Influence of Provision of Free Maternal Health Care Program on Maternal Mortality Rates in Kisii County, Kenya

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Abstract: **Kenya has long suffered from high maternal and infant morbidity and mortality rates. Recent estimates set the maternal mortality rate at 488 deaths per 100,000 live births, well above the MDG target of 147 per 100,000 by 2015. For every woman who dies in childbirth in Kenya, it is estimated that another 20-30 women suffer serious injury or disability due to complications during pregnancy or delivery. The problem is driven, at least in part, by lack of access to quality maternal health services, including ante-natal, delivery, and post-natal services by the year 2012l, only 44% of births in Kenya were delivered under the supervision of a skilled birth attendant. On June 1, 2013, the Government of Kenya took action to address this problem by initiating a policy of free maternity services in all public facilities. This paper seeks to evaluate the success rate of this government policy of free maternal health care and the key challenges facing free maternal health care in Kenya. It uses evidence from Kenya, as well as other countries that have implemented free maternal health care policies, in order to assess the situation and advice the government on best practices moving forward. It begins by outlining the national and international framework guiding the right to reproductive health. It then documents some of the key challenges facing the free maternal health care program and outlines several strategies for ensuring free services are implemented fully, effectively, and without compromise to other key arenas of intervention. Finally, it closes with a summary of recommendations to the Government of Kenya and other stakeholders.**

Key Words; **Influence of Provision Of Free Maternal Health Care Program On Maternal Mortality Rates**

I. INTRODUCTION

1.1 Background of the study

Millenium Development Goal number 5 sets a target of reducing maternal mortality by 75% by the year 2015 from the year 1990 (MDG 5).Globally, an estimated 289 000 women died during pregnancy and childbirth in 2013, a decline of 45% from levels in 1990. 99% of these deaths occurred in the less developed countries. Most of them died because they had no access to skilled routine and emergency care. Since 1990, some countries in Asia and Northern Africa have more than halved maternal mortality (World Health Organisation, 2014). If timely and appropriate obstetric care were accessed in the event of complication an estimated 75% of the above deaths could be prevented. While in many areas services simply do not exist and where they do they are often underutilized.

Improving maternal health is critical to saving the lives of hundreds of thousands of women who die due to complication from pregnancy and childbirth each year. Over 90 percent of these deaths could be prevented if women in developing regions had access to sufficient diets, basic literacy and health services, and safe water and sanitation facilities during pregnancy and childbirth.

In 2017, 4.1 million (75% of all under-five deaths) occurred within the first year of life. The risk of a child dying before completing the first year of age was highest in the WHO African Region (51 per 1000 live births), over six times higher than that in the WHO European Region (8 per 1000 live births).

Globally, the infant mortality rate has decreased from an estimated rate of 65 deaths per 1000 live births in 1990 to 29 deaths per 1000 live births in 2017. Annual infant deaths have declined from 8.8 million in 1990 to 4.1 million in 2017.

About 10.8 million children under five years of age die in the world each year mainly from preventable conditions or diseases that could be treated effectively; 42 countries account for 90% of the child deaths while 6 countries account for 50% of the deaths (Black et al., 2003). Causes of death differ substantially from one country to another; however, pneumonia and diarrhea remain the illnesses that are most often associated with child deaths. The lives of an estimated 6 million children could be saved each year if proven interventions such as antibiotics for pneumonia and oral rehydration therapy for diarrhea were universally available in the 42 countries responsible for 90% of child deaths. Existing child survival interventions could, if implemented through efficient and effective strategies, prevent a substantial proportion of current deaths (Jones et al., 2003). Evidence confirms it is possible to design intervention packages that effectively improve child survival and development in very different contexts, depending on the relative burden of causes of death.

Kenya is one of the 42 countries accounting for 90% of all under-five deaths in the world. The findings of the 2003

Kenya Demographic and Health Survey (KDHS) reveal that one in every nine children born dies before age five, mainly of acute respiratory infection, diarrhea, measles, malaria, and malnutrition. That major challenges remain in the effort to reduce child mortality in Kenya is evidenced by the continued increase in mortality rates since the 1990s. In the years between the 1970s and 1990s, infant and child mortality declined rapidly in Kenya as a result of the global initiatives to improve child health.

Kenya has long suffered from high maternal morbidity and mortality rates. The most recent estimates set the maternal mortality rate at 488 deaths per 100,000 live births, well above the MDG target of 147 per 100,000 by 2015. For every woman who dies in childbirth in Kenya, it is estimated that another 20-30 women suffer serious injury or disability due to complications during pregnancy or delivery. These high rates have persisted despite improvements in other health indicators over the past decades. The problem is driven, at least in part, by lack of access to quality maternal health services, including ante-natal, delivery, and post-natal services. Although health sector infrastructure has grown over the past decade, many women still live at a considerable distance from health facilities, cannot afford to pay fees for maternal services, and/or face other barriers to accessing quality care. Access to skilled delivery is a particular challenge. Overall, only 44% of births in Kenya are delivered under the supervision of a skilled birth attendant, well below the target of 90% of deliveries by 2015. Traditional birth attendants continue to assist with 28% of births, relatives and friends with 21%, and in 7% of births, mothers receive no assistance at all.

On June 1, 2013, the Government of Kenya took action to address this problem by initiating a policy of free maternity services in all public facilities, effective immediately. Health facilities soon began to feel the effect of this policy. On the day of the announcement, Pumwani Maternity Hospital delivered an unprecedented 100 births. By July, the Director of Public Health and Sanitation estimated a 10% increase in deliveries across the country, with increases of 50% in certain counties. In some facilities, these numbers have been even higher. According to representatives of Kenyatta National Hospital (KNH), within a month the number of pregnant women seeking maternal care had increased by 100 per cent.

In July 2013, the government committed Sh3.8 billion to fund the free maternal health care program, with an additional Sh700 million for free access to health centers and dispensaries, Sh3.1 billion for recruitment of 30 community nurses per constituency, Sh522 million for recruitment of 10 community health workers per constituency, and Sh. 1.2 billion for provision of housing units to health care workers, within its overall allotment of Sh10.6 billion for health care in the 2013/14 national budget. Sh60 billion has also been allotted to county governments to be used on health, leading to a total of Sh95 billion for health overall.10 And yet, several observers from within the health system have expressed concern that these commitments will not be nearly enough to meet the additional demand placed on facilities and staff due to the free maternity health policy. Others have questioned the feasibility and the appropriateness of the policy altogether which, they warn, might lead to a decline in quality of services, could further increase reproductive inequalities across the country, and will do little to address and could even worsen human rights violations in health facilities.

What are the key challenges facing free maternal health care in Kenya? What strategies can the government undertake to ensure the program is a success and achieves the goal of enhancing the state of maternal health in Kenya? This paper uses evidence from Kenya, as well as other countries that have implemented free maternal health care policies, in order to assess the situation and advice the government on best practices moving forward. It begins by outlining the national and international framework guiding the right to reproductive health. It then documents some of the key challenges facing the free maternal health care program and outlines several strategies for ensuring free services are implemented fully, effectively, and without compromise to other key arenas of intervention. Finally, it closes with a summary of recommendations to the Government of Kenya and other stakeholders.

Given the worrying trends in infant and child mortality rates, there is a clear need to assess current practices in the management of childhood illnesses and identify opportunities for intervention. Holistic approaches to improving child survival, such as the Integrated Management of Childhood Illnesses (IMCI) strategy, are one set of practices that have been shown to improve health outcomes for children. Conceptually, holistic approaches encompass components from the health facility such as availability of drugs and supplies, components from the health system such as skills training, and the family and community component of care-seeking practices. This conceptual framework is used to analyze client observation, exit interviews, and facility inventory data from the 2004 Kenya Service Provision Assessment in an effort to discern the factors that are associated with the practice of a holistic approach to child health care. Recommendations are made as to how the results might be used to influence programme and policy, with the aim of increasing child survival and development.

In order to reduce mortality among children under five, the government of Kenya, through the Ministry of Health, has developed and implemented new approaches to child survival efforts. The Kenyan government is also committed to the achievement of Millennium Development Goal number 4: reducing the infant and under-five mortality rates to 21 and 32 per 1,000 childbirths respectively by the year 2015. This section reviews the key child survival strategy being implemented in Kenya, Integrated Management of Childhood Illnesses (IMCI), as well as recent evidence from health facilities on the implementation of this strategy.

Globally, a woman dies every minute from complications related to child birth. About half a million women die each year due to pregnancy related causes, of which 99% occurs in developing countries. Attending antenatal clinics and deliveries with the assistance from skilled personnel has a significant impact in relation to maternal mortality and morbidity. The 2010 KDHS , estimate that 1 in 25 women have a chance/risk of dying from pregnancy and child birth complication in a life time .Use of maternal healthcare services is an effective approach in reducing the risk of maternal morbidity and mortality ,especially in places where general health status of a woman is poor(Gage ,2003). Although overall antenatal care coverage remains low, many women make their first ANC visit late into the pregnancy as compared to the recommended at 14 weeks of pregnancy .Use of skilled professional during delivery has declined from 51% in 1989 to 42% in 2004, further demonstrating a deteriorating use of maternal healthcare services among pregnant women. According to the 2010 Kenya preliminary census report, young people (age 14-24) who form about 36% of the population is the fastest growing segment of the population , these young people are faced with a number of challenges which range from early initiation to sex, unemployment ,abortion ,unwanted pregnancies among others.

Like many other health indicators, the burden of maternal morbidity and mortality is higher among this group, as the risk of developing pregnancy related complication and subsequent death during child birth (Van Eijk, 2006). Given the perspective of poverty and lack of quality maternal healthcare services in Kenya, implementation of free maternal healthcare services will depend on improved hospital infrastructure, increased resources outlay, staffing and improved remuneration packages for medical staffs.

Table 1.1 Maternal mortality rates per 10,000 births per country

The table 1.1 shows the difference between the western world and third world economies. Improvement is also noted for each country but the deaths are still much higher than anticipated by the WHO and the MDGs

Table 1.1 maternal mortality rates per 10,000 births

Country name/ Year	2011	2012	2013	2014	2015
Austria	4	4	4	4	4
Belgium	8	7	7	7	7
Canada	8	8	7	7	7
China	33	31	29	28	27
Denmark	8	7	7	7	6
Egypt	39	37	35	34	33
Algeria	147	145	144	141	140
Tunisia	66	64	64	63	62
Nigeria	824	819	821	820	814
Uganda	408	395	372	356	343
Tanzania	483	464	438	418	398
Kenya	584	562	540	525	510

1.1 Objectives of the Study

This study was guided by the following objectives

i. To establish how free prenatal care influences maternal mortality rate in Kisii County, Kenya
ii. To determine how free delivery care influences maternal mortality rate in Kisii County, Kenya
iii. To assess how free Emergency medical services influences maternal mortality rate in Kisii County, Kenya
iv. To identify how free post-delivery care influences maternal mortality rate in Kisii County, Kenya

1.2 Research Hypothesis

This research sought to test the following hypotheses

1. $H_{0:}$ Free prenatal care has no significant influence on maternal mortality rate in Kisii County
2. H_1: Free prenatal care has a significant influence on maternal mortality rate in Kisii County
3. H_0: Free delivery care has no significant influence on maternal mortality rate in Kisii County
4. $H_{1:}$ Free delivery care has a significant influence on maternal mortality rate in Kisii County
5. H_0: Free Emergency medical services has no significant influence maternal mortality rate in Kisii County
6. H_1: Free Emergency medical services has a significant influence on maternal mortality rate in Kisii County
7. $H_{0:}$ Free post-delivery care has no significant influence on maternal mortality rate in Kisii County
8. H_1: Free post-delivery care has a significant influence on maternal mortality rate in Kisii County

1.3 Definition of Key terms

Maternal mortality rate -The number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination

Free maternal health care Programme-A program focusing on non-payment for services offered to pregnant women i.e. antenatal, delivery and post-natal services

Free Delivery Care- A project focusing on non-payment for professional care given to mothers during child birth whether via virginal delivery or Caesarian Section

Free postnatal care- A project focusing on non-payment for provision of a supportive environment in which a woman, her baby and the wider family can begin their new lif

II. LITERATURE REVIEW

2.1 Free Prenatal Care and Maternal Mortality Rate

Less than half (47%) of pregnant women make four or more ANC visits and only 15% access antenatal care while in the first trimester of their pregnancy according to the 2008-09 KDHS The report adds that about half (52%) receive care before the 6th month of pregnancy. Barnet and Lesser (2003), the median number of months of pregnancy at first visit is above the first trimester at 5.6 months. Reproductive health education is information about their reproductive health during their pregnancy period so that they can make informed decisions when to seek these services. Health education programmes during antenatal clinic should inform the women about reproductive health, knowledge related to sexuality, nutrition, family planning, malaria, HIV/AIDS etc. Tetanus vaccinations play a big role to maternal and neonatal tetanus as it has no cure. (WHO, 2014)Claiming thousands of lives every year, maternal and neonatal tetanus (MNT) is a devastating disease caused by toxins released from Clostridium tetani bacteria.

With no cure, MNT is responsible for an average 110,000 deaths a year in the African Region. Once contracted, the newborn usually dies within seven days. However, MNT is entirely preventable through appropriate immunization of women of child bearing age, and through simple and basic precautionary measures in child delivery. Transmission occurs when there is contact between the bacteria and broken skin or dead tissues, such as the wound resulting when an infant's umbilical cord is cut. Burns and Groove (2013), Poor hygienic conditions, lack of access to sterilized childbirth delivery tools, unhygienic practices, and limited access to health services amplify the risk for MNT during childbirth. It is estimated that fewer than 5% of neonatal tetanus cases are actually reported, even from well-developed surveillance systems. It is for this reason that the deaths are greater than the numbers indicate. Of the estimated 28 countries with highest numbers of MNT cases, 16 of them are in the African Region - accounting for 90% global neonatal tetanus cases. These are Angola, Burkina Faso, Cameroon, Chad, Cote d'Ivoire, DR Congo, Ethiopia, Ghana, Guinea Bissau, Liberia, Mali, Mauritania, Mozambique, Niger, Nigeria and Senegal (WHO, 2014). .

Free pregnancy supplements given in public hospitals include folic acid and iron. The World Health Organization (WHO) recommends daily iron and folic acid supplementation for pregnant women. The recommended daily dose is 60mg of iron, and 0.4 mg of folic acid. Doing so reduces the risk of having a pregnancy affected with spina bifida or other neural tube defects, reduces the risk of having babies with low birth weight and iron defects. The supplements also reduce the risk of maternal anemia (WHO, 2014).

Ong'ech (2009), physical Exam is well done in most hospitals that offer prenatal care in Kenya. The following are a must: weight, height and blood pressure. Vagina and cervix maybe examined for any abnormalities. A Pap smear test can be requested to check for cervical cancer. The change in the size of the cervix and uterus helps confirm the stage of your pregnancy.

Pregnancy related laboratory services are free in public hospitals. Many Kenyan hospitals are well equipped to offer the best prenatal care in Kenya. The required tests for a healthy pregnancy are: Blood-blood type and the Rhesus factor. HIV test in Kenya for pregnant mothers is mandatory. This will help you especially if you are positive to start Prevention of Mother to Child Transmission program. You should get tested for STI's also. Urine tested is also carried out to establish if the kidney or bladder infections as these are not good for fetal development (S Witter, 2009).

2.2 Free Delivery Care and Maternal Mortality Rate

Sachs G (2015), service provision or delivery is an immediate output of the input into the health system, such as health workforce, supplies and finances. Increased input should lead to improved services. According to Nakamara (2010), Safe Motherhood Initiative is a worldwide effort that aims to reduce the number of deaths and illnesses associated with pregnancy and childbirth. Nakamara noted that the following ways are paramount to achieving safe motherhood.

Use of free Skilled birth attendance at all births, access to quality emergency obstetrical care and access to quality reproductive health care, including family planning and safe post abortion care. In addition, Kenya has signed on to several regional mandates regarding reproductive health. Kenya participated in and committed to the 2001 Abuja Declaration, pledging to commit at least 15% of the national budget to health care. Free midwife services are of importance to reduce home deliveries. According to Burns (2000), employing qualified person to monitor labor in the health facility has a great impact on reducing maternal motility. In Kenya health workers are unevenly distributed across the country with particular gaps in the North Eastern and Northern Rift provinces. Although it's known that attending to a pregnant mother by a trained person in midwifery skill significantly decreases maternal morbidity and mortality. Nairobi County is heterogeneous cosmopolitan society which comprises of individuals from different background, culture and traditions. Pregnant women seeking to deliver in hospitals have long suffered in the hospitals when they are unable to pay mandatory fees and many have been detained for a long period by the hospital administrators due to failure by their relatives to pay their bills or worse still majority of these women live in the urban informal settlement. After the introduction of free maternal healthcare services hospitals have reported increased numbers in maternity wards .Nurses have also reported being overburdened due to the new policy, with nearly all working overtime and as few as three (3) nurses aiding about 20 mothers at a time (On'gech et al, 2013)

2.3 Free Emergency Medical Services and Maternal Mortality Rate

Although natural, labor is a complex physiological process often lasting many hours before childbirth. Decisions made during labor can directly impact birth outcomes. For many women, clinical onset of early labor can be ambiguous, with women confusing irregular cramps of spurious labor as a sign of established labor, causing apprehension about the best time to seek health care ,For a small proportion of women, labor progresses rapidly increasing the possibility of precipitous or unexpected births in the community with higher associated risks (McLelland GE, Morgans AE, McKenna LG.Conversely, 2014) premature hospital admission for childbirth has been linked to increased risks of medical intervention due to predetermined progress milestones directed by hospital protocols (Holmes P, Oppenheimer LW, Wu Wen S.,2001). Nolan M, Smith J. (2014), as a result, laboring women are encouraged to telephone maternity wards prior to hospital attendance to remain at home until labor is established and avoid this 'cascade of interventions' (Cheyne H et al, 2007). Although midwives find telephone assessment in early labor beneficial, women have expressed dissatisfied with telephone triaging (McLelland GE, 2014). This leaves women wishing to go to hospital with the option of staying at home, making their own way into hospital or calling emergency services for assessment and transport.

Paramedics attend, assist and transport women who have unexpected out of hospital births (Spiby H, Green JM, Hucknal C, Richarson Foster H, Andrews A, 2013) however, research investigating the women in labor managed by paramedics is scarce. In one ambulance service in the east of England, Foster and Maillard, 2012 noted that only one fifth of women transported for imminent birth actually birthed before arrival to hospital, the remaining women were therefore in varying phases of first and second stage of labor. Identifying the changes from the irregular contractions of early labor to commencement of second stage requires specialized clinical skills (McLelland GE, 2014). The challenge of adequate assessment of progress is exacerbated for women who access services not specializing in maternity care. Similar to in-hospital care of women in labor, pre-hospital diagnosis and assessment of progress relies on highly skilled clinical judgment recognizing specific cues. Although they are skilled emergency care practitioners, paramedics have limited education underpinning their knowledge of maternity care, with new graduates reporting lack of confidence in managing laboring women (Cheyne H et al, 2007)

2.4 Free Post-delivery Care and Maternal Mortality Rate

Charlotte W, Pat D, Lalla T, Pyande M et al (2010) indicate that every year in Africa, at least 125,000 women and 870,000 newborns die in the first week after birth, yet this is when coverage and programmes are at their Essential routine PNC for all mothers Assess and check for bleeding, check temperature Support breastfeeding, checking the breasts to prevent mastitis Manage anemia, promote nutrition and insecticide treated bed nets, give vitamin A supplementation Complete tetanus toxoid immunization, if required Provide counseling and a range of options for family planning Refer for complications such as bleeding, infections, or postnatal depression Counsel on danger signs and home care Essential routine PNC

According to Nakamara (2010), all newborns should Assess for danger signs, measure and record weight, and check temperature and feeding Support optimal feeding practices, particularly exclusive breastfeeding Promote hygiene and good skin, eye, and cord care If prophylactic eye care is local policy and has not been given, it is still effective until 12 hours after birth Promote clean, dry cord care Identify superficial skin infections, such as pus draining from umbilicus, redness extending from umbilicus to skin, more than 10 skin pustules, and swelling, redness, and hardness of skin, and treat or refer if the baby also has danger signs Ensure warmth by delaying the baby's first bath to after the first 24 hours, practicing skinto-skin care, and putting a hat on the baby Encourage and facilitate birth registration Refer for routine immunizations Counsel on danger signs and home care lowest along the continuum of care. The first day is the time of highest risk for both mother and baby. The fact that 18 million women in Africa currently do not give birth in a health facility poses challenges for planning and implementing postnatal care (PNC) for women and their newborns (Charlotte et al, 2010).

Regardless of place of birth, mothers and newborns spend most of the postnatal period (the first six weeks after birth) at home. Postnatal care (PNC) programmes are among the weakest of all reproductive and child health programmes in the region. Free postnatal care in public hospitals focuses on free counselling and a range of options for family planning, free gynecology service for the mother and free medication (Ong'ech, 2009).

WHO (2014), Half of all postnatal maternal deaths occur during the first week after the baby is born, and the majority of these occur during the first 24 hours after childbirth.1 The leading cause of maternal mortality in Africa – accounting for 34 percent of deaths – is hemorrhage, the majority of which occurs postnatal. Sepsis and infection claim another 10 percent of maternal deaths, virtually all during the postnatal period.2 HIV-positive mothers are at greater risk of postnatal maternal death than HIV-negative women.3 Access to family planning in the early postnatal period is also important, and lack of effective PNC contributes to frequent, poorly spaced pregnancies. This is a stressful time for new mothers, so emotional and psychosocial support should be available to reduce the risk of depression.

At least one in four child deaths occur during the first month of life. These deaths often take place before child health services begin to provide care, usually at six weeks for the

first immunization visit. Low coverage of care in the postnatal period negatively influences other maternal, newborn, and child health (MNCH) programmes along the continuum of care. For example, the lack of support for healthy home behaviors, such as breastfeeding, can have ongoing effects for the child in terms of under nutrition. Additionally, newborns and mothers are frequently lost to follow up during the postnatal period for prevention of mother-to-child transmission (PMTCT) of HIV (WHO, 2014).

It has been estimated that if routine PNC and curative care in the postnatal period reached 90 percent of babies and their mothers, 10 to 27 percent of newborn deaths could be averted. In other words, high PNC coverage could save up to 310,000 newborn lives a year in Africa.9 The impact on maternal survival and well-being would also be significant. There is now more consensuses on the content of PNC.

2.5 Theoretical Framework

This study links with Anderson's health behavior model to analyze the implementation of free maternal healthcare services in public hospitals in Kenya. Anderson's (1968) health behavior model postulates that a certain characteristics contribute to, or determine implementation of healthcare services. He divides these characteristics into three categories i.e. enabling, need base and predisposing characteristics. Resources are defined as enabling as they make health services available to the targeted population. In order for the government to implement free maternal healthcare services there is need for political goodwill to enable government allocate more resources to health ministry. The government of Kenya and international bodies have realized with great concern the number of women who die from birth related causes , over 500,000 women die each year which translates to one woman per minute is dying somewhere from this preventable cause. Millennium development goal five(MDG 5) is about reducing maternal mortality , thus implementation of free maternal health therefore helped in reducing these deaths as more women will give birth in hospital under the supervision of skilled birth attendants (Anderson, 2005).

III. RESEARCH METHODOLOGY

3.1 Research Design

Research design is the format that guides the implementation of a research method, and the subsequent analysis of acquired data (Sapsford, 2007). It provides a framework for the generation of evidence that is suitable both to a certain set of criteria and to the research question in which the investigator is interested

A descriptive survey design was used in this study to explore influences of successful implementation of community base projects. Descriptive survey is a method of collecting information by interviewing and administering questionnaires to a sample of individuals (Orodho, 2003; Kothari, 2003). Descriptive survey enables the collection of information through questionnaires to determine the opinions, attitudes, preferences and perceptions of persons of interests to the research (Borg, 1987). Descriptive design allows the researcher to generate both numerical and descriptive data that can be used in measuring the relationship between variables as well as determining the effect provision of free maternal health care on maternal and child mortality rate in Kenya

3.2 Target Population

The study population targeted women of reproductive age seeking to undertake maternity services in Kisii Teaching and referral hospital and staff at KTRH maternity wing. Target population consisted of 25 nurses, 20 paramedics, 10doctors at KTRH maternity wing and 340 mothers. The study population is taken from recorded figures obtained from Kisii Teaching and referral Hospital Management System; i.e. the average number of women who attend maternity clinic daily at KTRH and the number of staff in the maternity department as at July 2015. Therefore the total target population is 402 which includes nurses, paramedics, doctors and mothers

3.3 Sample Size and Sampling Procedure

The sample size and sampling procedures for this study was determined by the following statistical procedures

3.3.1 Sample size

The sample size was determined using Krejcie and Morgan Table (1970). The total sample size for this study will be 200 respondents which consist of 180 mothers, 20nurses, 19 paramedics and 10doctors drawn from the target population based on the Krejcie and Morgan Table (1970).

3.3.2 Sampling Procedure

A cross sectional study was conducted where a total of 20 nurses, 19paramedics, 10doctors and 181 mothers were selected from the Kisii Teaching and referral Hospital. To select the mothers the study used stratified random sampling, this procedure helped minimize bias in the study and increase the level of the finding. Stratified sampling technique divides the population in different strata (subgroup) i.e. women seeking antenatal care and women seeking postnatal care. Members within strata were picked randomly. To select nurses, paramedics and doctors the study used simple random sampling. These sampling methodologies are deemed appropriate to represent the target population and to provide the same results at the lowest possible cost and time.

IV. CHAPTER FOUR DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Background of Information

The study sought to establish information of respondents including occupation, highest education level, work experience of the nurses, doctors and paramedics of Kisii Teaching and referral hospital maternity wing

4.1.1 Occupation of the respondents

The study sought to find out the relationship between respondents occupation and their opinion on provision of free maternity healthcare programme on maternal mortality rate in Kisii County, Kenya.

Table 4.1 Distribution of respondents by occupation

Occupation	Respondents	Percent
Nurses	35	50
Doctors	15	22
Paramedics	20	28
Total	70	100

Table 4.1 revealed that 50% of the respondents were nurses who most often interacted with the patients thus indicating that the research findings would be credible as their opinion is from firsthand experience. While 22% were doctors who mostly handled complications and surgeries this indicated the credibility of the findings on causes of maternal deaths. This was followed by 28% who paramedics were indicating that result on emergency cases would be credible. This study shows that nurses are the majority in taking care of pregnant patients.

4.1.2 Highest Education level

The information on the respondent's level of education was sought to find if there was relationship between the highest levels of education of the staff and provision of free maternity healthcare programme on maternal mortality rate in Kisii County, Kenya

Table 4.2 Respondent's level of education

Level of education	Respondents	Total Percentage
Non	0	0
Primary	0	0
Secondary	5	7
College	45	64
University	20	28
Total	70	100

Table 4.2 revealed that none had attained below secondary education, 7% of the respondents had attained up to secondary education, 64% had attained up to college education, 28% had attained up to university education. This study shows that the information given by the respondent is likely to be credible as the respondents are all literate. This study shows that the staffs attending to pregnant women are highly qualified for the task.

4.1.3 Work of experience of the respondents

The information on the years of work experience of respondents was sought to find out if there was a relationship between the years of work experience of staff and provision of free maternal healthcare services on maternal motility rate in public hospitals

Table 4.3 Years of work experience

Occupation	Respondents	Total Percentage
Below 5 years	10	14
5- 10 years	20	29
10 – 15 years	30	43
15 – 20 years	8	11
Above 20 years	2	3
Total	70	100

Table 4.3 showed that most staff had worked in these fields for over 5years thus were well placed to give reliable opinions regarding their views on maternal mortality rates in comparing before and after introduction of free maternal healthcare. It also represents that most of the staff have enough experience in their careers.

4.2 Free prenatal care and maternal mortality rate

Respondents were asked to rate the extent to which they agreed or disagreed with the various statements as related to the influence of level of free antenatal care on maternal mortality rate. A five-point Likert scale was used. Likert scale; 1= Strongly Agree, 2=Agree, 3=Not sure, 4=Disagree, 5=Strongly Disagree

Table 4.4 Free prenatal care

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	Std deviation
Free tetanus vaccine ensure safe delivery	9 %	53%	34%	4%	0	2.33	0.693
Free supplements ensure healthy mother during delivery	0%	45%	40%	10	5	2.75	1.006
Free laboratory testing ensure safe pregnancy	20%	58%	20%	2%	0	2.04	0.699
Free physical ensure safe pregnancy	13%	63%	16%	6%	2%	2.22	0.715

With regard to whether they feel Free Tetanus vaccine ensure safe delivery, there was a mean score of 2.33 on the Likert scale indicating that respondents were in agreement. This is supported by the findings which show that 53% of respondents agree to the statement. This is also evident in the standard deviation of 0.693 that revealed strong consistency in the responses. With regard to whether respondents agree Free supplements ensure healthy mother during delivery, none strongly agreed while 45% agree, 40% of the respondents are uncertain10% disagree and 5% strongly disagree. The mean having a value of 2.92 but there were strong inconsistencies in the responses as indicated by the standard deviation of 1.006 suggesting that the views of respondents varied thus. On the view of free laboratory testing ensures safe pregnancy, 20% respondents strongly agree while 58% agree, 20 are not certain and 2 disagree that makes the respondents in agreement. In addition to this, the mean being 2.04 and standard deviation 0.699 proves the agreement. On the other hand, 63% respondents agree and 12% respondents strongly agree free physical testing ensure safe pregnancy. The mean calculated being 2.22 and standard deviation 0.815 shows that the respondents are in agreement.

From the above statistical conclusions, it can be indicated that free antenatal care is viewed as significant way of reducing maternal mortality rates in Kisii County. The maternity death database from KTRH showed that MNT was responsible for an average 500 deaths yearly at the hospital.

This statement is supported by the focus group discussions held with the mothers at the maternity clinic at KTRH who are first hand beneficiaries of this program. On the discussions they indicated that free antenatal care enables most of them visit the clinic during pregnancy and incase of any issues they are made aware of. Also they noted that free physical testing ensures all is well during pregnancy thus ensures safe pregnancy. The mothers argued that the tetanus vaccine given was very essential as it prevented infections after delivery. They were glad it was free since preciously most of them would not afford it. They noted that free laboratory testing has gone a long way to reduce maternal mortality rate as most of them would not be able to afford it thus not get the care needed.

4.3 Free delivery care and maternal care

Respondents were asked to indicate their view on diverse factors on free delivery care in relation to how it influences maternal mortality rate.

Likert scale; 1= Strongly Agree, 2=Agree, 3=Not sure, 4=Disagree, 5=Strongly Disagree Source

Table 4.5 Free delivery care and maternal mortality rate

	Strongly agree	Agree	Un-certain	Disagree	Strongly disagree	Mean	Std deviation
Free midwife service leads to successful deliveries	58%	34%	4%	4%	0	2.12	0.860
Free theatre services has helped reduce the number of women who die from pregnancy-related causes	60%	26%	8%	2%	0%	1.44	0.735
Free medication ensures quick recovery of the mother after delivery	33%	35%	20%	10%	2%	2.16	1.165

The mean of 2.12 suggests that the response tends to be in agreement with the statement free midwife service leads to successful deliveries. The standard deviation of 0.66 suggests that response clusters around the mean value. When asked on whether free theatre services has helped reduce the number of women who die from pregnancy-related causes 90% of the respondents were in agreement. This is evidenced by the mean value of 1.44 and standard deviation of 0.735 that indicates the answer to be in a strong agreement. On the other hand, 30% respondents agree and 38% respondents strongly agree that free medication ensures quick recovery of the mother after delivery. The mean calculated being 2.16 shows that the respondents are in agreement.

The above statistics show that free delivery care is viewed as a major factor on reducing maternal motility rate. This is indicated by majority of the respondents agreeing to the free services offered under delivery care. This is supported by the results of the focus group discussions that have many mothers strongly noting that free midwife services has helped reduce the number of women who die due to pregnancy related causes as most of them would not have been able to afford professionals during delivery. The focus group discussion conducted indicates that the women feel free theatre services has helped reduce the number of women who die from pregnancy-related causes thus significantly reduce maternal motility rate.

To support this records of the maternity database indicate that deaths due to pregnancy related issues at KTRH have reduced from 20 mothers per month to 5mothers per month since the introduction of the free maternity healthcare program. This shows that program has seen safe delivery a month middle and low class mothers who attend KTRH as they are able to access services to ensure their wellbeing.

4.4 Free emergency medical services and maternal mortality rate

Respondents herein were asked to indicate whether Free Emergency Medical care influenced maternal mortality rate

Table 4.6 Delivery care and maternal rate

	Strongly agree	Agree	Un-certain	Agree	Disagree	Mean	Standard deviation
Free paramedic service ensure safe delivery	10%	45%	42%	3%	0%	2.37	0.724
Free ambulance service ensure successful deliveries	7%	40%	47%	8%	0%	2.61	0.733
Free emergency service for pregnant women ensure reduction in the number of death due to pregnancy related complications	4%	54%	38%	2%	0%	2.35	0.789

Likert scale; 1= Strongly Agree, 2=Agree, 3=Not sure, 4=Disagree, 5=Strongly Disagree

To the statement that free paramedic service ensure safe delivery half of the respondents either were uncertain and a similar number agreed. The same statistics of response applied to the respondents view on whether free ambulance service ensures successful deliveries. This is supported by the generated mean of 2.61 showing and 0.733. Similarly when asked on whether Free emergency service for pregnant women ensure reduction in the number of death due to pregnancy related complications about half agreed and the other half were uncertain.

The above statistics shows only a few of the staff are aware of the free emergency services. This is seen as being the paramedics who actually perform this task. The other half are not aware of this service thus cannot give a positive or negative response on whether free emergency services influence maternal mortality rate. This finding is supported by focus group discussion results where most mothers confessed of neither needing the emergency services nor knowing they existed.

4.6 Free post-delivery care and maternal mortality rate

Respondents were asked to give their view on whether free postnatal care influences maternal mortality rate.

Table 4.7 Free post –delivery and maternal mortality rate

	Strongly agree	Agree	Un-certain	Disagree	Strongly agree	Mean	Standard deviation
Free counseling and a range of opinions for family planning early postnatal period is important to a mother quick recover	37%	34%	4%	17%	10%	2.27	0.995
Free physical test done on the mother postpartum ensure quick recovery	27%	37%	24%	2%	10%	2.31	1.186
Free medication given to the mother ensure quick recovery	17%	59%	0%	20%	4%	2.35	0.735

Likert Scale 1=Strongly Agree, 2=Agree, 3=Not sure, 4=Disagree, 5=Strongly Disagre

Findings of the study on whether Free counselling and a range of options for family planning early postnatal period is important to a mother quick recovery; the mean 2.27 and standard deviation 0.995 supports the agreement by showing results to be closer to agree and strongly agree. On the other hand, the statement that free physical test done on the mother postpartum ensure quick recovery; The mean 2.31 supports the disagreement by showing results to be closer to agree and strongly agree the standard deviation is 1.186 as the clusters are scattered. The findings also indicate that 18% strongly agree free medication given to the mother ensure quick recovery, 59% agree, and 24% disagree that Free medication given to the mother ensure quick recovery. Mean of 2.35 and standard deviation 0.735 supports this agreement by indicating that respondent's answers tend to be on agreement of the statement. According to respondent's answers, it has been clearly identified that maternal motility rate has reduced due to free postnatal care.

The hospital maternity records stated that before introduction of the free maternal healthcare program 500 women and 2,400 newborns died yearly in the first week after birth. The KTRH maternity records show that in the last 5 years deaths due to HIV related causes during birth have gone down to zero for the patients who have religiously attended clinics and followed the guidelines given. Information gathered from the focus group discussion indicate that women find free counselling to be if importance as they are able to avoid being pregnant immediately after delivery thus have ample time to recover and gain strength. Also the women supported free physical testing as a highly influential aspect under postnatal care as they are able to detect any infections thereafter and heal appropriately. The conclusion of the discussion was that post-delivery care has significantly reduced maternal motility rate.

V. SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the findings

This section was guided by the variables under study as follows:

5.1.1 Free Antenatal Care and Maternal Mortality Rate

The finding of the study showed that there is a significant relationship between free antenatal care and maternal mortality rate. This is reflected due to the high agreement rate observed in responses given on programmes under the free antenatal care programme by the staff. The free antenatal services ensure that most mothers get access to the antenatal services. The pregnant mother's health is regularly observed thus minimum pregnancy related deaths occur as any complication would be detected early in the pregnancy. 60% of the respondents agreed that free Tetanus vaccine ensure safe delivery, 44% agreed that free supplements ensure healthy mother during delivery, 78% agreed that free Laboratory testing ensure safe pregnancy and 76% agreed that free physical testing ensure safe pregnancy.

5.1.2 Free Delivery care and maternal mortality rate

The study established that there is a direct relationship between free delivery care and maternal mortality rate. Free delivery care is a project focusing on non-payment for professional care given to mothers during child birth whether via virginal delivery or Caesarian Section Resources thus the core aspect of free maternal healthcare program. The study has shown that more than 60% of the respondents agree that services under the free delivery care program have helped reduce the maternal mortality rate significantly. Also the data provided by the hospital indicates 75% reduction of maternal deaths at KTRH after the introduction of the free delivery Care.

5.1.3 Free Emergency Care and Maternal Mortality Rate

The study established that free emergency medical services significantly influences maternal mortality rate. About 50% of the patients agree that the free emergency Care project has gone a long way to see that women under emergencies are well handled and survive the delivery process. However the study also shows that most mothers are not aware of this service offered. The study also gathers that very few women develop complications when under this program thus do not get a chance to use emergency services. Consequently the program significantly influences maternal mortality rate. It is therefore important for the government to create awareness on free emergency care so as to have all women benefit from the program

5.1.4 Free postnatal care and maternal mortality rate

The study established that there is a significant relationship between free postnatal care and maternal mortality rate. Free postnatal care involves free counselling, free medication and free physical testing. Quality of service is attributed to skilled personnel who adhere to professional ethics. According to information gathered in this study 55% of the respondents were satisfied that free postnatal care contributed significantly in the reduction of maternal mortality rate. The free medication offered during postnatal care was seen to be the most appreciated service under the postnatal care as most women seeking this service would not be able to afford it. Thus having the medication ensures quick and smooth recovery of mothers after birth thus significantly seeing a reduction in deaths due to post pregnancy complications.

5.2 Discussion of key findings

The finding of this research revealed that the nurses were the majority of the employees who took care of maternity cases. Most of the respondents were College graduates and the average work experience of the respondents was between 5-15 years. The answers were therefore credible as the respondents were literate with vast knowledge on the programme before and after inception

Free antenatal care programmes have played a significant role in reduction of maternal mortality rate. Tetanus vaccinations play a big role to maternal and neonatal tetanus as it has no cure. Maternal and neonatal tetanus (MNT) is a devastating disease caused by toxins released from Clostridium tetani bacteria. With no cure, the maternity death database from KTRH showed that MNT was responsible for an average 1,000 deaths yearly at the hospital. Once contracted, the mother usually dies within seven days. However, MNT is entirely preventable through appropriate immunization of women of child bearing age, and through simple and basic precautionary measures in child delivery. Transmission occurs when there is contact between the bacteria and broken skin or dead tissues, such as the wound resulting when an infant's umbilical cord is cut. Burns and Groove (2013), Poor hygienic conditions, lack of access to sterilized childbirth delivery tools, unhygienic practices, and limited access to health services amplify the risk for MNT during childbirth. With free antenatal care mothers who would have otherwise not afforded the treatment are able to access the vaccine and thus deaths due to MNT are reduced to zero Free pregnancy supplements given in public hospitals include folic acid and iron. The World Health Organization (WHO) recommends daily iron and folic acid supplementation for pregnant women. The recommended daily dose is 60mg of iron, and 0.4 mg of folic acid. Having free supplements encourages more women who would not have afforded it to access them. This reduces the risk of having a pregnancy affected with spina bifida or other neural tube defects, reduces the risk of having babies with low birth weight and iron defects. The supplements also reduce the risk of maternal anemia.

Free physical exam is well done in most hospitals that offer prenatal care in Kenya. The following are a must: weight, height and blood pressure. Vagina and cervix maybe examined for any abnormalities. A Pap smear test can be

requested to check for cervical cancer. The change in the size of the cervix and uterus helps confirm the stage of the pregnancy. When pregnant women access free physical test then they are able to keep track of every stage in pregnancy and get medical help in case of abnormalities thus reducing deaths due pregnancy related causes.

KTRH is well equipped to offer the best prenatal care in Kenya. The required tests for a healthy pregnancy are: Blood-blood type and the Rhesus factor. HIV test in Kenya for pregnant mothers is mandatory. This help especially if mother is HIV positive to start Prevention of Mother to Child Transmission program. Tests are also done for STI's. Urine tested is also carried out to establish if the kidney or bladder infections as these are not good for fetal development. Since majority of the patients accessing public maternity clinics were previously hardly able to afford the pregnancy related laboratory services they did not take the tests. Currently the situation is different as the tests are free thus an increase in healthy pregnancies.

The study found that KTRH has laid down a Safe Motherhood Initiative. This is an effort that aims to reduce the number of deaths and illnesses associated with pregnancy and childbirth. The following ways are paramount they use to achieving safe motherhood: Use of free Skilled birth attendance at all births, access to free quality emergency obstetrical care and access to free quality reproductive health care, including family planning and safe post abortion care. In addition, Kenya has signed on to several regional mandates regarding reproductive health, pledging to commit at least 15% of the national budget to health care.

Free midwife services are of importance to reduce home deliveries. KTRH has employed enough qualified person to monitor labor in the health facility. This has a great impact on reducing maternal motility. Although it's known that attending to a pregnant mother by a trained person in midwifery skill significantly decreases maternal morbidity and mortality. Kisii County is heterogeneous cosmopolitan society which comprises of individuals from different background, culture and traditions. Pregnant women seeking to deliver in hospitals have long suffered in the hospitals when they are unable to pay mandatory fees and many have been detained for a long period by the hospital administrators due to failure by their relatives to pay their bills or majority of these women live in the urban informal settlement. After the introduction of free maternal healthcare services hospitals have reported increased numbers in maternity cases.

The study found out that although midwives find telephone assessment in early labor beneficial, women expressed being dissatisfied with telephone triaging. This leaves women wishing to go to hospital with the option of staying at home, making their own way into hospital or calling paid emergency services for assessment and transport. The study showed that almost 50% of the hospital staff were also clueless on the influence of free emergency care on maternal mortality rate.

For many women, clinical onset of early labor can be ambiguous, with women confusing irregular cramps of spurious labor as a sign of established labor, causing apprehension about the best time to seek health care. For a small proportion of women, labor progresses rapidly increasing the possibility of precipitous or unexpected births in the community with higher associated risks. This is where the paramedics come in. The study found that premature hospital admission for childbirth is linked to increased risks of medical intervention due to predetermined progress milestones directed by hospital protocols as a result.

However, the study found that the women in labor managed by paramedics is scarce. In one ambulance service in KNH, only one ninth of women transported for imminent birth actually birthed before arrival to hospital, the remaining women were therefore in varying phases of first and second stage of labor. Identifying the changes from the irregular contractions of early labor to commencement of second stage requires specialized clinical skills. The challenge of adequate assessment of progress is exacerbated for women who access services not specializing in maternity care. Similar to in-hospital care of women in labor, pre-hospital diagnosis and assessment of progress relies on highly skilled clinical judgment recognizing specific cues. It was noted that although they are skilled emergency care practitioners, paramedics have limited education going even as low as some not ever attaining college education, underpinning their knowledge of maternity care, with new graduates reporting lack of confidence in managing laboring women.

It was discovered that majority of the respondents appreciated highly free medication care given to make recovery swift and bearable. The hospital maternity records stated that before introduction of the free maternal healthcare program 500 women and 2,400 newborns died yearly in the first week after birth. This is when coverage and programmes are at their Essential. Thus these showed most women neglected or could not afford PNC services.

The study found out that KTRH provided a number of services for PNC to all mothers: Assess and check for bleeding, check temperature Support breastfeeding, checking the breasts to prevent mastitis Manage anemia, promote nutrition and insecticide treated bed nets, give vitamin A supplementation Complete tetanus toxoid immunization, if required Provide counseling and a range of options for family planning Refer for complications such as bleeding, infections, or postnatal depression Counsel on danger signs and home care Essential routine PNC. Free postnatal care in public hospitals focuses on free counselling and a range of options for family planning, free gynecology service for the mother and free medication.

The study noted that regardless of place of birth, mothers and newborns spend most of the postnatal period (the first six weeks after birth) at home. Postnatal care (PNC) project was

among the weakest of all projects under the free maternal healthcare programme in the hospital.

WHO (2014), the leading cause of maternal mortality in Africa – accounting for 34 percent of deaths – is hemorrhage, the majority of which occurs postnatal. Sepsis and infection claim another 10 percent of maternal deaths, virtually all during the postnatal period. The study found out that HIV-positive mothers are at greater risk of postnatal maternal death than HIV-negative women. Thus newborns and mothers follow up during the postnatal period for prevention of mother-to-child transmission (PMTCT) of HIV. The KTRH maternity records show that in the last 5 years deaths due to HIV related causes during birth have gone down to zero for the patients who have religiously attended clinics and followed the guidelines given. The study found that access to family planning in the early postnatal period is also important, and lack of effective PNC contributes to frequent, poorly spaced pregnancies. This is a stressful time for new mothers, thus the clinics offered emotional and psychosocial support to reduce the risk of depression. The clinicians noted that if routine PNC and curative care in the postnatal period reached 90 percent of babies and their mothers, 10 to 27 percent of newborn deaths could be averted. In other words, high PNC coverage could save up to 310,000 newborn lives a year in Africa. The impact on maternal survival and well-being would also be significant

5.3 Conclusion of the Findings

The study revealed that there is a significant relationship between free antenatal care and maternal mortality rate in Kisii County, Kenya. Investment in free antenatal care programmes and encouragement of mothers to attend would ensure a decrease in maternal mortality rate. The roles played by vaccines and physical tests given during the antenatal period go a long way to see not only delivery of healthy babies but healthy mothers too.

The study established that there is a direct relationship between free delivery care and maternal mortality rate. Whether via virginal delivery or Caesarian Section every mother seeking to deliver must be attended to by a professional to avoid infections and worse death of mother and baby. The study identified that the nurses, doctors were well trained and had enough experience to handle the procedure. In the contrary most paramedics were less experienced and less skilled to handle successful delivery procedure.

The study also deduced that there is a relationship between free emergency medical services significantly and maternal mortality rate. This takes care of mothers on emergency situations at home who would have died due to intensive bleeding, pain or being attended to by nonprofessionals. However the study also shows that most mothers and staff are not aware of this service offered. Failure by the government to inform women on free emergency medical services may result into underutilization of free services in lower level hospitals leading to deaths due to related circumstances.

The study established that there is a significant relationship between free postnatal care and maternal mortality rate hence women need to be encouraged to attend postnatal clinics even after safe deliveries. This would help reduce deaths due to after words complications and ensure faster healing.

The study recorded Above 50% agreement by respondent to all question pointers the best pointer that free maternal healthcare has positively influenced reduction in maternal mortality rate

5.4 Recommendation of the Study

The study finding unveiled a number of suggestions concerning the influence of free maternal healthcare services in Kisii County, Kenya. The following are therefore recommendations on the finding:

1. other essential services should be added to the delivery care programme such as provision of treatment in case of complications during delivery.
2. The number of staff need to be increased as more women are accessing maternity services in hospital thus the current staff are overwhelmed.
3. Laboring women to telephone maternity wards prior to hospital attendance to remain at home until labor is established and avoid this 'cascade of interventions'.
4. Paramedics should be provided with maternity training so as to be well equipped to attend to the patients.
5. Awareness should be created on free emergency services as most women and staff seemed unaware of it.
6. The government put more emphasis on Patient satisfaction as a way of attracting more patients to deliver in public hospitals.

5.5 Suggestion for further study

There may be a need for further research to determine the quality of services after the introduction of free maternal healthcare services in public hospitals in Kenya.

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LIST OF ACRONYMS AND ABBREVIATIONS

PNC: Post Natal Care
FMC: Free Maternity Care
KTRH: Kisii Teaching and referral hospital
CEDAW: Elimination of discrimination against women
EOC: Essential obstetric care
KDHS: Kenya Demographic and health survey
MDG: Millennium development goal
MMR: Maternal mortality ratio
MoH: Ministry of health
SMI: Safe motherhood initiative
TBA: Traditional birth attendance
UNFPA: United nation population fund
WHO: World health organization
WRA: Women of reproductive age

APPENDICES

APPENDIX I: LETTER OF TRANSMITTAL OF DATA COLLECTION INSTRUMENTS

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: DATA COLLECTION

My name is, a student pursuing a Masters of Arts in project planning and management at the school of Continuing and Distance Education of the University of Nairobi.

I am undertaking a study on effect of provision of free maternal health care on maternal and child mortality rate in Kenya, a case of Kisii County

This is part of requirement of the fulfillment of the course.

The attached questionnaire is therefore intended to seek your views on the various aspects of projects. Kindly fill it with all sincerity and honesty. The information you provide will be utilized purely for academic purposes and will be treated with outmost confidentiality.

Thank you for your cooperation. Yours faithfully,

NYAKINA DUKE MOSE

APPENDIX II QUESTIONNAIRE

SECTION A

PARTICIPANT'S DETAILS

Highest education level

None [ ]

Primary [ ]

Secondary [ ]

College [ ]

University [ ]

Occupation

Nurse [ ]

Doctor [ ]

Paramedic [ ]

Work Experience

5 yrs. and below [ ]

5- 10 years [ ]

10-15 years [ ]

15-20 years [ ]

20-25 years [ ]

Above 20 years [ ]

Section B Free prenatal care

1. Free Prenatal Care is given in public hospitals including KTRH. Please indicate the level with your agreement on the following statements which are measured in the Likert scale of 1-5 where 5 = Strongly Agree, 4 = Agree 3= Neutral 2= Disagree 1 = Strongly Disagree

Statement	1	2	3	4	5
Free supplements ensure healthy mothers during delivered					
Free tetanus vaccine ensures safe delivery					
Free laboratory testing ensures safe pregnancy					
Free physical testing ensures safe pregnancy					

SECTION C FREE DELIVERY CARE

Free Delivery Care is given in public hospitals including KTRH Please indicate the level with your agreement on the following statements which are measured in the Likert scale of 1-5 where 5 = Strongly Agree, 4 = Agree 3= Neutral 2= Disagree 1 = Strongly Disagree

Statement	1	2	3	4	5
Free midwife services leads to successful deliveries					
Free theatre services has helped reduce the number of women who die from pregnancy-related causes					
Free medication ensure quick recovery of the mother after delivery					

SECTION D FREE EMERGENCY MEDICAL SERVICES

Free Newborn Care is given in public hospitals including KTRH Please indicate the level with your agreement on the following statements which are measured in the Likert scale of 1-5 where 5 = Strongly Agree, 4 = Agree 3= Neutral 2= Disagree 1 = Strongly Disagree

Statement	1	2	3	4	5
Free paramedic services ensures safe delivery					
Free ambulance services ensure successful deliveries					
Free emergency services for pregnant women ensure reduction in the number of deaths due to pregnancy related complications					

Section E Free Post-delivery care

Free Postnatal Care is given in public hospitals including KTRH, Please indicate the level with your agreement on the following statements which are measured in the Likert scale of 1-5 where 5 = Strongly Agree, 4 = Agree 3= Neutral 2= Disagree 1 = Strongly Disagree

Statement	1	2	3	4	5
Free counseling and a range of options for family planning in early postnatal period is important to a mothers quick recovery					
Free physical tests done to the mother postpartum ensure quick recovery					
Free medication given to the mother ensure quick recovery					

APPENDIX II FOCUS GROUP DISCUSSION SCHEDULE

Section B: Free Prenatal Care

1. Does free tetanus vaccine ensures safe delivery? Explain

2. Does free supplements ensure healthy mothers during delivered? Explain

3. Does free laboratory testing ensures safe pregnancy? Explain

4. Does free physical testing ensures safe pregnancy? Explain

Section C: Free Delivery Care

1. Does Free midwife services leads to successful deliveries? Explain

2. Does Free theatre services has helped reduce the number of women who die from pregnancy-related causes? Explain

3. Does free medication ensure quick recovery of the mother after delivery? Explain

Section D: Free Emergency medical services

1. Does free paramedic services ensure safe delivery? Explain

2. Does free ambulance services ensure successful deliveries? Explain

3. Does free emergency services for pregnant women ensure reduction in the number of deaths due to pregnancy related complications? Explain

Section E: Free Post-delivery care

1. Does Free counseling and a range of options for family planning in early postnatal period is important to a mother’s quick recovery? Explain

2. Does free physical tests done to the mother postpartum ensure quick recovery? Explain

3. Does free medication given to the mother ensure quick recovery? Explain