International Journal of Innovative Research and Advanced Studies (IJIRAS)
Volume 4 Issue 6, June 2017

ISSN: 2394-4404

Patterns Of Utilization Of Maternal Healthcare Services In Korogocho Slums, Nairobi, Kenya

Wilson A.P. Otengah

Taji I. Shivachi

Department of Social Sciences and Humanities,
Rongo University, Kenya

Abstract: ***Maternal mortality is a grave concern in Africa. In 2015, sub-Saharan Africa alone accounted for approximately 66% of all maternal deaths worldwide. Studies have however established that maternal mortality can be prevented if a woman receives maternal healthcare services (MHS) from a skilled healthcare practitioner during pregnancy, delivery and the post-partum period. In addition, seeking help from a skilled healthcare practitioner at the onset of any complications during and after pregnancy also drastically reduces the risk of maternal death. In view of this, many governments in developing countries, Kenya included, have implemented interventions to improve availability, accessibility and quality of MHS. The aforementioned notwithstanding, utilization of MHS remains low in developing countries, especially in marginalized communities like the urban poor who reside in informal settlements. This study sought to investigate the patterns of utilization of MHS in the Korogocho informal settlement, in Nairobi city, Kenya. The study sought to establish the patterns of utilization of ANC and PNC services, examine the patterns of health facility delivery, and assess the patterns of consultation of skilled providers for obstetric complications. The target population comprised of all women aged between 18 and 49 years, who had delivered in the twelve months preceding data collection. Data was collected through a questionnaire that was administered to 512 respondents; key informant interviews with 38 maternal healthcare practitioners, and focus group discussions. The study found that while 90% of the respondents made at least one ANC visit, only 40% made four or more visits as recommended by WHO. Furthermore, approximately 14% of the subjects delivered at home. In addition, only 41% of the respondents received PNC care from a skilled provider within one week of delivery. The+ study therefore concluded that utilization of MHS in the study area is relatively low. The study recommends that the ministry of health at both the county and national governments should conduct targeted awareness campaigns in the study area in order to improve the uptake of MHS.***

I. INTRODUCTION

Maternal health is a grave concern in Sub-Saharan Africa due persistent poor maternal morbidity and mortality. The World Health Organization (WHO) estimates that in 2015, more than 30 million women suffered maternal morbidity in Sub-Saharan Africa (World Health Organization, 2016). Maternal morbidity is a serious concern since, in addition to negatively impacting the social and economic standing of the mother and her family, it can lead to further morbidities, dilapidating disabilities, and even death (Say et al., 2014; UNFPA, 2015; WHO, 2015). According to World Health Organization (2016), sub-Saharan Africa alone accounted for approximately 66% of the more than 300,000 maternal deaths worldwide.

However, maternal morbidity and mortality can be drastically reduced if an expectant woman receives adequate maternal healthcare services (MHS), including attending a minimum of four Ante-Natal Care (ANC) clinics during pregnancy, delivering in a health facility under the supervision of a trained practitioner, and receiving Post-Natal Care (PNC) from a skilled healthcare practitioner immediately after child-birth (World Health Organization, 2015). The main purpose of MHS is the provision of preventive treatment (basic immunization, prophylaxis of specific conditions, for example through the provision of anti-malaria drugs, food supplements,

and PMTCT therapy for HIV); health promotion (through counselling, maternal health education); monitoring, early diagnosis and treatment of pregnancy related complications; safe delivery; and early detection and treatment of post-partum complications (World Health Organization, 2015b). Indeed, effective MHS has been identified as the key determinant of good maternal health outcomes.

Cognisant of this fact, governments in the developing world have undertaken several interventions to reduce maternal morbidity and mortality. These measures include reduction, and in some cases abolition of fees for maternal healthcare services (MHS), including ANC, delivery and PNC, extension of maternal healthcare services to underserved areas, and investments in MHS resources (Afulani, 2015; Obermeyer, et al., 2015). According to WHO et al. (2016), the reduction in maternal mortality by 44%, between 1990 and 2015, resulted largely from concerted efforts that were put in place by nation states to improve the quality, accessibility and availability of MHS.

However, availability and accessibility of quality MHS cannot be useful if those services are not being utilized. It is therefore important to monitor the patterns of utilization of MHS in order to identify gaps and design interventions that are specific to the identified gaps. Nevertheless, despite the obvious need for effective and continous surveillence systems that provide comprehensive and timely data on the patterns of utilization of MHS, most developing countries still rely on periodic demographic health surveys (DHS). Unfortunately, the data from these studies may sometimes be unreliable due to time lapses, and other limitations of surveys.

It was therefore important to conduct this study in order to establish the patterns of utilization that are specific to the informal settlements of Nairobi. This is because the available data is generalized for the entire county, and may not form an accurate basis for evidence based targeted interventions. According to African Population and Health Research Center (2014), data from national surveys does not capture situations that are specific to informal settlements because of limited coverage of slums in their samples. Further, national averages have a tendency of blurring group specifics, resulting in overall distortions.

The main objective of this study was to investigate the patterns of utilization of MHS in Korogocho informal settlements. The specific objectives were to establish the patterns of utilization of ANC, delivery and PNC services in the study area.

II. METHODOLOGY

This study applied a mixed method approach which included a survey and analysis of secondary data. The study was conducted in Korogocho, which is located approximately five kilometres east of Nairobi City centre, and is one of the more than 200 informal settlements in the city. Korogocho, which occupies an area approximately one square kilometre, is one of the most congested informal settlements in Nairobi, with an estimated population of 200,000 people.

The target population for this study comprised of all women aged between 18 and 49 years. Only women who had delivered in the twelve months preceding data collection were included. This was based on the assumption that information on maternal healthcare seeking behaviour is more accurate when obtained from women who have delivered within one year preceding a survey since it minimizes recall bias on the part of respondents (Kistiana, 2014). A questionnaire was administered to 512 respondents. The sample size was arrived at using a formula developed by Babalola (1998). In addition, data were also collected from practitioners in 15 health facilities in the study area (two run by the County Government of Nairobi; one government mobile clinic; six non-profit; and six privately owned).

The first stage of the sampling process involved clustering the study area into the seven villages that form Korogocho. In the second stage, enumeration areas were randomly selection from each of the villages. Systematic random sampling procedure was then applied to select specific housing units from a listing of all households in each of the selected enumerated areas. Finally, within each selected housing unit, one woman of reproductive age, who had given birth in the year preceding the study, was interviewed. Whenever the researcher came across a household that did not fulfil the inclusion criteria, the next household was chosen for replacement. Also, any household where there was more than one eligible woman for selection, only one respondent was randomly selected using the simple random method.

In addition to the questionnaire, data was also collected from the main respondents through seven focus group discussions. Seventy discussants were drawn from the 512 respondents to the questionnaire, to form seven FGDs, one in each of the villages. The questionnaire survey and FGDs were complimented 30 key informant interviews, with key informants being purposively selected from among health workers in the maternity sections of healthcare facilities in each of the villages in the study area. Care was taken to include only those facilities that offered maternal health services. Secondary sources of data included books, journals, magazines, reports from libraries, and the internet, among others.

Quantitative data was analyzed using descriptive statistics, which have been displayed in frequency tables and charts. Thematic analysis was applied to analyze qualitative data.

III. RESULTS

Bearing in mind the limitations posed by recall bias (Kistiana, 2009), the sample for this study included only women who had delivered in the 12 months preceding data collection. According to Kistiana (2009), women tend to have very vivid recollection of pregnancy experiences for up to 12 months after delivery. Thereafter, the recollection of pregnancy events diminishes with time. Information was therefore obtained about the utilization of MHS in the respondents' previous and most recent pregnancy.

PREVIOUS UTILIZATION OF MHS

Several studies have established that the utilization of MHS in previous pregnancies tends to influence MHsB in subsequent pregnancies (Bell et al., 2003; Moyer & Mustafa, 2013). With this in mind, respondents were asked to recall their utilization of MHS in their previous pregnancies, most of which occurred before 2016. A majority of the respondents (88.42%) attended ANC at least once in their previous pregnancies. Most of the respondents (86.95%) had their previous deliveries in a health facility. However, only 38.42% received post-partum care from a skilled healthcare practitioner, as shown in Table 1.

Utilization of Maternal Health Services in Previous Pregnancies		Number of Respondents (n = 406)	
		Frequency	Percentage
Attended ANC at a Health Facility at Least Once	No	87	21.43
	Yes	319	78.57
	Total	**406**	**100**
Delivered at a Health facility	No	53	13.05
	Yes	353	86.95
	Total	**406**	**100**
Received PNC at Health Facility	No	273	67.24
	Yes	133	32.76
	Total	**406**	**100**

Table 1: Frequency and percentage distribution of previous utilization of maternal health services

The results in Table 1 reveal a discrepancy between ANC attendance and health facility delivery on the one hand, and utilization of PNC services on the other. This discrepancy could be attributed to the fact that most maternal health awareness campaigns focus on the need for ANC attendance and health facility delivery. According to Chege & Mbilu (2015), most safe motherhood awareness campaigns in Kenya focus their message around the need for family planning, child spacing, ANC attendance and health facility delivery. The need for receiving PNC at a health facility is not as pronounced in most awareness campaigns. For this reason, many women might not be aware that receiving PNC at a health facility is an important component of safe motherhood.

Further, the low uptake of PNC services could be could be attributed to women's preference for home based PNC under the care of TBAs, as opposed to receiving PNC at health facilities. The preference for home based PNC could be related to perceptions on the quality of services offered by TBAs as opposed those offered in health facilities. Some studies have argued that many women in African communities, of which the study area is a part, prefer receiving MHS under the care of TBAs because they are gentler than nurses in health facilities (Afulani, 2015; Ayele et al., 2014; Akunga et al., 2014).

UTILIZATION OF ROUTINE MHS IN THE MOST RECENT PREGNANCY

In relation to their most recent pregnancy, it was established that while most of the respondents (90.54%) made at least one visit to a health facility for ANC, and delivered at a health facility (86.13%), only 40% received post-partum care. Only slightly more than one tenth of the respondents did not deliver at a health facility. However, less than half (40.82%) of the respondents received post-partum care, as illustrated in Figure 1.

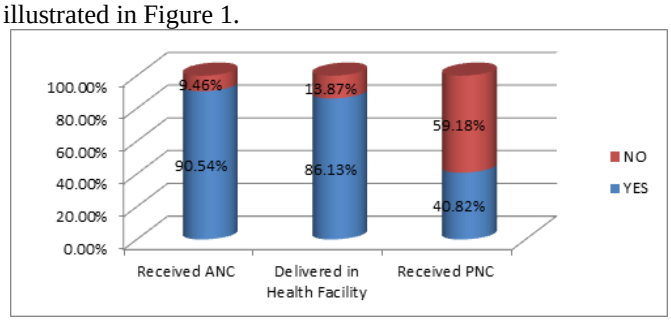

Figure 1: Patterns of utilization of routine MHS services in the most recent pregnancy

The results in Figure 1 indicate that the uptake of ANC and post-partum care improved in the most recent pregnancies of the respondents, compared to their previous pregnancies (refer to Table 1). The slight increase could be as a result of increased access to, and availability of ANC services, occasioned by the high number of health facilities offering these services in the study are and its environs.

The results in Figure 1 agree with the results of empirical studies from other parts of Sub-Saharan Africa. According to Beatty (2016), UNICEF (2015), and WHO et al. (2016), the uptake of MHS increased steadily from 1990 to 2012, but stagnated between then and 2016. The stagnation has been attributed to perceptions on the quality of services, and a resurgence in the role of TBAs (Byrne, et al., 2016). The slight drop in reported health facility delivery among respondents in this study (compare data in Table 1 and Figure 1) could therefore be an indication that this trend applies in the study area, as it does in other parts of Sub-Saharan Africa. However, the slight increase in utilization of ANC and PNC services contradicts this trend of stagnation in Sub-Saharan Africa, but conforms to the general trend in the informal settlements of Nairobi. According to the African Population and Health Research Center (2014), the uptake of ANC services in informal settlements of Nairobi has increased steadily since 2002.

The study also reveals that even though a majority of the respondents (90.54%) attended ANC, only slightly more than two fifths of them (40.34%) made the recommended four or more visits during their last pregnancy, as indicated in Table 2. More than one fifth of the respondents made only one visit. In addition, only 37% of the respondents made their first ANC visit in the first trimester of their pregnancy, compared to 41% and 21% in the second and third trimesters respectively. More than half the respondents (57.23%) received home-based ANC (HbANC). The largest proportion of the respondents (20.70%) delivered in government health facilities in the study area. The study also reveals that almost three fifths of the respondents did not receive post-partum care at all.

Variables		Frequency	Percentage	Cumulative Percentage
Place where ANC care was received	facility nearest to place of residence	386	83.19	83.19
	Specific facility away from residence but within Korogocho	62	13.36	96.55
	Specific facility outside Korogocho	16	3.45	100.00
	Total	464	100	
Number of ANC visits in health facility	No visit	49	9.57	9.57
	1	63	12.30	21.88
	2	90	17.58	39.45
	3	104	20.31	59.77
	4	144	28.13	87.89
	5+	62	12.11	100
	Total	**512**	**100**	

ISSN: 2394-4404

Timing of first ANC visit	First trimester	173	37	37
	Second trimester	192	41	79
	Third trimester	98	21	100
	Total	**463**	**100**	
Received HbANC	No	219	42.77	42.77
	Yes	293	57.23	100
	Total	**512**	**100**	
Place of Delivery	Private facility in Korogocho	37	7.23	7.23
	Government facility in Korogocho	106	20.70	27.93
	Non-profit facility in Korogocho	61	11.91	39.84
	Pumwani Maternity Hospital	60	11.72	51.56
	Mama Lucy Kibaki Hospital	98	19.14	70.70
	Kenyatta National Hospital	10	1.95	72.66
	Private facility outside Korogocho	69	13.48	86.13
	At home	71	13.87	100.00
	Total	**512**	**100**	
Post-partum care received	Not received	303	59.18	59.18
	After one week	101	19.73	78.91
	Within one week	69	13.48	92.38
	Within 2 days	39	7.62	100.00
	Total	**512**	**100**	

Table 2: Frequency and percentage distribution of utilization of routine MHS services in the most recent pregnancy.

Most of the respondents (83%) attended ANC at the health facility nearest to their homes, regardless of whether the facility was non-profit, government, or privately owned, as indicated in Table 2. This might be due to the fact that ANC care, as it is offered in health facilities, does not require specialized equipment, and is provided by general nurses in most health facilities in Kenya (Ministry of Health, Government of Kenya, 2014). Further, ANC services and procedures are standard in all health facilities (World Health Organization, 2015b). Finally, ANC services are offered free of charge in both government and non-profit facilities, and at a fee ranging from 20 to 100 Kenya shillings in private facilities (Ministry of Health, Government of Kenya, 2014). Because of the aforementioned reasons, most women tend not to be selective about where they attend ANC, since the services they receive will be more or less the same, at more or less the same cost. A similar trend was observed in South Africa (Burgard, 2004), where women were found not to be very selective about where they received ANC services, but were very particular about where they delivered. According to Burgard (2004), women may not mind where they receive ANC, because services are standard in all health facilities. However, the author argues that when deciding where to deliver, most women choose a health facility where any complications that may arise during delivery can be managed.

In this study, only 40% of the respondents attended ANC four or more times, as shown it Table 2. However, an earlier study in Korogocho and Viwandani, which is another informal settlement in Nairobi, found that an average 54% of all expectant women made at least four ANC visits in 2014 (African Population and Health Research Center, 2014). The discrepancy in the findings between this study and the earlier study in Korogocho and Viwandani could be attributed to the fact that the earlier study included participants from two informal settlements. Thus, the sample for the earlier study was markedly different in sociocultural dynamics, from the sample for this study. Similarly in South African informal settlements, more than 50% of expectant women attended ANC four or more times (Bremmer & Van-Den-Broek, 2015).

IV. DISCUSSION

The finding that only 40% of the respondents made the recommended four or more ANC visits could be attributed to several factors. First of all, only slightly more than one third (37%) of the respondents made their first ANC visit within the first trimester of their pregnancy, as indicated in Table 2. Starting ANC attendance in the first trimester gives the expectant woman adequate time to make more visits, while starting in the second or third trimester leaves her with little time within which to attend ANC. Therefore, women who commence their ANC attendance in their first trimester are more likely to make many visits. The fact that only 37% of the respondents made their first ANC visit in the first trimester of their pregnancy could be a plausible explanation for the fact that only 40% of the respondents made four or more visits.

This finding agrees with a comparative study on the determinants of utilization of ANC services in Ghana, Kenya and Malawi, Pell et al. (2013), which observed that women who commence ANC in the first trimester are more likely to make the recommended four or more visits, than their counterparts who start in the second or third trimesters. Studies in Nigeria (Ononokpono and Odimegwu, 2014), and Kenya (Gitonga, 2017) have also identified a link between ANC commencement and total the number of ANC visits made.

Another reason why women in the study area do not make the recommended four or more ANC visits could be because most of them do not appreciate the holistic role of ANC. It emerged during the FGDs and in-depth interviews that for some women in the study area, ANC simply provides an opportunity to acquire the ANC booklet, which a woman must produce in order to be allowed to deliver free of charge in government facilities.

For others, ANC is "just a check-up", during which the health practitioner checks the progress of the pregnancy. However, according to the World Health Organization (2006) ANC has the holistic purpose of prophylaxis for common infections that can affect the mother and/or the child, and providing health education and counselling. In addition, ANC provides an opportunity to monitor danger signs for obstetric complications, and to immediately manage any complications that may arise. Finally, ANC helps both the healthcare practitioners and the expectant woman to prepare for possible complications during delivery based on symptoms observed during pregnancy. However, during in-depth interviews, it emerged that this understanding of the role of ANC has not been widely disseminated in the study area.

Other respondents believe that ANC attendance is important only because it enables an expectant woman to get the required immunizations and food supplement tablets. The study revealed that some women in the study area only attend ANC on the days they are scheduled to get immunization, and once they get all the required immunizations, they stop attending.

Another explanation for under-utilization of ANC is the belief among some women in the study area, that ANC is unnecessary. Most of those who felt that ANC was unnecessary believe that pregnancy is usually accompanied by discomfort, which may sometimes be severe. They therefore

ISSN: 2394-4404

feel that a pregnant woman is expected to persevere any discomforts that may occur during pregnancy.

Table 2 also reveals that more than half (57.23%) of the respondents received ANC at home, under the care of TBAs and other home-based care givers. The home-based ANC (HbANC) was administered mostly in the second and third trimesters, and involved massage and use of herbal medicine. The FGDs revealed that massage is the most popular service offered by the TBAs. Massage is known to greatly reduce many of the discomforts experienced during pregnancy, and is believed to be beneficial to both mother and child (Byrne, et al., 2016). The FGDs and in-depth interviews also revealed that the herbal medicines are meant to fortify the body in readiness to cope with the trauma of childbirth, by among other things, increasing blood levels, prevent severe bleeding during and after delivery, and increase milk supply after delivery. In addition, the herbal medicines are believed to protect the mother and new-born from a broad range of conditions, including those caused by supernatural forces. The study also revealed that utilization of HbANC was prevalent even among respondents who attended ANC at health facilities. Other studies have similarly observed that women in developing countries tend to utilize MHS in health facilities, alongside TBAs (Akunga, Menya, & Kabue, 2014; Byrne, et al., 2016; Odwee, Francis, & Asaf, 2014)

More than half of the respondents (53.52%) delivered at government health facilities, both within and outside Korogocho. The main reason for the apparent preference of government facilities is the fact that delivery is free of charge at these facilities. Korogocho is an informal settlement, where most of the residents are relatively poor, and therefore cost may be an important consideration in determining the place of delivery.

A large proportion of those who delivered at government facilities did so at facilities within Korogocho. The second largest proportion delivered at the Mama Lucy Kibaki Hospital, located approximately five Kilometres away from the study area. However, only ten respondents delivered at the Kenyatta National Hospital (KNH), which is located approximately ten kilometres away from the study area. Through the FGDs, it was established that distance is an important consideration in deciding where to deliver. Indeed, the main reason why fewer respondents delivered at the KNH than the Mama Lucy Kibaki Hospital was distance, as will be elaborated in the third section of this Chapter. It is also noteworthy that most of the respondents who delivered at government referral facilities were referred there due to complications during pregnancy or delivery. This implies that many of those who delivered at the referral facilities did not do so out of choice.

Only two fifths (20.71%) of the respondents sought delivery services in privately managed health facilities, with most of them obtaining these services in private health facilities outside Korogocho. A possible explanation for this could be that those who can afford to deliver in private facilities prefer to do so outside the study area, in facilities that are better equipped with personnel and other medical resources.

These findings are markedly different from the results of the NDHS which was conducted in the study area and Viwandani, another informal settlement in Nairobi. According to the NDHS, most women in the study area receive ANC services in public health facilities, but deliver in private health facilities (African Population and Health Research Center, 2014). The NDHS attributed this to the perception among residents that the quality of services in health facilities managed by government is poor. Similarly in Ghana, Malawi (Pell, et al., 2013), and also in Tanzania, (Lwelamira & Safari, 2012), empirical studies found that while women attend ANC at government health facilities, they tend to deliver at private hospitals.

In this study however, the number of women who delivered in government facilities was much higher than those who delivered in private ones. Nevertheless, FGDs for this study revealed that most of the respondents who delivered in government facilities would have preferred to deliver in private facilities outside the study area, but opted to deliver in government facilities due to cost limitations. Therefore, while the respondents to this study did prefer delivering in private health facilities, they eventually ended up delivering in the government facilities due to resource constraints. A similar pattern was reported in empirical studies in Ethiopia (Ayele et al., 2014) and Ghana (Ahmed L. , 2015), where women delivered in government facilities, but would have prefered to deliver in private health facilities.

The study also found that the number of women who delivered in health facilities was lower than those who attended ANC. This was considered an anomaly since several studies have identified ANC attendance as a key determinant of health facility delivery. According to Bhanderi and Srinivasan (2015), who conducted a study on the patterns of utilization of MHS among residents of informal settlements in India, and Ochako et al. (2011), who analyzed the results of the Kenya Demographic Health Survey, women who make at least one ANC visit have a high likelihood of delivering at a health facility. Based on the above mentioned findings, it would therefore have been expected in this study that the number of respondents who attended ANC at least once, and those who delivered at a health facility would be the same. However, the findings of this current study indicate that the respondents who delivered in health facilities were fewer than those who made at least one ANC visit, albeit by only 4%. The difference could be atributed to the respondents whose water broke too soon and they were unable to reach a healthcare facility, compelling them to deliver at home. Another reason could be a preference for home delivery under the care of a TBA.

Furthermore, despite the fact that approximately 40% of the respondents received post-partum care from a skilled healthcare practitioner, only 7.62% of them received PNC within two days of delivery as recommended by the WHO. An additional 13% attended PNC check-up after two days, but within one week after delivery. The rest attended PNC check-ups more than one week after delivery.

This finding contradicts the argument that ANC attendance corresponds with the uptake of both delivery and PNC services. According to Chou et al., (2015), Jasper (2016) and Moyer and Mustafa (2013), ANC attendance is a strong predictor of utilization of post-partum services. In this study, approximately 90% of the respondents made at least one ANC

visit. Thus, it would have been expected that the number of repondents who received PNC would be closer to 90%. On the contrary, less than half of those who received ANC services also received PNC.

The reason for the big difference between those who received ANC and those who received PNC could be related to cultural beliefs. During the FGDs and in-depth interviews, it emerged that most of the women in the study area believe that post-partum complications are caused by cultural factors.

This finding concurs with the argument of Akunga et al. (2014), who aver that post-partum complications are associated with cultural causal factors. According to the authors, most women might not seek help from a health facility for a condition believed to have been caused by supernatural factors. Similarly in Ethiopia, an empirical study found that women who believe their pregnancy related complication is caused by supernatural factors are not likely to seek help from biomedical practitioners (Ayele et al, 2014).

Also related to cultural beliefs, is the fear of evil spirits. The FGDs and in-depth interviews revealed that many of the respondents believed that if their new-born children were exposed to the outside world so soon after their birth, the infants would be struck by illnesses caused by malevolent spirits. Therefore, since the women could not venture outside without their new-born children, the former were forced to stay indoors. This prevented them from visiting health facilities for PNC.

The study also made an interesting discovery during the FGDs and in-depth interviews. Government health facilities encourage mothers to leave the facility immediately after delivery, because they do not have the capacity to offer in-patient services to the large number of women seeking free delivery services. Therefore, women who have a normal delivery without developing any complications are discharged from the health facility only hours after delivery. The in-depth interviews and FGDs also revealed that after being discharged, women are usually asked to go back to the facility after two weeks. This arrangement is contrary to WHO recommendations, which urge health providers to monitor women for 24-48 hours after delivery (World Health Organization, 2015b). The arrangement therefore rules out the possibility of women receiving PNC within two days after delivery as recommended by WHO. On the other hand, private and non-profit facilities have policies in which women are discharged at least 24 hours after delivery. During this time, women receive PNC at the hands of health practitioners. This post-delivery discharge practice in public health facilities could therefore be one of the reasons why less than half of the respondents received PNC within one week of delivery, as shown on Table 2. This is because more than half of the respondents delivered in government health facilities, where they were likely to receive post-partum care only for a few hours after delivery.

Most of the respondents who did not attend PNC also said they were not aware that they were expected to receive specialized care within one week of delivery. This is an indication that awareness about the need for post-partum care could be low in the study area. Most FGD discussants felt that since they did not have any complications, they did not see the need to visit a health facility.

Finally, the FGDs revealed that most women in the study area prefer to receive post-partum care from TBAs. There was general consensus among FGD discussants that TBAs were better providers of post-partum care than health facility-based practitioners.

Similar findings were reported by Akunga et al. (2014), Byrne et al. (2016), and Gitonga (2017), all of whom found that many women in rural Kenya prefer to receive post-partum care from TBAs, who are considered friendlier and gentler than the practitioners in health facilities. Similarly, studies in Nigeria (Idowu, 2013), Uganda (Kalule-Sabiti et al., 2014) and Ethiopia (Ayele et al., 2014), also found that women preferred TBAs for post-partum care.

V. CONCLUSSIONS AND RECOMMENDATIONS

The study concluded that although most women deliver in health facilities assisted by skilled providers, and that utilization of ANC is also fairly high, the uptake of PNC services is very low. This is a serious shortcoming since a lot of maternal deaths occur due to post-partum complications. The implication of this finding is that it is possible to transform the unfavourable maternal health outcomes, since it is evident that most women get into contact with the formal healthcare system at one point during pregnancy. Therefore, a sustained and targeted campaign to impart women with relevant knowledge on maternal health would bear fruits. This study therefore recommends that the ministry of health of the County government of Nairobi conducts a targeted awareness campaign in the study area to enhance the uptake of ANC and PNC services.

REFERENCES

[1] African Population and Health Research Center. (2014). Population and health dynamics in Nairobi's informal settlements: report of the second Nairobi cross-sectional slums survey (NCSS) 2012. Nairobi: APHRC.
[2] Afulani, P. (2015). Determinants of maternal health and health-seeking behavior in sub-Saharan Africa: The role of quality of care. PhD Thesis Submitted to the University of California, Los Angeles.
[3] Ahmed, L. (2015). Social Determinants of Utilization of Maternal Healthcare Services in Ghana. Asian Journal of Science and Medicine 97(11), 389-408.
[4] Akunga, D., Menya, & Kabue, M. (2014). Determinants of Postnatal Care Use in Kenya. African Population Studies 28(3), 1447-1459.
[5] Alam, N., Hajizadeh, M., Dumont, A., & Fournier, P. (2015). Inequities in Maternal Health Care Utilization in Sub-Saharan African Countries: A Multiyear and Multi-Country Analysis. Retrieved April 6, 2016, from PLOS ONE:http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0120922
[6] Alkema, L., Chou, D., Zhang, S., Moller, A., Gemmill, A., & and Daniels, L. (2016). Global, Regional, and National levels in maternal mortality between 1990 and 2015, with scenario-based projections to 20130: a

systematic analysis by the UN maternal mortality estimation inter-agency group. Lancet, 462-474.
[7] Anderson, G., Park, H., Sanders, L., Jesus, N., & Akufuor, M. e. (2015). Healthseeking Behaviour for Maternal Morbidity in Sub_Saharan Africa: Trends and Challenges. Chicago: Bruner and Sons Inc.
[8] Anyait, A., Mukanga, D., Oundo, G. B., & Nuwaha, F. (2012). Predictors for health facility delivery in Busia district of Uganda: a cross sectional study. BMC Pregnancy and Childbirth 12(1), 132-41.
[9] Avogo, W. (2011). Countdown to the Millenium Development Goal Five: Maternal Health Seeking Behavior in Ghana. Retrieved August 11, 2016, from http://docsfiles.com/pdf_princeton_and_the_millennium.html
[10] Ayele, D., Belayihum, B., Teji, K., & Ayana, D. (2014). factors affecting utilization of maternal health care services in Kombollcha District, Eastern Hararghe Zone, Oromia Regional State, Eastern Ethiopia. International Scholarly Research Notes: 2014.
[11] Banda, G. (2015). Maternal health in malawi: How to turn the tables around. Lilongwe: Azam Bros Inc.
[12] Bazzano, A., Kirkwood, B., Tawiah-Agyemang, C., Owusu-Agyei, S., & Adongo, P. (2008). Social Costs of Skilled Attendance at Birth in Rural Ghana. International Journal of Gynecology & Obstetrics 102(1), 91–94.
[13] Bell, J., Curtis, S., & Alayon, S. (2003). Trends in Delivery Care in Six Countries. Retrieved May 16, 2016, from DHS Analytical Studies: http://www.measuredhs.com/pubs/pub_details.cfm?ID=482&srchTp=advanced
[14] Bhanderi, M., & Srinivasan, K. (2015). Utilization of maternal health services and determinants of skilled care during delivery in slums of Gujarat, India. doi:10.5171/2015.293492
[15] Bremmer, D., & Van-Den-Broek. (2015). Determinants of Health Facility Delivery in South Africa. Asian Journal of Social Science 91(11), 511-19.
[16] Burgard, S. (2004). Race and Pregnancy-Related Care in Brazil and South Africa. Social Science and Medicine, 1127–46.
[17] Byrne, A., Caulfield, T., Onyo, P., Nyagero, J., Morgan, A., Nduba, J., & Kermode, M. (2016). Community and provider perceptions of traditional and skilled birth attendants providing maternal health care for pastoralist communities in Kenya: a qualitative study. BMC Pregnancy and Childbirth 16(43). doi:DOI 10.1186/s12884-016-0828-9
[18] Campbell, S., Ooona, M., & Graham, W. (2006). "Strategies for Reducing Maternal Mortality Getting on with What Works. The lancet 368(9543), 1284–99.
[19] Campbell, S., Roland, M., & Buetow, S. (2000). Defining Quality of Care. Social Science & Medicine 51(11), 1611–25.
[20] Carroli, G., Rooney, C., & Villar, J. (2001). How Effective Is Antenatal Care in Preventing Maternal Mortality and Serious Morbidity? An Overview of the Evidence. Paediatric and perinatal Epidemiology 15(1), 1–42.
[21] Chege, J., & Mbilu, T. (2015). Utilization of maternal health care services in Kenya: An analysis of the patterns and determinants of maternal health care use. Retrieved March 19, 2016, from SST: http.www.sociologyand science/maternalhealth/Africa
[22] Dhakal, S., Chapman, G. N., Simkhada, P., Van-Teijlingen, E., Stephens, J., & Raja, A. (2009). Utilization of postnatal care among rural women in Nepal. BMC pregnancy and Childbirth 7(9).
[23] Emelumadu, O., Ukegbu, A., Ezeama, N., Kanu, O., Ifeadike, C., & Onyeonoro, U. (2014). Socio-Demographic Determinants of Maternal Health-Care Service Utilization among Rural Women in Anambra State, South East Nigeria. Annals of Medical and Health Sciences Research 4(3), 374-82.
[24] Ensor, T., Quigley, P., Green, C., Badru, A., Kaluba, D., & Siziya, S. (2014). Knowledgeable Antenatal Care as a Pathway to Skilled Delivery: Modelling the Interactions between Use of Services and Knowledge in Zambia. Health Policy Plan 29(5): 580-588. doi:10.1093/heapol/czt044.
[25] Gabrysch, S., & Campbell, O. (2009). Still Too Far to Walk: Literature Review of the Determinants of Delivery Service Use. BMC Pregnancy and Childbirth 9(1), 34-41.
[26] Gage, A., Ilombu, O., & Akinyemi, A. (2013). Quality of maternal health services and their utilization in five states of Nigeria.
[27] Garenne, M. (2011). Estimating Obstetric Mortality from Pregnancy-Related Deaths Recorded in Demographic Censuses and Surveys. Studies in Family Planning 42(4), 237-46.
[28] Haque, M. N. (2009). Individual's characteristics affecting maternal health services utilization: Married adolescents and their uses of maternal health services in Bangladesh. The Journal of Health 8(2), 1-15.
[29] Henry, S. (2016). Diet for Healthy Pregnancy. Retrieved June 11, 2016, from www.healyme.com/topic/pregnancycenter
[30] Hunter, M. (2011). Counseling in Obstetrics and Gynaecology. Leicester: British Psychology Society.
[31] Idowu, A. (2013). The Socio-Cultural Context of Maternal Health in Lagos State, Nigeria. PhD Thesis Submitted to Covenant University.
[32] Idowu, A., Osinaike, M., & Ajayi, M. (2011). Maternal Health Challenges and Prospects for National Development: A Study of Badagry Lacal Government Lagos State. Gender and Behaviour, 9(20), 4224-46.
[33] Jasper, C. N. (2016). Determinants of Maternal Mortality in Sub-Saharan Africa. New York: Cramer.
[34] Kalule-Sabiti, I., Amoateng, A., & Ngake, M. (2014). The Effect of Socio-Demographic Factors on the Utilization of Maternal Health Care Services in Uganda. African Population Studies 28(1), 515-25.
[35] Khan, K., Wojdyla, D., Say, L., Gulmezoglu, A., & Van-Look, P. (2006). WHO Analysis of Causes of Maternal Death: A Systematic Review. Lancet 367, 1066–74.
[36] Kistiana, S. (2009). Socio-economic and demographic determinants of maternal health care utilization in Indonesia. Msc thesis: The Flinders University of Australia, Adelaide.

[37] Lawn, J., Cousens, S., & Zupan, J. (2011). Stillbirths: Where? When? Why? How to Make the Data Count. The Lancet 377(9775), 1448–63.
[38] Li, X., Fortney, J. M., & Glover, L. (1996). The Postpartum Period: The Key to Maternal Mortality. International journal of gynaecology and obstetrics 54(1), 1–10.
[39] Lwelamira, J., & Safari, J. (2012). Choice of Place for Childbirth: Prevalence and Determinants of Health Facility Delivery Among Women in Bahi District, Central Tanzania. Asian Journal of Medical Sciences, 4(3), 105-112.
[40] Magoma, M., Requejo, J., Campbell, O., Cousens, S., & Filippi, V. (2010). High ANC Coverage and Low Skilled Attendance in a Rural Tanzanian District: A Case for Implementing a Birth Plan Intervention. BMC Pregnancy and Childbirth 10(1).
[41] McHugh, M. (2013). The Chi Square Test of Independence. Biochemia Medica 32(2), 143-149.
[42] Ministry of Health, Government of Kenya. (2014). Kenya Health Policy 2014-2030. Nairobi: Government Printer.
[43] Moyer, C., & Mustafa, A. (2013). Drivers and Deterrents of Facility Delivery in Sub-Saharan Africa: A Systematic Review. Reproductive health 10(40).
[44] Mpembeni, R., Killewo, J., Leshabari, M., Massawe, S., Jahn, A., Mushi, D., & Mwakipa, H. (2007). Use pattern of maternal health services and determinants of skilled care during delivery in southern Tanzania: implications for achievement of MDG-5 targets. BMC pregnancy and Childbirth. 7, 1-7.
[45] Nikiéma, B., Beninguisse, G., & Haggerty, J. (2009). Providing Information on Pregnancy Complications during Antenatal Visits: Unmet Educational Needs in Sub-Saharan Africa. Health Policy and Planning 24(5), 367–76.
[46] Obermeyer, J., Hunt, P., Ahmed, M., Mohammad, S., Fitzpatrick, J., & and Pius, P. (2015). Patterns of Utilization of Maternal Health Services in Developing Countries: An Analysis of Sub-Saharan Africa and South Asia. Retrieved March 1, 2016, from Lancet: http://www.thelancet.com.
[47] Ochako, R., Fotso, J.-C., Ikamari, L., & Khasakhala, A. (2011). Utilization of Maternal Health Services among Young Women in Kenya: Insights from the Kenya Demographic and Health Survey, 2003. Retrieved April 1, 2016, from BMC Pregnancy and Childbirth 11(1): http://doi.org/10.1186/147-2393-11-1
[48] Odwee, J., Francis, N., & Asaf, A. (2014). The Determinants of Health Care Demand in Uganda: The case study of Lira District, Northern Uganda. Nairobi: African Economic Research Consortium.
[49] Osungbade, K., & Olusimbo, K. I. (2011). Public Health Perspectives of Preeclampsia in Developing Countries: Implication for Health System Strengthening. Journal of pregnancy.
[50] PATH. (2011). Postpartum Hemorrhage Prevention and Treatment. Retrieved January 15, 2016, from PATH: http://www.pphprevention.org/pph
[51] Pell, C. (2013). Factors Affecting Antenatal Care Attendance: Results from Qualitative Studies in Ghana, Kenya and Malawi. PLoS ONE 8(1), 537-47.
[52] Pell, C., Arantza Men˜aca, A., Were, F., Afrah, N., Chatio, S., Manda-Taylor, L., . . . Pool, R. (2013). Factors Affecting Antenatal Care Attendance: Results from Qualitative Studies in Ghana, Kenya and Malawi. PLoS ONE 8(1), 537-47. doi:10.1371/journal.pone.0053747.t003
[53] Republic of Kenya. (2014). Demographic Health Survey of 2014. Nairobi: Government Printer.
[54] Say, L., Chou, D., Gemmill, A., Tuncalp, Ö., Moller, A., Daniels, J., & and Gulmezoglu, A. (2014). Global Causes of Maternal Death: A WHO Systematic Analysis. Retrieved January 11, 2016, from Lancet Glob. Health: http://dx.doi.org/10.1016/S2214-109X(14)70227-X.
[55] Say, L., Chou, D., Gemmill, A., Tunçalp, Ö., Moller, A., Daniels, J., & Gülmezoglu, A. (2014). Global Causes of Maternal Death: A WHO Systematic Analysis. Retrieved January 11, 2016, from Lancet Glob. Health: http://dx.doi.org/10.1016/S2214-109X(14)70227-X.
[56] Shukria, S. (2015). Health-seeking behaviours in northern Kenya. Qualitative Health Research 18:747. doi: 10.1177/1049.90. Retrieved from Qualitative Health Research.
[57] Singh, P., Rai, R., Alagarajan, M., & Singh, L. (2012). Determinants of Maternity Care Services Utilization among Married Adolescents in Rural India. PLoS ONE 7(2), e31666. doi:10.1371/journal.pone.0031666.
[58] UNFPA. (2015). Trends in maternal mortality. New York: United Nations.
[59] Vaghella, J., Ahmed, V., Bruce, C., Stephenson, K., Ravindra, K., & Patel, J. (2014). Reducing Maternal Mortality: Evidence Based Approach. Mumbai: Raj Press.
[60] Van-Look, P., & Heggenhougen, S. (2011). Sexual and Reproductive Health: A Public Health Perspective.
[61] World Health Organization. (2002). Antenatal Care Randomized Trial. Manual for the Implementation of the New Model. Retrieved March 15, 2016, from World Health Organization: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/RHR_01_30/en/
[62] World Health Organization. (2004). Making Pregnancy Safer: The Critical Role of the Skilled Attendant: A Joint Statement by WHO, ICM and FIGO. Geneva: World Health Organization.
[63] World Health Organization. (2015). Global Strategy for Women's, Children's and Adolescents' Health: 2016-2030. Geneva: United Nations.
[64] World Health Organization. (2015b). WHO Recommended Interventions for Improving Maternal and Newborn Health. Retrieved April 26, 2016, from World Health Organization: http://www.who.int/maternal_child_adolescent/documents/who_mps_0705/en/
[65] World Health Organization. (2016). World Health Statistics. Geneva: World Health Organization.