

**Obstetric Care in the Home Delivery among Women in Lugari
District, Western Province, Kenya**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

To the world's greatest dad; I did it! Thank you for sowing the seeds of excelling in me; hope you will share this joy with me from up there in heaven. You will always be in my heart. To my mother; thank you for believing in me. You are the epitome of mother as God intended.

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This is a product of many hands working through me. All glory to God for creating, loving, equipping, providing and empowering me; thank you for you make all things possible. To my mother for being my pillar of strength; God uses you everyday to make me who I am today. You are truly phenomenal. Thank you for always seeing the potential in me and the great sacrifices. Thanks to James and Pat for your selflessness, God bless you a hundred fold. To my sister Betty, you are a sister as God intended; thank you for your invaluable assistance. Thanks to my family for sticking by me at all times. To my God-given sisters Jean and Rashida, thanks for your all-round support. My appreciation to my supervisors Dr. Anselimo Makokha, Dr. Peter Wanzala and Ms. Lilian Nyandieka for their guidance and encouragement. To the team at Kenya Medical Research Institute- Centre for Public Health Research (CPHR) computer lab for being at hand to assist me; with special mention of Mr. Moses Mwangi, thank you for you technical support. I also extend my thanks to Mr. Ombacho, the Chief Public Health Officer at the Ministry of Health for taking time from his duties to read my proposal and offer me the much needed guidance. Last but not least, I take the opportunity to appreciate the assistance and cooperation of the team in Lugari: the Medical Officer of Health Dr. Robert Wekesa for allowing me to carry out the study and offering guidance, to the nurses and staff of the health centres visited and all my respondents for accepting to work with me. Thank you all for making all this possible. I am indebted to you all, God bless you.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immuno-deficiency Syndrome
ARRHTF	African Regional Reproductive Health Task Force
ANC	Ante natal Care
CBS	Central Bureau of Statistics
CRR	Centre for Reproductive Rights
DHS	Demographic Health Survey
FIDA	Federation of Women Lawyers of Kenya
HIV	Human Immuno-deficiency Virus
IMPAC	Integrated Management of Pregnancy and Childbirth
KDHS	Kenya Demographic Health Survey
KNBS	Kenya National Bureau of Statistics
KSPA	Kenya Service Provision Assessment Survey
MCH	Maternal Child Health
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn and Child Health
NCAPD	National Coordination Agency for Population and Development
NHSSP II	National Health Sector Strategic Plan II
NMR	Neonatal Mortality Rate
NRHSP	National Reproductive Health Strategic Plan
PNC	Post natal Care

SMI	Safe Motherhood Initiative
SMNC	Standards for Maternal and Neonatal Care
SSA	Sub-Saharan Africa
TBAs	Traditional Birth Attendants
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children’s Emergency Fund
WHO	World Health Organization

ABSTRACT

This was a descriptive study with the objective of investigating the obstetric care in home delivery process. It involved looking at the pre, intra and post partum practices with the aim of finding out whether they comply with the World Health Organization (WHO) recommended obstetric practices. The study was set in Western Province due to the high prevalence of home deliveries and the rampant use of traditional birth attendants (TBAs). Information was obtained by administering questionnaires to mothers who had delivered at home. They were selected by simple random sampling to a sample size of 330. The catchment area was at the clinics as the mothers brought the infants for immunization. TBAs were interviewed as key informants. Data was entered and stored in MS Access and analysis done using SPSS package.

There was a 96% achievement of the sample size with the reproductive age of 15-49 years was well represented. Majority had incomplete secondary education and below (75%) compared to others. The nearest health facility was at between 2-3 km for most of them with 83% having reliable transport in form of bicycles and motorbikes. Maternal Child Health services were readily available to all or most all of them: ANC (100%), PNC (98%) and delivery (94%) at the nearest health facility at a fee. There was 97% ANC attendance with majority (67%) having their first visit within the second trimester at frequency of 2-3 visits. comprehensiveness of these visits was wanting with only 1% receiving the WHO recommended package for ANC. Distance did not contribute to the ANC attendance ($p = 0.26$) or the frequency of attendance ($p = 0.51$). reasons for home delivery could be

summarized as economical, geographical, cultural and psychological. the five cleans were ensured by majority though it was difficult to assess the delivery surface due to the different materials used in preparation. Complications at delivery were experienced by 15% while death of the infant in the postnatal period was reported by only 2%. Only 17% sought any form of PNC check-up. There were some harmful practices noted in the TBA practices such as the use of herbs to fast-track the labour process and the attempts to handle complications.

Adherence to the IMPAC standards was lacking at some stages of the pregnancy especially PNC. However, the good results reflected in the low neonatal mortality can be attributed to various factors such as the mothers' awareness of the importance of ANC attendance, the TBAs conditions for taking up clients and the good working relationship between the health facilities and the TBAs. The Government may have its reasons to be apprehensive of home delivery process since it is difficult to monitor and maintain standard but there is need for collaboration with TBAs who fill a very important gap in society.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND INFORMATION

Every minute of each day, a woman somewhere in the world dies of complications related to what should be the most life-affirming act: giving birth (Kantrowitz and Wingert, 2007).. In fact, childbirth is the leading cause of death and disability for women of reproductive age; more dangerous than heart disease and AIDS (Kantrowitz and Wingert, 2007). Pregnancy and childbirth claim the lives of an estimated 514,000 women each year with the overwhelming majority of these deaths (98%) in the developing world. (WHO, 1997a). The differences in maternal mortality ratios (MMR) in some parts of Sub-Saharan Africa (SSA) and the developed world is the greatest health indicator yet reported. The MMR in some parts of Africa may be as much as 200 times more than those in developed countries (Koblinsky, 1995).

Globally, the Maternal Mortality Ratio (MMR) is estimated at 400 per 100,000 live births per year and 1000 in SSA. The major causes of maternal death include severe bleeding/hemorrhage (25%), infections (13%), eclampsia (12%), obstructed labour (8%), complications of abortion (13%), other direct causes such as ectopic pregnancy, embolism and anaesthesia related cases (8%) and indirect causes like malaria, anaemia, HIV/AIDS and cardiovascular diseases (20%) (WHO, 1997a). In Kenya the MMR is estimated at 414 per 100,000 live births per year according to the Kenya Demographic Health Survey

(KDHS) of 2003 (CBS *et al*, 2004); this is a decline from 590 in 1998 (NCPD *et al*, 1999). The methodology used and the sample size implemented in these two surveys do not allow for precise estimates of maternal mortality. The sampling errors around each of the estimates are large, consequently, the two estimates are not significantly different; thus, it is impossible to say with confidence that maternal mortality has declined. The decline implied was not supported by the trends in related indicators, such as antenatal care (ANC) coverage, delivery in health facilities, and medical assistance at delivery, all of which remained more or less stable over the last five years (CBS *et al*, 2004).

In a baseline survey conducted in Western Province in 2000 on the approaches to providing quality maternal care, a total of 31 maternal deaths were recorded the previous year at the health facilities. Lugari District recorded only one death; this was however attributed to non-availability of comprehensive referral facilities. The leading causes of death noted in the Province were postpartum haemorrhage (22%), pre-eclampsia/eclampsia (16%) obstructed labour (16%) and puerperal sepsis (16%) (MoH *et al*, 2002).

The question of the impact of place of birth on the course of labour and delivery has been abundantly researched in the past two decades (Campbell and Macfarlane, 1994). In many developed countries labour went from a natural process to a controlled procedure and the place of birth changed from home to hospital. In this environment, much of the human touch was taken out of the delivery process: pain was alleviated pharmacologically; women were left alone for long periods of time and were monitored closely from afar. This is

opposed to the delivery practiced in those parts of the world where fewer than 20% of women have access to any type of formal birth facility. For them, home delivery is not an option; it is virtually inevitable (Mbizvo *et al* 1993, Onwudiegwu, 1993). Many factors keep women away from higher-level health facilities. They include high cost of hospital delivery; unfamiliar practices; inappropriate staff attitudes; restrictions with regard to the attendance of family members at the birth and the frequent need to obtain permission from other (usually male) family members before seeking institutional care (Brieger *et al* 1994, Paolisso and Leslie 1995).

Just as quality treatment makes a lasting impression, so do negligence and abuse. These negative experiences include: violation of dignity; lack of medical attention; long hours of waiting upon arrival; physical and verbal abuse; neglect after delivery; violation involving post-delivery stitching; violation of rights to consent and information. These experiences shape women's subsequent decisions regarding health care use with some opting not to return to the facility where they were mistreated while others opt for home births (CRR and FIDA, 2007). Home deliveries in developing countries are often attended by untrained or insufficiently trained caregivers, hence support of the labouring woman is oftentimes deficient or even absent (WHO, 1997a).

The Kenyan government acknowledges the need to improve the quality of the nation's maternal health care services. According to the 2004 Kenya Service Provision Assessment Survey (KSPAS), only 29% of medical facilities have all of the basic delivery-room

infrastructure and equipment that include a delivery bed, an examination light and both visual and auditory privacy. In addition, there is a skewed distribution of medical staff in urban areas with a severe overall shortage of providers across the country. According to this survey, only four out of ten facilities in Kenya offering delivery services have all of the items recognized as necessary for infection control during delivery (NCAPD, 2005). These are hand-washing supplies, clean or sterile latex gloves, disinfecting solution and a sharps box. Furthermore, only one-third of the facilities have the capacity to sterilize delivery equipment. The others either lack equipment or knowledge necessary for adequate disinfection. Only a quarter of the facilities had written guidelines for sterilization available in the relevant area (NCAPD, 2005).

Cost sharing is a concept that was introduced into Kenya's national health sector in the early 1990s. After decades of providing essentially free services, supervisors and healthcare providers alike required a major paradigm shift to make the cost sharing system work. But severe economic decline had dictated that the Ministry of Health to begin charging a modest fees for services delivered by government health facilities. This led to the introduction of the user fees at public health facilities; the patient had to bear part of the cost of services rendered. User fees in Africa have had a profoundly negative effect on women's access to maternal health services. In Kenya the government has acknowledged that thousands of Kenyans do not dare seek treatment from health facilities as they are too poor to even afford food, let alone medical care (Ford and Versi, 2004). On 5th May 2007, the Kenyan Government announced total exemption of maternity fees in public hospitals

effective from 1st July 2007 (Kazungu, 2007). This is a positive move that could significantly improve maternal health in Kenya. However, it remains to be seen how the exemption will be effected without compromising the quality of care (CRR & FIDA, 2007). User fee is just one of the structural barriers to quality maternal health care. Others include understaffing, lack of institutional support, lack of supplies, unhygienic conditions, lack/poor record keeping and transparency in operations (CRR and FIDA, 2007).

In the baseline survey done in the four districts of Western Province in 2000, under-staffing was found to be a major hurdle to safe motherhood in Lugari District as shown in Table 1. Lugari had only one health facility providing basic essential obstetric care with non providing comprehensive essential obstetric care (MoH *et al*, 2002). Essential obstetric care is the term used to describe the elements of obstetric care needed for the management of normal and complicated pregnancy, delivery and the postpartum period. It is defined for two different levels of the health care system:

- a) Basic essential obstetric care services at the health centre level should include at least the following: parenteral antibiotics, parenteral oxytocic drugs, parenteral edatives for eclampsia, manual removal of placenta and manual removal of retained products
- b) Comprehensive essential obstetric care services at the district hospital level (first referral level) should include all the above plus surgery, anaesthesia, and blood transfusion (WHO, 1991A).

According to the Second National Health Sector Strategic Plan of Kenya (NHSSP II), by 2010 skilled deliveries should be at least 90% and mid-term MDG targets are 100% by 2015. The National Reproductive Health Strategic Plan (NRHSP) 1997-2010 of Kenya targets to reduce MMR from 414 to 170 per 100,000 live births per year and increase skilled attendance to pregnancy to 90% (MoH, 2006).

Table 1: Staffing levels in Health facilities in Lugari District

Cadre of staff	In Post in Public Facilities	Deficit	In Post in Private Facilities
Obstetrician/gynecologist	0	0	0
Medical Office	1	3	1
Anaesthetist	0	0	0
Registered Community Health Nurse/midwife	5	25	0
Enrolled Community Nurse/midwife	65	132	3
Nurse Anaesthetist	0	0	0
Clinical Officer	7	5	3
Clinical Officer Anaesthetist	0	0	0
Total	78	165	7

There was a deficit in all the cadre of staff required with some specialist such as the obstetrician, gynecologists and anaesthetists not present at all. These specialists are only present in the Provincial and District hospitals; the highest health institution in Lugari

District was yet to be elevated to the District hospital level at the time of the survey (2000). But even after the elevation the hospital still lacked these specialists.

1.2 STATEMENT OF THE PROBLEM

High MMR is associated with home deliveries, which are considered unsafe due to use of TBAs who are considered unskilled as they lack the level of knowledge and competence in midwifery according to the WHO standards. During the Second African Regional Reproductive Health Task Force (ARRHTF) in 2003, the report of the Working Group on traditional birth attendants (TBAs) raised various concerns. Among them was the question: “Is it right to totally attribute failure to reduce maternal mortality to TBAs?” (Mbizvo, 2003). Though health institution delivery is considered safe, in Kenya reports have shown an increase in maternal and neonatal mortality at these institutions (Kimani 2006). Highlighted in the local media in 2005 was the high number of deaths reported from well equipped, fully-manned maternities among multiparous mothers in fairly good health (Kimani 2006).

In a report by the Centre for Reproductive Rights (CRR) and Federation of Women Lawyers Kenya (FIDA) on the Violation of Human Rights in Kenyan Health Facilities, it was noted that many women have negative experiences at health facilities that endanger the life of the mother and child (CRR and FIDA, 2007). These include lack of medical attention, delayed attention on arrival, physical abuse, neglect following delivery and

violation involving post-delivery stitching. This has contributed to avoidance of these particular facilities by some mothers with others opting for home delivery. Child theft and exchange are other frightening factors that keep women away from health facilities especially in the urban areas. Fresh on every Kenyan's mind is the "miracle babies" saga involving Pastor Gilbert Deya a Kenyan evangelist based in London. He was later implicated in a child trafficking syndicate with the source of the babies being the largest government maternity hospital Pumwani Maternity Hospital.

Just like the government and other organizations have pointed out the shortcomings of the health institutions in terms of maternal health, it is important to do the same for home-based deliveries for effective interventions to be sought and implemented. It should be acknowledged that TBAs continue to fill a genuine gap in maternal health and efforts made to facilitate collaboration where possible. TBAs should also be evaluated in the light of their training. There are limited systematic and documented practices of the TBAs, making it difficult to identify areas of intervention for improvement.

1.3 JUSTIFICATION OF STUDY

Neonatal Mortality Rate (NMR) refers to the death of the newborn within the first 28 days (4 weeks) as a proportion of every 1,000 live births. It is a reflection of maternal health, obstetric care, neonatal care, early childbearing, birth spacing and cultural practices among other factors. Of the four million global neonatal deaths, 98% occur in low and middle

income countries (UNICEF, 2008). In Kenya, according to the KDHS 2003, of the 59% births that take place at home, 50% are assisted by unskilled attendants (28% TBAs, 22% friends/relative), eight percent with no assistance. One percent was missing data which means that the respondents did not respond to the question. The breakdown by province is shown in table 2. NMR has been linked to poor maternal health; inadequate care during pregnancy; inappropriate management of complications and delivery; poor hygiene during delivery and lack of care during the first critical hours after birth and lack of newborn care (WHO, 2006). These are all factors are the reason home delivery is discouraged because the recommended environments cannot be fully ensured.

Table 2: Comparison of NMR, Home Deliveries and Assistance at Delivery in Kenya's Provinces

Province	NMR	% of Home deliveries	% of Assistance at Delivery				
			Doctor	Nurse/ Midwife	TBAs	Relative/ Friend	No one
Nairobi	32	21	34	45	9	8	4
Central	27	32	18	50	5	19	8
Coast	45	67	12	22	28	32	6
Eastern	32	61	9	30	25	28	8
Nyanza	27	63	6	33	33	18	10
R. Valley	37	63	12	25	28	26	9
Western	25	71	5	24	42	18	11
N. Eastern	50	93	2	7	83	8	0
Total	33	59	11	30	28	22	8

(Source: KDHS 2003)

In spite of the association between NMR and home delivery, it is interesting to note that Western Province has the lowest NMR of 25 for every 1,000 live births yet it has a very high prevalence of home births (71%) and unskilled attendant births (60% - TBAs, relative/friends and no attendant) compared to the other provinces besides North Eastern Province. The North Eastern Province has unique characteristics that include the nomadic lifestyle, rampant practice of Female Genital Cutting (FGC), few health facilities scattered at great distance among others. It can therefore be assumed that there may be something right being done in home deliveries in Western Kenya majority of which are assisted by TBAs (42%). These unskilled attendants according to WHO standards are meeting a felt need in the community. This can only be ascertained by getting a detailed documentation of their practices, a task this study aims to undertake. Asking women about their experiences is an important method for obtaining information about postpartum morbidity and a critical step towards defining service needs. A number of recent epidemiological studies take this approach, and have been instrumental in raising awareness of the hitherto unacknowledged dimensions of the problem of maternal health (WHO, 1998a). The results of the study are intended to inform policy makers and other relevant organizations to enable the development of programs to promote culturally sensitive and acceptable change or to determine the correct practices in the area of safe motherhood and even in attaining the MDGs. It also seeks to add to the existing knowledge in safe motherhood.

1.4 RESEARCH HYPOTHESES

Home delivery practices do not meet the recommended standards in the WHO Integrated Management of Pregnancy and Childbirth Care (IMPAC) Package.

1.5 OBJECTIVES

1.5.1 General Objective

To assess the obstetric care practices in home delivery process among women in comparison to the recommended WHO Integrated Management of Pregnancy and Childbirth Care (IMPAC) Package in Lugari District, Western Province, Kenya

1.5.2 Specific Objectives

- To assess the antenatal practices among women who undergo the home delivery based the IMPAC standards for ANC.
- To evaluate the handling of the labour process in home delivery based on the IMPAC standards for delivery.
- To assess the postpartum care practices among women who undergo home delivery based on the IMPAC standards for PNC.

1.6 LIMITATIONS

This being a descriptive study, it was only possible to describe the happenings on the ground without exploring in depth the association of factors hence cannot prove cause. The

study could not completely eliminate both selection and information bias. Since it was based at the MCH clinics, the opinions of those mothers who delivered at home and did not attend the clinic missed out. However, the sample of mothers interviewed was representative of the Lugari District's population since the immunization coverage in 2005 stood at about 73%. With a NMR of 25, it was possible that some of the children born at home may have not have survived to the first month of their life hence their mothers were not captured in the sample as they were not at the clinics. Mothers who had delivered much earlier may have experienced a recall bias/problem. Recall problem was expected from the mothers considering the anxiety and labour pain during that period. Lack of a TBA register at the District Headquarters hampered the statistical determination of the sample size. However representatives from all the interview areas selected randomly from a list compiled based on information of the mothers interviewed. With this few limitations, the interpretation and generalization of the findings may be limited. Despite the above-mentioned limitations, the study obtained important information that has many policy implications safe motherhood and child survival programs in Kenya.

CHAPTER 2

LITERATURE REVIEW

2.1 HOME DELIVERY

Home delivery refers to delivery away from a health facility; this is done for various reasons that can be broadly classified as economic, geographical and cultural (Smith 1993). In a study conducted by the WHO Regional Office for Africa on home deliveries in Africa, four countries were selected to represent four African regions: Angola (Southern Africa), Ethiopia (East and Horn of Africa), Nigeria (West Africa Anglophone) and Senegal (West Africa Francophone). In all the countries home deliveries were more practiced in the rural areas than urban. TBAs assisted 61% of the births, nurses 20%, midwives 15% and doctors four percent. The reasons cited for high percentage of home deliveries were cultural, poverty, attitude of health personnel and fear to undergo some medical procedures (e.g. episiotomies, forceps deliveries). The disadvantages of home deliveries noted in the study were delay in referral, poor danger sign knowledge, lack of transport/ communication facilities for referral, poor equipment, drugs and supplies, poor infection control, lack of documentation of outcomes and inadequate supervision. According to the findings of the study, the advantages of home deliveries were easy access for clients, relatively cheap, have knowledge on where to refer incase of complications, there was health education of clients on danger signs and ANC/Family planning promotion (Kosia, 2003).

According to the KDHS 2003, home births in Kenya were more common in the rural areas (65%) than urban (29%) and among those in the poorest quartile (83%) compared with the richest quartile (26%). Skilled assistance during delivery both at home and health facilities in urban was 72% compared with 35% in the rural areas, 17% of the poorest quartile was attended to by skilled attendants compared to 76% of the richest quartile (CBS *et al*, 2004). Western Province had the second highest prevalence of home deliveries (71%) and unskilled attendant births (60%) after North Eastern Province (CBS *et al*, 2004). North Eastern was excluded from the comparison due to the unique challenges the Province faces such as the pastoralists lifestyle, rampant female genital cutting and slow pace of development among others. In Western Province mothers have been reported to die after opting to deliver at home for fear of going against traditions hence would rather die of complications than go to hospital. This fear has been largely attributed to placenta handling which can lead to infertility if handled inappropriately (Mwai, 2006).

2.2 SAFE MOTHERHOOD

Safe Motherhood has been defined as creating the circumstance within which a woman is able to choose whether she will become pregnant, and if she does, ensuring she receives care for prevention and treatment of pregnancy complications, has access to a trained birth assistance, has access to emergency obstetric care if needed and care after birth so that she can avoid death or disability from complications of pregnancy and childbirth (Feuerstein, 1993). The World Bank, WHO and UNFPA in a bid to help raise global awareness on the

impact of maternal mortality and morbidity, established the Safe Motherhood Initiative (SMI) in 1987. This issued an international call to action to reduce maternal morbidity and mortality by half by the year 2000.

The initial focus of SMI was on training the TBAs to perform normal deliveries and screen high-risk pregnancies for complications then refer them to health professionals at health facilities. Experience from various SMI programs showed that the level of skill among the “skilled TBAs” was still lower than what is considered safe hence WHO classified them as “unskilled attendants”. According to the WHO definition, a skilled attendant refers to a person with midwifery skills trained to proficiency in the skills necessary to manage normal deliveries and diagnose or refer obstetric complications (WHO *et al*, 1999).

The common characteristics among most TBAs include being elderly, often illiterate, sometimes outspoken, dynamic and respected by all. Most of them learnt the practice from experience or apprenticeship and are mostly spiritualists or herbalists. Their practices are heavily influenced by their beliefs and culture, their services maybe based on humanitarian grounds so that payment is in cash, kind or none at all (Feuerstein, 1993). The role of the TBAs is a very controversial issue; in some countries they are recognized and integrated in the health system where they assist mainly in the rural areas in normal deliveries, diagnosis of complicated pregnancies and referral to health facilities and even in educating women on family planning. While in other countries, they are regarded as a stumbling block to achievement of their health goals because some of their practices are seen to be harmful.

The TBAs strong cultural and traditional inclination, though seen as an impediment, this is precisely what endears them to many women as caregivers especially in rural settings (Okafor and Rizzuto 1994).

The SMI approach has since changed to ensuring women's access to skilled care during pregnancy and delivery at a health facility. According to the WHO 2007 statistics on births attended by skilled health personnel, there is a 63% global coverage with 46% in Africa. Comparing the regions in Africa, East Africa had the lowest coverage of 32% with Southern Africa having the highest coverage of 89% (WHO, 2007). In Kenya, one of the primary objectives of the National Reproductive Health Strategy Plan (NRHSP) is to ensure the presence of skilled attendants during 90% of deliveries by 2010 (MoH, 2006). The most recent statistics indicate only 42% of deliveries with skilled attendants (CBS *et al*, 2004)

According to the Ministry of Health's Division of Reproductive Health in Kenya, the health system faces several challenges to safe motherhood. These challenges include general shortage of medical staff; inadequate access to skilled care during pregnancy, delivery and after delivery especially among the rural and urban poor; poor infrastructure; socio-economic and cultural barriers to seeking care (MoH, 2006). Though part of the economic barrier has been recently removed through the user fee exemption for maternity services, the others persist hence the role of TBAs remains just as important. Therefore condescending and dismissive attitudes towards the role of TBAs where they are seen as a

stumbling block undermines SMI; it is important to understand what they do and what else they need to do to ensure safe motherhood (Feuerstein, 1993). This condescending attitude is due to the perception that the TBAs lack the capacity to be trained to operate even on the minimum acceptable stands on safe motherhood. There is need for a deliberate effort to document the working of TBAs and identify avenues of intervention and collaboration with the mainstream healthcare system to achieve the SMI and Millennium Development Goals (MDG) 5, (to reduce maternal mortality) and MDG 4 (to reduce child mortality).

2.3 SAFE MOTHERHOOD INDICATORS

MMR and the proportion of births attended by skilled attendant are the two indicators being used to monitor progress towards achievement of the MDG 5 while the neonatal mortality rate (NMR) for MDG 4. These indicators are also used in the SMI programs. Maternal mortality refers to death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 1991). MMR is a measure of the likelihood that a pregnant woman will die from maternal causes (Lewis, 2001). It offers a litmus test of the status of women in society, their access to health care and adequacy of health care system in responding to their needs (WHO, 1991). Due to poor registration of deaths and their causes, it is difficult to accurately determine MMR hence the proportion of births attended by skilled attendant has been accepted as the most relevant indicator due to the historical data showing a

correlation between having skilled care at delivery and declining maternal mortality (Graham *et al.* 2001).

Neonatal mortality is death of infant within 4 weeks (28 days) of delivery. These deaths are an indicator of the quality of care at pregnancy; maternal health; management of complications and delivery; hygiene during delivery; availability of care during the first critical hours after birth and the quality of newborn care (WHO, 2006). The NMR refers to neonatal deaths per 1,000 live births. SSA has the highest NMR in the world estimated at 45 per 1,000 live births and while Kenya stands at 33 (CBS *et al.*, 2004) compared to other countries in the region such as South Africa with as low as 17 and Lesotho as high as 52 (Unicef, 2008).

2.4 INTEGRATED MANAGEMENT OF PREGNANCY AND CHILDBIRTH CARE (IMPAC)

These are standards developed by WHO in an effort to provide guidance for assisting countries to improve the health and survival of women and their newborn babies during pregnancy, childbirth and the postnatal period. The IMPAC package document focuses more on the skills and services required to ensure that maternal and neonatal ill health conditions are possibly prevented and properly identified and managed (WHO, 2006). Within this package there are Standards for Maternal and Neonatal Care (SMNC). These standards are intended to be generic standards, which can be adapted and implemented

according to the needs, financial and health systems capacities in different countries. Countries are then expected to set their targets for compliance to these standards. These standards are divided into six sections:

1. General standards of care for healthy pregnancy and childbirth
2. Standards for safe care in childbirth and the immediate postpartum period
3. Standards for postnatal care
4. Standards of care for managing major complications in pre, intra and post partum
5. Standards of care for managing major complications in the newborn
6. Health service delivery standards.

They can be used individually or as a package. They are cross-referenced with each other for ease of use. The first four sections of IMPAC are the ones relevant to this study and will be the main reference for this study in attempting to understand the obstetric care available to women who deliver at home (WHO, 2003).

2.5 ANTENATAL CARE (ANC)

WHO recommends that antenatal care for the majority of normal pregnancies should consist of four visits during pregnancy (WHO and UNICEF, 2003). The guidelines stipulate that only examinations and tests that serve an immediate purpose and that have been proven to be beneficial should be performed (WHO, 2001). These examinations include:

- Measurement of blood pressure

- Testing of urine for bacteriuria and proteinuria,
- Blood tests to detect syphilis and severe anaemia.

Routine weight and height measurement at each visit is considered optional (WHO, 2003).

Many elements of ANC have not been shown to have any impact in reducing the risk of serious complications and maternal deaths (Maine, 1991). There is now broad agreement that the focus of antenatal care interventions should be on improving maternal health, this being both an end in itself and necessary for improving the health and survival of infants (WHO, UNICEF 2003). According to the Focused ANC approach, actions that improve mother and newborn chances of survival are: presence of a skilled attendant; client knowledge and preparedness for complications; functional referral system (WHO, 2001).

WHO recommends that each visit should be viewed as the only visit the mother will ever make to the clinic hence should be very thorough, personalized and comprehensive. At least four visits are recommended (WHO, 2001). Data for the late 1990s to 2001 shows that 72% of women worldwide have at least one antenatal visit with a skilled provider during pregnancy. The ANC coverage in developed countries is 98% while in the developing countries it is at 68%. The SSA coverage stands at 68% with South Asia having the lowest levels of use at 54% (WHO & UNICEF, 2003). In this statistics ANC coverage in Kenya was 76% with the highest coverage in SSA reported in Cape Verde (99%) and the lowest in Ethiopia (27%). There has been some improvement with coverage standing at 87% in Kenya: 4% of the women go for one ANC visits in a pregnancy, 31% for two-three visits, 52% for more than four and 10% none (CBS *et al*, 2004). Differential use of ANC is

affected by factors like urban or rural residence, age of woman, number of births, level of education and household wealth (WHO and UNICEF, 2003). In Kenya there is urban/rural differentials use of antenatal care with 91% of urban women reporting at least one ANC visit compared with 88% in rural areas (CBS *et al*, 2004).

The challenge in ANC lies in the time of initial visit and the frequency; with early initiation of ANC being recommended to allow enough time for essential diagnosis and treatment regimens. In Egypt nine percent of all maternal deaths occur during the first six months of pregnancy and a further 16% during the last three months (Ministry of Health and Population, 2000). Compared to other regions where women initiate ANC in the first trimester, those in SSA present mostly in the second trimester and a relatively substantial proportion present only in the third trimester, nonetheless, they tend to report more than one visit (WHO and UNICEF, 2003). There is a correlation between frequency of ANC attendance and delivery with a skilled assistance. In developing countries, those with no ANC reported only 17% skilled assistance at delivery, those with one or more visits 60% and four or more visits 68% (WHO and UNICEF 2003).

IMPAC has set outcome indicators of an effective ANC program. These are percentage of women: with at least one clinic visit; with more than four clinic visits; with access to clinic within specific distance; of those immunized for tetanus and with written birth plan. Each country is then expected to set their indicator targets. To improve maternal and newborns health, Kenya has set targets in the NHSSP II though are not as elaborate as IMPAC. By

2010, ANC coverage in Kenya should be at 90% of the pregnant mothers having four clinic visits. The Annual Operation Plan (AOP) 2006/07 set its target at 66% (MoH, 2006). This was the reference for assessment in this study.

2.6 POSTNATAL CARE (PNC)

PNC involves provision of breastfeeding support, birth spacing counseling and services, nutrition education, detection and referral of postpartum complications and education and care of low birth weight infants (WHO, 1998a). The postnatal period is defined as the first six weeks after birth which is critical to the health and survival of a mother and her newborn. Lack of care in this time period may result in death or disability as well as missed opportunities to promote healthy behaviour affecting women, newborns, and children.

Globally, both the needs of the mother and baby during the postpartum period are often eclipsed by the attention given to pregnancy and birth. Yet, compared to the ante and intra partum periods, majority of maternal and neonatal deaths and disabilities occur during the post natal period (WHO, 1998a). Half of all postnatal maternal deaths occur during the first week after birth with majority occurring during the first 24 hours after childbirth (Li *et al*, 1996). The leading cause of maternal mortality in Africa is haemorrhage mostly occurring postnatally as do sepsis and infection (Khan *et al*, 2006). Another risk of postnatal maternal death is HIV status; HIV-positive mothers are at greater risk of than HIV-negative women (EHOG, 2004). In spite of high risk of postnatal maternal death, there is very low coverage of care in the postnatal period. This negatively influences other Maternal, Newborn, and

Child Health (MNCH) program along the continuum of care (Shisana and Simbayi, 2002). In Africa, culture contributes a lot to poor PNC uptake. Many African communities observe practices that keep mothers and babies indoors for the first month after birth (seclusion) mainly because they are wary about visitors coming in close contact with newborns (Warren, 2005). Consequently, if the mother or baby becomes ill during this period of seclusion, seeking formal health care is often delayed. This delay is in three forms - delay in recognition of complications, delay in reaching appropriate care and delay in receiving appropriate care (Sines *et al*, 2007).

The lack of comparable, relevant data for programs reveals the lack of systematic implementation of the PNC package. There are no consistently measured indicators of effectiveness of National PNC programs (Warren, 2005). Based on an analysis of 23 Demographic and Health Surveys (DHS), two-thirds of women in SSA give birth at home with only 13% of these women going for a PNC visit within two days of birth. In Eritrea, 92% of women giving birth at home received no PNC. Similarly, 85% of women giving birth at home in Mali and 70% of women giving birth at home in Rwanda received no PNC at all, according to the most recent DHS country data (Sines *et al*, 2007). In Kenya, 35% of the health facilities offer PNC with the highest being in Western Province 53% (NCAPD, 2005). The usage on these services is low especially among those who undergo home deliveries with 81% not having any PNC. Usage is not influenced much by level of education (none-87%, secondary school-72%) or wealth (highest quartile-72%, lowest-81%) or place of residence (urban-79%, rural-81%) (CBS *et al*, 2004). Most of the mothers

who report going for PNC actually take the baby for immunization as opposed to going for their checkup. In Western Province, Kenya, though 71% of births in take place at home, only 4% of infants were reported to have had no vaccination by age 12-23 months (CBS *et al*, 2004).

Postpartum care recommended in IMPAC should involve:

- Prevention and detection of complications
- Anaemia prevention and control through iron and folic acid supplementation
- Information and counseling on nutrition, safe sex, family planning and provision of some contraceptive methods
- Advice on danger signs, emergency preparedness and follow-up
- Treatment of arising problems
- Pre-referral treatment of severe problems (WHO, 2003)

Unlike ANC and delivery, the NHSSP II has no set targets or indicators for PNC for 2010 neither has the Vision 2030.

2.7 THE ROLE OF TBAs

According to Marie Stopes International, there are two types of TBAs: Type 1 are those who have delivered few babies (friends /relatives); Type 2 are those who specialize in the practice hence have delivered many babies (King and Mola, 2006). Type 2 TBAs are the ones that will be officially referred to as TBAs in the study. TBAs provide culturally appropriate

nurturing in the community setting and hence should offer a first-line link with the formal healthcare system. In SSA about 42% of the pregnant women are attended to by a professional healthcare worker at delivery (MARCO, 1996) with the remaining majority relying on TBAs. According to WHO, training TBAs has not borne much fruit due to the absence of back up from a functioning referral system and support from professionally trained health workers (WHO *et al*, 1999). In the Second African Regional Reproductive Health Task Force (ARRHTF) 2003, the report of the Working Group on TBAs raised the following concerns:

- Is the performance of TBAs being evaluated in relation to their training?
- Is it right to totally attribute failure to reduce maternal mortality to TBAs?
- What measures have been taken to reorient TBAs in the light of the paradigm shift that focuses on emergency obstetric care since 1997?
- What about the constraints faced by TBA in the performance of the duties? (Mbizvo *et al*, 1993).

In Kenya, there is only a five percent TBA support program recorded by the health facilities and none at all in Western Province which has the highest TBA assisted births (NCAPD, 2005).

2.8 BIRTH PRACTICES

2.8.1 Cleanliness

In labour and delivery, cleanliness is of utmost importance; not the form of sterility of the operation theatre but short nails and carefully washed hands with soap and water must be ensured (WHO, 1996). In regions with high prevalence of HIV and hepatitis B and C protective clothing is important to protect the caregiver from the contaminated blood and other materials (WHO, 1995). Five cleans are emphasized to prevent infection: clean delivery surface, clean hands, clean cord-tie, clean blade, and clean cord-stump during delivery. This is relatively easy to achieve except in conditions of inadequate supply of clean water, lack of fuel and supplies, and unsanitary housing characteristic of rural settings. WHO established a clean delivery kit and its correct, effective use (WHO, 1994), its content may vary from country to country but must fit the specific needs of the woman delivering; they should be easily obtainable, clean but not necessarily sterile; the disposal material should not be reused (WHO, 1996). Reusable instruments should be appropriately decontaminated according WHO guidelines provided (WHO, 1995). Invasive techniques should be kept to a strict minimum, extra caution should be observed with use and disposal of sharp instruments (ICN, 1996) IMPAC standards require ensuring of cleanliness of delivery surface, hands of attendant, umbilical cord and perineal area (WHO, 2006).

2.8.2 Thermal Protection

Thermal protection of the newborn is the series of measures taken at birth and in the first days of life to ensure that the newborn does not become either cold or overheated and

maintains a normal body temperature (36.5-37.5°C). The newborn cannot regulate its temperature as well as an adult hence cools down or heats up much faster and is able to tolerate only a limited range of environmental temperatures. The smaller the newborn, the greater the risk; thermal stability improves gradually with weight (WHO, 1997b). Temperature loss occurs mainly during the first minutes after birth; in the first 10-20 minutes the newborn who is not thermally protected may lose 2-4°C with even greater loss in the following hours if proper care is not given (Adamsons and Towell, 1965) leading to hypothermia (Dahm and James 1972). A hypothermic baby, especially if it is small or sick, is at increased risk of developing health problems and of dying (Tafari, 1985). In trying to keep babies warm, it is important to make sure they do not become overheated leading to hyperthermia; though it less common but just as dangerous. Hyperthermia increases the metabolic rate and the rate of water loss by evaporation leading to dehydration. Temperatures above 42°C can lead to neurological damage (WHO, 1997b).

Some of WHO recommended ways of maintaining the warm chain include warming the delivery room of temperature of at least 25°C and ensuring no draughts, skin-to-skin contact with mother's chest or abdomen, postponed bathing and weighing, appropriate clothing/bedding (one or two more layers than adults) (WHO,1998a). There are varied views on the first bath. A randomized, controlled trial involving 249 infants in a Ugandan referral hospital, designed to study the impact of newborn bathing on the prevalence of neonatal hypothermia concluded that bathing newborn babies shortly after birth increased the risk of hypothermia (Bergstrom *et al*, 2004). Hypothermia of the newborn is due more

to lack of knowledge than to lack of equipment. Harmful cultural practices such as sprinkling cold water on the newborn baby to stimulate breathing, should be identified and discouraged, or replaced by acceptable, safer alternatives (WHO, 1997b).

2.8.3 Delivery

Pre, intra and post partum practices both at home and health institutions have been categorized into three: Practices which are demonstrably useful and should be encouraged; Practices which are clearly harmful/ineffective and should be eliminated; Practices for which insufficient evidence exists to support a clear recommendation and which should be used with caution while further research provides clarification (WHO, 1996). In home deliveries these practices are usually strongly based on culture, beliefs and even religion. One of the most notable advantages of home deliveries is the family support the mother receives. Research shows that women with a constant companion during labour had shorter labour, fewer obstetric complications, reduced feeling of pain and anxiety and better coping behaviour (Kenner and Mac Laren 1993). At home, the mother is allowed to assume the comfortable delivery position unlike the traditional supine position demanded at health institutions. Maternal delivery position is an aspect of obstetrics that has come under increased scrutiny (Gupta and Nikodem, 2000) as it may affect the physiological health of the mother and infant hence satisfaction with the birth experience may be enhanced if a woman is given the option of choosing her delivery position (Terry *et al*, 2006).

TBAs sometimes use herbs to “fast-track” delivery; this can lead to complications and even death (Mwaniki 2006). They manage complications such as haemorrhages and neonatal conditions with herbal concoctions (Ayodo 2007). Some TBAs routinely do a “uterine revision” to explore the uterine cavity after delivery or “lavage of the uterus” to rinsing out or douching of the uterine cavity after delivery. These practices can result in infection, mechanical trauma or even shock (WHO 1996). The recommended IMPAC practices for delivery are:

- Having and knowing how to use a disposable delivery kit that basically contains new razor blade, ties, gloves and cotton wool/clean cloths.
- Ensuring a warm chain by skin-to-skin contact and covering mother and baby.
- Cutting of cord when it stops pulsating.
- Wiping baby clean after cutting the cord; bathing should be after 6 hours.
- Waiting for the placenta to deliver on its own.
- Initiating breastfeeding within the first hour after birth.
- Watching over the mother for the first 24 hours.
- Disposing of the placenta in a correct, safe and culturally appropriate manner (WHO, 2003).

Practices considered harmful include use of local medications to hasten labour, inserting any substances into the vagina during labour or after delivery, pushing on the abdomen during labour or delivery, pulling on the cord to deliver the placenta, applying any substance on umbilical cord/stump. Helpful traditional practices are encouraged (WHO,

2006). Some good practices include giving oral fluids during labour, massage and relaxation techniques, freedom in position and movement throughout labour among others (WHO, 1996). Some of those with insufficient evidence to support recommendation include nipple stimulation to increase uterine contractions and active manipulation of the foetus at the moment of birth among others (WHO, 1996).

It recommends that every pregnant mother should have an individual birth plan. This plan should include knowledge of the due date, identification of a skilled birth attendant, identification of a health facility for delivery or emergency, knowledge of dangers in pregnancy and delivery and how to manage them, identification of a decision maker for emergency, access to emergency money and transport plan for emergency, have a birth partner/companion and collection of basic supplies for birth (mother-baby package) (WHO, 2001). The outcome indicators for assessing standard of delivery according to IMPAC are:

- The proportion of births at which a skilled attendant is present.
- The proportion of births at which a birth companion, designated by the woman, is present.
- The proportion of women who recently gave birth whose delivery took place where planned.
- Transport is available to referral facilities (WHO, 2006).

CHAPTER 3

METHODOLOGY

3.1 STUDY SITE

Lugari District is one of eight administrative districts in Western Province, Kenya. It was established by Presidential decree in late 1998 and therefore it is one of the newly created districts resulting from the splitting of the former Kakamega District. The District runs along the Great North Road (Nairobi-Kampala Road). It has an area of 670 km² with one local authority; Lugari County Council, one constituency; Lugari constituency and three administrative divisions: Lugari, Lukuyani and Matete. The population of the District, according to the 1999 National Census stood at 215,920 with the number of women in the reproductive ages of 15-49yrs at 49,061. The climate is mainly tropical; the annual rainfall ranges between 500-900 mm with an average temperature varying around 22 and 23⁰C. Kipkaren River runs across the district, it also borders River Nzoia to the North East.



Figure 1: Lugari District and her Neighbours

The district is still underdeveloped and her inhabitants mainly practice subsistence agriculture with the main cash crops being sugar cane and maize. Other crops grown include cassava, sweet potatoes, bananas, millet, sorghum and groundnuts. Dairy and poultry farming are also widely practiced. The living standards are generally low with 40-50% of the population living below the poverty line (KNBS, 2007). The infrastructure is not developed and many villages lack social amenities such as transport facilities, running water and electricity. The main means of transport within the district are the bicycles and motorcycles with vehicles plying mainly on the roads to nearby towns. Lugari District was chosen as the study site in a random selection process to represent Western Province which has the highest prevalence of home deliveries and use of TBAs.

3.2 STUDY DESIGN

This was a descriptive cross-sectional study; it sought to describe the existing practices involved in home births in the light of the WHO recommended standards on ANC, normal delivery and PNC. It involved interviewing the women who delivered at home on a one-time basis requiring them to recall past experiences. These were the study subjects with TBAs as key informants

3.3 STUDY POPULATION

This consisted of women who have undergone at least one home delivery and living in Lugari District. Special attention was on those who attend the MCH clinics at the health facilities where immunization of infants takes place. There was no TBAs register at Lugari

District headquarters; those who are registered did so before the split of the district in 1998. Attempts to have a Lugari District register were in progress in before the Ministry of Health directive on TBAs. The local authority outlawed home deliveries hence the TBAs fear being identified. Through the mothers interviewed, information of the TBA in the area was gathered and randomly sampled. Those who consented to participate were interviewed; those who declined were replaced by randomly selecting another TBA ultimately 15 were interviewed.

3.4 INCLUSION AND EXCLUSION CRITERIA

3.4.1 Inclusion Criteria

Women who had undergone home delivery at least once and attended the MCH clinics. The TBAs were interviewed as Key Informants. Those consenting to participate in the study.

3.4.2 Exclusion Criteria

Women attending the MCH clinic that have never undergone a home delivery and those who did not consent to participate in the study.

3.5 SAMPLING

The health facilities within Lugari District were used as catchment areas and were selected by using simple random sampling method. There are 21 government run health facilities in Lugari District. These comprised 1 district hospital, 2 sub-district hospitals, 4 health centres and 14 dispensaries serving the population. The health centres were deemed suitable because they are evenly distributed in the District hence would facilitate even coverage of

the whole district. These are Matunda, Matete, Mabusi and Kongoni. The Lumakanda District Hospital and Mautuma and Likuyani Sub-District Hospitals were also included as they handle the referral cases. Two private facilities were also included: Nzoia Health Centre which was established by the ACK Church but depends on the Ministry of Health for its operations and, Matunda Maternity Home which handles majority of the cases unlike the newly established Matunda Health Centre that is still ill-equipped. From the population of women who have undergone at least one home delivery the study sample was determined using simple random sampling. The sample size of subjects was determined using the following formulae:

$$n = \frac{Z^2 pq}{d^2}$$

Where:

n = sample size (316)

Z = the standard normal deviate at the desired confidence level (95%)

p = the prevalence of home deliveries in Western Province (71%)

q = 1 – p

d = the level of significance set (5%) (Mugendi and Mugendi, 1999)

To ensure the sample size was attained after data cleaning, the study targeted to interview 360 mothers.

3.6 STUDY VARIABLES

There were various variables observed in the study. The independent variables included: age, marital status, number of births, education level, occupation, income, access to health facility, ANC attendance, delivery practices, maternal complications and PNC attendance. The dependant variable was the level of compliance to WHO IMPAC standards; this was determined by scoring the practices at ANC, PNC and delivery. The controlled variable was the place of delivery which is away from the health facilities.

3.7 DATA COLLECTION

This was done by administering semi-structured questionnaires consisting of both open and closed-ended questions to the mothers. Translation of the questions to the local language was done. Key Informant interviews were conducted with the TBAs answering a set of prepared questions.

3.8 DATA MANAGEMENT AND ANALYSIS

Data from the field was cleaned and entered into Ms Access. Double data entry was done for quality control to minimize any errors during the keying in process. Analysis was done using the Statistical Package for Social Sciences (SPSS). All these data and information had back-ups on flash disks.

The analysis was performed using the SPSS. Descriptive statistics were determined to establish the distribution of variables in the sample. Correlation analysis was done to establish the relationships between two or more relevant variables. The Chi Square test was

used to test for the significance of the associations between two or more variables. To determine the level of compliance to IMPAC, a scoring process was used. Compliance to the standards was scored in percentages with full compliance being 100%. This was done at three independent levels; ANC, Delivery and PNC.

3.9 QUALITY ASSURANCE

Bias during the selection of the study site and study population were minimized by using the simple random sampling giving all those involved and equal probability of being selected and hence the sample is a true representation of the population. Quality assurance was ensured by:

- Use of a standard questionnaire that also had a translated version to the local language hence consistency of the study instruments.
- Training of one research assistant
- Pre-testing of the questionnaire.
- Selecting a representative sample.
- Calculating a sample size based on the prevalence of home deliveries hence valid representative number of respondents.
- Cleaning the data before analysis.

3.10 ETHICAL CONSIDERATIONS

Permission to carry out this study was sought from the relevant authorities who included the KEMRI Ethical Review Committee (ERC) and the District Medical Officer of Health (DMOH), Lugari District Hospital. The subjects were briefed on the details of the study

and their consent sought by use of a consent form. Confidentiality was ensured by restricting access to the information collected and coding of the questionnaires to conceal the identity of the subjects. The list linking the questionnaire codes and subjects names was kept separately with restricted access. In the course of the study, the researcher strived to fill the knowledge gaps identified especially in the area of family planning, reproductive health, child care among others. There was assurance given that the findings of the study would be communicated to the DMOH and on request to the study subjects.

CHAPTER 4

RESULTS

4.1 SOCIO-DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

4.1.1 Respondents

From the data collection, 96% (316) of the sample size of the mothers was achieved after data cleaning. Those excluded did not respond to all the questions or were not the biological mothers of the babies they brought to the clinic. For the TBAs, statistical determination of the sample size was hampered by the absence of the TBA register at the district as anticipated. A total of 15 TBAs were interviewed ensuring one or two representative from the research areas. The health facilities located close to the highway had high workloads as compared to those away from the highway; hence their sample sizes were higher.

4.1.2 Age

Home delivery was not limited to any particular age-group with the respondents being between 15-46 years of age as shown in Figure 2. The median age of the mothers interviewed was 26 years with the mode age being 30 years.

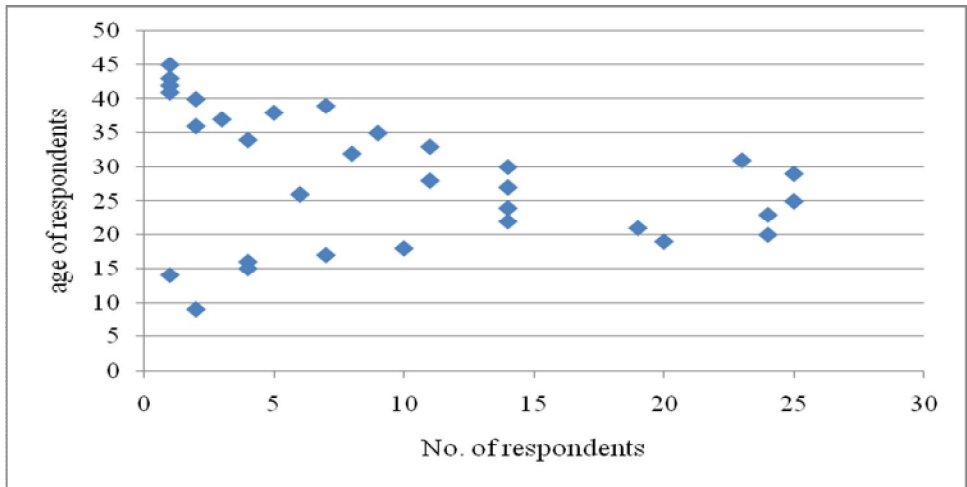


Figure 2: Age Distribution of Respondents

4.1.3 Education

Majority of the respondents were those with incomplete secondary education or less (75%) compared to those that completed secondary school and those with tertiary level education.

The highest level of education attained by the respondents is shown in Figure 3.

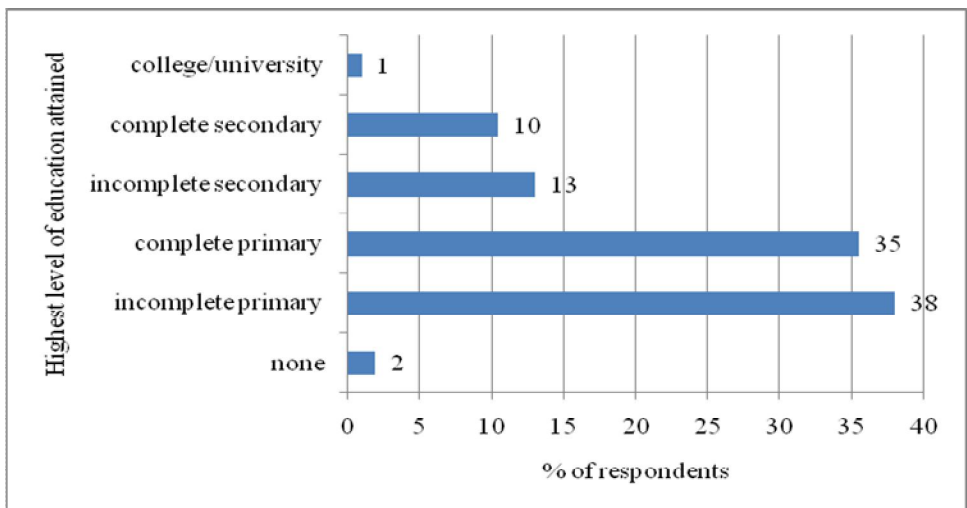


Figure 3: Highest level of education attained.

4.1.4 Marital Status and Number of births

Majority (87%) of the respondents were married as shown in Figure 4.

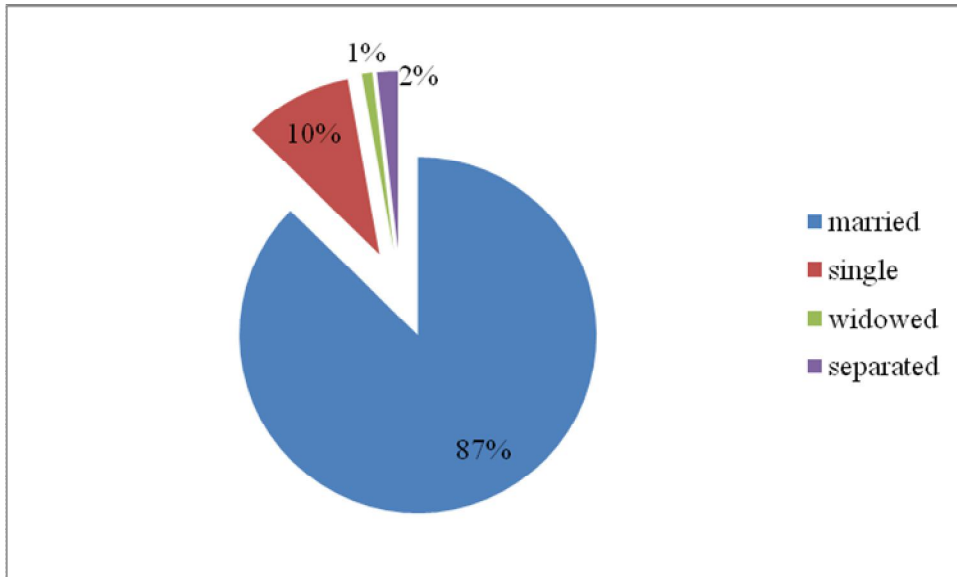


Figure 4: Marital status

Most of the respondents (60%) had between 2-4 children followed by 23% with one child, 15% 5-7 children and 2% with more than 8 children.

4.1.5 Occupation and Income

Most of the respondents (80%) were housewives hence dependant on their spouses for financial support. Those who had some form of income were either salaried employed, self-employed or casual workers as shown in Figure 5.



Figure 5: Occupation of respondents.

Majority (45%) of the respondents had a family income range of between Ksh. 1,000-4,999 as shown in Figure 6. Some (24%) could not estimate their monthly income due to irregularity or seasonal fluctuation for those that depend on farming or casual work on the farm, unwillingness to disclose or lack of knowledge of spouse income who is the sole breadwinner.

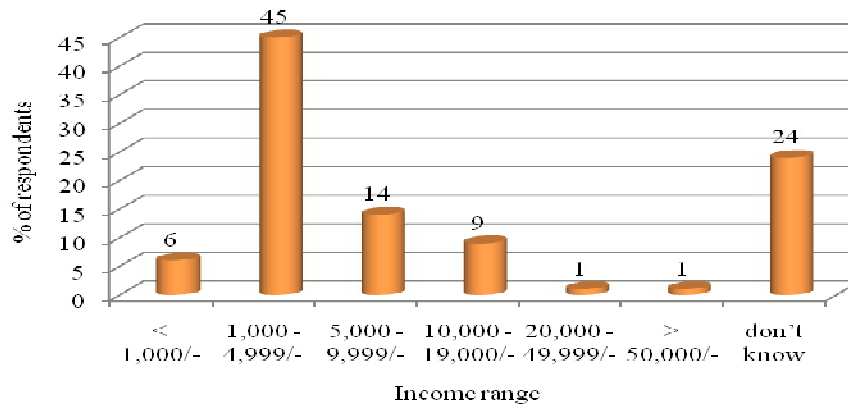


Figure 6: Range of family income of respondents

Most of the respondents (39%) depended on their spouse's income as shown in Figure 7.

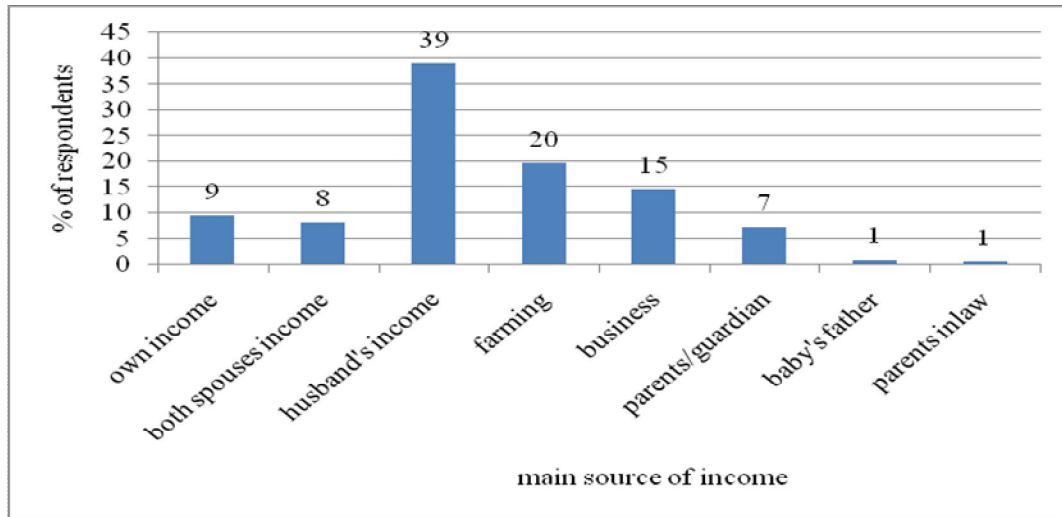


Figure 7: Main source of income

Most of the respondents were dependant on others for their sustenance. Others were dependant on farming and business which fluctuates and is seasonal hence unpredictable. Some mothers had their spouses working away from home hence they depended on their parents' in-law for support. In some cases the mothers were not married but depended on the father of the baby for financial support.

Control of family finances for majority lay with the husbands as shown in figure 8. Only 41% of the mothers were in control of the family finances unlike the rest who had to depend on others to make decisions on their behalf. It was clear that whoever provided the finances was in control of the finances as in the case of the parents' in-law, baby's father and husband in most cases.

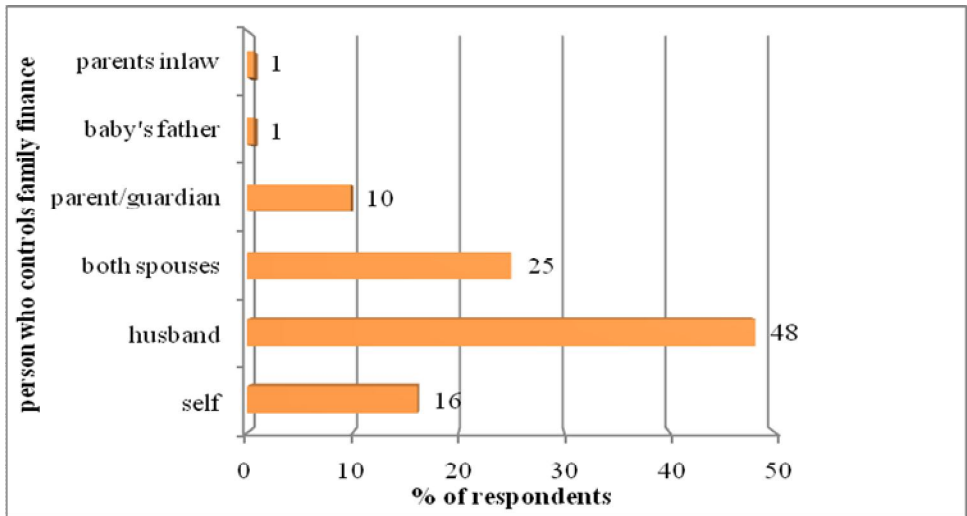


Figure 8: Person who controls the finances

4.2 HEALTH FACILITIES SERVICES

4.2.1 Distance to Health Facility

The nearest health facility for most (49%) of the respondents was 2-3 km as shown in Figure 9.

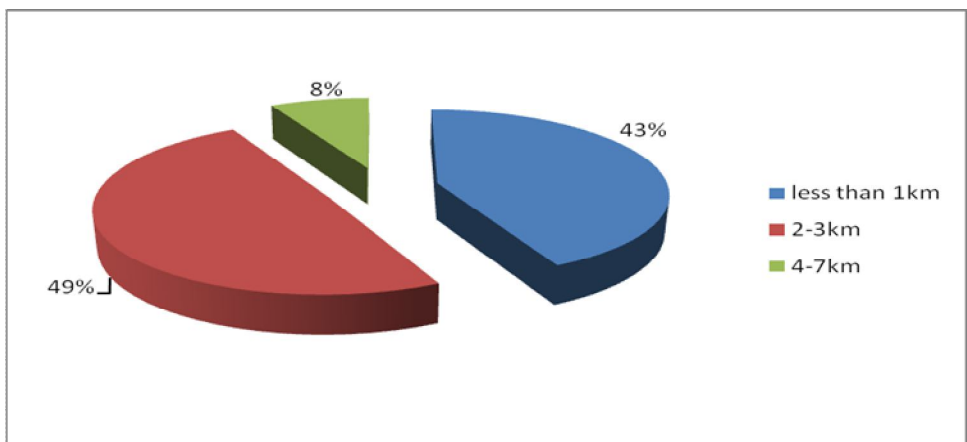


Figure 9: Distance to nearest health facility

Majority (83%) reported having reliable transport to the health facility in form of bicycles and motorbikes. The distance to the nearest health facility did not contribute to the ANC attendance ($p = 0.26$). Frequency of ANC attendance by the respondents was also not affected by the distance to the nearest health facility ($p = 0.51$).

4.2.2 Services Offered at Health Facility

All the respondents (100%) reported having ANC services while 98% PNC services availability at their at the health facilities. Majority reported that there was a charge for access the service as shown in figure 10.

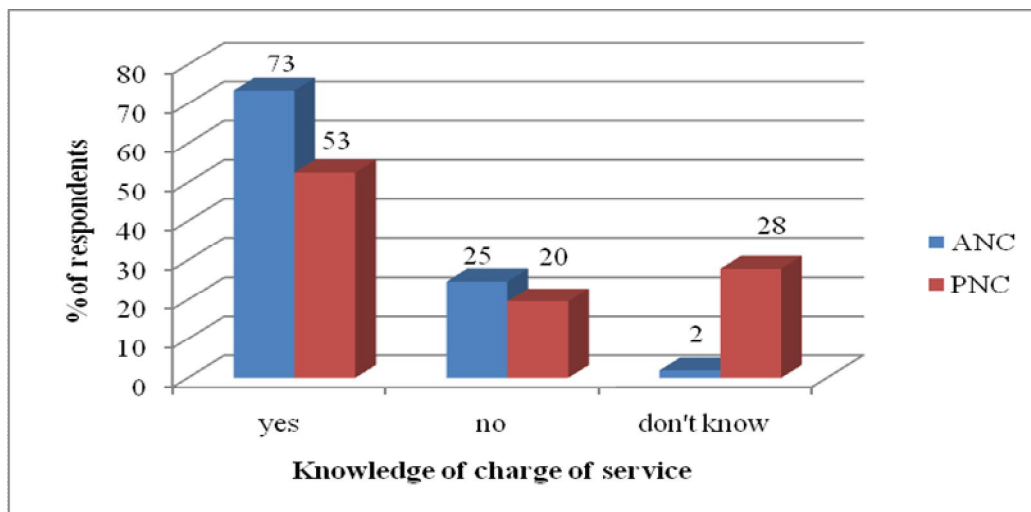


Figure 10: Knowledge of charges for ANC and PNC services

Those who did not know if there was a charge or not for access ANC and PNC was because they had not accessed the services before. There was lower awareness in the case of PNC mainly because there was poor uptake of the services as will be seen later in the report.

Knowledge on the specific charges for ANC and PNC is shown in the Table 3.

Table 3: Respondents' knowledge on the specific charges for services at health facilities.

Charges (Ksh.)	Knowledge on specific charges for services (n=316)			
	ANC		PNC	
	Frequency	%	Frequency	%
Equal/less than 20/-	167	53	3	1
30-50/-	57	18	0	0
60-100/-	57	18	3	1
More than 100/-	31	10	0	0
Don't know	3	1	310	98
Total	316	100	316	100

When asked to specify the amount of money actually paid for the services, the knowledge on ANC was known by almost all the respondents but this was the exact opposite in the case of PNC. This was also a reflection of the uptake of the services. For delivery services, knowledge on the charges was as shown in Figure 11.

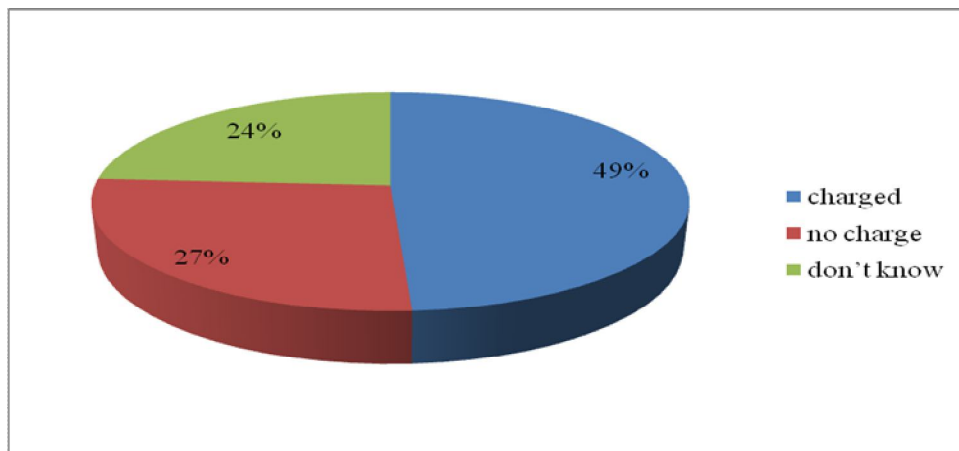


Figure 11: Knowledge of Delivery Charges

Majority (49%) of the respondents reported there being a charge for delivery as shown on Figure 11. However, majority of those who reported there being a charge for delivery (77%) did not know the actual amount as shown in figure 12.

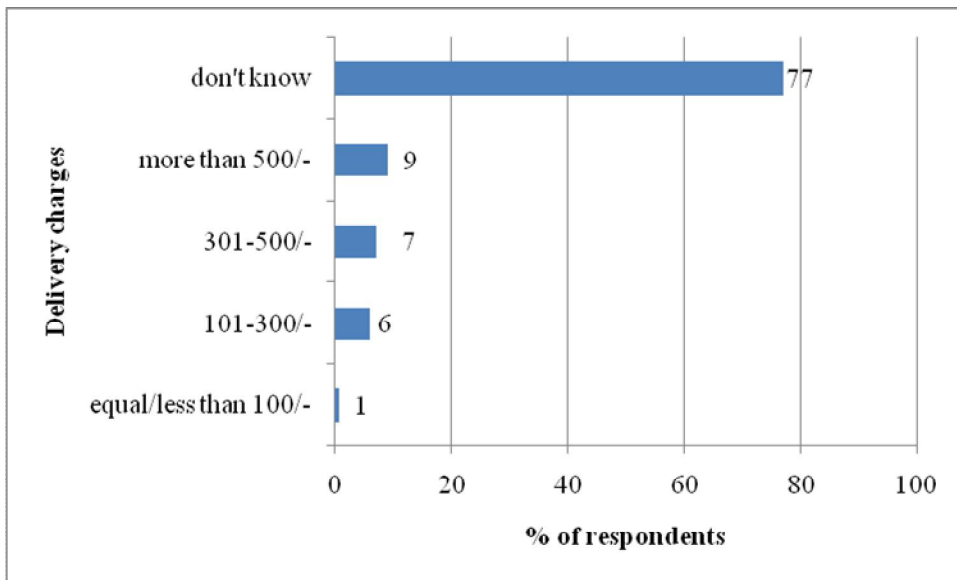


Figure 12: Delivery fee at health facility

The majority who did not know the charges was because they had not delivered at the health facility recently or in some cases never. The charges given by the respondents varied depending on the facility of delivery: the District Hospital, Sub-District Hospital, health centre or dispensary. These also varied depending on the nature of delivery: normal or complicated.

4.3 ANTENATAL CARE (ANC) ATTENDANCE

4.3.1 Reasons for Attendance

Nearly all (97%) of the respondents had attended an ANC clinic at least once with varying reasons for attendance as shown in Figure 13. Some (29%) gave more than one reason for attendance.

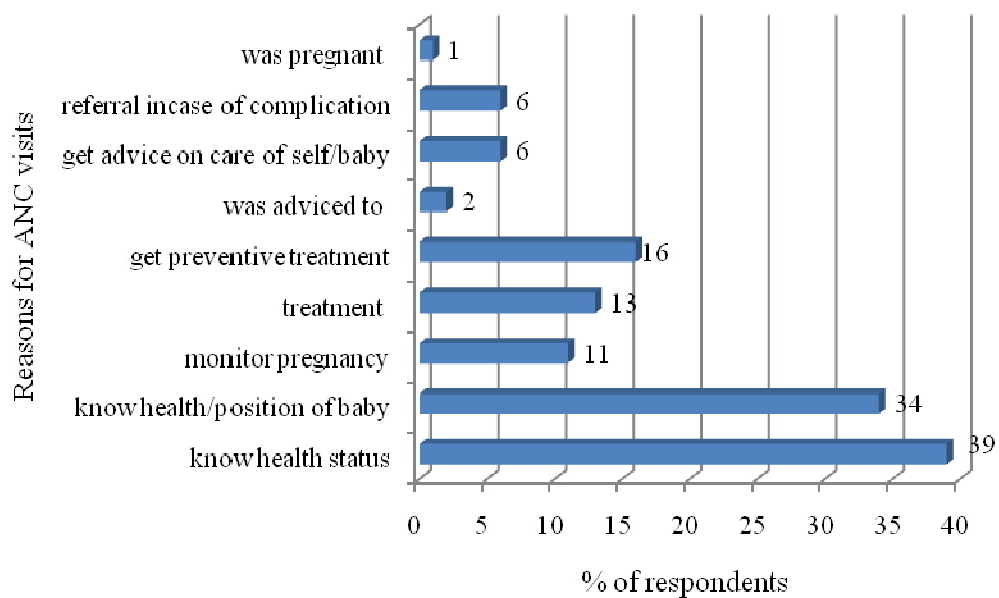


Figure 13: Reasons for ANC attendance.

There are those who understood the reasons for ANC to ensure the mother and foetus are health, through monitoring the pregnancy, getting preventive treatment, treatment when ill, advice among other reasons. There were others who went just went as a formality, get a card so that incase of complications they would not be turned away as this seemed to be the practice at the health facilities.

Of the 3% of the respondents that had never attended ANC attributed it to various reasons as shown in Figure 14.

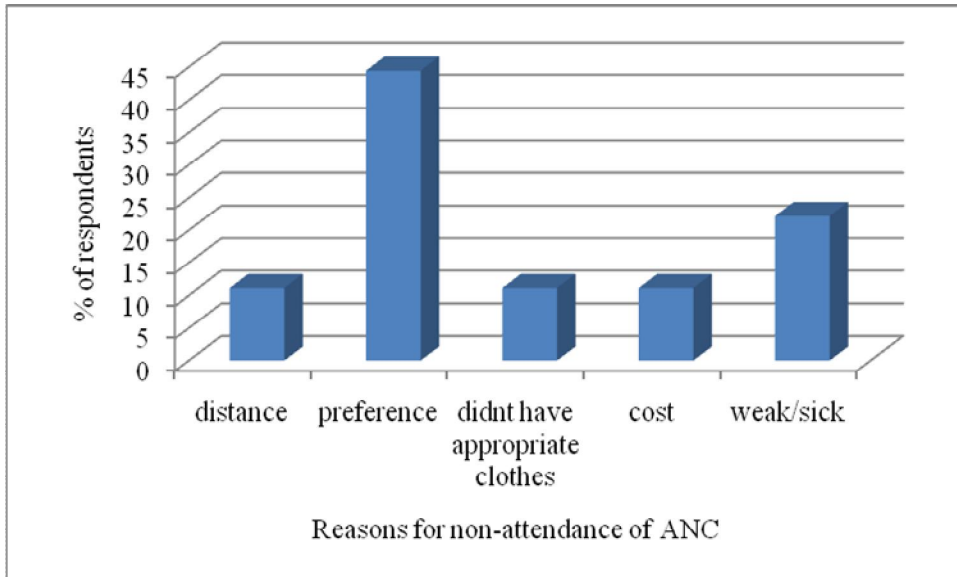


Figure 14: Reasons for non-attendance of ANC

Most of those who did not attend ANC clinic just preferred not to do so. Cost was an impediment to some of the mothers as they could not afford the transport and fee at the health facility. The appropriate clothing referred to maternity dresses; the attending staff was very particular and even sends away mothers who were inappropriately dressed causing some to keep away all together. Most of these mothers (67%) sought check up from the TBAs.

The frequency and timing of first visits to ANC was varied as shown in Figure 15 and 16.

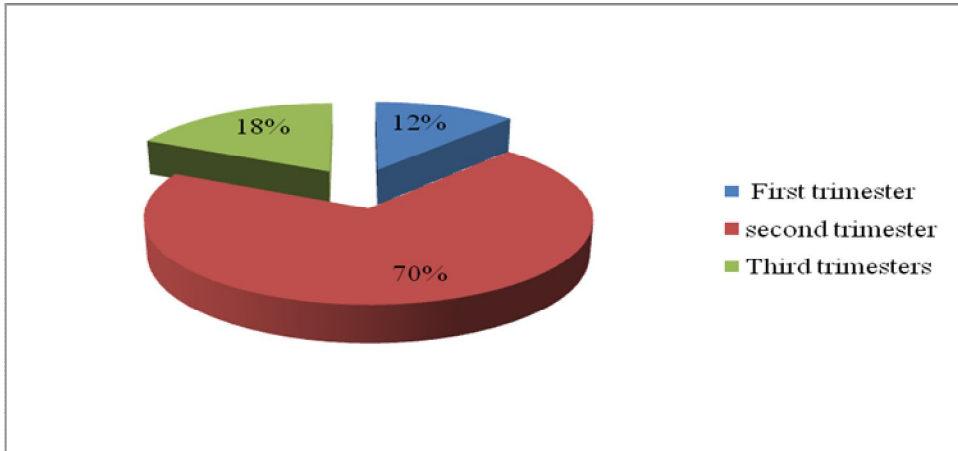


Figure 15: Period of first ANC visit

Most of the respondents (97%) attended ANC for the pregnancies delivered at home with most of them going for their first visit in the second trimester when the pregnancy was visible as shown above. The frequency of the visits was as shown in figure 16 with half of the respondents going for between two to three visits.

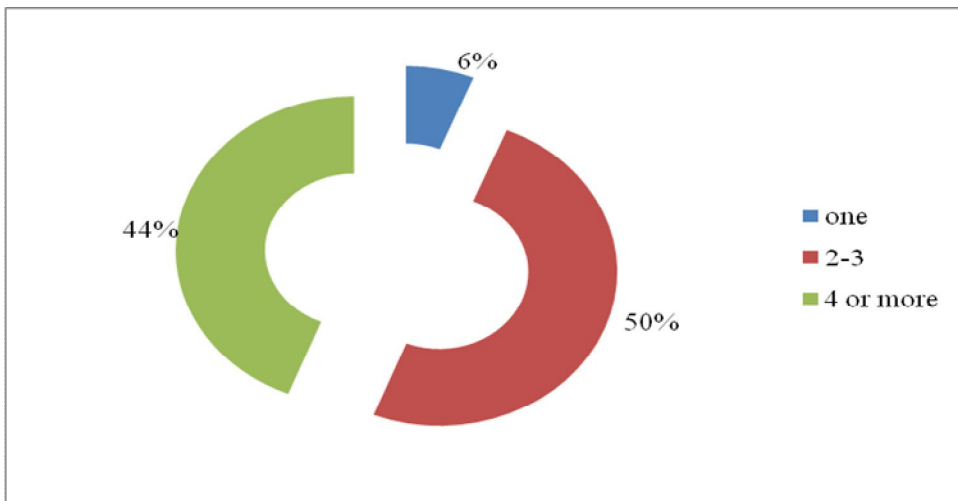


Figure 16: Total number of ANC visits

When the difference in attendance and frequency of use of ANC was compared with several factors, there was no significant association: age ($p=0.801$), number of births ($p=0.104$) and education ($p=0.119$).

4.3.2 ANC Services

The nature of ANC services offered differed among the respondents as shown in Table 5. These are the WHO recommended ANC procedures (WHO and UNICEF, 2003). The obstetric examination involved the checking of the fetal position and examining the mother. Most of the health facilities did not have height as one of the routine tests hence the low score. The mothers had a learning session for the first 30 minutes where information related to pregnancy is given which includes educating the mothers on the danger signs to look out for during pregnancy. Those who come late to the clinic miss this session.

Table 4: Services Offered the ANC clinic as per WHO recommendations

Procedure	Respondents administered (n=307)	
	Frequency	% of respondents
Obstetric exam	307	100
Information on dangers	175	57
Weight check	292	95
Height check	9	3
Blood pressure check	207	88
Blood test	282	92
Urine test	236	77
Tetanus injection	295	96
Nutritional supplements	240	78

Table 5: Medication given at the ANC clinic as per WHO recommendations

Medication	Respondents administered (n=307)	
	Frequency	% of respondents
Anti-malaria	279	91
Dewormers	12	4
Painkillers	6	2
Antibiotics	6	2
Heartburn medication	3	1

For the medication, the above medications in table 5 were those that the mothers could recall. Being a malaria endemic zone, anti-malaria medication was one of the ANC routines. The nutritional supplements were mainly folic acid tablets.

The WHO emphasizes on treating each visit as if it is the only visit by the mother, hence focus is on comprehensiveness of the visit as opposed to the number. To check for comprehensiveness, the mothers were scored based on a list of the ten ANC services recommended by WHO (Table 6) that were administered during their visit and the results are shown on Table 6. These were scored in percentages of the ten recommended services using this formula:

$$\text{Comprehensiveness} = \frac{\text{number of services administered}}{\text{Total recommended service (10)}} \times 100$$

Table 6: Comprehensiveness of ANC visits.

Comprehensiveness of ANC	Respondents received (n=307)	
	Frequency	% Of respondents
100%	3	1
90%	34	11
80%	92	30
70%	98	32
60%	37	12
50%	34	11
40%	6	2
10%	1	0.3
Not sure	2	0.7

Comprehensiveness of ANC visits were not at 100% for majority of the respondents. For majority, the poorly adhered to procedures included checking of height and provision of knowledge of danger signs in pregnancy. Laboratory procedures of checking blood and urine were hampered either by attending a facility that lacked a laboratory or some not being able to afford the fees for the test.

4.4 HOME DELIVERY

4.4.1 Reasons for Home Delivery

There were varied reasons given for home delivery that were summarized as shown in Figure 17.

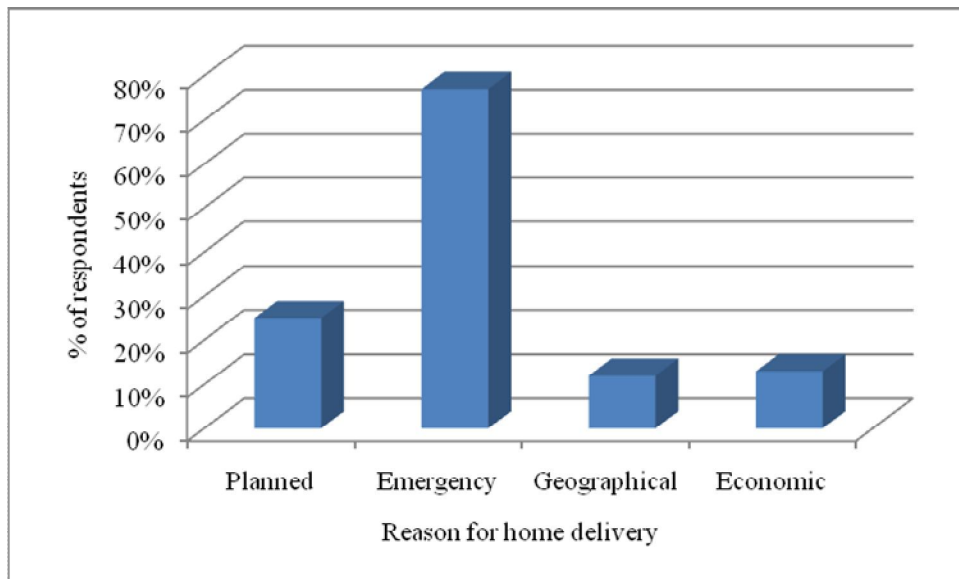


Figure 17: Reasons for home delivery

Some respondents gave more than one reasons for home delivery hence the percentage is more than 100%. Those who planned to deliver at home sighted reasons like having a skilled or reliable attendant available (2%), fear of surgical procedures (3%), no complications anticipated (4%), spouse/guardian decided (3%) and preference (13%). The geographical reasons included distance to health facility (9%) and transport problems (3%). The emergency reasons were mainly connected to lack of proper information on the due date (4%), delivery before due date (11%), mother was alone when labour begun (5%), the labour was very short hence (29%) some delivered enroute to the health facility or night emergency (28%). Economic reasons were due to the delivery fee which the mothers could not afford (13%).

Death of the infant in the postnatal period in home delivery was reported in only 2% of the respondents with majority not knowing the cause as shown in figure 18.

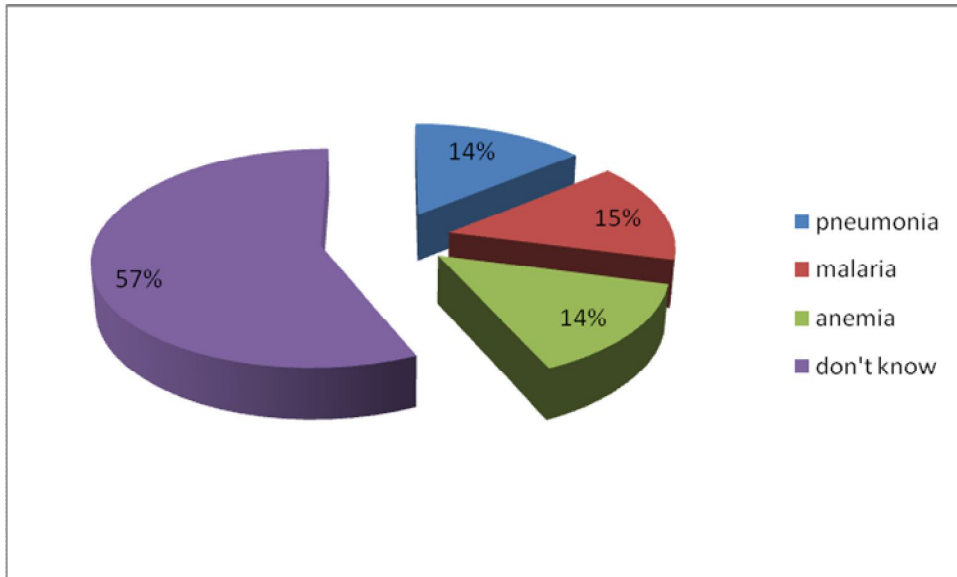


Figure 18: Cause of death in neonatal period

Many mothers did not know the cause of death because autopsies are hardly done on children who die at home and they were hurriedly buried. Malaria was the leading known cause of death due to Lugari being a malaria endemic zone.

4.4.2 Reasons for Choice of Birth Attendant

Majority of the mothers (89%) reported having chosen their birth attendant sighting different reasons as shown in Figure 19. Most of the mothers cited geographic reasons, that is the nearest available birth attendant. This was followed by those who were guided by other mothers' opinion who recommended a birth attendant to the respondent due to

attendant's track record of successful deliveries the mothers' positive experience for the mothers.

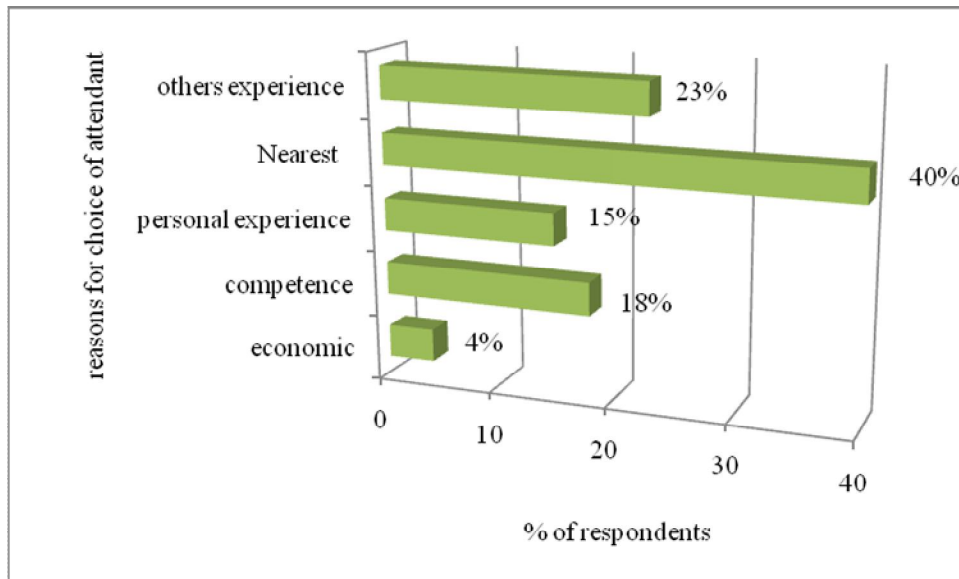


Figure 19: Reason for choice of birth attendant

The competence of the birth attendant in terms of her being registered, her skills and years of experience also endeared the mothers to the TBA. Economic reasons also dictated the choice of with many mothers preferring those who were affordable, offered a payment plan to allow payment over an agreed period of time or even accepted it in kind. The mother's personal experience with a birth attendant in previous deliveries also contributed to the choice.

For those who had no choice in the attendant at delivery, it was either because the birth attendant was chosen by the parents/guardian or spouse (2%) while others had no attendant present at delivery (9%).

4.4.3 Place of Delivery

The actual place of delivery is as shown in figure 20.

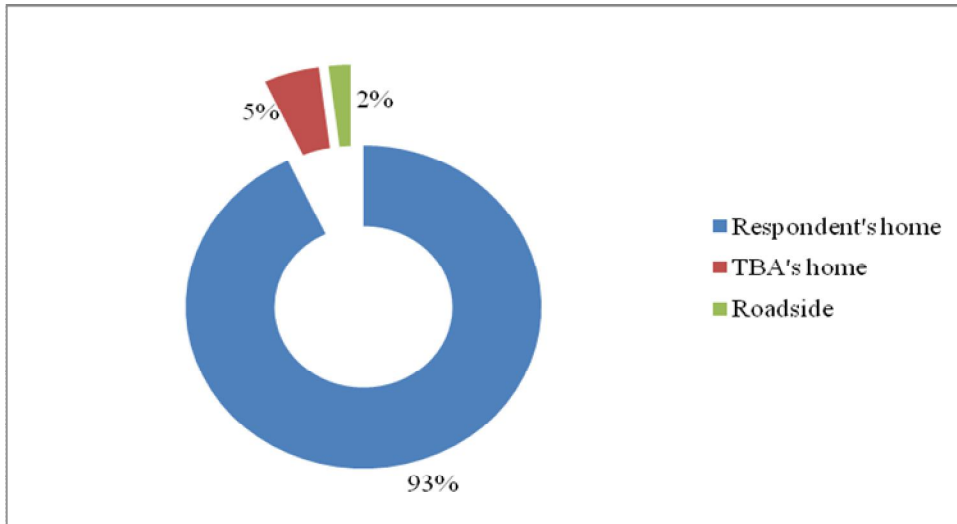


Figure 20: Place of actual place of delivery

For most of the mothers, the birth attendant came to their homes for the delivery. For those who went to the TBAs home, it was those TBAs who had specially built houses that were used specifically for delivery. The roadside deliveries occurred when the mother was enroute to the delivery place either to the health facility or to the TBAs home. Few of the TBAs (17%) had specially built houses where the deliveries take place.

4.4.4 Preparation for Delivery

The respondent was asked to recall the preparations for herself, the birth attendant, the baby and place of delivery.

4.4.4.1 Preparation by Mother

Most of the mothers (80%) did not make any preparation for themselves. Few of them (10%) had money for payment to TBAs and emergencies as shown in Table 7.

Table 7: Preparations for mother for delivery

Preparation for mother	Respondents (n=316)	
	Frequency	% of respondents
Money	32	10
Clothes	6	2
Cotton wool/pads	22	7
Clothes, cotton wool/pads	3	1
Nothing	253	80

None of the mothers fully met the standard preparation requires by IMPAC of having a birth plan which includes: emergency means of transport, money to pay birth attendant, for any needed mediations and supplies, items needed at birth by mother (extra set of clothes and pads/cotton wool) and potential blood donors in case of emergency. There are those who had money to pay the birth attendant and for any eventuality in case of complications in delivery. The requirements of the mother were ensured by having clothes and cotton wool/pads.

4.4.4.2 Preparation by Birth Attendant

Preparation for the birth attendant was mainly to ensure hygiene. Most of the respondents (91%) had birth attendants during delivery. Hygiene was ensured in different ways by 84%

of the respondents who protected or washed their hands. The gloves were provided by the mother or the birth attendant herself. Some (14%) did nothing to ensure hygiene. In dire cases, gloves were improvised by use of polythene bags on the hands. The polythene bags may protect the birth attendant but to provide protection to the mother and child, their cleanliness had to be ensured. This would not guaranteed by the mothers. Those who had antiseptic, it was for cleaning the baby's umbilical cord stump after cutting. Some birth attendants (3%) had official uniform which they use at delivery; this improves the hygienic conditions of the delivery process.

Table 8: Preparations for birth attendant

Preparation for birth attendant	Respondents (n=289)	
	Frequency	% of respondents
Gloves	204	71
Uniform	1	0.3
Washed hands	14	5
Paper bags	6	2
Antiseptic	1	0.3
Gloves, uniform	10	3
Gloves, antiseptic	10	3
Gloves, washed hands	1	0.3
Nothing	43	15

4.4.4.3 Preparation of delivery place

This involved the preparation of the actual delivery spot. Majority of the mothers (31%) used the gunny bag which was then disposed off. The TBAs had the polythene sheets or PVC mats which are part of their tools of trade; these are washed and reused. For 2% soil was heaped at the delivery spot to absorb the blood and water, this was then scrapped off the floor and disposed. There were other materials used as shown in Table 9 some in combination. Most of them were disposed off however, few washed and used in the home. Few of the mothers (1%) were not aware of how the place was prepared due the pain and anxiety of the moment.

Table 9: Preparations for delivery place

Preparation for delivery place	Respondents (n=316)	
	Frequency	% Of respondents
Gunny bag	98	31
PVC/polythene sheer	53	17
Rags/blanket/sheet	22	7
Mattress	3	1
Soil	6	2
Reed mat	3	1
Anything available	1	0.3
Gunny bag, PVC/polythene	34	11
Gunny bag, PVC/polythene, rag/blanket	3	1
Gunny bag, rags/blanket	25	8
PVC/polythene, rags/blankets/reed mat	13	4
Rags/blanket, mattress	3	1

Preparation for delivery place	Respondents (n=316)	
	Frequency	% Of respondents
Gunny bag, mattress/reed mat	6	2
PVC/polythene, mattress	9	3
Nothing	32	10
Don't know	3	1

IMPAC standards recommend a clean and not sterile delivery surface. Compliance to the IMPAC standards for clean delivery surface was difficult to assess due to the difference in materials used which the mothers could not confidently confirm their clean state.

4.4.4.4 Preparation for Baby

Preparation for the baby was looked at in two phases: preparation for cord cutting and for baby's layette. For cord, 87% of respondents had a new razorblade for cutting and a string and tying hence complying with the clean cord requirement as shown in figure 21.

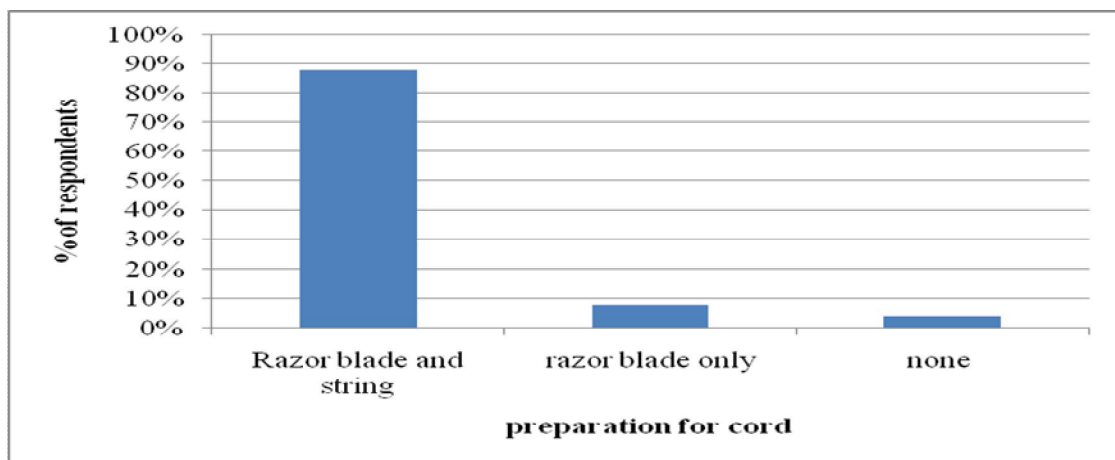


Figure 21: Preparation for cord cutting

For 87% the razor blade and string were new hence sterile in compliance to the hygiene standards. Those who had only the razor blade had to improvise the string to tie the cord if the birth attendant did not have one. This sometimes compromised hygiene if the string has to be quickly obtained from the nearest available place. Those who had nothing prepared depended on the birth assistant to have the required equipment and if this was not the case the nearest instrument which may not sterile such as a scissor could be used. This gravely endangered the child's life due to potential infection.

This could not be said certainly for the 8% of the mothers who had only the razor blade without a string prepared and another 4% who did not prepare these items in advance.

For the baby's layette the preparation was as shown in Table 11. Majority (71%) ensured they had something to wrap the baby in, 9% had clothes, 17% both a wrap and clothes while 2% used any available cloth to wrap the baby.

Table 10: Preparations for baby's layette

Preparation for baby's layette	Respondents (n=316)	
	Frequency	% of respondents
Wrap (Towel/shawl/ lesa/blanket) only	224	71
Clothes only	28	9
Any available cloth	10	3
Both clothes and wrap	54	17

4.4.4.5 Use of Medication

The respondents were asked if they used any medication just before or during the labour process, the response was as shown in Figure 22. Majority did not have any medication administered to them during labour. The content of the herbal medicine taken was unknown to the mother as the TBA did not reveal it.

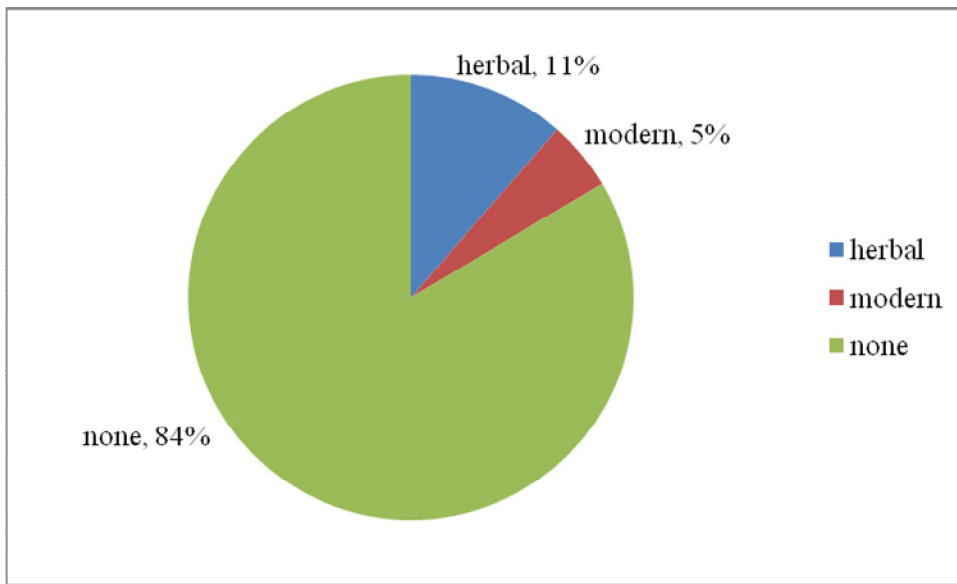


Figure 22: Use of medication during labour

Most of the modern medicines used by the mothers during this period were pain killers to help reduce the pain experienced. Of those who used herbal medication, various reasons were cited as shown in Table 11.

Table 11: Reason for use of herbal medicine in labour

Reason	Respondents (n=36)	
	Frequency	% of respondents
Painkiller	13	36
Give strength	5	14
Increase contractions	10	28
Placenta birth	3	8
Stop haemorrhage	3	8
Numbness in legs	2	6

The herbal medication was used either to accelerate the delivery process or alleviate a complication occurring during labour. Those used to accelerate the process include the medication used to give strength to push, increase contractions and assist in placenta birth. Those that alleviated complications were the painkillers helped reduce the intensity of labor pain, herbs to stop haemorrhage and treat numbness in legs experienced during intense labour. The use of herbal medicines was contrary to the IMPAC requirements. This was because the content was unknown and could be potentially harmful in the longrun even if it may be effective for the time.

4.4.4.6 Complication at Delivery

Complications at delivery were experienced by 15% of the respondents as shown in the Figure 23.

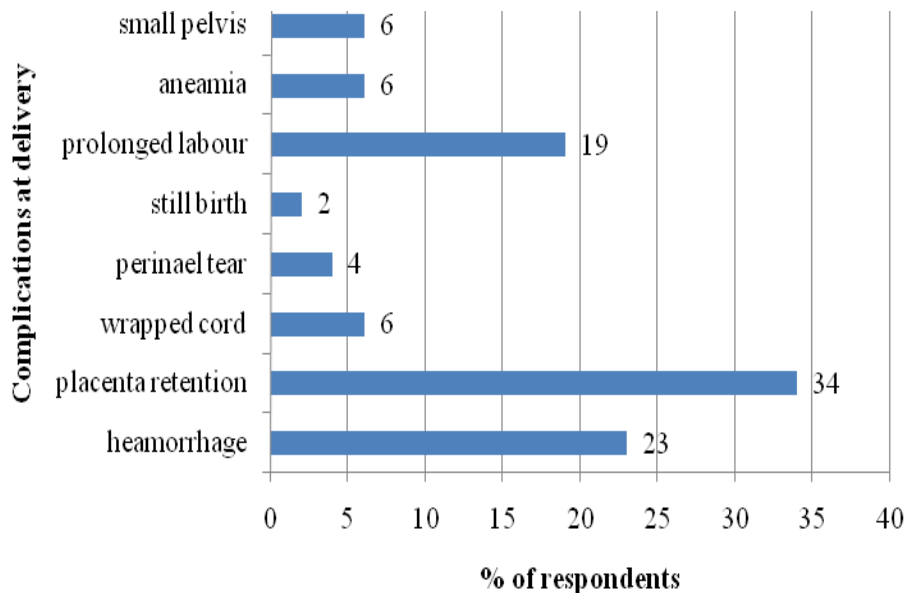


Figure 23: Nature of complication at delivery

Haemorrhage was differentiated from the normal expected bleeding at delivery depending on how long it persisted, the volume and the effect on the mother. Anemia was mostly a condition that had persisted during the pregnancy and resulted in complication especially due to the bleeding at delivery. The response to complications was as shown in figure 24.

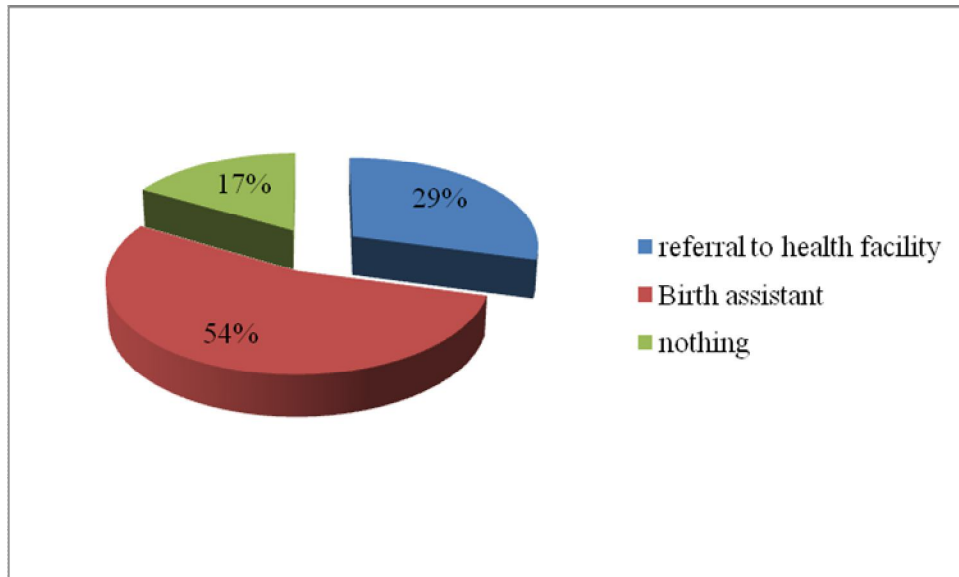


Figure 24: Management of complication at delivery

The TBA assisted 54% of those with complications, 29% were referred to the health facility and assisted by medical personnel while the rest (12%) managed on their own with the help of whoever was assisting them. The TBAs reported having skills to manage some complications and only referred those they were not competent to handle.

4.5 POSTNATAL CARE (PNC)

Only 39% of the respondents reported to have had PNC check-up as shown in figure 25. However only 17% went to the health facility, the rest got check up from the TBA. The PNC administered by the TBA could not be classified as PNC since there are not standard procedures performed or followed.

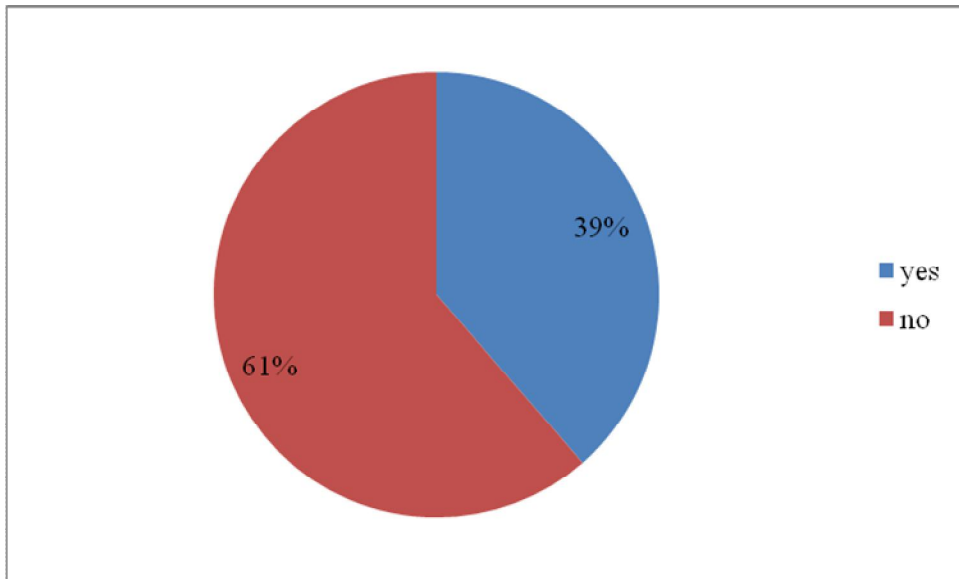


Figure 25: PNC attendance

Only 8% suffered complications/disability due to childbirth as shown in figure 26 below.

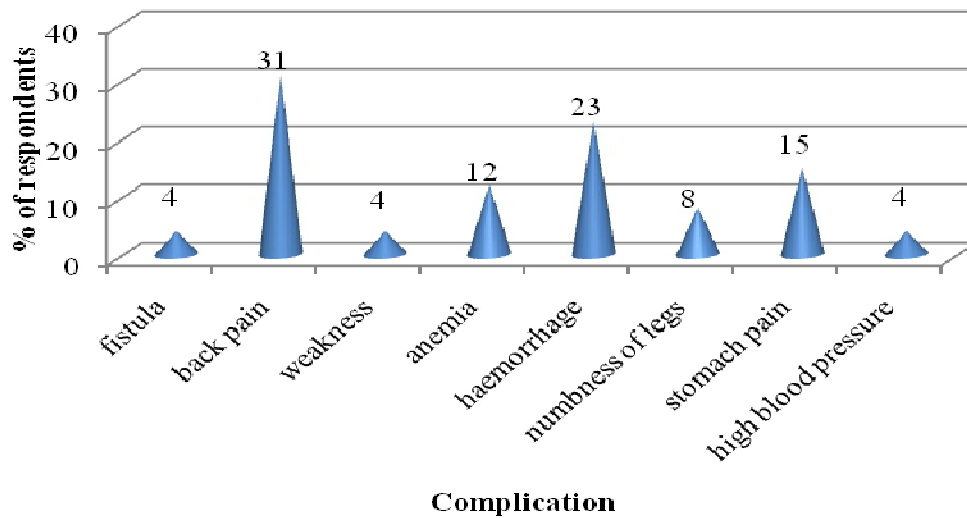


Figure 26: Nature of complication due to childbirth

These were complications that occurred after a delivery and where non-existent before. Most of these persisted beyond the post natal period with some hindering normal life operations. Some complications disappeared after treatment for those who sought it and even those who self medicated. Others just waited out with the mother either coping or seeking some kind of intervention away from the health facilities as shown in figure 27.

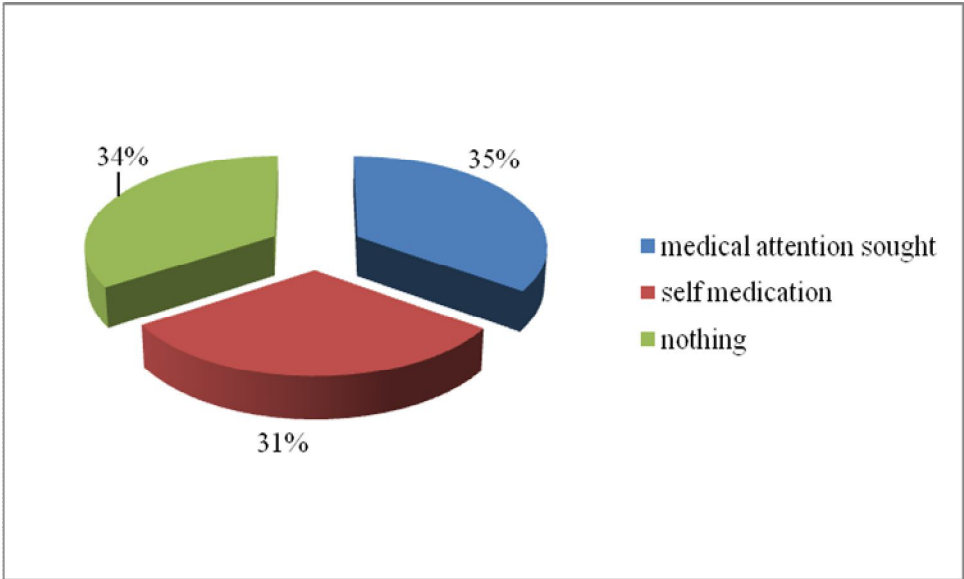


Figure 27: Intervention for complications at childbirth

With the lack of PNC indicators for Kenya, comprehensiveness could not be determined for the mothers attending. Overall PNC attendant was very poor.

4.6 TRADITIONAL BIRTH ATTENDANTS (TBAS)

4.6.1 Characteristics of the TBAs

The TBAs interviewed were those classified as the Type 2 (King and Mola, 2006). These are those who specialize in the practice hence have delivered many babies. They all had no formal education and were aged between 42yr-72yrs old. Most of the TBAs claimed that theirs was a gift from God as shown in figure 28.

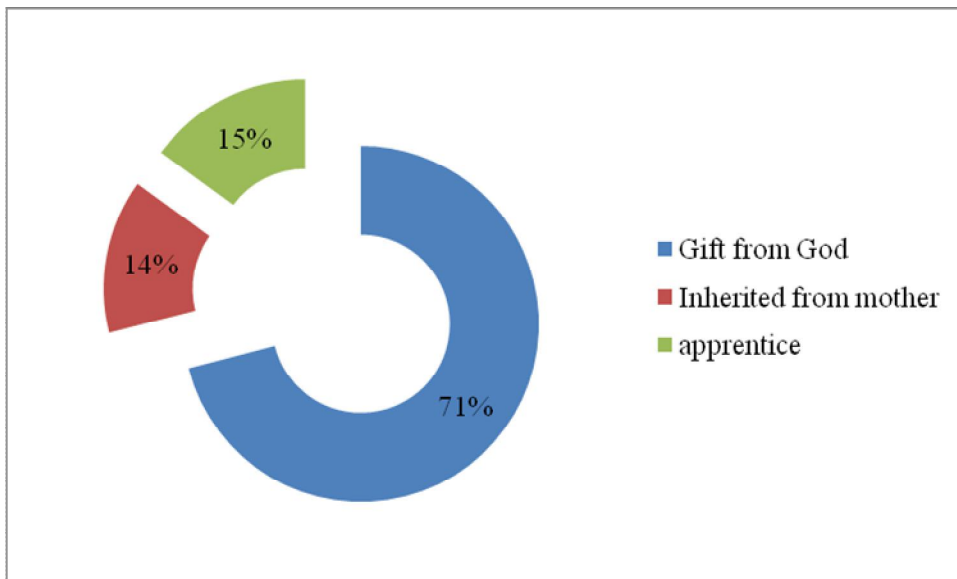


Figure 28: Source of TBA skills

Those who got the skill from God did not undergo any training they just begun attending to mothers when they were young girls mostly in teenage hood. The apprentice had begun as assistants to older TBAs and learnt and perfected the skill with time and guidance. Those who inherited the skill it was mainly from the mother. They grew under of apprenticeship

of the mother. The difference between the latter two is that the one who inherited the skill had the skill while the other one had to learn it.

Most (85%) of the TBAs reported being registered by the government. There was however no register of registration at the District headquarters. The registered had done so before the split of the larger Kakamega District or elsewhere for those who have relocated. Half of the TBAs had received some formal training provided mainly by NGOs through the Ministry of Health while others from apprenticeship as shown in figure 29.

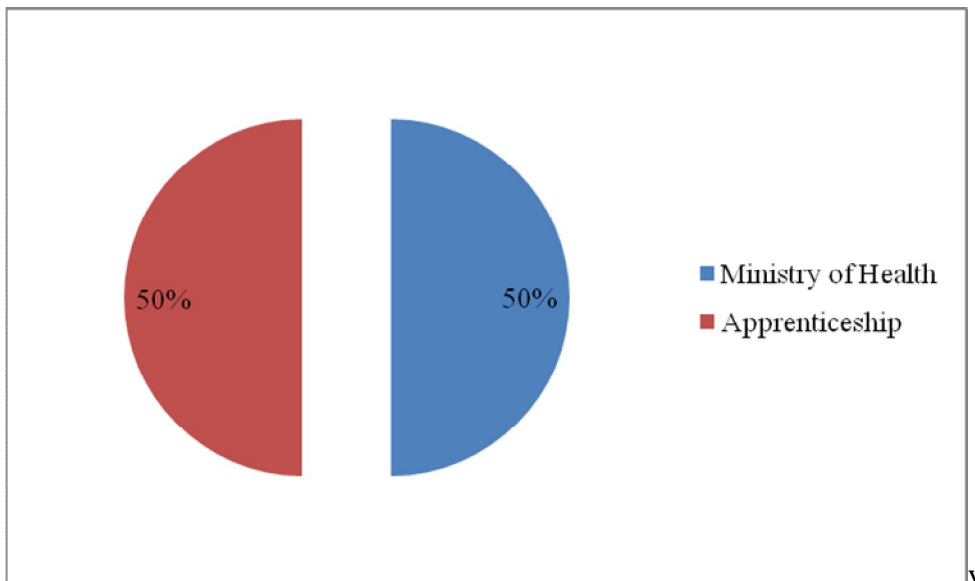


Figure 29: Formal training for TBAs

The NGOs through the Ministry of health have in the past trained TBAs to handle normal delivery, recognize and refer complication and advice mothers on family planning methods.

They equipped the TBAs with basic equipment such as a delivery kit containing a fetoscope, razor blades and string, torch and a PVC delivery mat.

4.6.2 Skills of the TBAs

The TBAs had varied skills to handle or treat complications as shown in figure 30. This was either through skill or use of herbal medicines.

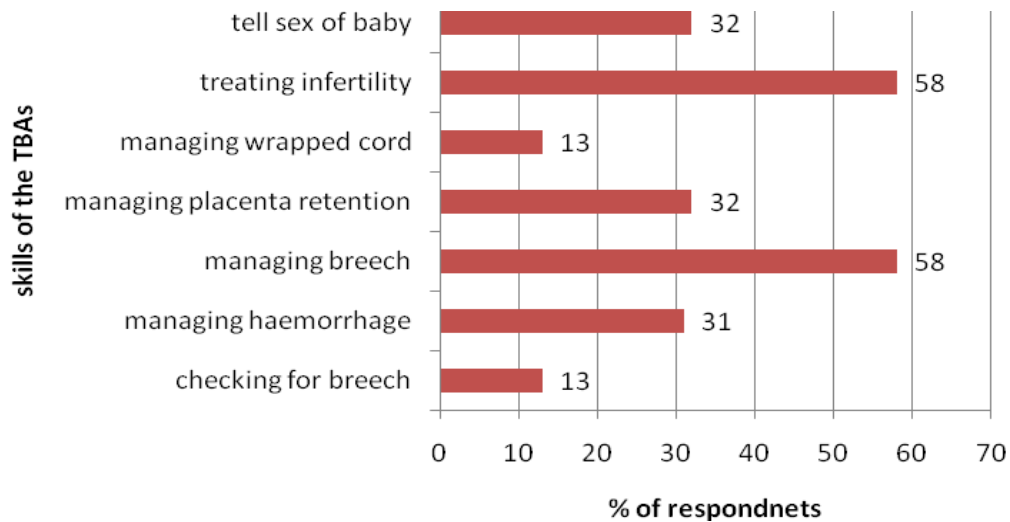


Figure 30: Skills of the TBAs

These are the skills they possessed besides handling a delivery. For those who could tell the sex of the baby before delivery, they could do this by the activity of the foetus- a vigorously kicking foetus was a boy or by the cravings of the mother while pregnant among other observable signs. Fertility treatment and managing haemorrhage was usually by taking herbal concoctions whose composition was a trade secret. Wrapped cord, breech and

placenta retention required skill and practice on the TBAs side. There was no formal training in managing complications as this was overstepping their scope of duty as they were required to refer these to health facility.

4.6.3 TBA Services during Delivery

All (100%) the TBAs reported referring those who were HIV+ to safeguard the health of the mother, baby and even their own. They all had been sensitized during training or even by the health facilities where they accompany their clients with complication to on how to tell the HIV status of the mother just by identifying the symbol indicated on the ANC card. The ANC card was a prerequisite for uptake of the clients for the TBAs interviewed. Figure 31 shows percentage of TBAs who referred certain complications.

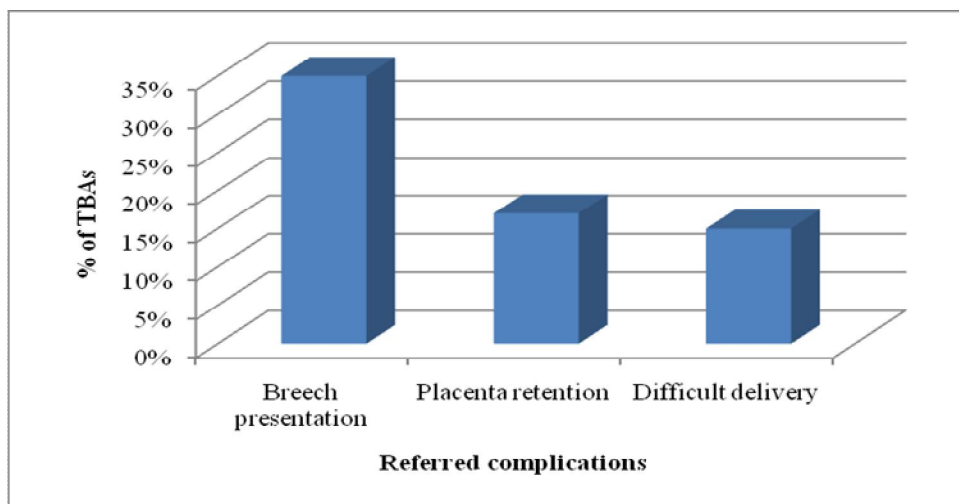


Figure 31: Referred complications by TBAs

Those that referred are those who did not attempt to handle the complication at home either because they did not have the skill to do or understood that it was beyond their mandate.

All those who referred accompanied their clients to the health facility so as to brief the health personnel on the case. These deliveries took place either at the home of the mother or TBA for those who had specially built houses for this purpose (17%). The mothers were expected to have the gloves, razor blade and thread, if they didn't have, the TBA provided them at a fee or improvised. The timing of the umbilical cutting varied as shown in figure 32. The TBAs could not explain the reason for their except that that was what they were taught to do. For those who attempted to explain it felt that they needed to let the umbilical die before cutting it off since it was the lifeline between the mother and child.

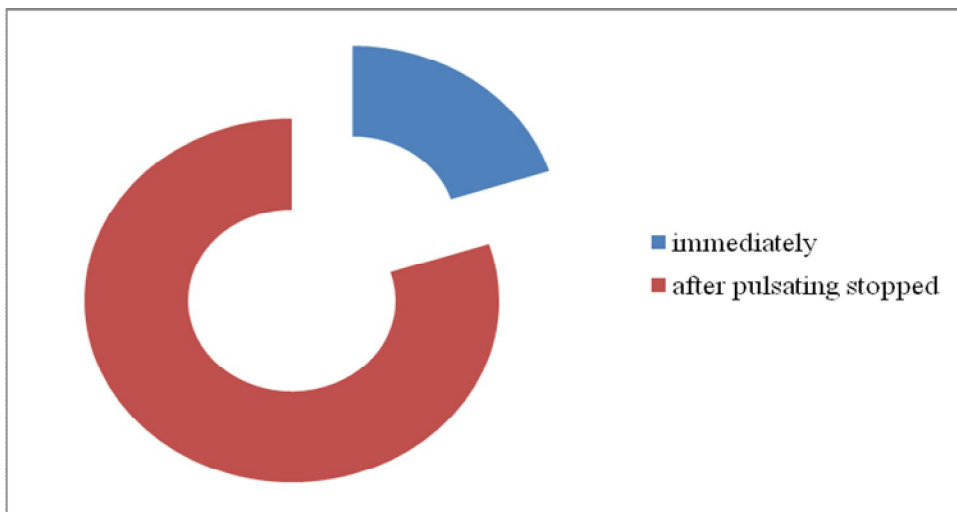


Figure 32: Timing for cutting the umbilical cord

There was no deliberate thermal control by the TBAs such as warming the room with a fire. Hygiene was observed; the mother by taking a bath, the TBA by ensuring there was constant supply of warm water for washing hands and baby after delivery, use of gloves and sterile/new razor and thread. Most of the TBAs (68%) washed the baby immediately with the rest only wiping until after three days as shown in figure 33.

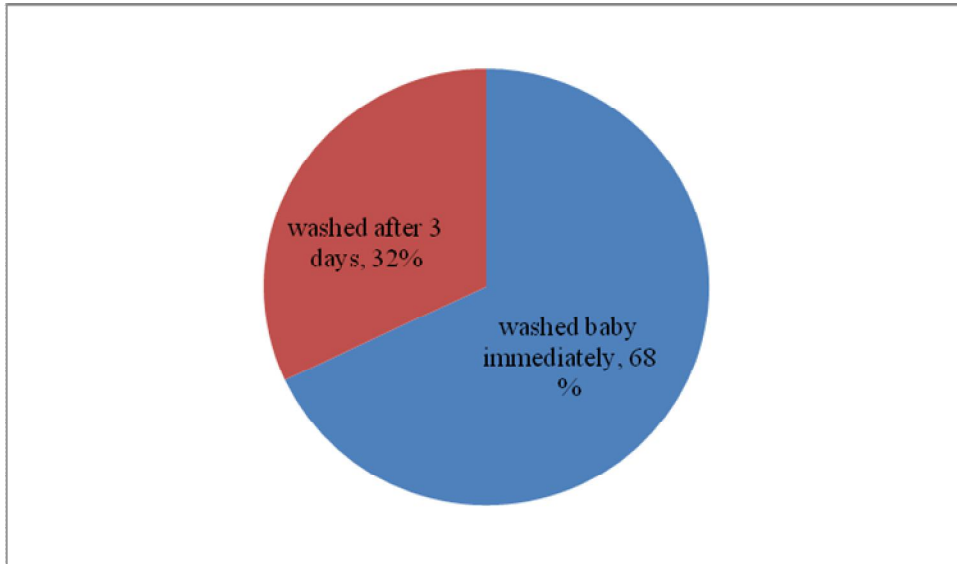


Figure 33: Timing of washing the baby after delivery

Those who washed immediately said this aided in identifying any deformities on the baby early and hence be able to take action urgently while others felt this averts infection. For those who delayed the bath it was to avoid exposing the baby to cold which could result in health problems and that the baby's skin was too delicate then to be washed.

PNC was provided by all the TBAs; they visited their clients for three to five days after delivery to ascertain the health of both the mother and baby. Some TBAs charged for services as shown in figure 34.

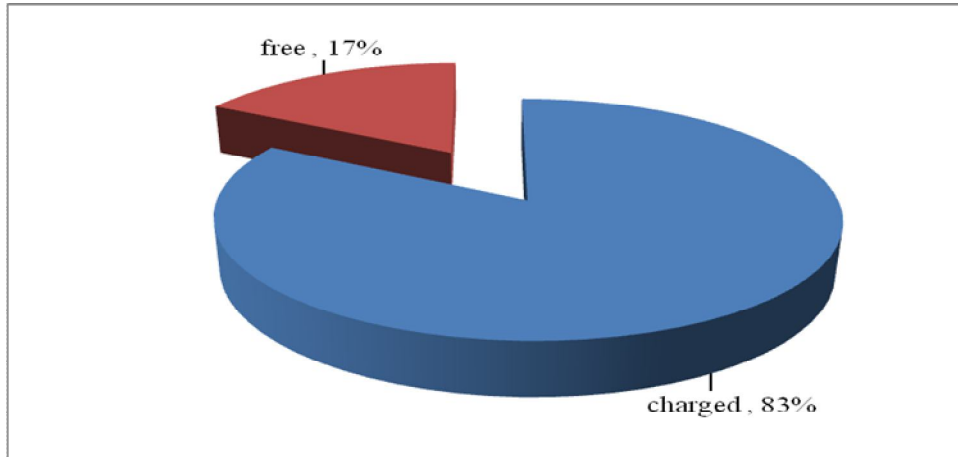


Figure 34: Charging for delivery services

For the delivery charges the TBAs did not have a fixed price with all of them giving a range between Ksh.100-1,000/= as it varied depending on the services given and whether it was cash on delivery, credit or in kind. All those who charged for the services allowed the mothers a payment plan over a reasonable period of time.

Some (35%) reported having been attached at one time to a health facility where they assisted in handling deliveries as shown in figure 35.

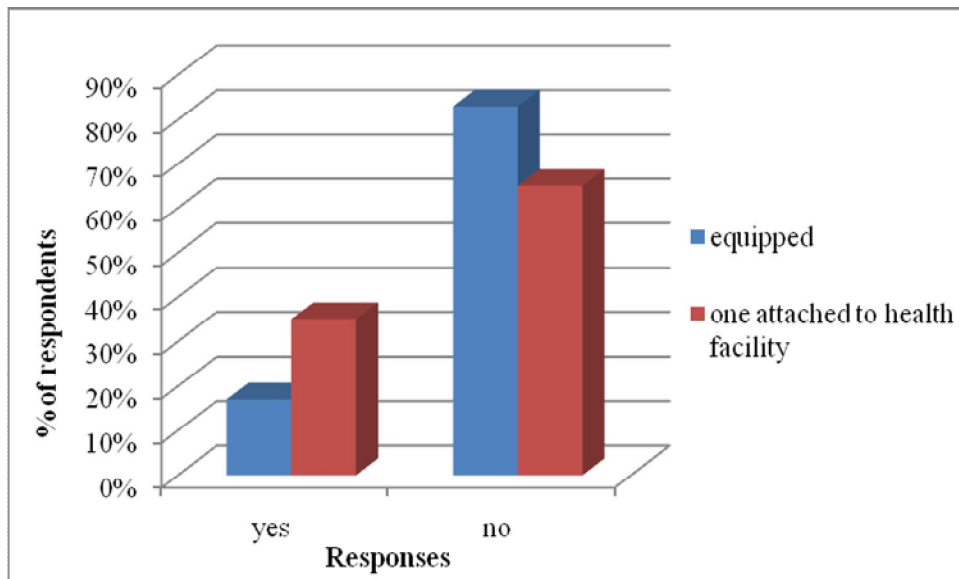


Figure 35: Collaboration with health facility and being equipped

This attachment was before the ban whereby health facilities employed the services of TBAs to assist in the maternity unit with deliveries due to understaffing. The TBA continued to assist in the home deliveries even during this time. This relationship made referrals of complications very easy. Some of these TBAs (17%) were facilitated by the health facility to better operate by equipping them with relevant basic equipment and materials such as a fetoscope, PVC mat, gloves, razor blades, towel, soap and torch all in a carry-case to facilitate their work.

CHAPTER 5

DISCUSSION

5.1 SOCIO-DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

From the findings, most of the respondents were housewives hence dependant on their spouses for financial support who in most cases controlled the finances at home. Some of the respondents (24%) could not estimate their monthly income due to irregularity of income or seasonality fluctuation for those that depend on farming or casual work on the farm, unwillingness to disclose or lack of knowledge of spouse income who was the sole breadwinner. Most (45%) estimated the family monthly income at between Ksh. 1,000-4,900. These fall below the minimum wage in Kenya that stands at Ksh. 5,200. This is in agreement with the findings of the KDHS 2003 which found that in Kenya home births are more common among the rural poor (CBS *et al*, 2004). From the health facility records for 2007 at the MCH clinic visited, majority (75-62%) of the mothers had home deliveries. From the demographic characteristics of the respondents, home delivery was not limited to any particular age-group; the reproductive age of 15-49 years (WHO, 2001a) was well represented. There also wasn't much difference between the first time mothers (41%) and the multiparous (42%). Education was a factor in home delivery as majority of the respondents were those with incomplete secondary education and below (75%) compared to others.

5.2 ANTE NATAL CARE (ANC)

ANC attendance was very high (97%) with difference in frequency. Differential use of ANC is affected by factors like urban or rural residence, age of woman, number of births, level of education and household wealth (WHO and UNICEF, 2003). However in this population, education, age and number of births did not influence the differential. The wealth factor could not be determined due to non-disclosure in some cases. In SSA most mothers present for the first visit in the second trimester and a relatively substantial proportion present only in the third trimester (WHO and UNICEF, 2003). This was the same in this study with 67% in second trimester and 19% in the third.

Most of the mothers were concerned about knowing their health and that of the fetus. There were few (6%) whose sole purpose was to get a clinic card so that they have a referral place to go in case of complications at delivery. It is apparent that group of mothers did not really know the importance of ANC. Statistically; distance to the health facility was not a factor that influenced ANC attendance ($p=0.206$) but it was cited as a reason by 11% of those who did not attend ANC. Distance was also not a factor in the frequency of attendance ($p= 0.516$). Waiving of user fee for maternity services (Kazungu, 2007) has not been effected in the region. The ANC charges differed among the different health facilities visited with majority having a registration fee of between Ksh.20-30 per visit with additional charges for laboratory test for blood and urine.

It is recommended that each visit should be viewed as the only visit the mother will ever make to the clinic hence should be very thorough, personalized and comprehensive (WHO, 2001). The essential ANC examinations include measurement of blood pressure, testing of urine and blood. Routine weight and height measurement at each visit is considered optional (WHO, 2003); height was rarely taken unlike weight. Some of the respondents scored very poorly on the comprehensiveness of ANC especially the laboratory tests. This was attributed to either cost of the laboratory test or attended a facility that did not have the facilities. Some of the mothers who purposed to deliver at home identified a TBA who was able to frequently check them during the pregnancy mainly on the position of the baby and give stomach palpating which is believed to make delivery easier by making the pregnancy “lighter”. Through this, the TBAs reported that they could detect breech presentations and even cases of small pelvis hence advice the mother on facility delivery.

The much attention given to ANC by the Ministry of Health and other health organizations has paid off. Mothers were aware that ANC was essential in pregnancy however there were varied the reasons for attendance. The NHSSP II target of 90% of mothers having 4 visits by 2010 is still way off with only 44% having 4 or more visits (MoH, 2006).

5.3 DELIVERY

5.3.1 Reasons for Home Delivery

From the findings there were various factors that led to home delivery. The economic factors identified included cost in terms of the clinic fee and transport to the health facility.

Studies have shown that user fees in Africa have had a profoundly negative effect on women's access to maternal health services. (Ford and Versi, 2004). Though the Kenyan Government waived the user fee for maternity, this directive has not been effected. For the respondents little or nothing had changed at their health facilities. There was skepticism from some quarters on how the exemption of maternity fee would be effected without compromising the quality of care (CRR and FIDA, 2007). This proved to be true as the respondents that reported free delivery services at their health facilities also reported that the mother had to provide everything she would need at delivery. These include pads, cotton wool, antiseptic, gloves, razor blade, thread among others.

Geographical factors were in form of distance to the health facility especially in cases of night emergencies and short labour. When the baby is due at night the challenges of transport, security and availability of a 24-hour health facility give the mother little choice but to opt for home delivery. The main forms of transport in Lugari District were bicycles and motorbikes. This may be a reliable form of transport but not suitable for a labouring mother. This is compounded by the fact that many cannot afford to check themselves into the health facility as the due date approaches while for others their nearest health facility lacks inpatient services.

Though culture has been identified as one of the main reasons for home delivery in Western Province (Mwai, 2006), none of the mothers attributed directly to it. The few (13%) who preferred home delivery did not elaborate much but felt that child birth was a natural

process that did not require fussing over. They had positive previous experiences at home hence did not see the need to do otherwise. The negative experiences were noted among those who expressed fear of surgical procedures. They felt they could be forced to undergo a caesarian section operation or an episiotomy as the attendants at the health facility were not patient enough to allow normal delivery in cases of long labour. This was either from past personal experience or from those of people known to the respondents. Negative experiences and unfamiliar practices at health facilities have also been seen to contribute to the decision to delivery away from these facilities (CRR and FIDA, 2007). It can safely be assumed 32% of the respondents planned to deliver at home. These include those attributed it to fear of surgical procedures (1%), having a dependable TBAs available (1%), preference (13%), no complications anticipated (3%), cost (11%), had a dependable TBA (2%) and where the spouse/guardian decided (2%). The remaining 68% were circumstantial home deliveries. This is also supported by the fact that 40% of the mothers got the nearest person of TBA to assist them in the delivery (figure 19).

5.3.2 Preparation for mother and baby

None of the respondents had a written birth plan nor did they even know about it as shown from the results on preparation for delivery. The Focused ANC requires the mother to have a birth plan (WHO, 2001). Other things the mother is required to have are emergency money and transport, birth companion, basic supplies for birth and birth attendant (WHO, 2001). According to the TBAs, they require the mother to take a bath just before the actual delivery. This ensured cleanliness of the perineal area (WHO, 2006a). Preparation for the

baby was well done by ensuring there were either clothes, a wrap or both. Culture interferes a lot with this preparation. Prior buying of the baby layette is forbidden as it is thought it can jinx the baby resulting in death. Cleanliness of this layette is important to prevent infection through the umbilical cord and delicate skin.

5.3.3 Actual Delivery

This mainly took place at the mothers' home; the birth attendant was sought when labour began. Very few had special delivery houses. There was individual attention from the birth attendant who attended to one client at a time at the client's home. From the findings, placenta retention, heamorrhage prolonged/obstructed labour topped the list of complications at delivery (figure 23). Some of these were handled by the birth attendant with some referred to the health facilities. Most (80%) of the TBAs cut the cord only after the placenta birth (figure 32); this allows for the pulsating to stop as IMPAC recommends (WHO, 2006a).

5.3.4 Cleanliness at delivery

Infection is the second highest cause of maternal deaths accounting for 13% of the deaths (WHO, 1997a). Ensuring cleanliness of delivery surface, hands of attendant, umbilical cord and perineal area is one of the IMPAC standards (WHO, 2006a). The emphasis is on clean and not sterile (WHO, 1996). Only 5% of the respondents could recall the birth attendant washing their hands before assisting in the actual delivery. The others protected the hands by use of the gloves or improvising with nylon paper bags. There was concern by a nurse at

Lumakanda District Hospital that there may be cases of re-use of gloves by TBAs for different deliveries; this was however disputed by the TBAs interviewed. Cleanliness of place was difficult to ascertain as it depends on the cleanliness of the material used the gunny bags, rags, mats, blanket and the like. One of the harmful practices noted was in the use of soil which could later be scrapped of the floor and disposed off. Though the respondents insisted that the baby was received without touching the soil, there is still danger of infection to the mother. Another bad practice was the lack of any form of preparation for the delivery area.

IMPAC discourages the reuse of the razor blade, gloves and cord ties (WHO, 2006a). Cleanliness of blade was ascertained by asking the mother to confirm if the razor blade used was new. Some mothers still sterilized even the new razor blades by boiling them. The string used to tie the cord was not necessarily new but was sterilized by boiling together with the razor blade. Some of the respondents (8%) reported not having a string for tying the cord (figure 21) ended up using any available string even one pulled from an old garment which may or may not be sterilized due to the urgency of the situation. There was no cultural dictation on the material of string used. Overall, there was good knowledge on the importance of maintaining cleanliness but this was affected by circumstances such as emergency delivery and poverty.

5.3.5 Thermal Control

Due to the high surface area to volume ratio, the baby tends to lose body heat very fast resulting in cases of neonatal hypothermia when left exposed for long periods (Kendig, 2007). Though 98% of the deliveries took place indoors, there was no evidence of deliberate efforts to warm or keep the room warm especially in cold seasons. There were diverse opinions on the advisable time for the first bath. Bathing newborn babies shortly after birth increased the risk of hypothermia (Bergstrom *et al*, 2004). The question of bathing the baby was directed to the TBAs who were better placed to respond: 80% insisted on washing the baby immediately after birth with some attributing it to checking the physical condition of the baby during the bath. Those who disagreed said this could cause disease for the baby and advised on actual washing after three days from birth.

5.4 POST NATAL CARE (PNC)

According to a USAID study that compared Demographic Health Surveys of various countries, there was a wide gap between ANC and delivery care and an even wider gap between delivery care and PNC (Fort *et al*, 2006). In Kenya, the Ministry of health has no set targets for PNC in their safe motherhood development plans (NHSSP, NRHSP) for 2010 or even in the Vision 2030 unlike ANC and delivery. Though PNC services were widely available at the health facilities and the respondents were aware of them, this knowledge did not translate to use of the services. Majority of them received check-up from the TBAs at home; those who went to the health facility for PNC mainly took the newborn

for immunization as opposed to getting themselves checked. There is an increasing emphasis on ensuring that women receive PNC within 48 hours of delivery for early diagnosis of postpartum complications. PNC also provides an opportunity to counsel the new mother on family planning and on caring for herself and her newborn, as well as to assess the newborn for any problems (NCAPD, 2005). The mothers therefore miss out on this essential information and services impacting negatively on both the health of the mother and newborn.

From the study, placenta retention was noted as the leading form of complication at delivery followed by haemorrhage and prolonged labour. The leading cause of maternal mortality in Africa is haemorrhage majority of which occurs postnatally; so does sepsis and infection (Khan *et al*, 2006). Majority (75%) of those with placenta retention complications were assisted by the birth attendant while the others sought intervention at a health facility. This was done mainly by massaging the belly and in some cases use of herbal medicines; this was the same for prolonged labour. For haemorrhage, some sought medical attention; others were treated by the birth attendant using herbs while others just waited it out. This endangers the mother as all complications should be quickly referred to a health facility (WHO *et al*, 1999). This is sometimes impeded by the lack of transport, poverty and poor knowledge levels of the birth attendant. Neonatal death records from the District Health records for 2007 reported only one death. This was attributed the fact that death of the baby away from the health facilities are not reported. Majority of the mothers did not know the causes of death of the babies (Figure 18).

5.5 TRADITIONAL BIRTH ATTENDANTS (TBAS)

The classic profile of a TBA: elderly, often illiterate, sometimes outspoken, dynamic and respected by all. They learnt the practice from experience or apprenticeship and are mostly spiritualists or herbalists (Feuerstein, 1993). Those interviewed fitted this description very well. Since they had no formal educations, it is easily assumed that they cannot be effectively trained. This is not entirely true as some of them have attended some of the training seminars and vividly recall and practice what was taught.

The main danger lies in the attempts by some to manage complications at delivery. However on further probing it emerged that most of the times it was a lifesaving call due to distance to the nearest health facility especially at night where a 24hr facility may even be lacking and lack of transport services. According to the Ministry of Health's Division of Reproductive Health in Kenya, the health system faces several challenges to safe motherhood which include: general shortage of medical staff; poor infrastructure, socio-economic and cultural barriers to seeking care among others. (Feuerstein, 1993). Most of the facilities are poorly equipped and staffed facilities hence lack the capacity to manage the complication that require of surgery hence would need to travel further to Kitale or Webuye District Hospital and Moi Teaching and Referral Hospital. The TBAs accompany the mother for referral; this however was being affected by the ban on TBA operations hence they fear arrest. Another point of concern was the use of the herbs for various purposes; disclosure on the content of the concoction was not culturally possible. This

makes it difficult to pass judgment on this as herbal medicine as some of the mothers felt they were very effective and a favourite option for many.

Though cost was fronted as one of reasons for home delivery (figure 17), majority of the TBAs charged as much as or even more than the Ksh. 300-500/- charged at the health facilities. However the difference was that the TBAs allow their clients a payment plan or even accept in kind. They hardly turn away a mother in need unlike the health facilities who may later detain the mother after delivery. In some cases some offer free services as they may be based on humanitarian grounds.

The birth process is just as exhausting for the TBA as the mother; they sometimes have to keep vigil with the mother even for as long as two days. They are able to provide the mother with the much needed individualized care and attention. When faced with a case of extreme poverty where the mother may not afford the essentials for delivery, they are forced to provide with no guarantee of compensation or even payment for services. One of the greatest challenges they face is non-payment when their clients don't live up to their promises. Following up a debt is very tricky for the TBAs as should any misfortune befall the mother or child they can be blamed as they are believed to have some supernatural power accompanying their skills. Their practices are heavily influenced by their beliefs and culture. (Feuerstein, 1993). The Government directive which renders their work illegal has interfered with the collaboration with the health facilities that existed in the past

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

1. Home deliveries are both planned (32%) and circumstantial (68%) in nature. Reasons for home delivery go beyond what has always seemed the obvious - cost, cultural and geographical. Fear of surgical procedures and negative previous experiences had a lot of influence on the mothers' choice of delivery place.
2. There is a lot of confusion on the government directive on the free maternal service that requires clarification. This is evident as the health facilities in Lugari charged for access of MCH facilities.
3. Most of the TBAs always accompanied their clients to the nearest health facility in case of complications making it easier to address the complication as they provide information. This is however being impeded by the government directive which declares the TBAs practice illegal.
4. Majority (85%) of the TBAs were officially registered at the local authorities, 50% had been trained by NGOs through the Ministry of Health in home delivery. Some of the TBAs had a working relationship with the health facilities in the past before the Ministry of Health ban.
5. The TBAs insist on taking on their clients earlier in the pregnancy so as to monitor them to detect and refer in advance those deemed be prone to complications.
6. All the TBAs interviewed were aware of the HIV/AIDS pandemic and the dangers during pregnancy and delivery. Those who have been formally trained can identify

the mothers HIV status from the ANC card. The ANC card is therefore a requirement for uptake of their clients.

7. The attendance of ANC was excellent (97%) but the comprehensiveness of the services was wanting. IMPAC standards are based on frequency of attendance; the NHSSP II adaptation sets four clinic visits as the indicator. The 2006/7 target was 66% while the 2010 target is 90%; from the findings four visits stood at 44% hence below the targets.
8. There was no evidence of the knowledge or practice on the written birth plan by the mothers but majority showed good knowledge and preparation of the delivery kit.
9. The knowledge and practice of cleanliness was evident. However the level of cleanliness of the birth surface could not be determined with the variety of materials used to line the place. Clean hands practice was evident both with the birth attendant and the mothers with the knowledge that gloves were an integral part of the delivery kit (63%). Clean cord was also ensured by the use of new razor blade and tie for the cord (87%).
10. Some of the harmful practices identified in IMPAC were noted such as the use of medication to increase contractions. Some of the complications that require referral were managed by the TBAs such as prolonged labour, breech presentations, umbilical cord around the neck of the baby and delayed expelling of the placenta.
11. The knowledge of the warm chain was lacking for both the mothers and TBAs as there was no evidence of deliberate efforts to warm the delivery room.
12. There were varied opinions on when to give the baby the first birth.

13. Postnatal care was not given the importance it deserves; there was very little evidence of mothers deliberating going for checkup to the clinic within 6 weeks of delivery apart from taking the baby for immunization. Complications arising were just waited out with only a few seeking medical attention especially if it persisted.

6.2 RECOMMENDATIONS

1. The role of TBAs should not be overlooked; instead their training should be stepped up to equip them with new knowledge and provide them with equipment and materials to facilitate their working. This should be coupled with back up from a functioning referral system and support from professionally trained health workers.
2. The good results reflected in the low neonatal mortality can be attributed to various factors such as the mothers' awareness of the importance of ANC attendance, the TBAs conditions for taking up clients and the good working relationship between the health facilities and the TBAs. The positive outcomes of TBAs should not be ignored instead they should be recognized as a link between the community and the health facilities.
3. Fully implement the Focused ANC initiative which ensures comprehensive services offered to mothers hence reduce the risks associated with delivery and detect complications early for management.
4. Mothers should be educated during the ANC clinic on various relevant issues on delivery. They should also be provided with delivery kits.

5. The Ministry of Health should facilitate community outreaches by health workers to reach even those who may not come to the ANC and MCH clinic with education, ANC and PNC services.
6. Government should clarify on the waiving of the maternity fees and extend the services to all health facilities especially in the rural areas where majority of the poor live.
7. Besides cost, the Ministry of Health should strive to address the other hurdles to safe motherhood as identified by the mothers.
8. Vigorous campaign on the importance of PNC is required just as it has been done for ANC and safe delivery only.

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APPENDICES

1. CONSENT FORM: ENGLISH

TITLE: OBSTETRIC CARE IN THE HOME DELIVERY PROCESS

PART A: INFORMATION SHEET

Background

Deaths of the mother and newborn have been strongly linked to the care received during delivery, place of birth and the birth attendant. Home deliveries especially with the assistance of an unskilled birth attendant have been seen as the major causes of these deaths due to inability and lack of equipment to detect and handle complications; inappropriate delivery environment (hygiene and temperature) and improper handling of mother and newborn. The “big five” associated dangers of home births include: severe bleeding/hemorrhage, infections, eclampsia, obstructed labour and complications of abortion.

Objective of study

This will be a descriptive cross-sectional study with the objective of investigating the obstetric care in home delivery process. This will involve looking at the birth practices with the aim of finding out if they comply with the World Health Organization (WHO) recommended practices.

What your participation will involve

Your participation in the study will involve completion of questionnaire assisted by a research assistant. We will work within your schedule to ensure that the questionnaire is completed at a time that is most appropriate to you. We will encourage you to honour appointments and other agreed timings. We will also encourage you to provide accurate information. The interview will last approximately 20mins.

Benefits of participation in study

In the course of the study, I will strive to fill the knowledge gaps identified and provide greater knowledge on issues of safe motherhood. Where am inadequate to assist, I will - act as a link to organizations that can assist. There will be no monetary benefits associated with participating in this study.

Risks of participation

There are no known harms associated with your participation in this research.

Confidentiality of participant

I guarantee that your real name will not be used in the report; instead, you and any other person and place names involved will be given codes that will be used in all verbal and written records and report. The information collected from you will not be shown to anyone outside of this project without your consent.

Withdrawal from study

Your participation in this research is voluntary; you have the right to withdraw at any point of the study, for any reason, and without any prejudice.

If you have any question about this study, you can contact the investigator on 0722-494763. You may also contact The Chairperson/Secretary of the KEMRI Scientific Steering Committee and KEMRI Ethical Review Committee (A group of people who review the research to protect your rights) on Tel: 020-2722541/2713349, 0722-205901, 0733-400003

Name of interviewer	Signature	Date
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3.1 PART B: PARTICIPANT’S CONSENT

I have understood the information sheet and I have had a chance to ask questions about the study. I understand that any time that I may wish to withdraw from the study, I will do so without giving any reason and that such action may not jeopardize me in any way.

I agree to take part in this study.

Name of Participant	Signature	Date
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2. CONSENT FORM : TRANSLATION (LUHYA)

EBARUA YA KHUULILISSIANA

KAMASOMO KA BAMAI BEBULILA ENGO

A. ERIPOTI

Historia ya Kamasomo

Bamai nende babana batoro bafwa lukali sikila ya bulindi nibwo banyola na bebula, abundu niyo bebulila nende omwibusu obayeta. Lukali bamai babebulila engo nabayetwa nende babusi bakhusomela ekasi eyino esukuli banyola chitambu chinyala cha kila bafwa sikila omwibusu sali nende buchuzi, kamashini kamuyeta namewe kamalesi khusilikha mai chitambu nechikholekha engo.

Sikila sia kamasomo

Mumasomo kano nanya khulola enge bamai bebulilanga engo: enge bachichanga mkliniki, enge betekhangha khubula nende sikilanga na bebulila engo. Nanya khulola na bakholanga enge benekha khulondekhana nende kamalaka ka batalamu ba WHO.

Bushiriki b'oo

Wenyekha khuchiba kareba niko kene ekhurebe ne nandika asi. Kene khukhole kano mchisaa chichindai khiwe mtaka 10. Khusaba ochibe bulai nge takholekha.

Bulai bwa khushiriki

Chisa nicho khukhabe khulala, kena enjibe kamareba kosisi niko olinako khu kamakhuba ka bamai nende khubula. Niko ekhanya taa, kene ekhake khulola omundu onyala khukachiba akhuyete. Sekene ekhulipe chisendi chosichosi sikila ya khuchiba kamareba taa.

Bubi bwa khushiriki

Bayo bubi bosibosi nibo emanyile bunyala bakhuumisia no unjibila kamareba kano taa.

Chisiri cha omushiriki

Sekena endurumikhire lisina lio nenandika eripoti eyino taa. Badala ya lisina lio, kena endumikhire enamba ya esiri. Kamakhuwa niko nandike sekene nokesie omundu yesiyesi khakhola ekasi nenase taa nekhakhureba erusa taa.

Khuloba khushiriki

Nobona oli sowenya khunjibila kamareba taa, onyala waloba chisa chosichosi bila etabu yosiyosi.

Noli na kamareba kosikosi, khupile lusimu khunamba 0722-494763. Lundi onyala wapila omukhulundu wase khu namba eyino 020-2722541/2713349, 0722-205901, 0733-400003. Omukhulundu yuno kemelela babandu balola bulai bwoo no okhaumia ne khukhola ekasi eyino taa.

Lisina lia omurebi

Lwala

Etare

4.1 B: ERUSA YA OMUSHIRIKI

Naulile niko bambolele na bambele nafasi ya khureba kamareba khu kasi eyino. Namanyi nandi nyala naloba khuchiba kamareba chisa chosichosi bila etabu yosiyosi bila esababu yosiyosi.

Neyamile khuchiba kamareba.

Lisina lia omushiriki

Lwala

Etare

3. QUESTIONNAIRE: ENGLISH

QUESTIONNAIRE OF STUDY ON OBSTETRIC CARE IN THE HOME DELIVERY PROCESS

Number	Questionnaire Serial				
Date					
Place					
Time: Start					
End					

Please fill in the blanks or tick the answer where necessary.

1. SOCIO-DEMOGRAPHIC INFORMATION

1. Name _____

3. Date of birth _____

4. What is your present marital status?

Married [1] Single [2] Widowed [3] Divorced [4] Separated [5]

5. How many children have you given birth to?

One child [1] 2-4 children [2] 5-7 children [3] More than 8 children [4]

6. What is your highest level of education?

None [1] Incomplete Primary [2] Adult education [3] Complete Primary [4]

Incomplete secondary [5] Complete secondary [6] College/University [7]

7. What is your occupation?

Housewife [1] Casual worker [2] Self-employed [3] Salaried employment [4]

2. SOCIO-ECONOMIC INFORMATION

2.1 What is your main source of income?

Own salary/wages [1] Both Spouses salary/wages [2] Husband's salary [3]
Farming [4] Business [5] Other (specify) [6] _____

2.2 What is the range of your family monthly income?

Less than Ksh.1, 000 [1] Ksh.1, 000 – 4,999 [2] Ksh. 5,000 – 9,999 [3]
Ksh.10, 000–19,000 [4] Ksh.20, 000–49,999 [5] Above 50,000[6] Don't know [7]

2.3 Excluding your nuclear family, how many other people live in your house?

None [1] One [2] 2-4 [3] 5-7 [4] More than 8 [5]

2.4 Who controls the family finances?

Self [1] Husband [2] Both [3] Other specify [4] _____

2.5 Do you have medical cover?

Yes [1] No [2]

3. HEALTH FACILITIES

3.1 What is your nearest health facility?

District hospital [1] Sub-District hospital [2] Private hospital [3]
Health centre [4] Dispensary [5]

2. What is the approximate distance between your home and the health facility?

Less than 1 km [1] 2-3 km [2] 4- 7km [3] 8-10 km [4] More than 10 km [5]

3. Is there reliable public transport to the facility?

Yes [1] No [2]

Does the health facility offer the following services?

- | | | |
|-------------------|---------|--------|
| 4. Antenatal Care | Yes [1] | No [2] |
| 5. Postnatal Care | Yes [1] | No [2] |
| 6. Delivery | Yes [1] | No [2] |

Does the health facility charge for the above services? If yes how much?

- | | | | |
|--------------------|----------------------|--------|----------------|
| 3.7 Antenatal Care | Yes [1] amount _____ | No [2] | Don't know [3] |
| 3.8 Postnatal Care | Yes [1] amount _____ | No [2] | Don't know [3] |
| 3.9 Delivery | Yes [1] amount _____ | No [2] | Don't know [3] |

3.10 If you had to visit the health facility, can you afford the above fees?

Yes [1] No [2]

4 ANTENATAL CARE SERVICES

4.1 Have you ever attended the ANC clinic?

Yes [1] No [2]

Give reasons for your answer _____

4.2 If your answer for 4.1 is "yes", when was the first visit for the last pregnancy?

Within 1-3 months [1] 4-6month [2] 7-9 month [3]

4.3 How many visits did you have for the entire pregnancy?

One visit [1] 2-3 visits [2] 4 or more visits [3]

4.4 If your answer for 4.1 is "No", did you get any check ups for your pregnancy?

Yes [1] Specify _____ No [2]

If the answer in 4.1 is “yes” tick the procedures undergone at clinic in the table below (refer to your clinic card).

Procedures	Yes
4.5 Obstetric examination: gestation age estimate, uterine height, fetal heart rate.	
4.6 Informed about danger signs of pregnancy	
4.7 Weight measured	
4.8 Height measured	
4.9 Blood pressure taken	
4.10 Blood sample taken	
4.11 Urine sample taken	
4.12 Tetanus vaccination	
4.13 Nutritional Supplementation e.g. Vitamin A, Iron/folic acid	
4.14 Others (specify)	

4.15 For the pregnancy(s) delivered at home, did you attend ANC at the health facility?

Yes [1] No [2]

5. DELIVERY

5.1 Why did you deliver at home?

5.2 How many pregnancies have you delivered at home?

One [1] 2-3 [2] 4 or more than [3]

5.3 Have you lost any baby (ies) in the home delivery?

Yes [1] how many _____ No [2]

5.4 If your answer for 5.3 is “yes” what was the reason?

5.5 Did you choose your birth attendant?

Yes [1] No [2]

5.6 If your answer for 5.5 is “yes”, why did you decide on the particular attendant?

5.7 For the pregnancy delivered at home, where did it take place?

At your home [1] TBA’s home [2] Other [3] (specify) _____

Describe the preparations you made for the actual delivery.

5.8 For mother

5.9 For place of delivery

5.10 For birth attendant

5.11 For baby

5.12. List any form of medication administered or procedure performed just before or during the process of labour up to the delivery and why.

Procedure/Medication	Reasons

5.13 Did you or the baby encounter any complications during the delivery?

Yes [1] No [2]

5.14 If your answer in 5.10 is “yes”, fill the table below.

Complication	Management

6 POSTNATAL CARE

6.1 After delivery did you go for any treatment or further check up?

Yes [1] No [2]

6.2 If your answer in 6.1 is “yes”, fill the table below.

Treatment/Check up	Where	By whom

6.3 Have you developed any complications/disabilities due to childbirth?

Yes [1] No [2]

6.4 If your answer in 6.3 is “yes”, fill the table below.

Complication	When	Medical intervention

4. QUESTIONNAIRE: TRANSLATION (LUHYA)

KAMAREBA KA BAMAI BEBULILANGA ENGO.

Number	Questionnaire Serial				
ETAREE					
AB'UNDU					
SISA: Khuanja					
Khumala					

1. KAMAKHUWA KELIMENYA LIEBABANDU

1.1 Lisina _____

1.2 Lilibulwa _____

1.3 Sayi limenya lio lia munju lilisina?

Nabela [1] Nasikoko [2] Namuekhwa [3] Khwalekhana [4] Khwakabukhana[5]

4. Oli na kamebula kenga?

Omwana mlala [1] Babana 2-4 [2] Babana 5-7 [3] Babira babana 8 [4]

5. Kamasomo koo kaangaki kali si?

Senasoma ta [1] senamala kebweni ta [2] Kamasomo kabakhulu [3] Namala
kebweni [4] Senamala kekhabili ta [5] Namala kekhabili[6] Kamasomo kaangaki [7]

6. Ochumanga si?

Omukhasi wemunju [1] kibarua [2] Neandika [3] Naandikwa [4]

2. KAMAKHUWA KELIMENYA NENDE KIMIANDU

2.1 Onyolanga waye chisendi?

Kimiandu kioo [1] Kimiandu kiefwe fwembi [2] Kimiandu kio msecha [3]

Bulimi [4] bibiasara [5] Kandi (bola) [6] _____

2.2 Onyolanga chisendi chinga khumwesi?

Sechola 1, 000[1] 1,000 – 4,999[2] 5,000 – 9,999[3] 10,000–19,000[4]

20,000–49,999[5] Chikhila 50,000[6] Semanya ta [7]

2.3 Wamenya nende babandu bengha bakhali babana bwoo?

Mbao [1] Mlala [2] 2-4 [3] 5-7 [4]

2.4 Nanu wimelelanga kimiandu?

Samwene [1] Omusecha [2] khwesi [3] Okundi[4] _____

2.5 Olinende libikhilo lie busilikhi bwoo?

Ye [1] Ta [2]

3. EMALESI

3.1 Abundu wa khusilikhwa aliaembi nende engo niyo ndala si?

District hospital [1] Sub-District hospital [2] Esibitali ya binafsi [3]

Health Centre [4] Dispensary [5]

2. Elialei si nende engo?

Asi wa 1 km [1] 2-3 km [2] 4- 7km [3] 8-10 km [4] Atai hukhila 10 km [5]

3. Bubwangu bwa khuola emalesi chana burie?

Ye [1] Ta [2]

Esibitali eli nende bikhola bwino?

4. Ekloniki ya bamai benda Ye [1] Ta[2]

5. Ekliliki ya bamai bebule Ye [1] Ta [2]

6. Ekliliki ya khubulilayo Ye [1] Ta [2]

Bamulipishanga? Chinga?

3.7 Ekliliki ya b'amai b'enda Ye [1] chinga _____ Ta [2] Semanya ta [7]

3.8 Ekliliki ya b'amai b'eb'ule Ye [1] chinga _____ Ta [2] Semanya ta [7]

3.9 Ekliliki ya b'amai b'eb'ule Ye [1] chinga _____ Ta [2] Semanya ta [7]

3.10 Onyala walipa chisendi chino nocha emalesi?

Ye [1] Ta [2]

4 KLINIKI YA B'AMAI B'ENDA

4.1 Wachakho khusilikhwa mkliniki ya bamai b'enda?

Ye [1] Ta [2]

Sikila si? _____

4.2 Kabali ochibile 4.1 oli "ye", wanja khucha noli kimiesi kinga nenda?

Kati ya 1-3 [1] 4-6 [2] 7-9 [3]

4.3 Wacha chisafari chinga noli nende enda eyo?

Lulala [1] kati ya 2-3 [2] 4 namwe khukhila [3]

4. Kabali ochibile 4.1 oli "Ta", wachakho abundi bakhulolekho enda?

Ye [1] Waye? _____ Ta [2]

Kabali ochibile 4.1 oli "ye" rakho "X" engebakhu lola mukililiki.

Bikholwa	Ye
4.5 Khuemola enda na khulola omwana enge akonile munda.	
4.6 Khukhusomia chitab'u chichamana nenda.	
7. Busiro	
4.8 Bulei	
Bikholwa	Ye
4.9 Kamani ke kamafuki	
4.10 Khulola kamafuki	
4.11 Khulola kamenyi	
4.12 Lunyasi lwa tetanus	
4.13 Kamalesi ka yeta khung'ona kumub'ili enge Vitamin A, Iron/folic acid	
4.14 Kandi?	

4.15 Enda niyo webulila engo, wacha wakhulolwa mkliniki ya bamai benda?

Ye [1]

Ta [2]

5. KHIBULA

5.1 Sina no webulila engo?

5.2 Wayebulila engo babana benga?

Mlala [1]

2-3 [2]

4 namwe bakhila [3]

5.3 Watibiakho omwana(babana) no wibulila engo?

Ye [1] b'enga _____

Ta [2]

5.4 Kabali ochibile 5.3 oli "ye" sina siamwira?

5.5 Warobora omundu khukhibusia?

Ye [1] T [2]

5.6 Kabali ochibile 5.5 oli “ye”, sina siakila wamurob’ora?

5.7 Enda niyo webulila engo, webulila waye?

Engo woo [1] engo wo mwibusi [2] aandi [3] (waye) _____

Khubolele enge wetekekha nio wibule:

5.8 Wamwene _____

5.9 Abundu niyo webulila _____

5.10 Omwibusi _____

5.11 Bindu bio mwana _____

5.12 Andika kamalesi namwe busilikhi bosibosi nibwo bakuwa nokana khubula na kaba kasi.

Kamalesi/busilikhi	Kasi?

5.13 Ewe namwe omwana kanyolakho butinyu bosobosi no wibula?

Ye [1] Ta [2]

5.11 Kabali ochibile 5.10 oli “ye”, ichusia ano.

Butinyu	Wakhola orie?

6 BULINDI BWA BAMAI BEBULE

6.1 Enge webula, bakhusilikhakho namwe khulola noli bulai?

Ye [1] Ta [2]

6.2 Kabali ochibile 6.1 oli “ye”, ichusio ano.

B’usilikhi/khulolwa	Waye	Nende nanu

6.3 Wanyolakho bulwale namwe khulemala sikila ya khibula?

Ye [1] Ta [2]

6.4 Kabali ochib’ile 6.3 oli “ye”, ichusio ano.

Bulwale/khulemala	Khurula ena	Khusilikha.

5. KEY INFORMANT QUESTIONS: ENGLISH

QUESTIONS FOR TBAs IN A STUDY ON OBSTETRIC CARE IN THE HOME

DELIVERY PROCESS

1. What form of training do you have as a TBA?
2. Are you certified by any organization?
3. How long have you been practicing as a TBA?
4. How many births have you attended to?
5. What services do you provide to the mothers besides assisting in the actual delivery?
6. Do you charge for your services? If so how is the price determined?
7. If you charge for the services, do you turn away those who cannot afford? Do you accept a payment plan?
8. How do you decide on whom to take up as a client?
9. Do you have prior consultation with the clients prior to the delivery day?
10. Do you work in conjunction with the health facilities?
11. What happens when you encounter a complication?
12. What special skills do you possess?
13. Do you administer any form of medication or perform any procedures to the delivering mothers?
14. Do you perform the birth in the client's home or do have a designated delivery room?
15. How do you prepare for the birth?

16. What is your opinion on health facility deliveries?
17. Do you insist on knowing the women's HIV+ status?
18. Do you assist HIV+ women in delivery?
19. If so, do you take any precautions? List them.
20. What factors interfere with your effective working?

6. KEY INFORMANT QUESTIONS: TRANSLATION (LUHYA)

KAMAREBA KA BEBUSI BENGO

1. Wasomela waye ekasi eyino?
2. Waeandikishakho nende siana siosi siosi?
3. Waba omwibusi sisa si?
4. Wayebusi babana benga?
5. Kando nende khubusia, oyetanga bamai mngila sina ekindi?
6. Wakhulipanga khu kasi yoo? Oamuanga oriena ebei?
7. Omundu nakhanyala khuliba taa, omuyeta? Okubalia khulibe kalaa engeanyola?
8. Oroboranga oriena mai niyo wib'usia?
9. Omwimolanga nali neenda na khola khubula ta?
10. Okholanga ekasi nende chisibitali?
11. Okholanga si nonyolekhana nende butinyu no khowibusi?
12. Oli na buchusi si?
13. Orumikhiranga lunyasi lwosilwosi namwe butalamu bwosibwosi no wibusia?
14. Wibusilanga engo woo omumai namwe ulinende enju ewoo ya khubusilamo?
15. Witekekhanganga oriena nocha khibusia?
16. Maoni koo khu khubulila esibitali kali si?
17. Orebanga bamai khumanya hali yab'we ya bukimwi nabecha khiwe?
18. Wibusianga bamai bali nende bukimwi?
19. Kabali wibusianga bali nende b'ukimwi, wikhinganga orie?
20. Bindu sina bikhukhingililanga khukhola ekasi bulai?