SELF-REFERRALS AMONG WOMEN SEEKING SKILLED BIRTH ATTENDANCE SERVICES IN SELECTED PUBLIC HOSPITALS IN MARSABIT COUNTY, KENYA

JOSEPH ONYANGO ADOYO (BSc MLS)

Q142/38402/2017

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER'S DEGREE IN PUBLIC HEALTH SYSTEM MANAGEMENT AND APPLICATION IN THE SCHOOL OF PUBLIC HEALTH AND APPLIED SCIENCES OF KENYATTA UNIVERSITY

MAY 2021

DECLARATION

"This project is my original work and has not been presented for a degree in any other university"

Signature ……Date ……..

Joseph Onyango Adoyo

Q142/38402/2017

Approval

This project has been submitted with my approval as University Supervisor.

Signature …… Date ……..

Dr. Eliphas Gitonga

Department of Population, Reproductive Health and Community Resource Management, School of Public Health and Applied Sciences

DEDICATION

I dedicate this project to my wife Linet Onyango, my angels - Annet, Abigail, Angelica and Alyssa, my mother Esther and my late father Joshua Adoyo.

ACKNOWLEDGEMENTS

I give thanks to the Almighty God.

To my supervisor, Dr. Eliphas Gitonga, thank you so much for offering your valuable guidance throughout the process. Without forgetting to mention the support of Dr. G. O. Otieno, Alison Yoos, and Grace Wanjau, your support and guidance were the very anchor to my strength. May the Almighty God bless you abundantly.

A special thanks to Dr. Boru and Molu Waso for being there for me all the time as my mentor and supervisor at the placement site.

Lastly, I give thanks to my Data collectors, the staff of Marsabit County Referral and Moyale Sub County Referral maternity, and the women who participated in the study.

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ABBREVIATIONS AND ACRONYMS

ANC – Antenatal Care

CU – Community Unit

FANC – Focused Antenatal Care

LMIC – Low and Middle Income Countries

MDGs – Millennium Development Goals

MMR – Maternal Mortality Rate

PNC – Postnatal Care

SDGs – Sustainable Development Goals

UHC – Universal Health Coverage

WHO – World Health Organization

DEFINITION OF OPERATIONAL TERMS

Self-referral: an act of referring oneself to a health care provider/facility for services without having to seek services to their link facilities

Client parameters movement: An indirect referral involving movement of client information for supportive diagnosis and management guidance to appropriate levels of the system.

Initiating facility: Also referred to as the referring facility, an organization, service, or community unit that prepares an initial outward referral to communicate the client's condition and status.

Receiving facility: Organization, service, or community unit that accepts the referred clients or specimens from the initiating facility.

Referral system: A mechanism to enable clients' health needs be comprehensively managed using resources beyond those available where they access care.

ABSTRACT

Self-referral to higher-level health facilities by women in search for skilled birth attendance services shows autonomy of women in the choice of facilities for desired services but can also be a reflection of non-adherence to established referral pathways. The choice has negative effect on delivery of services and human resource within a health care system. The Kenya Health Sector Referral Strategy has provided for a framework for its implementation and further decentralized to county level with an aim to optimizing the utilization and access of facilities at different levels of healthcare system. The study was conducted to explore self-referral, by establishing the extent and determine socio demographic, health system and institutional related factors associated with self-referral among women seeking skilled birth attendance services in Marsabit County. The study adopted a cross-sectional design at two selected referral hospitals. A systematic sampling technique was employed among women at post-natal ward to achieve 161 participants, and data collected using interviewer administered questionnaire. Data was analyzed by use of Chi-square and multiple logistic regression statistics to determine the factors associated with self-referral at 95% confidence interval. The result indicates that 47.2% had self-referred. The odds of self-referral to higher level health facilities were, increased among women; aged 25-30 (AOR 5.174, CI 1.015-26.365, *p*-value 0.048), referred for other ANC services (AOR 4.057, CI 1.405-11.720, *p*-value 0.010), who visited the referral facility before for delivery (AOR 5.395, CI 1.411 – 20.628, *p*-value 0.014), and less likely among women who perceived privacy and confidentiality of services (AOR 0.370, CI 0.138-0.990, *p*-value 0.048). Out of 10 women seeking skilled birth attendance services, four are self-referrals that signifies a possible implication on an unprecedented increased workload at referral facilities and at the same time increased cost implication on women to access these services. Therefore, targeting to address the factors that influences self-referral practice, there need for creation of awareness campaigns to reach all pregnant women and in particular those aged between 25 and 30 years to change their biased perception towards higher-level hospitals and improving the availability of all recommended ANC services at primary level facilities to reduce self-referral.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the study

Globally, in the year 2017, it was estimated that over 810 women died from preventable causes related to pregnancy and childbirth every day (WHO, 2019), and majority (94%), of countries contributing to the high mortalities were in low-resource setting. Sub-Saharan Africa's constant poor maternal and child health outcome that is approximately 86% of the estimated global maternal death in 2017 (WHO, 2019), has posed great concern to the achievement of reducing maternal mortality ratios (MMR) in many African countries (WHO, 2007) (AbouZahr C., et al, 2001). Adolescent girls under 15 years old have the highest risk of maternal mortality and complication in pregnancy. The complications were most common among adolescent girls aged between 10-19 years compared to 20-24 years (Ganchimeg T., 2014). Kenya, a lower middle-income country with a population of 47 million according to 2019 census, made significant progress in reducing her MMR. Between the year 2008/09 and 2014, Kenya's MMR declined to 362 (KNBS et al, 2015) from 520 maternal deaths per 100,000 live births (KNBS et al, 2009). Despite this significant progress, Kenya's MMR remains above SDG targets of 70 maternal deaths per 100,000 live births (UN, 2020)

Kenyan health system have designated community level primary care facilities, which are often run by trained nurses/midwives or clinical officers who offer skilled birth services and refer appropriately women with complications to hospitals categorized as referral hospitals (MOH-Kenya, 2013a). The referral strategy targets to improve efficiency and as a result, health service coverage expansion in systems that experiences health workforce and resource shortages (Koblinsky M, 2006). Despite the low levels of health spending at 7.0 percent of budget in 2017/18, through universal health coverage, there is a strong focus on lower level tiers networked with higher level tiers of health facilities through the government enacting two policies that targeted to increase access to basic health services and reduce financial barriers (MOH, 2014), (MOH, 2016).

Kenya household health expenditure and utilization survey (KHHEUS) found that bypassing nearest outpatient facilities is mainly motivated by a quest for a higher

quality of care, with “medicine unavailable” (21%) as the major reason (MOH, Dec 2014). A population-based study conducted over a decade ago in Kenya on antenatal care, and immunization utilization found that more than fifty percent of survey respondents bypassed first-level facilities hence self-referring to higher-level health centres and hospitals (Audo MO, 2005).

In Marsabit County health service delivery is offered in a hierarchical system which consist of 5 levels. Level I consist of community units, each staffed by volunteer community health workers that mans a collection of households. Level I and II, are designated as the primary entry point of preventive and curative care, including uncomplicated delivery while level IV, in addition to providing coordination services to level 1, and II, offer specialized services. Offering a range of curative services are secondary referral facilities classified as Level IV and Level V facilities at county level. (MOH , 2014). Access to health care is a major concern for the county residents as the health facilities are inadequate in number and coverage (Marsabit CIDP, 2017).

The decision by women about choice of referral facility to access delivery, which are both influenced by individual, socio economic, and health system characteristics and in turn affects utilization of nearby dispensaries and health centres for childbirth in the study setting is not yet explored.

To improve maternal health and reduce mortality among pregnant women, barriers that limit access to quality maternal health services need to be identified and addressed at both societal and health system level. “The right to the highest attainable standard of health in a hierarchical system can be possible only through an effective heath referral system.” (MOH, 2014b). Referral mechanism system strengthening and improvement of linkages between the various levels of the facility are key to such improvements (UNICEF:, 2018). Referral system is a measure of the governments’ ability to manage all contributors to referral cycle and it similarly reflects the overall functioning of the health care system (Giovine, Ostrowski C., 2010). Better health outcomes for both maternal and infant contributing to the attainment of the SDGs requires adequate accessibility to antenatal care (ANC), skilled birth deliveries, and post-natal care (PNC) (Campbell, 2006).

Giving referral to women is determined by a health professional review. The referral decision's appropriateness depend on how skilled is the health staff providing referral, tools that are available to offer diagnostics and a specialized health facility in addition to quality of care in that referral facility (Jahn A, 2001). It is essential to refer women considered to have high-risk pregnancies and obstetric complications to ensure they access timely and appropriate care and appropriate utilization of referral system during pregnancy can lead to a meaningful reduction in maternal and newborn morbidity and death (Andrea B. Pembe, 2017).

Inappropriate referral such as when women bypass nearest/link health facilities to seek care at higher level facilities that is also known as self-referral, suggests non-compliance to and inadequacies of the designated referral guidelines. This in turn effects health system ability in providing maternal health service in terms of human resource. At the implementation level, the perception among caretakers that lower-level facilities offer inadequate quality services; referral decisions are delayed, even in urgent cases (Mulaki, May 2019). Higher prevalence of bypassing of lower level of care to referral hospitals is attributed to higher sophistication of the referral hospitals as shown by studies from African countries. For example, as high as 82% of maternity hospitals users are self-referral, this is irrespective of how serious they perceive the seriousness of their medical complaint (Murray, 2006). People's preference for a particular higher level health care facility can be expressed through the extent of bypassing of certain nearby primary health facilities and high rates depicts lack of achievement of health services planned coverage and inefficiency of health system (Leonard KL., 2002).

The aim of this facility-based study was to determine the extent of self-referrals and explore factors associated with self-referral among women seeking skilled birth attendance services in selected public hospitals in Marsabit County.

1.2 Problem Statement

Kenya has identified the need for referral structure and system strengthening as stipulated in the policy document (Kenya Health Policy 2012–2030), and strategic plan (Kenya Health Sector Strategic and Investment Plan KHSSP 2012–2018). The

policies aims to improve efficiency in the health system by pursuing the principles of primary health care and underscoring an improved patient outcomes.

In addition, the Referral Strategy has categorized referral into four with an ultimate goal of achieving universal health coverage (UHC) and vision 2030. The strategy visions a stronger referral system guided by a designated referral strategy to enable appropriate use of the limited available resources while offering quality health needs support to caretakers. However, this important framework underscores a critical gap that is lack of bypass policy.

Over the past decade, there has been strong appeal to promote institutional births, both at the national and county level, which has resulted into significant rise in such births for instance 43% in 2009 to 62% in 2014 (UNICEF, 2020), but the proportion of self-referral on this finding is not established. Given the approaches at improving facility delivery rates such as abolishment of user-fee policies, there was need for evidence of approaches effectiveness that can show equitable distribution and ensure quality of care do not suffer as a result.

The need to improve efficiency (MOH, 2012), and monitor the general knowledge about challenges to referral, the gap about what influences these challenges has not been fully addressed (UNHCR, 2009). An analysis of ANC attendance and records of hospital deliveries data for Marsabit County, between the periods of August 2018 to June 2019, established that approximately 78% of women who delivered in the two referral hospitals were not booked to deliver in those facilities (KHIS, 2019).

In spite of self-referral implication on delivery of maternal healthcare services, studies targeting the phenomenon of self-referral lack in Marsabit County. Therefore, it was crucial determining the extent of self-referral, as well as assessing the factors influencing such self-referral to improving maternal health services delivery and utilization

1.3 Justification

The purpose of this study is to explore self-referral among women seeking skilled birth attendance at the selected referral hospital at the study setting. While self-referral have been studied in other contexts such as in the broad hospital setup targeting outpatient department with conclusion implicating males to have increased

odds of self-referral than female (Rajman A., 2015), there is limited knowledge about self-referral focusing on women seeking skilled birth attendance in the study area. As Kenya healthcare system faces increased threats regarding shortage of human resource, utmost optimization of both utilization and access of health services at all levels with compliance to referral pathway is necessary.

The findings of this study may provide insight into the proportion and determinants of self-referral by understanding individual perception and preferences to referral facilities. Understanding of women perception to referral hospital has benefits to the leadership of the healthcare system because the phenomenon have potential impact to underutilization of primary health facilities, and overburdening the referral facilities. The finding of this study have the potential of being used to raise awareness of women concerning service seeking practice particularly for skilled birth services, and provide information for the health management team to strengthen efficiency of services. The results of the study is important in giving direction to policy makers on the efficiency and functionality of the referral strategy.

The hospitals together with Marsabit County health management to utilize the findings and understand the extent of in/appropriate utilization of the facilities, as well as resource use as compared to allocation. The results will also influence planning and alignment of resources in relation to service delivery; and to design referral strategies in the County.

1.4 Research Objective

1.4.1 General objective

To explore self-referrals among women seeking skilled birth attendance at the selected public health hospitals in Marsabit County.

1.4.2 Specific objectives

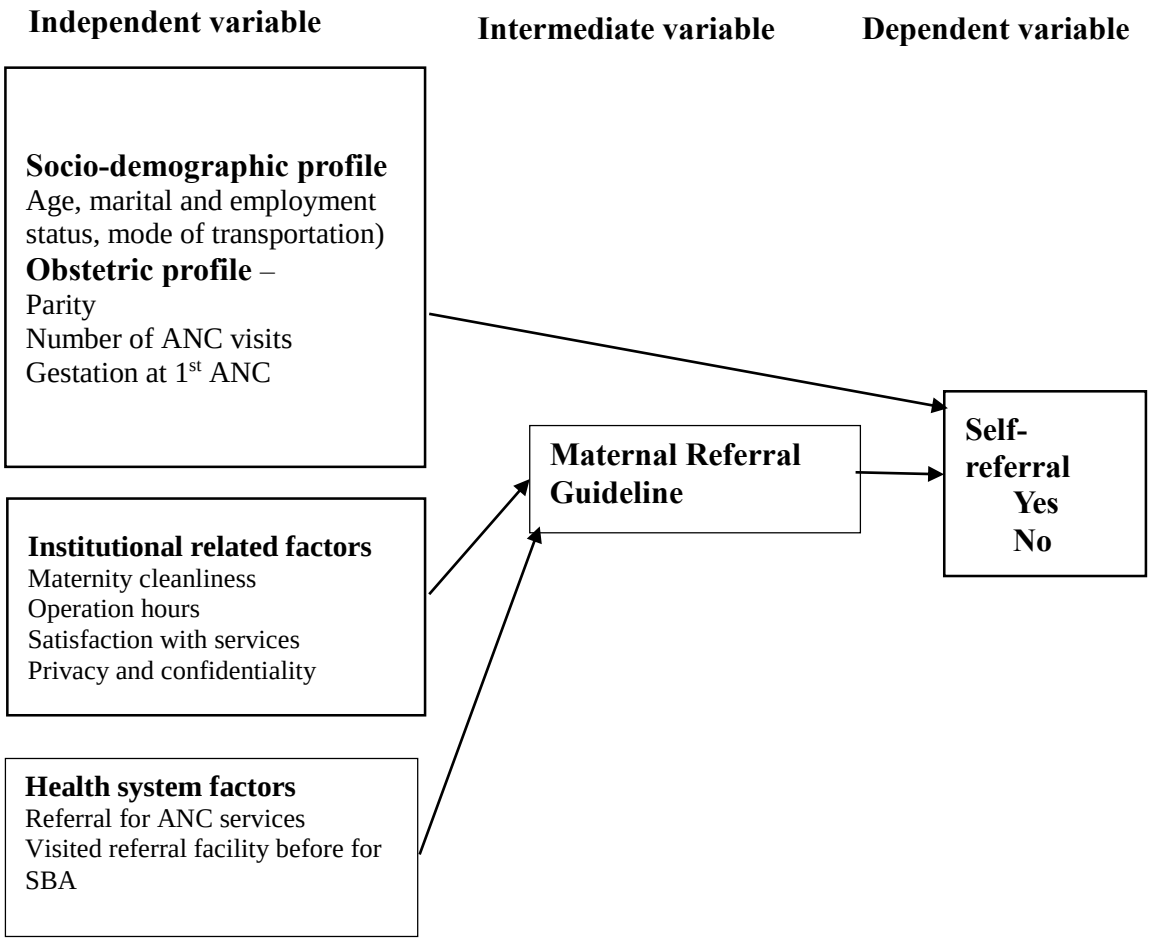
i. To determine the proportion of self-referral among women seeking skilled birth attendance in Marsabit County
ii. To determine socio-demographic characteristics associated with self-referral among women seeking skilled birth attendance in Marsabit County.

iii. To identify health-system related factors associated with self-referrals among women seeking skilled birth attendance in Marsabit County.
iv. To determine health institutional related factors associated with self-referrals among women seeking skilled birth attendance in Marsabit County.

1.4.3 Research Questions

i. What is the proportion of self-referral among women seeking skilled birth attendance in Marsabit County
ii. What are the socio-demographic characteristics associated with self-referral among women seeking skilled birth attendance in Marsabit County.
iii. What are the health-system related factors associated with self-referrals among women seeking skilled birth attendance in Marsabit County.
iv. What are the health institutional related factors associated with self-referrals among women seeking skilled birth attendance in Marsabit County.

1.5 Conceptual/Theoretical Framework



Source: (Adopted from MEASURE Evaluation, 2004)

Figure 1.1: Conceptual framework

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Over four decades since the Alma Ata declaration in 1978 which expressed on action by all governments to promote community participation at the primary healthcare and protect health for all people. A functional referral systems and structure is considered an important requisites of a health system. In most countries world over, the design of health care referral systems are structured in a manner so as to encourage the use of lower level facilities by caretakers before being referred if necessary, to a more specialized level of care in the hierarchy. The design is to minimize cost implication on caretakers and the institution use of resources (Mwabu, 2006). This has not been the case in several countries, whereby lower level facilities are bypassed and caretakers prefer to refer directly to the referral hospital with medical conditions, which can be managed at primary health facilities (Bapna, 2001). That has inflicted an unnecessary increase in workload at the referral hospital and eventually elevating the overall cost of providing health.

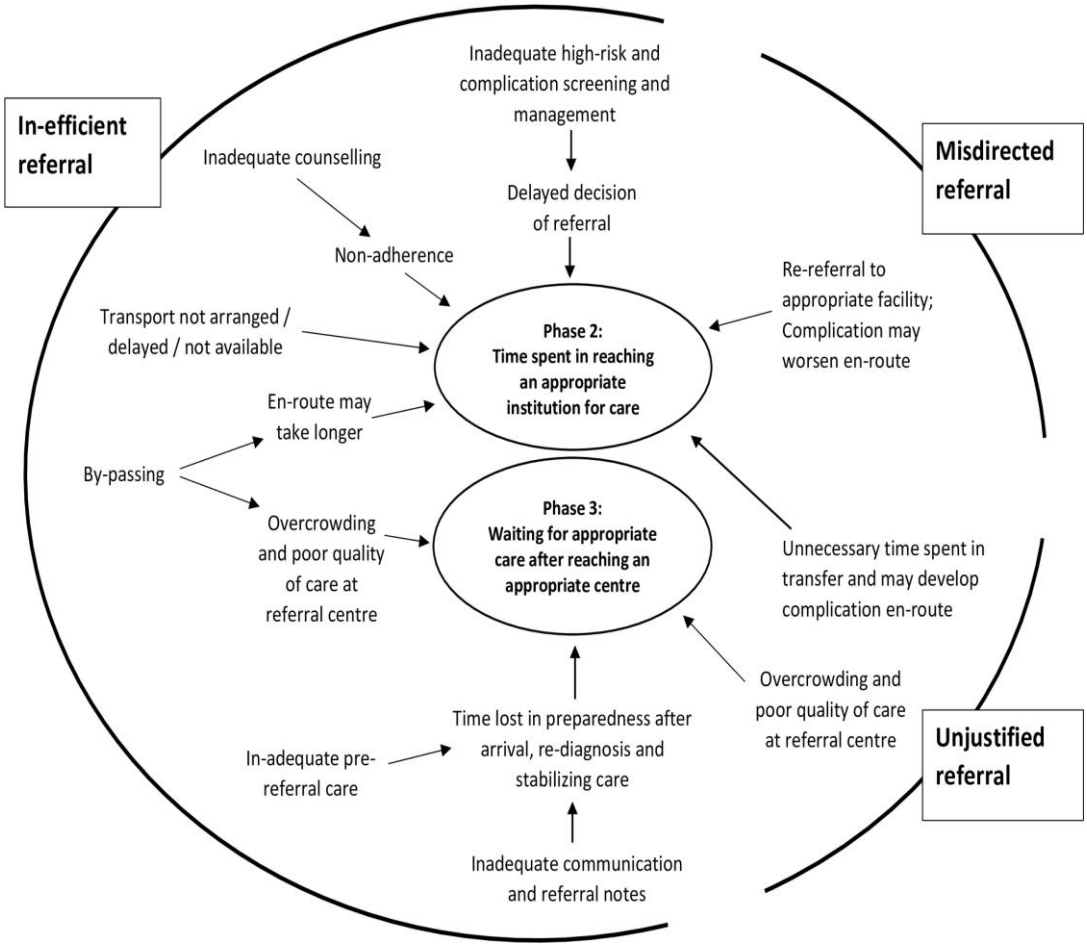
The Constitution of Kenya (2010) is supportive of reproductive and maternal health as highlighted in Article 43(1,a) gives every person the "right to the highest attainable standard of health, which includes the right to health care services, including reproductive health care". It also provides that a person have the right to emergency treatment (Article 43(2). In addition, it provides for a devolved system of governance, which gives the mandate of healthcare provision to county governments, hence allowing an opportunity to every devolved government to address historical inequities in access to health services. Furthermore, the declaration made by President Uhuru Kenyatta in 2013, abolished user fee for maternity services in government hospitals and is further strengthened by the launch of Beyond Zero Campaign in January 2014, to promote maternal health. The introduction of free maternity services led to an estimated 10 percent increase in deliveries within health facilities across the country, where as some counties recorded 50% increase immediately following the announcement.

Even though with the existence of enabling environment created by policy formulation and political backing, access to maternal health care services has remained a challenge, including inadequate access to ANC and skilled birth attendance (Gacheri, July 2017). Many women still live far distances from health facilities and thus reaching skilled delivery services remain a challenge in accessing quality care. Women living in rural and hard-to-reach areas, those from poor households and those with little or no education have disproportionately worse access to these life-saving maternal health services (Kowalewski, 2000).

The type of health care services accessed and the time of access is influenced by the referral system in its health care system and its adequacy in functionality (MOH-Kenya, 2013a). To achieve successful health service referral, there should be consideration on cost implication of services and supplies, facilities access geographically, accessibility of referral services, and availability of trained staff to provide quality care. The caretaker's ability to accept referral advice, honor referral and utilize referral care is often the major intricate aspect a referral endorsement. Several factors determine the level of compliance and acceptance of referral, including referral need such as the severity of disease, cost and overall experience of an individual with the initiating facility.

According to health system design to minimize cost of care, health care staffs are advised to recommend and encourage caretakers to seek services at primary level care facilities and if necessary an appropriate referral made to the higher level facilities (Mwabu, 2006). Caretakers have a tendency of initially seeking care direct at the referral facility bypassing the lower level facilities for illnesses that are manageable at the primary level facilities (Bapna, 2001). Thus, caretakers often in this case end up overburdening the referral facility, which in other ways has higher cost implication on service delivery and caretaker.

According to the figure below, it shows the components of referral decisions at institution level and pre-referral management, with highlights on by-passing that is categorized under in-efficient referral, contributing to phases of delays in labour and delivery care according to my review.



Source (Singh S, 2016)

Figure 2.1: By-passing – a contribution to phases of delays in access to emergency obstetric care

Self-referral is whereby caretakers present for healthcare services at higher-level hospitals on their own decision this is as opposed to them getting referral onwards only after going to a primary level care centre. An 'early complication in pregnancy' - "is a medical complication that developed because of pregnancy or a medical condition complicated by pregnancy". (CDC, 2016). Community health-worker referral on the other hand refers to community health worker refers client to higher-level health facility.

Through the decentralized system of governance, management of referral system and health services provision is a function of the decentralized government. To ensure effectiveness and efficiency of health referral system with improved health indicators, County systems are expected to have stronger referral system that can adapt to the specific need of each setup (Health, 2013). The identified critical priority

investment areas for the referral system include, capacity building of the health managers on their roles in referral, and standardizing of referral guidelines, tools and information system at all health care delivery levels KHSSP 2012–2018. Building an efficient and effective referral structure through adoption of guidelines and standard documentation tools that is able to respond to the needs of the vulnerable populations.

2.2 Referral categories

Referral is the movement of caretakers from primary level facilities to higher/referral facilities whether or not through health provider. Referral for maternal care is categorized into three according to (Jahn, 2001); "(1) institutional or self, (2) ante-natal, delivery or postnatal referral, and (3) elective or emergency referrals". Access to services provided by specialized/higher level facility can only be achieve through implementation of referral system (WHO., 1994). To improve and maintain an appropriate and efficient referral system, an assessment of obstacles to successful referral network and their relative significance are necessary. Key to functionality of a referral system include effective supervision structure, minimizing cost of referral, structured information system monitoring and evaluation capacity and accountability.

Health system in Kenya has been organized into six levels of care (level 1-6). The six levels are then arranged into a block of four tiers of care, (tier I – IV) according to the scope of services offered and their complexity (MOH-Kenya, 2013a). Community Units (CU) comprises the first tier/level of health system.

2.3 Factors related to non-adherence to maternal referral pathways

Decentralized system of providing health care services can benefit from referral pathways in general especially after making essential resources and improving capacities at every level of referral structure. Ensuring ambulances, short-wave radio gadgets, equipped health facilities are available, can lead to improvement and ability of the referral system that can handle pregnancy complication in a resource-limited country as was shown by a study in Malawi (Kongnyuy, 2008)

In Ethiopia, a study showed that referral hospital accessibility by caretakers is inversely proportional to the distance from their area of residence (Hsia RY, 2012), indicating that transportation is as a key challenge to referral system. WHO/UNICEF describes the link between transport and health to be inextricable, whereby basic health care services accessibility get affected by inadequate transport system. Population located far away from healthcare facilities affects their ability to use health services as shown by a study done in Kenya (Kariri J. K., 2017). Health systems planning in most developing countries have never considered adequate resources allocation to referral facilities.

A study by (Omaha, 1998) found out that, it is very important for both the health users and the health providers to have knowledge of the referral structure and guideline as this will eventually enable referral system effectiveness and accessibility geographically. Referral pathways use and non-use are influenced by a variety of aspects categorized as health professional related factors, patient-related, or health systems related according to (Murray, 2006).

Health referral systems development effectiveness is generally anchored on leadership (Gilson, 2011) which is clearly articulated as one of the pillar in the WHOs framework for action (Curry, 2012). Most developing countries documents weak health information systems, longer referral duration (Peterson, 2004), noncompliance with referral systems (Ilboudo, 2011), increasing number of self-referrals. Other challenges include poorly equipped referral facilities (Hsia, 2012) and inadequate transport support for referrals (Hussein, 2012).

Referral systems which are organized are characterized by clear protocols for management whereby low risks conditions or otherwise conditions that require referrals are determined, are managed in lower level facilities while complicated and more difficult clinical conditions are managed by higher hospitals. The guideline needs to allocate responsibilities for each tier of care and a dedicated transport system. (MOH, October 2013)

2.3.1 Health systems related factors

Inappropriate referrals in most cases are as a result of lack of or inadequacy of health system. These include health care providers shortages, in specific lack of equipment

and materials, lack of specialized services and lack of infrastructure at lower level facilities (such as level 1 and 2 hospitals). These lacks contributes to non-compliance with the referral system and bypassing of lower levels. (Sharan M. A., 2010.) Regions in Namibia with appropriate levels of care health facilities but were inaccessible were shown to contribute to higher proportion of self-referral to regions with more ease of geographical accessibility (Low, 2001). Likewise, because of a shortage of doctors, patients directly self-referred themselves to hospitals instead of first seeking care at health centers as found out by (Sharan M. A., 2010), despite availability of quality healthcare services, and presence of drugs and supplies at health centers in Eritrea.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Introduction

This chapter describes the research design, variables, sampling techniques, sample size determination, study location and target population, inclusion and exclusion criteria, research instrument, validity and reliability of the study, data collection techniques, data analysis and ethical consideration.

3.2 Research design

A descriptive cross-sectional study with systematic sampling design. Questionnaire-administered interview was used together with review of maternity admission records of obstetric profiles for women who delivered in the maternity unit of the selected two referral hospitals in Marsabit County.

3.3 Study Variables

3.3.1 Independent variables

The following independent variables were included in this study; socio-demographic characteristics - age, marital status, employment status; mode of transportation; obstetric profile - parity, ANC attendance, health-system factors – referral for ANC services, visited referral facility before. institution related factors - maternity cleanliness, operation hours, satisfaction with privacy and confidentiality of services.

3.3.2 Dependent variable

Self-referral among women seeking skilled birth attendance was the the dependent variable for this study.

3.4 Location of the study

The study was conducted in Marsabit County, in Saku Sub-County and Moyale Sub-County at Marsabit County Referral hospital maternity and Moyale sub-county referral hospital maternity respectively.

3.5 Study population

The study population was all women who delivered at the maternity of the two selected hospitals in Marasabit County within the period of 1st October – 31 October, 2019.

3.5.1 Inclusion and exclusion criteria

This study included all women seeking childbirth services and were 15 years and above who gave either written or verbal consent to participate in the study. Those women who had not been previously booked to deliver or referred with referral exhibit, the referral facilities selected are not their nearest/link facility, unconscious (unable to talk) and who refused to consent to participate were excluded from participation.

3.6 Sampling technique and sample size

3.6.1 Sample size determination

Fishers formula (Mugenda 2003) was used. To estimate a proportion to within ±5% of the true value with 95% confidence interval, the sample size(n) was calculated as follows (for a population more than 10,000):

$$\mathrm{n} = \frac{z^2\, pq}{d^2}$$

n= sample size

z = normal deviate (1.96) = 95% confidence interval

p = proportion of target population estimated to have particular characteristics

q = 1 – p

d = degree of accuracy = 0.05

therefore at 95% confidence level and ±5 percentage precision and a population proportion of 50%, the sample size was:

$$\frac{(1.96\ x\ 1.96)x0.5x(1-0.5)}{0.05x0.05}$$

n = 384 (desired sample in a population greater than 10000).

To get the desired sample size(nf) from a population of 279, the following formulae was used:

$$\text{Nf} = \frac{n}{1 + ({}^{(n-1)}/_{N})}$$

N = 279

n = 384

$$\text{nf} = \frac{384}{1+({}^{384}/_{279})}$$

$$\text{nf} = \frac{384}{1+1.376}$$

$$\text{nf} = \frac{384}{2.376}$$

nf = 161 (women seeking skilled birth attendance services)

Additional 10% of the sample size included in consideration of non-response i.e. (161+17)=177

3.6.2 Sampling technique

The sampling frame was generated from list of all women who registered at the maternity registry department of the two selected hospitals within the period of 1st

October to 31st October 2019. An average number of combined workload of the women seeking skilled birth services was calculated on the previous three months (July, August, and September 2019) to arrive at 279 women, of which proportionate sampling was done. Systematic sampling was used to select the women for interview. Every second woman was systematically selected to participate and starting point number was randomly selected in this study.

3.7 Data collection tools/instrument

Pre-developed questionnaire (appendix 2) administered by trained research assistants was use to collect data from the selected women. This questionnaire was used together with a pre-developed data extraction tool (last section of questionnaire page 4, Q29-33) to obtain other health information on woman admission diagnosis records.

3.7.1 Pre testing

Pretesting involved administering of the same questionnaires and data extraction tool in a separate referral hospital with similar characteristics and that was identified as Laisamis sub-County hospital in Marsabit County. The pretesting involved 17 women at the pretesting site.

3.7.2 Validity

The validity of the research instrument was established through discussing with the supervisor, to evaluate how well data collection and extraction would be achieved. This ensured that the instrument was relevant to the research objectives and questions with ambiguities detected corrected.

3.7.3 Reliability

Test - retest was used to determine the reliability of the extraction tool. This was carried out at Laisamis referral hospital whereby 17 women were interviewed and their records reviewed. A correlation coefficient was calculated to indicate the relationship between two set of split data.

3.8 Data analysis

SPSS version 22.0 software was used for data analysis. All the data were summarized using descriptive statistics. Mean and standard deviation were used to summarize numerical continuous data for age. Categorical data such as marital status, employment status, type of referrals, and means of transport to access the hospital were summarized in proportions. Differences in both numerical and categorical variables between self-referred and non-self-referred women was calculated using the chi-square test to determine significance of association. The inferential statistics were tested at 95% confidence interval with p-value of ≤ 0.05 being significant

3.9 Logistical and ethical considerations

Study approval was obtained from Kenyatta University graduate school (appendix 4). Ethical clearance was obtained from Kenyatta University Ethics Review Committee (appendix 5). Research permit was given from (NACOSTI) National Commission for Science, Technology and innovation (appendix 6). Further approvals were sought from ethics and review committee in Marsabit County. The research assistants explained to the respondents about the research and that the study was for academic purposes only and on top of that, informed consent was sought prior to administering of the questionnaire, respondents were assured of privacy and confidentiality of their responses.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter describes the interpretation and explanation of the findings of the study in line with research questions and objectives.

The results are described under the following sub-domains; the proportion of self-referral, socio demographic profile of the study participants, health system, and institutional related factors associated with self-referral.

4.2 Response rate

A total of 161 women seeking skilled birth attendance at the selected public health hospitals responded. The response rate of 91% achieved was considered adequate for generalization of findings for descriptive studies according to threshold recommended by Mugenda and Mugenda (2010), which is at 70% threshold.

Table 4.1: Response rate among participants from the selected hospitals

Referral hospital	Proportionate sample	Number achieved	Response rate %
Marsabit County Referral hospital	69	69	**100**
Moyale Sub County referral hospital	108	92	**85**
Total	**177**	**161**	**91**

4.3 Socio-demographic characteristics of respondents

Table 4.2 summarizes the socio demographic characteristics of the study participants. Of the 161 respondents who were interviewed from the two selected public hospitals, mean age of the participants was 25.4, SD 5.6.

The majority of the participants 126 (78.3%) were below 30years of age, 145 (90.1%) married, 123 (76.4%) unemployed, 124 (77.5%) used public or personal transport to travel to hospital to seek skilled birth delivery.

Table 4.2: Socio-demographic characteristics of respondents

Particulars		**n**	**%**
Age (years)	≤19	27	16.8
	20-24	45	28
	25-29	54	33.5
	≥30	35	21.7
Marital status	Single	14	8.7
	Married	145	90.1
	Widowed	2	1.2
Employment status	Employed	38	23.6
	Unemployed	123	76.4
Means of transport (N=160)	Walking on foot	21	13.1
	Public or personal transport means	124	77.5
	Facility/Community referral transport	15	9.4
Parity	0	51	31.7
	1	30	18.6
	2	33	20.5
	3	15	9.3
	4	14	8.7
	≥5	18	11.2

4.4 Proportion of self-referral

Figure 2.3 summarizes the proportion of self-referral for skilled birth attendance in the study area.

The overall proportion of self-referral among women seeking skilled birth attendance in the study area was 76 (47.2%).

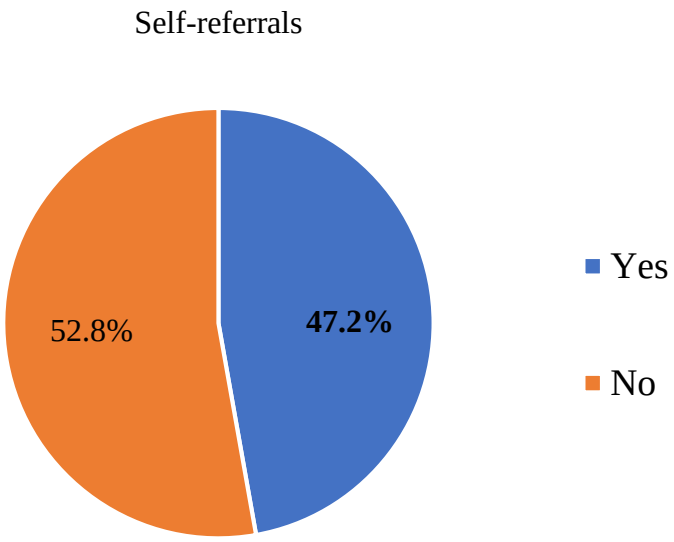


Figure 2.3: Proportion of self-referral among women

4.5 Socio demographic factors associated with self-referral among respondents

Table 4.3 provide the summary of the analysis of association between socio-demographic factors and self-referral. The result showed that the association between socio-demographic characteristics and self-referral was significant among; age χ^2 (3, N=161) = 12.89, p = .005, means of transport χ^2 (2, N = 161) = 15.72, p = <.001. There was no significant association between marital status, employment status and parity with self-referral as shown in Table 4.3.

Table 4.3: Association between socio demographic factors and self-referral

		Self-referral				
		Yes		**No**		
		n	**%**	**n**	**%**	***p*-value**
Age (years)	≤ 19	11	14.5	16	18.8	**0.005**
	20-24	30	39.5	15	17.6	χ^2 =12.899
	25-29	17	22.4	37	43.5	df=3
	≥ 30	18	23.7	17	20.0	
Marital status	Single	7	9.2	7	8.2	**0.973**
	Married	68	89.5	77	90.6	χ^2 =0.056
	Widowed	1	1.3	1	1.2	df=2
Employment status	Employed	20	26.3	18	21.2	**0.28[a]**
	Unemployed	56	73.7	67	78.8	χ^2 =0.0588 df=1
Means of transport (N=160)	Walking on foot	6	8.0	15	17.6	**<0.001**
	Public/personal transport	68	90.7	56	65.9	χ^2 =15.722 df=2
	Facility/community referral transport	1	1.3	14	16.5	
Parity	0	23	30.3	28	32.9	**0.732**
	1	14	18.4	16	18.8	χ^2 =2.791
	2	17	22.4	16	18.8	
	3	6	7.9	9	10.6	df=5
	4	9	11.8	5	5.9	
	5+	7	9.2	11	12.9	

[a]Fisher's exact test

4.6 Institutional factors associated with self-referral

Table 4.4 summarizes institutional related factors towards self-referral among the respondents. In relation to the aspect of perceived quality of maternity services offered, majority 106 (77.4%) agreed the facilities provided delivery services everyday 24-hours a day, 91 (66.1%) agreed on cleanliness of labour ward. Majority also agreed that there was adequate privacy and confidentiality of delivery services offered at 99 (72.3%)

Table 4.4: Perception of respondents on institutional factors toward self-referral

Particulars		**n**	**%**
24-hours delivery services (N=137)	Neutral	31	22.6
	Agree	106	77.4
	Disagree	2	1.5
Cleanliness of maternity and labour ward (N=136)	Neutral	43	31.6
	Agree	91	66.9
Privacy and confidentiality of delivery services (N=137)	Neutral	38	27.7
	Agree	99	72.3

4.6.1 Institutional factors associated with self-referral among the respondents

The result showed that perceived privacy and confidentiality of services offered p = .044 was significantly associated with self-referral. There was no association between other aspects such as perceived cleanliness of the labour ward, and 24hrs of delivery services as shown in Table 4.5 below.

Table 4.5: Institutional factors associated with self-referral among women

		Self-referral				
		Yes		No		
		n	%	n	%	*p*-value
24hrs of service delivery (N=137)	Neutral	20	26.3	11	18.0	**0.172[a]**
	Agree	56	73.7	50	82.0	χ^2 =1.316, df =1
	Disagree	1	1.3	1	1.6	**0.696**
Clean maternity (N=136)	Neutral	26	34.7	17	27.9	χ^2 =0.725, df =2
	Agree	48	64.0	43	70.5	
Privacy and confidentiality in services (N=137)	Neutral	26	34.2	12	19.7	**0.044[a]**
	Agree	50	65.8	49	80.3	χ^2 =3.542, df=1

[a]Fisher's exact test

4.7 Health system factors associated with self-referral

Table 4.6 summarizes the proportion of health system factors among respondents. Of the 161, slightly above average 92 (57.1%) had visited the referral hospital previously for delivery services. However, majority 117 (72.7%) reported having had been referred for other ANC services during the period they attended clinics.

Table 4.6: Health system factors considered among women

Particulars		n	%
Visited referral facility before for delivery	Yes	92	57.1
	No	69	42.9
Referred for other ANC services	Yes	44	27.3
	No	117	72.7

4.7.1 Health system factors associated with self-referral among respondents

The study results showed that, women who were referred for other ANC services *p* = .021, and having visited the referral facility before for delivery *p* = .017 were significantly associated with self-referral as shown in the table 4.7.

Table 4.7: Health system factors associated with self-referral among women

		Self-referral				
		Yes		No		
		n	%	n	%	*p*-value
Referred for ANC services	Yes	27	35.5	17	20.0	**0.021[a]**
	No	49	64.5	68	80.0	χ^2 =4.840, df=1
Visited facility before	Yes	51	67.1	41	48.2	**0.017[a]**
	No	25	32.9	44	51.8	χ^2 =5.798, df=1

[a]Fisher's exact test

4.8 Factors influencing self-referral

Table 4.8 summarizes multivariate analysis of the significantly associated factors with self-referral. Test of association between sociodemographic, institutional related factors and health system factors, and self-referral was calculated. The variable that had a significant $p \leq 0.05$ association with self-referral were all included into the multivariate analysis.

The study established that the odds of self-referral to higher level health facilities were more likely among women; aged 25-30 (AOR 5.174, CI 1.015-26.365, *p*-value 0.048), referred for other ANC services (AOR 4.057, CI 1.405 - 11.720, *p*-value 0.010), who visited the referral facility before for delivery (AOR 5.395, CI 1,411-20.628, *p*-value 0.014), and less likely among women who perceived availability of privacy and confidentiality of services (AOR 0.370, CI 0.138 - 0.990, *p*-value 0.048) at the referral facilities.

Table 4.8: Determinants of self-referral among women

				95% Lower	C.I. Upper
		***p*-Value**	**AOR**		
Age in Years	≤19	Referent			
	20-24	0.243	0.442	0.112	1.740
	25-29	**0.048**	5.174	1.015	26.365
	≥30	0.251	2.938	0.467	18.471
Means of transport	Walking	Referent			
	Public/private transport	0.888	0.808	0.042	15.708
	Facility/community referral	0.239	0.187	0.011	3.043
Privacy and	Neutral	Referent			
confidentiality	Agree	**0.048**	0.370	0.138	0.990
Visited Facility before	No	Referent			
	Yes	**0.014**	5.395	1.411	20.628
Referred for ANC	No	Referent			
services	Yes	**0.010**	4.057	1.405	11.720

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides discussion and conclusions of the study findings using the study specific objectives while making inferences in comparison with existing literature from similar study area.

5.2 Discussion

The study showed that 47.2% of women self-referred themselves to the referral health facilities for skilled birth attendance services in Marsabit County, thus implies that a significant number of women bypass their designated nearest primary health facilities without getting through any referral process. The proportion was similar to the ones reported from Pwani Tanzania 40% (Kruk M, 2014;), but slightly above the findings in India 37.7% women bypassed their nearest facility for childbirth (Mariano S, 2016). Studies have shown that patients lack of knowledge about referral, such as lack of understanding on hierarchy, capacities and limitations of each health care facility level (Afari H., 2014), and lack of awareness why patients require not to practice self-referral (Dlakavu WF, 2013) are both limitation to adherence to referral system. Conversely, our finding is significantly lower than those reported in Nepal, Nigeria and in South Africa at the George Provincial hospital that established a self-referral rate at 70% (Karkee R, 2015), 93% (Akande TM, 2004), 88.9% (Marszalek J, 2006), (Becker J, 2012) respectively. These differences could be attributed to the differences in the organization of health system and study designs. Non-adherence with referral pathways can have multiple implications on healthcare system in its totality and specifically for service delivery. It was also shown by the study that age was significantly associated with self-referral. Women aged between 25-29 years in the study setting were more likely to self-refer hence bypass their nearest primary health facilities in search for the same services at the referral hospitals. Similar result from a study conducted in Limpopo supported the inference that younger individuals aged between 20-39 bypass lower level of care more (59%) frequently (Visser CA, 2015). This finding is also consistent with (Magoro S.M., 2015), who also found out that the age group 21-30

years was the largest 54.7% of the other age groups among self-referrals to Dilokong Hospital South Africa. The study findings possibly attributes that women of older age likely feel they have limited risk during child birth as a result of their increased experience with pregnancy and delivery as was also found out by the Burkina Faso study (Pierre Ilboudo T, 2011). This study did not find any significant association between women status of employment and self-referral, however, there was significant association between self-referral and means of transport. This is in contradiction to a Kenyan study that attributed patients from higher socio-economic groups infrequently utilize higher level of care (Wambui MF, 2013). This difference is likely due to limited access to private health facilities at our study setting as compared to the latter study, which was conducted in settings with higher access to private health services. Similarly, this study is in concurrence with the result of a study in India that showed hired transport to reach the health facility increased the odds of bypassing nearest health facility (Sabde Y. et al, 2018).

On health system related factors, the study established that, women being referred for other ANC services, and having visited the referral facility before for delivery were associated to self-referral. A Tanzania study gave a similar findings that established that the main reason given for self-referral was lack of diagnostics at primary health care facilities (Kahabuka C, 2011). The first contact experience that patient get with health care providers does influence their perception of quality of services given and will determine whether the patient will subsequently switch or comply with another provider (Mugisha F, 2004), (Floyd L., 2014). In addition, (Audo MO, 2005), found out in his study that the reason women bypass municipal facilities in Kenya were mostly due to poor care (37%), lack of laboratory services (21.2%), and lack of drugs (30.4%); and this likely explains the reason why women would prefer higher level facilities due to previous experience and perception of better quality. Given the fact that primary health facilities refer for some diagnostics such as laboratory test, women sticking with their initial facility preferences together with the biased perception of better quality services at the referral hospitals increases the likelihood of self-referral and therefore need to change the “status quo” whereby women stick to their previous preferences.

On institutional related factors, the study showed that an element of perceived quality of services that is privacy and confidentiality of services offered were significantly associated with self-referral. This finding is similar to those established in a study investigating referral patterns in Namibia, which found out that patient sought treatment outside of their district for better quality of care (Low A., 2001). Other studies have reported a link between self-referral (bypassing) and patients' perceived quality of care (Kruk M, 2014;), (Karkee R, 2015), (Kruk ME, 2010).

The study established that the odds of self-referral to higher level health facilities were increased among women aged 25-29 years, referred for other ANC services, who visited the referral facility before for delivery, and decreased among women who perceived privacy and confidentiality of services.

5.3 Conclusion

This study finding have important implication for health system in the study area.

The study established that 47.2% of women seeking skilled birth services in the selected hospitals practiced self-referral in Marsabit County.

The results revealed that age, and means of transport was significantly associated with self-referral.

The study concludes that health system factors associated with self-referral included having been referred for ANC services, and having visited referral facility before for delivery.

The study also concludes that institutional related factors privacy and confidentiality of services under the aspect of quality was associated with self-referral.

The main factors that influenced self-referral were; age category 25-30 years, having been referred for ANC diagnostic services, and in addition women having initial experience with services at the referral hospital.

5.4 Recommendation

5.4.1 Recommendation from the study

The following recommendations are made to enhance awareness targeting to reduce self-referral practice revealed by the study and hence strengthen the existing referral pathway specifically for skilled birth attendance in Marsabit County.

Create awareness on the extent of self-referral among facility managers and county health management team in Marsabit County

Create awareness on skilled birth delivery services targeting pregnant women aged between 25 and 29 to reduce self-referral practice

Improve the availability and accessibility of all recommended ANC services through increased funding, and create awareness campaign to change the women biased perception towards referral hospital.

Institute patient oriented approach to address the privacy and confidentiality deficiencies highlighted to encourage women to seek for skilled birth attendance at respective primary level facilities

5.4.2 Recommendation for future study

Future research recommended targeting understanding self-referral and how it is affected by obstetric care functionality of the primary health care facilities.

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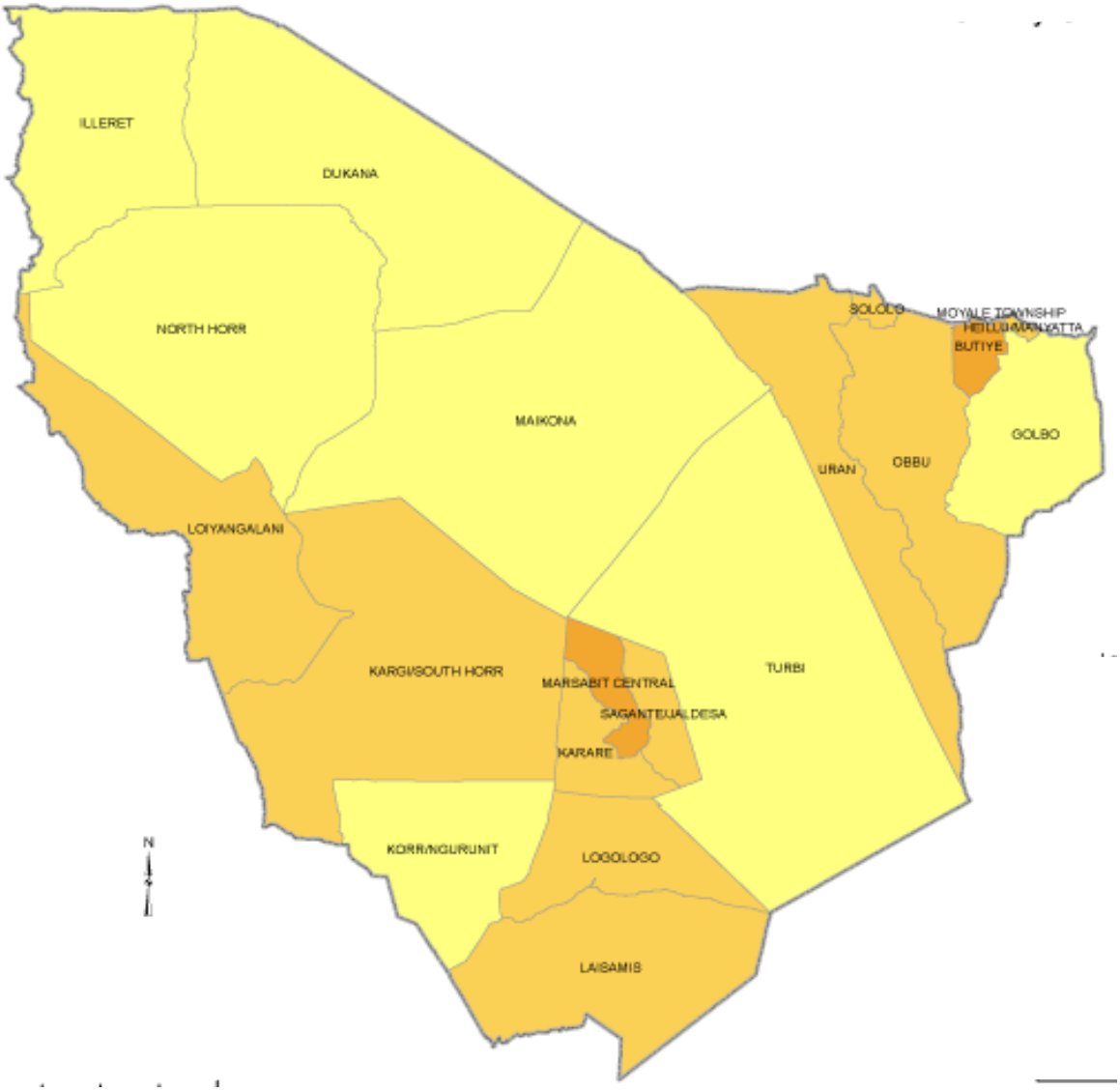
APPENDICES

Appendix I Map of Marsabit County



Appendix II QUESTIONNAIRE AND DATA EXTRACTION TOOL

Referrals among mothers seeking maternity services in Marsabit County, Kenya

Consent Form

Hello. My name is _____. I am working with the Marsabit County health department. We are conducting a survey about maternal health services among mothers attending maternity services in Marsabit County. The information we collect will assist the community and department of health to plan and institute effective measures to improve maternal health services. You are selected for the survey. I would like to ask you some questions that usually take about 15 to 30 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. Your participation is voluntary; however, your participation will be highly appreciated. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

Do I have your permission to continue with this assessment? Yes …….1 No … … 0

Name of nearest/link facility_____ Level a) **I**, b) **II,** c) **III**, d) **IV**

Type of nearest/link facility 1. **Private** 2. **Public** 3. **Mission**

Name of residence/village _____ Ward _____

During ANC

1. For the just concluded pregnancy, where did you attend antenatal care (ANC)?
   1 Did not attend ANC
   2 Primary facility
   3 Current facility (where delivery is sought)
   4 Others specify _____
2. If you attended ANC, how many times did you attend the clinic?
   1. Once 2. Twice 3. Three times 4. Four times
   5. N/A
3. During the period you were attending ANC, were you referred to seek any/some-ANC services/tests elsewhere concerning the pregnancy?
   1 Yes 2 No 3 N/A
4. If **yes** above, who initiated the referral mentioned above?
   1 Self-referral
   2 Health care worker in the facility 4 N/A
   3 Other (Specify) _____
5. What was/were the reason/s for referral mentioned above? (**Tick all that apply)**
   1 Ultra sound
   2 HB

3 Syphilis test
4 Malaria test
5 Blood group
7 Other (Specify) 8 N/A
_____

During delivery

6. Your visit to this facility (current facility) for delivery, is it referral?
   1 Yes 2 No 3 N/A
7. If **yes** above, which type of referral?
   1 Self-referral
   2 Inter-facility referral
   3 Referral from the community
   4 N/A
8. Who initiated the type of referral mentioned above?
   1 Community health assistant/volunteer
   2 Health care worker in primary facility
   3 Health care worker in other facility
   4 Other (Explain) _____
   5 N/A
9. Which is/are the referral document/note used to refer for this service?
   1 No referral document
   2 Mother baby booklet
   3 Standard referral document
   4 Other (Explain) _____
   5 N/A
10. Referral status of the woman
    1. **In labour** 2. **Not in labour** 3. **N/A**
11. What was the means of transport you used to access this facility? (for both non/referred women)
    1 Walking on foot
    2 Vehicle (Public)
    3 Motorcycle
    4 Facility/Referral transport
    5 Taxi Assigned in the community
    6 Other (Specify) _____
    7 N/A
12. Have you ever visited this facility (current facility) for delivery before? (if this is her 2nd and above delivery)
    1 Yes 2 No 3 N/A
13. If **Yes** above, how many times
    1. **1-2** 2. **3-4** 3. **>4**
    4. Other (Specify) _____ 5. N/A
14. How many hours did you have to wait before being seen by a doctor, upon reaching the current facility?
    1 **Within 2hrs** 2 **Between 2-4hrs** 3 **>4hrs**
15. Respond to the following statements using the options provided

		Disagree	Not Sure	Agree	N/A
i.	During ANC visit, I was counselled adequately on danger signs and indications/process for referral				
ii.	It is easy to access facility referral transport from your nearest health facility to this hospital				
iii.	This hospital provide satisfactory quality of delivery services to women				
iv.	I chose this hospital because it provides delivery services every day, 24 hours				
v.	I choose this hospital because the maternity department is clean in terms of labour ward and post-natal ward				
vi.	I chose this facility because health staff in this maternity department provide adequate privacy and confidentiality to women who deliver here and their medical information				

Data from maternity admission file and Mother baby booklet

16. **Age** _____ **years**

17. **Marital status**

    1. **Single** 2. **Married** 3. **Widowed**
    4. Other (Specify) _____

18. **Employment status / Occupation**

    1. **Employed** 2. **Unemployed** 3. **Other**
    4. Other (Specify) _____

OBSTETRIC PROFILE

19. **Parity** _____

20. **Gravidity** _____

21. **Gestation age** _____**wks**

22. **Weight and height at delivery** _____ **kgs** _____**ft**

23. **Medical illness**	**Previous**	**Current**
Asthma	1	1
Heart disease	2	2
TB	3	3
Diabetes	4	4
Hypertension	5	5
Anaemia	6	6

Other (specify)	7	7
None	8	8

24. Obstetrical illness

1 Pregnancy induced hypertension
2 Ante-partum haemorrhage
3 Prolonged /obstructed stage of labour
4 Prolapsed cord
5 Previous caesarean section
6 Transverse/oblique lie
7 Other (specify)

25. Have you been admitted in hospital during the period of the just concluded pregnancy?

1. Yes **2. No**

26. Mode of delivery

1. Caeserean section 2. Normal delivery

27. Time of referral _____ Day/Night

28. Distance from the clinic to the hospital _____ KM

DATA EXTRACTION SECTION

Information from mother baby booklet

29 Gestation at 1st ANC visit _____ weeks

30 HB done during ANC 1. Yes 2. No 3. NA

31 Syphilis test done during ANC 1. Yes 2. No 3. NA

32 Malaria Test done during ANC 1. Yes 2. No 3. NA

33 HIV test done during ANC 1. Yes 2. No 3. NA

Appendix III Approval of Research Project Proposal

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Dean, Graduate School

DATE: 5th July, 2019

TO: Joseph Onyango Adoyo
C/o Health Management and Informatics Dept.

REF: Q142/38402/2017

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 26th June, 2019 approved your Research Project Proposal for the M.PH Degree Entitled, **"Referrals among Women Seeking Maternity Services in Marsabit County, Kenya.**

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

HARRIET ISABOKE
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Health Management & Informatics Department.

Supervisors:

1. Dr. Eliphas Gitonga
   C/o Department of Health Management & Informatics
   Kenyatta University

HI/lnn

Appendix IV. Ethical Review Committee Approval

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: Q142/38402/2017

DATE: 5th July, 2019

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR JOSEPH ONYANGO ADOYO – REG. NO. Q142/38402/2017.

I write to introduce Joseph Onyango Adoyo who is a Postgraduate Student of this University. The student is registered for M.PH degree programme in the Department of Health Management & Informatics.

Joseph intends to conduct research for a M.PH Project Proposal entitled, "Referrals among Women Seeking Maternity Services in Marsabit County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
AG. DEAN, GRADUATE SCHOOL

HI/Inn

Appendix V. Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 539463

Date of Issue: 04/October/2019

RESEARCH LICENSE

This is to Certify that Mr.. Joseph Adoyo of Kenyatta University, has been licensed to conduct research in Marsabit on the topic: Referral among women seeking maternity services in Marsabit County, Kenya for the period ending : 04/October/2020.

License No: NACOSTI/P/19/65

539463

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

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