of women of reproductive age, in particular, women aged below 20 years in Kenya (KDHS, 2014). World Health Organization (WHO) study shows that over two-thirds of pregnant women receive at least one antenatal visit, (van Eijk *et al.*, 2006). Globally, as few as one third of deliveries take place in a health facility and most births around 60 million each year is attended by unskilled attendants or nobody at all (Darmstadt *et al.*, 2009). The reports are of public health concern because they show that there are several undesired outcomes because of poor utilization of ANC services. A study in Kenya indicated that 52.5% of women in rural areas and 49.2% in urban settings attended ANC once prior to delivery and the first ANC visit was after 28 weeks of pregnancy (Simkhada *et al.*, 2008). Data from the Kenya

Demographic and Health Survey (KDHS) 2014 also shows that although the overall ANC coverage remains high, many women make their first ANC visit late in pregnancy and only 4% of women had no antenatal care, (Babalola and Fatusi, 2009; Chuma *et al.*, 2009). In Ghana 85% attended at least one antenatal visit with a skilled provider before delivery, (Ghana demographic and health survey 2014). About 73% of pregnant women in urban areas and 55% in rural areas were more likely to attend 4 or more antenatal visits, (Hafez *et al.*, 1999). Though it has been reported that up to 40% of pregnant women in developing countries receive no ANC (Titaley *et al.*, 2010). Another study in Ghana reported that 14% of women did not attend ANC at all because different factors influenced the seeking of healthcare (Raatikainen *et al.*, 2007). This study sought to determine the level of utilization of antenatal care services, hindrances to ANC utilization, the services offered during ANC visits and the choice of a place for seeking ANC services.

MATERIALS AND METHODS

Study site: The study was carried out at Migosi Sub-County Hospital in Kisumu Central Sub-County, Kenya; which is one of the seven sub–counties within Kisumu County. The hospital serves a population of 20,870 on yearly basis and covers a total area of approximately 32.7 sq. km with a population of 168,892 and lies within longitudes 33^0 20'E and 35^0 20'E and latitudes 0^0 20'S and 0^0 50'S close to Lake Victoria. Majority of clients seeking services from this health facility are slum dwellers with low socio-economic status. A few of the inhabitants of the area are employees of the government and others are either engaged in informal and small-scale businesses.

Design: This study adopted a descriptive cross sectional study design. Quantitative approach for data collection was adopted and a structured questionnaire was used.

Study participants: A total of 285 post-natal mothers between 18-49 years who attended ANC services and delivered at MSCH hospital were recruited in the study. Ethical approval was granted by ethical review committee of JOOUST and written informed consents were obtained from all the study participants.

Data analyses: Data was entered in an excel sheet and analyzed using descriptive statistics with the p-value of 0.05 considered as statistically significant.

RESULTS

Demographic characteristics: Among the respondents, majority 162 (56.8%) were between 18-28 years old. Interestingly, 224 (78.6%) of the respondents were from Kisumu County and the remaining 61 (21.4%) were from other counties. Educational status was quiet diverse with 92 (32.3%) having secondary education, 70 (24.6%) primary education, 38 (13.3%) tertiary colleges and 22 (7.7%) attaining university education respectively. On the other hand, 63 (22.1%) did not disclose their educational levels. Occupationally, 129 (45.6%) of the respondent were housewives, 121 (42.46%) were engaged in business, 34(11.93%) were employed and only 1 (0.35%) was still a student. It was also noted that majority were Christians 269 (94.4%) while 16 (5.6%) were Muslims. The married were 238 (83.51%), single 38 (13.33%), widowed, divorced and separated shared the same frequency at 3 (1.05%) (Table 1).

Table 1. Socio-demographic Characteristics of Respondents

Age (years)	Frequency (N=285)	%
18-28	162	56.8
29-39	114	40
40 and above	4	1.4
Age unknown	5	1.8
Level of education		
None	63	22.1
Primary	70	24.6
Secondary	92	32.3
Tertiary college	38	13.3
University	22	7.7
Occupation		
Housewife	129	45.26
Runs business	121	42.46
Employment	34	11.93
Student	1	0.35
Religion		
Christianity	269	94.4
Muslim	16	5.6
Marital status		
Married	238	83.51
Single	38	13.33
Widowed	3	1.05
Divorced	3	1.05
Separated	3	1.05

Utilization of ANC services: Of the respondents 225 (78%) completed the required four ANC visits with about 145 (50%) completing beyond 4 visits. However, those who did not complete four visits were about 60 (20%) with 9 (3.16%) only had a single visit. In addition, the study shows that the main reason for incomplete ANC visits was personal challenges 32 (53.3 %) followed by work schedule 13 (21.7%) and early deliveries5 (8.3%). Others 10 (16.7 %) said they started ANC late and therefore could not make the required four visits. The noted hindrance to the utilization of ANC services were waiting time 114 (40%), lack of money 91 (32%) and lack of special equipment 80 (28%), (Table 2).

Table 2. Utilization of ANC Services at the health facility

Variables	Frequency	Percentage
a) Number of ANC visit	(n)	(%)
1	9	3.2
2	10	3.5
3	41	14.4
4	80	28.1
> 4	145	50.9
b) Reasons for incomplete ANC visits		
Work schedule	13	21.7
Early deliveries	5	8.3
Personal factors	32	53.3
Started ANC late	10	16.7
c) Hindrance to ANC utilization		
Waiting time	114	40
Lack of money	91	32
Special diagnostic equipment	80	28

Services at ANC: Of the 14 services offered during ANC visits, 9 services were provided and well utilized by the respondents and took the following leads; Iron and folate supplementation (IFAS) 269 (94.4%), issuance of long lasting insecticide treated nets (LLITNs) 91.2% (260), intermittent preventive therapy for malaria (IPTP) 258 (90.5%) and others as shown in Table 3. However, the other remaining services recorded low utilization such as emergency obstetric care 108

(37.9%), prevention of mother to child transmission (PMTCT) 133(46.7%), STI screening and condom use 138 (48.4%).

Table 3. Services provided during ANC

ANC services	Frequency	%
IFAS	269	94.4
Deworming	158	55.4
IPTP	258	90.5
LLITN	260	91.2
Tetanus toxoid	258	90.5
BP monitoring	243	85.3
STI screening and condom use	138	48.4
PMTCT	133	46.7
HIV/AIDS care and treatment	208	73.0
Skilled birth attendant	223	78.2
Emergency obstetric care	108	37.9
Pregnancy warning signs	202	70.9
Post partum care	175	61.4
Health education	253	88.8

N/B: Multiple response questions

Choice of a place for seeking ANC services: As shown in Figure 1, good services 205 (72%) is the main determinant for a choice of a place for ANC visit, this was followed by friendliness of nurses 48 (17%). Other respondents preferred the cleanliness of the maternity unit and others 6(2%) chose the place for ANC on the recommendation of CHVs.

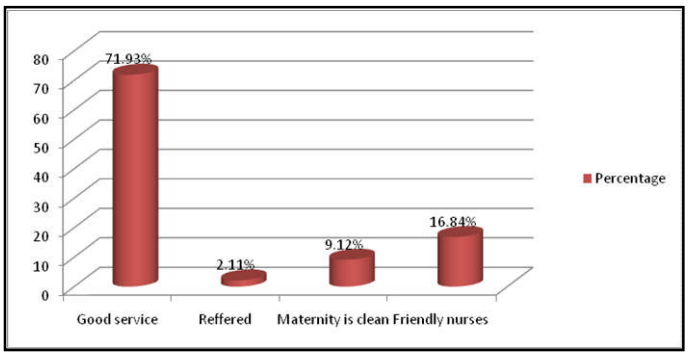

Figure 1. Determinants of choice of a place for seeking ANC services

DISCUSSION

The study shows that 225 (78.95%) mothers made four and above ANC visits, majority 224 (78.6%) of these respondents were from Kisumu county and the study also found out that 162 (56.8%) of the respondents were aged 18-28years and only 63 (22.1%) had not attended school. The observation suggests that perhaps the high education level and older age group among the respondents could be contributing to the good utilization of ANC services. This may be supported by other studies that have shown that women of below 20 years report poor utilization of ANC services compared to older women (KDHS, 2014). For the past 10 years, a study has reported that only a minority of pregnant women (36.1%) make the required minimum of four ANC visits in public health facilities in Kenya, (Chuma *et al.*, 2009). However, our study shows higher utilization and this suggests that there must have been a lot of campaign to create awareness hence leading to improved attendance of ANC. Other study reported that proximity is a key factor for access and completion of ANC services and access to health services includes gaining entry into the health care system, finding a health care provider with whom the patient can communicate and trust, and accessing a health care location where needed services are provided, (Balarajan *et al.*, 2011). The proximity to the health facility may be playing out as regards to the ANC visits in this study as majority of the respondents come from within the county or urban settings and the provision of ANC services may be superior to the locally available services, (Rai *et al.*, 2012). Indeed, other studies also reported that the most important variable associated with utilization of ANC services is the physical accessibility of these services,(Balarajan *et al.*, 2011). Several other studies also found that physical proximity of health care services, especially in the developing countries plays an important role in utilization of these services, (Darmstadt *et al.*, 2009). This study also reported incomplete ANC visits by 21.05% (n=60) respondents. The reasons cited for incomplete ANC utilization includes waiting time, lack of money and unavailability of special diagnostic equipment. The amount of time a patient waits to be seen is one factor which affects utilization of healthcare services and patients perceive long waiting times as barrier to actually obtaining services and keeping patients waiting unnecessarily can be a cause of stress for both patient and doctor since waiting time is a tangible aspect of practice that patients will use to judge health personnel even more than their knowledge and skill (Jiang and Giachetti, 2008). Therefore, the study findings were contrary to findings from a study in Viet Nam by (Nguyen *et al.*, 2007), which reported that long waiting periods did upset some women and they felt unable to question this because of their lower status. This difference in findings could be because our study was carried out in an urban setting and our respondents consisted of the aged with good level of education. Our study however presents a new finding that unavailability of services can also contribute to incomplete ANC visit.

The findings of this study revealed that ANC services were actually provided to the respondents and utilized with the respondents confirming receipt of ANC services which is proof of ANC utilization. Receipt of services goes hand in hand with client satisfaction. Other studies reported that patient satisfaction may be considered to be one of the desired outcomes of care; even an element in health status itself, patient satisfaction is an important measure of health quality as it offers information on the provider's success at meeting the expectations most relevant to the client and a key determinant of patient's perspective behavioral intention, (M *et al.*, 2015).
The study also sought to establish the determinants for selection of ANC place and found that respondents visited health facility because of good services, friendliness of nurses, cleanliness of the facility and some were referred by either community health volunteers or their friends. Something good must be of good quality and quality in its definition is *"consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patients' needs and satisfies providers.* In Nigeria, perceived quality of care was one of the factors responsible for the low utilization rate of ANC services in tertiary institutions in the Southwest part of the country, (Oladapo and Osiberu, 2009). Nonetheless, our study agrees with the findings that the care providers ought to listen to clients concerns, give good advice, and give full and accurate information and respect clients; right to dignity, and maintain privacy and confidentiality since women are more likely to seek and return for services if they feel cared for and respected by the providers, Republic of Kenya (ROK), (2006).

Conclusion

The study concludes that ANC services were provided and well utilized by the respondents with majority confirming receipt of those services though some mothers still missed the required services. Therefore, the health care providers should improve on the provision of maternal health services right from ANC up to delivery. This should include well equipped health facilities and effort to address hindrance to seeking ANC services. However, we recommend a similar study be carried out in a rural settings to determine how provision of ANC services influence the level of utilization. The effort will inform the policy makers on strategies to adopt to improve utilization of ANC services.

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