

**EVALUATION OF FREE MATERNAL HEALTH CARE SERVICES IN
KENYA: (A CASE STUDY OF MACHAKOS LEVEL 5 HOSPITAL)**

BY

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DECLARATION

I, Denis Otundo, confirm that the work presented in this paper is my own. Where information has been derived from other sources, I confirm that this has been indicated in the project.

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Abstract

Free maternal health care services in Kenya was introduced three and a half years ago and increased the number of skilled deliveries significantly. Empirical studies of preventive and curative services have often found that utilization of maternal health services is related to the availability, quality and cost of services, as well as to social structure, health beliefs and personal characteristics of the users. In this paper an attempt is made to examine the factors associated with the utilization of free maternal health care services in Kenya on the basis of data collected from Machakos Level 5 hospital.

This work is aimed at assessing the efficiency and effectiveness of the programme at all levels which depends heavily among other things on the quality of services offered and the involvement of the stake holders. The stakeholders include clients/ end users of the product i.e mothers, the service providers (facility based health care workers), the health management teams; the governance teams, the county government and the community at large.

In a sample of 269 participants who received free maternal services at Machakos level 5, the study investigated the influence of hospital infrastructure, resources, patient's source of information and their satisfaction as factors that determine the effectiveness free maternity health care services in Kenya.

The findings of the study showed that there is a recognizable relationship between hospital infrastructure and implementation of free maternity services in public hospitals. It also established that there is a direct relationship between resource allocation and implementation of

free maternity services because resources are the enabling factors and immediate input into health system

The study established that there is a positive and significant relationship between patient level of awareness and utilization of free maternal healthcare services. Awareness was sighted as a major structural variable that could influence decision of women to deliver in public hospitals, such knowledge should highlight on requirement and various point of service delivery all of which determined to a great extent the quality of free maternal health services in Kenya.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

World health organization (WHO) estimates that more than 585,000 women of reproductive age die each year from pregnancy related causes worldwide, 99% of these deaths occur in the less developed countries .The ratio of maternal mortality in sub-Saharan is the highest in the world estimated at 686per 100,000 live births (World Bank, 1994), if timely and appropriate obstetric care were accessed in the event of complication an estimated 75% of the above deaths could be prevented, (Patton,2009). Women play an important role in the society which includes reproduction, production and community services. Studies have demonstrated that high levels of maternal mortality and morbidity in developing countries are preventable through use of skilled birth attendants, equipping health facilities and provision of essential resources required to effectively implement standard maternal healthcare services in Kenya and other developing countries around the world (Fortney, 2012).

According to Nakamura (2010) maternal health refers to, health of women during pregnancy, childbirth and the postpartum period. In addition, late presentation by pregnant woman in the event of a complication, combined with poor quality care, contributes to high levels of maternal and perinatal mortality and severs morbidity (Thaddeus and Maine, 1994). All women are at risk of obstetric complications; access to adequate essential obstetric care (EOC) needs to be universal (WHO, 2012).

Indeed world health organization (WHO) estimates that over 500,000 women worldwide succumb to complications of pregnancy and child birth each year, millions more women

survive but suffer from illness and disabilities related to child birth .It has been estimated by safe motherhood initiative (SMI)that 30 to 50 morbidities occur from maternal death(SMI,2003). The goal of prenatal care is to detect any complications of pregnancy early, prevent them if possible and to direct women to the appropriate special medical services, (Borkowski, 2005).

Postnatal care issues include recovery from child birth, concerns about newborn care, nutrition breastfeeding and family planning. Maternal death is widely regarded as one of life's most tragic outcomes. There is a cruel irony in the death of a woman who is engaged in the act of creating life, and her death is an incomparable loss for any children who are left behind, such deaths are almost entirely preventable given proper medical surveillance and intervention, and as such maternal mortality is often viewed as a sentinel indicator of the quality of a health care delivery system. According to center for disease and control (CDC), the total amount spent on health care in the United States of America (USA) is greater than any other country in the world, (French, and Bell, 1999).

Despite this, women in the USA have a greater lifetime risk of dying of pregnancy-related complications than women in other countries. For example, the likelihood of a woman dying during childbirth in the USA is five times greater than in Greece, four times greater than in Germany, and three times greater than in Spain. More than two women die every day in the USA from pregnancy-related causes. African-American women are at higher risk, they are nearly four times more likely to die of pregnancy-related complications than white women. Even for white women in the USA, however, the maternal mortality ratios are higher than for women in other industrialized countries.

These rates and disparities have not improved in more than 20 years. Maternal mortality ratios have actually increased from a low of 6.6 deaths per 100,000 live births in 1987 to 13.3 deaths per 100,000 live births (Becak, 2006).

Japan achieved dramatic fall in maternal mortality over just a ten-year period from 1960 to 1970, with the maternal mortality ration (MMR) declining from 130 to 50 – almost a two-thirds reduction. This provides encouragement to many developing countries trying to achieve significant falls in maternal mortality in the period remaining up to 2015 – the target year for the Millennium Declaration. The success of Japan in tackling maternal mortality is due to a host of factors, but also provides evidence of the three main interventions which are needed everywhere in the world, it has implemented universal access to skilled care at delivery; Japan has long invested in the training of professional midwives and nurses and ensuring their availability to women during pregnancy, delivery and post-natal care (at no cost).

Today 100% of deliveries in Japan occur with help of health professionals and in health facilities equipped to manage normal cases or to promptly refer on complications to higher-level hospitals. Through the provision of quality skilled care, Japan has virtually eliminated one of the major causes of deaths to mothers and babies after birth. In the developing countries child birth is associated with suffering ill health and even death, (Penfold, Harrison , Bell , Fitzmaurice,2007).

Indeed globally, the increasing attention given to maternal health has seen reduction of maternal deaths .There is a growing movement, globally and particularly in the Africa region, to reduce financial barriers to health care generally, but with special emphasis on

high priority services and vulnerable groups. In Burundi, for example, free services for pregnant women and the under-fives were introduced in 2006, and utilization appears to have increased as a result, though no formal evaluation has been undertaken, (Fitzmaurice,2007).

In Burkina Faso, an 80% subsidy policy for deliveries was launched in 2006. Other countries have followed suit, though with varying target groups, and all still at the stage of being elaborated. In Kenya, for example, various changes have been made to the user fee regime – most recently, in 2007, deliveries were announced to be free, though there is no evidence yet of implementation or impact. Liberia suspended fees for primary care in 2007.

In Ghana, an exemptions policy for delivery fees was introduced in 2004. It was intended to cover all facility costs for intrapartum care in both public and private facilities. Initially payment was effected through the local government administration but later through the health system. Funding was provided from a debt relief fund, under the Highly Indebted Poor Countries (HIPC) initiative. Furthermore, quality of care is an essential component of any programme that upholds the basic principle of a reproductive health approach. Quality is not easy to measure or define. However, significant progress has been made in defining quality of care in relation to family planning element of reproductive health (Bruce, 1990).

The recognition that the quality of services has an impact on the use of services has given the suppliers of such services a strong incentive to improve quality care with the goal of greater acceptance among the clients seeking the services. Historically the major focus in maternal services has been to reduce maternal mortality by the provision of hospital based services. The effectiveness of this approach in the developed and developing countries has

perhaps detracted from the broader issues of quality of care, which affect women's health and influence the acceptability and uptake of services. Where services exist they should be provided at the very least a standard of care that results in the best possible and should not inhibit utilization of free maternal healthcare services in public hospitals in Kenya.

There has also been progress in sub-Saharan Africa, but Kenya, unlike in the developed world where a woman's life time risk of dying during or following pregnancy is 1 in 3800, the risk of maternal death is very high at 1 in 39. Increasing numbers of women seeking maternal health services during childbirth and after child birth in health facilities is therefore important to ensure that quality of care provided is optimal. According to Kenya demographic health survey, 2012 it's estimated that about 43% of births in Kenya are delivered under the supervision of skilled birth attendant, TBA continues to assist 28% of the births, 22% are home deliveries assisted by friends and relatives while 7% of expectant mothers deliver without assistance.

Kenyan women have long suffered from high maternal mortality and morbidity for many years and utilization of antenatal and maternal services is an essential health indicator and step to the right direction, increasing the proportion of mothers who are cared for in health facilities during pregnancy, delivery and post-delivery reduces health risk to both the mother and the child. In most communities motherhood is often celebrated as a positive gain in the community and fulfilling experience for the concerned couple/ family where its seen as the continuation of family lineage while at the same time for many women it is associated with suffering, pain ill-health and even death associated with hemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labor.

1.2 Statement of the Problem

From the existing data ,observation and group discussion among health care providers it indicate that 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 .Utilization of maternal healthcare services is associated with improved maternal health outcomes, (Griffins and Stevenson 2001).

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 highly depend on improved hospital infrastructure, increased resources outlay, staffing and improved remuneration packages for medical staffs which will be evaluated in this study.

1.3 Purpose of the Study

The purpose of the study was to evaluate free maternity health care services in Kenya, with reference to Machakos Level 5 Hospital.

1.4 Objectives of the Study

This research was be guided by the following objectives:-

1. To determine the influence of hospital infrastructure on implementation of free maternal healthcare services in Machakos Level 5 Hospital.
2. To determine the influence of resources on implementation of free maternal healthcare services in Machakos Level 5 Hospital.
3. To establish the influence of sources of information on implementation of free maternal healthcare services in Machakos Level 5 Hospital.
4. To establish influence of patient satisfaction on implementation of free maternal healthcare services in Machakos Level 5 Hospital.

1.5 Research Questions

The study sort to answer the following questions;

1. What is the influence of hospital infrastructure on the implementation of free maternal healthcare services in Machakos Level 5 Hospital?
2. What are the resources required in implementing free maternal healthcare services in Machakos Level Hospital?
3. How does source of information on the implementation of free maternal healthcare services in Machakos Level 5 Hospital influence utilization of services?

4. Does patient satisfaction affect the implementation of maternal healthcare services in Machakos Level 5 Hospital?

1.6 Significance of the Study

This research came in handy to provide an insight into various factors that are likely to influence the implementation of free maternal healthcare services in public hospitals in Kenya with reference to Machakos Level 5 Hospital. The primary stakeholders, Government and pregnant women are the main beneficiary of this research since the study was carried out in a typical setting where factors highlighted would be most likely to be experienced.

This would help understand factors influencing and possible alternatives to the health assistance which would assist the positive outcome. Identification of individual factors that may influence or impede implementation of free maternal healthcare services in public hospitals. Over the last two decades, there have been investments in public health system in Kenya with the emphasis on providing maternal healthcare services and at the same time encouraging women to deliver under the supervision of skilled healthcare professionals. However, the uptake of maternal healthcare services in Kenya is very low.

According to Esipisu (2011), maternal healthcare uptake stands at 43% of women delivering in hospital. Machakos County provides an ideal setup to carry out this research due to the nature and the characteristics of the study population. Therefore, foreign and local investors would be able to inject more help to the sector through the ministry of health. The study would also bring into light the various factors that the investors and the government need to focus on when targeting provision of free maternal healthcare services.

The results of this study would also be invaluable to researchers and scholars, as it would form a basis for further research. The students may use this study to form basis of discussion of maternal healthcare services in developing countries.

1.7 Basic Assumption of the Study

During the study there was an assumption that all respondents (midwives, gynecologists and selected mothers) would cooperate in filling the questionnaire and provide accurate and honest answers to provided questions.

1.8 Limitation of the Study

The likely challenge was limited access to information sought and inability to include other counties in the study. Also some of the respondents were reluctant to provide information due to fear that that information provided may be used against them. The study was limited to time and financial cost required to carry out comprehensive study on implementation of free maternal healthcare services in Machakos County.

1.9 Delimitation of the Study

Maternal healthcare involves a range of services categorized as contraceptive; abortion, obstetrics care and prenatal care. This study was limited to public hospitals providing free maternal healthcare services in Machakos County.

1.10 Definition of Significant Terms

Awareness - Knowledge gained through own perception or being informed by being cognizant of current development in regard to free maternal healthcare services offered in public hospitals.

Free maternal health care: non-payment for services offered to pregnant women i.e. antenatal, delivery and post-natal services.

Hospital Infrastructure - include physical and organizational structures required for effective and efficient operation within the hospital set up. Physical structure include wards, theatre, incubators, beds, equipment's and other facilities like toilet , bathroom while organizational structures include body of rules and regulations governing various system e.g. procedure of patient admission and discharge .

Human resources - include all human workforce or human capital , they include an a ray of personnel i.e. senior medical consultants(gynecologist) , midwives , laboratory technologist ,pharmaceutical technologists , hospital administrator ,drivers ,cleaners , cooks

Implementation of free maternal healthcare services: The removal of service charge in public hospital in relation to women delivering in these hospitals.

Maternal healthcare: are services offered to a pregnant woman they include, antenatal, delivery and post delivery services

Machakos County; one of the 47 administrative units in Kenya

Public hospitals: – Government operated hospitals e.g. Machakos Level five hospital

Quality of services – A states of how good or bad health services are. It measures whether healthcare services meet at least the basic requirements.

CHAPTER TWO

LITRATURE REVIEW

2.1 Introduction

The reflection and collection of the literature review to this chapter attempts to present a review of various previous studies that have been undertaken in relation to implementation of free maternal healthcare services in public hospitals .Various studies on this subject are reviewed herein to provide a broad perspective on how to implement free maternal healthcare services in public hospitals in Kenya.

Reducing maternal mortality has seen the government and the international agencies promote maternal healthcare services. Although, reducing maternal mortality requires different strategies to promote health of pregnant women. In this study, maternal healthcare will be analyzed by women who have gone to deliver and those seeking post delivery services. Literature review will focus on implementation of frees maternal healthcare services in public hospitals. It's a systematic identification, location scrutiny of relevant published works to gain information about research topic, (Burns and Groove 2007).

Relevant studies in both developed and developing countries are reviewed with particular emphasis on finding and methodological issues in developing countries. Maternity fee is not the only challenge that mothers face at delivery, the high rates of maternal deaths have become a matter of concern and a major threat to women at childbirth. This has in fact elicited reactions with the United Nations member countries incorporating maternal health within the Millennium Development Goals target points and the need to reduce maternal mortality through the MD, (Bruce, 1990).

According to constitution of Kenya (2010), Article 26 in the Bill of Rights speaks of the right to life; it states: “Every person has a right to life.” It is in this context that we must look at the maternal health with a microscope that will go beyond maternity fees and address the issue of maternal mortality. The Jubilee Manifesto speaks of every Kenyan having access to quality health care and raising budgetary allocation on health from 6% to 10% in 2014- 2015 fiscal years, but this will still be lower than the recommended standard of 15 % of the national budget that was agreed on in the Abuja Declaration of April 2001(WHO2011).

Elimination of Discrimination against Women (CEDAW) requires that, states to ensure women have appropriate services in connection with pregnancy, childbirth, and post-natal care, including family planning and emergency obstetric care (CEDAW 2010). Kenya has also committed to fulfilling the Millennium Development Goals (MDG 5) to improve maternal mortality ratio by 2015 with a target of 147 against 2011 of 488 per 100,000 live births, its implementation started in 2002 where it was main streamed into development agenda and process, in 2011. Reducing maternal mortality has seen the government of Kenya and other international agencies join hand and resources to promote maternal healthcare services.

Although reducing maternal mortality and morbidity requires different strategies and approach to promoting maternal health. Placing women right at the centre stage will promote safe motherhood in relation to the millennium development goal number five (MDG 5). Previous studies have shown that the uptake of maternal healthcare services in developing countries has significant consequences for both the mother and the child

(Kausser, 1999). The United Nations Population Fund (UNFPA) has outlined the principles of the Human Rights Based Approach (HRBA) to sexual and reproductive health rights.

The HRBA states that governments, as duty bearers, have three levels of obligation to right-holders (all persons): (1) to respect sexual and reproductive health rights (SRHR) by refraining from interfering with the enjoyment of these rights, (2) to protect SRHR by enacting laws that create mechanisms to prevent violations of these rights by state authorities or by nonstate actors and (3) to fulfill SRHR by taking active steps to put in place institutions and procedures, including the allocation of resources, to enable people to enjoy these rights. As a member of the African Union, Kenya launched the Campaign on Accelerated Reduction of Maternal Mortality in Africa (CARMMA) in November 2010, reiterating the Campaign's slogan that "no women should die while giving life.

In recent years, several African countries (including Burundi, Zambia, Burkina Faso, Liberia, Niger, and Sudan) have enacted policies to make deliveries and/or health care for mothers and children free or nearly free in order to fulfill these mandates. Kenya's new free maternal health services policy is a potentially positive step in this direction. However, in order to comply with international, regional, and local obligations, implementation of this policy must not override or diminish other rights provided by these frameworks (Bourbonnais, 2013).

2.2 The Concept of Implementing Free Maternal Healthcare Services

The literature suggests that implementation of free maternal healthcare services in Machakos County may be influenced by a host of factors such as hospital infrastructure which includes ward spaces, delivery coach, infant incubators, and ultra sound, theatre,

laboratory and ambulance services. If pregnant women have the knowledge on kinds of services offered by public hospital the value of implementing these services will be realized while if people do not utilize the service then it doesn't make any economic sense.

Also the condition of facilities ought to be at its best to attract more patients to use the services while at the same time all deliveries should be with the assistance from trained healthcare worker who is capable of identifying the signs of complication and act appropriately (Griffiths and Stephenson 2001). Referral facilities should be available to deal with obstetric emergencies and patients referred to a higher level facility where the patient will be given appropriate care to avoid death (Thaddeus and Maine 1994).

2.2.1 The Hospital Infrastructure on Implementation of Free Maternal Healthcare Services

Kenyan public health facilities have long suffered from insufficient infrastructure and equipment. Recent survey data found that only 36% of public health facilities offering delivery services had all the basic delivery room infrastructure and equipment needed with rural areas and lower level facilities particularly ill-equipped to handle deliveries and emergencies associated with giving birth (Bourbonnais, 2013).

In order to implement free maternity service in Machakos County public hospital, the government through the ministry of health need to build and /or equip already existing health dispensaries in the county to handle delivery cases while at the same time put in place proper referral network where patients experiencing complication are transferred to higher level hospitals as a means to handle congestions at a higher level hospital like Kenyatta National hospital and Pumwani Maternity hospital.

2.2.2 Resources required in order to Implement Free Maternal Healthcare Services in Public Hospitals

According to Sachs (2008) 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. Ensuring availability and access to health services is one of the main functions of health systems. 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 and they include; Use of 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. Also Kenya signed (but did not ratify) the Maputo Protocol on the Rights of Women of 2003, which recognizes reproductive rights and commits state parties to establishing and strengthening existing pre-natal, delivery, and post-natal health and nutritional services for women. Successful programme implemented require prudent human capacity management, human resource must be empowered to steer the initiative to succeed. Dugmour and Lucy (2005) indicate that some of the greatest risk to effective capacity management rise from lack of understanding of the importance of performing the capacity management process on all resources that need to be managed for service delivery.

The Kenya Health Sector Strategic and Investment Plan (2012-2018) also estimates that current staff levels meet only 17% of minimum requirements needed for effective operation of the health system, Kenya has only 7 nurses per 4,000 residents, half the number (14 per 4,000) recommended by the World Bank(Bourbonnais 2013). According to Burns (2000) he asserts that employing qualified person to monitor labour 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 14 trained person in midwifery skill significantly decreases maternal morbidity and mortality.

Machakos 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 overcrowding in maternity wards where some mothers are forced to leave the hospital early to make room for others or even deliver on the floor due to lack of beds. 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, 2013).

2.2.3 Sources of Information for Women on implementation of Free Maternal Healthcare Services in Public Hospitals

Awareness was identified as a major structural variable that could influence the decision on whether to utilize maternal healthcare services. Women need information about maternal healthcare services 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. (Barnet 2003; Lesser 2003). Information should indicate where these services are offered, including the requirements for attending ANC services. In Kenya, maternal healthcare services including family planning services is provided by both public and private health facilities. Lack of awareness concerning free maternal health services could be a major barrier to women's utilization of maternal health services.

Matua (2004) and Jewkes (2012) cited lack of adequate information about maternal health service, laboratory tests results and dangers of late bookings or not attending ANC services at all, as contributors to the poor utilization of maternal healthcare services. Inadequate information about these services and its benefits to the mother's and the infant's health may also negatively influence the utilization of maternal healthcare services.

Sometimes, pregnant women may not be aware of the health problems related to poor or no utilization of maternal health services (Dennit,1995).Behaviour is expected to change if pregnant women are aware of the implications of not delivering in the hospital and if they are convinced of the benefits of practicing preventive care. Perceived benefits of utilizing

these services will provide a platform for interacting with other pregnant women, identifying needs or problems and jointly arriving at possible solutions to these needs.

2.2.4 Patients Satisfaction and Implementation of Free Maternal Healthcare Services in Public Hospitals

Quality services should ultimately do what is right, acceptable to and good for the pregnant women seeking to deliver in public hospitals in Machakos County, health workers should at all times adhere to professional ethics. Quality of maternal health services has to be imbued with the concept of caring including the humanistic attributes of competence, confidence, commitment, compassion and conscience and should be based on knowledge, skills and values (Vanderwal, 2002).

Focused maternal health services should promote quality care. Quality of maternal healthcare services should ultimately do what is right, acceptable to and good for the pregnant women during pre-natal, delivery and post-natal services. Health professionals working in maternity set up should at all times provide services that are acceptable to the women by doing the following; Respect beliefs, traditions, culture and provide relevant and feasible advice in relation to safe motherhood.

When a specific cultural practice has been identified as a violation of human rights, skilled providers must carefully assess the usefulness of the practice in their area. For instance, Nairobi being a cosmopolitan area with people of different beliefs and religious practices, a Muslim woman will at all times desire to be assisted by a woman rather than a man midwife and if these rights are not respected may deter Muslim women from seeking these services. Pregnant women are sometimes reluctant to use maternity services because healthcare providers are perceived to be rude, insensitive and threatening. Pregnant women can also

base their behaviour on previous negative experiences and perceptions of care received (Matua 2004; Starrs 1997; Ziyani 2004). This is an area of concern to midwifery practice, as it has serious implications on the quality of maternal healthcare services.

2.3 Anderson's Health Behaviour Model

This study modifies Anderson's health behaviour model to analysis 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 will therefore help in reducing these deaths as more women will give birth in hospital under the supervision of skilled birth attendants (Anderson, 2005). It's postulated that some people are more likely to use public health services than others and the likelihood can be predicted by individual characteristics.

People who are aware of benefit associated with hospital delivery will at all times deliver at the hospital. Religious, cultural beliefs and level of education at times hinders women from

utilizing maternal health services thus the government through its various organs need to put in place mechanism to encourage more women to deliver in hospitals. Also attitudinal-belief factors, where individual have stronger faith in quality of services one will be more inclined to utilize health services (Rebhan, 2005)

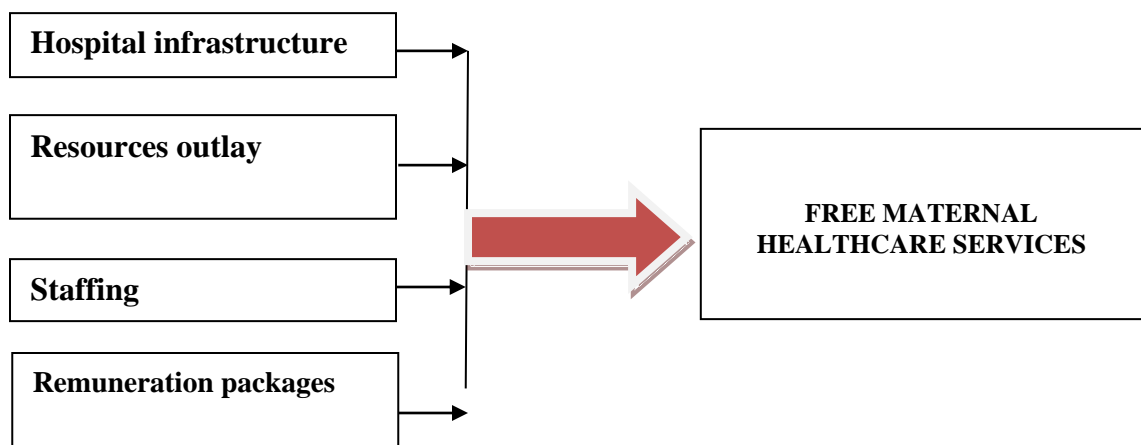
2.4 Conceptual Framework

The focus of the study is to define the relationship between the dependent and independent variables. In this study the independent variables will include Trends of ANC visits, Maternal and neonatal mortality rates , financial resources(capital),human resource and levels of awareness among pregnant women in relation to free maternal healthcare services while the dependent variables is implementation of free maternal healthcare services in public hospitals in Machakos Level 5 Hospital, Machakos county.

Figure 1: Conceptual Framework
Independent Variables

Dependent Variable

hospital infrastructure, increased resources outlay, staffing and improved remuneration packages for medical staffs



Source: Researcher 2015

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research design that was employed in the study putting into perspective the characteristics of the target population, Sampling procedure and Sampling size ,Data collection instruments ,Pilot testing of the instruments, Validity of the instrument, reliability of the instrument ,Data collection procedure ,Data analysis techniques ,Ethical consideration and Operationalization.

3.2 Research Design

The study used a cross-sectional research method to collect information from the key informants. This included qualitative and quantitative research methods. The information was collected at both levels of the Healthcare Workers, decision making organs and the patients. This research was an analytical study concerned with finding out what, where and how of a phenomenon. The study used quantitative research method, however some aspects of qualitative approach was used in order to gain better understanding concept is to select several targeted cases where an intensive analysis identified the possible alternatives for solving the research questions on the basis of existing solution applied in the selected.

Research design provides an operational framework within which the facts are placed, processed through analyzing procedures and the valuable research output is produced. Thus Machakos level five hospital, Machakos county public hospitals focused of the study which provided a natural setting on which data was collected.

3.3 Target Population

The study population targeted women of reproductive age seeking to deliver or post natal services in Machakos level five hospital. Target population consisted of 120,000 thousand (total population women who delivered in Machakos hospital from the year 2013 - 2015 as per the recorded figures obtained from DHIS & MoH hospital management system. According to Julke (2009) the element of the target population are often people, households or companies for the purpose of use within a survey.

3.4. Sample Size and Sampling Procedure

Sampling means obtaining representative data or observations from a group or population. It involves a risk of study finding being not true for some of the left out cases, but this risk can often be calculated and restricted on a tolerable levels.

3.4.1. Sample Size

The study used 95% level of confidence and determined the sample size using Yamane formula (Yamane 1967). According to Evans (2000) sample size is the number of observation in a sample. The actual sample of the population was drawn using stratified simple random procedure. As EHS manual (2011) (as quoted by Tolonen 2008) that sample size relates to statistical precision of survey results, whereas bias is the concern related to low response rate.

Sample size calculation (Yamane formula 1967)

$$n=N/(1+N(e^2))$$

Where:

n = sample size

N = the population size (no of women who gave birth between June to December 2013(120,000))

e = error-95% level of confidence (0.05).

$$n=120,000/ (1+120,000(.05^2)) = 398$$

3.4.2 Sampling Procedure

This research applied both probability and non probability sampling techniques and they included purposive sampling and stratified sampling techniques to collect data. A cross sectional study was conducted where a total of 398 women pregnant women were to be selected from the four public hospitals in Machakos County .Health facilities in the study were designated as strata since they differ in typology and also attend to expectant women from different social-economic back ground. Sampling techniques provide a range of methods that facilitate to reduce the amount of data, there is need to collect data from the subgroup rather than all cases or elements.

At the time of conducting research, it's often impossible or too expensive to collect data from all the units of analysis included in the research problem. According to Ngechu (2004),emphasized the importance of selecting a representative sample through making a sample frame, A population frame is a systematic list of subjects ,elements, traits or objects to be studied, in this study population frame of the required number of subject ,respondents and elements was selected in order to make a sample.

Sampling ensures that elements of a population are selected as being representative of the population (Keya, 1989). The study used stratified random sampling, this procedure will help minimize bias in the study and increase the level of the finding. Stratified sampling technique divides the population in different strata (subgroup).according to Kerry and Bland (1989) the technique produce estimates of overall population parameters with greater precision and ensures more representative sample is derived from a relatively homogeneous population. Stratification aims at reducing standard error by providing some control over variance (Cooper and Schindler, 2003).By using Yamane formula of sample size with an error of 5%and 95% degree of confidence(Yamane 1978).The calculation of $n = \frac{N}{1 + N(e)^2}$ (previous patients) approximately came up with a sample of 398 patients from all the four hospital sites .

3.5 Data Collection Instruments

The study employed the use a survey questionnaire and interview schedule administered to women who have delivered in the hospital while interview scheduled was administered to health workers. The questionnaire was designed to have both open and close ended question. The closed ended question was provided more structured response to facilitate tangible recommendation. It was used to test rating of various attributes.

Open ended questions helped in gathering additional information. The questionnaire was carefully designed and tested to enhance validity and accuracy required while collecting data in this research. According to Ngechu (2004) the choice of tool and instrument depends on the attributes of the subject, research topic, problem question, objectives and expected results. Primary data was gathered and generated from respondents while

secondary data was gathered from related literature, books, research work, and internet among other sources.

3.5.1 Pilot Testing of the Instrument

Content validity measures the degree to which data collected using a particular instrument represents a specific domain or content of a concept. In order to minimize errors in the questionnaire, a pilot testing was done by half split test. The pilot study helped reduce ambiguity, vague items or words that have been unidentified during formulation of the tool. Berg and Gall (1989) defines validity as the degree by which the sample of test item represents the content the test is designed to measure.

3.5.2 Validity of the Instruments

To establish validity of the research instrument the study sought the opinion of experts in the field of the study. Validity and content of the questionnaire was assessed to determine whether it addressed all relevant aspects of variable and whether the results correlate sufficiently. The study compared the results from different questionnaires to help assess their accuracy. The most important criterion of research is validity. Validity is concerned with the integrity of the conclusions that are generated from a piece of research. It will be also concerned with whether or not the items actually elicit the intended information.

Validity suggests fruitfulness and refers to the match between a construct, or the way a study conceptualizes the idea in a conceptual definition and the data generated. It refers to how well an idea about reality fits in with actual reality .Qualitative research is usually aimed at giving fair, honest and balance account of social life from the view point of someone who lives it every day (Neumann, 2003).In other words, validity is concerned with whether the finding are really about what appears to reality on the ground. Validity

defined at the extent to which data collection method(s) accurately measure what they are intended to measure (Saunders, 2003). According to Yun (2003), “he states that no single source has a complete advantage over others”. The different sources are highly complementary, and a good case study should use various sources of evidence and when applied they confirmed the validity of data and relevant results.

3.6 Reliability of Instruments

Validity of the questionnaire was assessed through the use of half split test method. Half split designs are commonly used in survey research to experimentally determine the difference between two variations of survey protocol characteristics, such as the data collection mode, the survey recruitment protocol, or the survey instrument. Reliability of the instrument will be done using Cronbach's Alpha to measure internal consistency by establishing if certain items within the scale measure the same contrast.

According to Kilin (2003) established that Alpha value threshold at 0.6 thus forming the study benchmark. Cronbach's Alpha will be established for each objective which form the reliability value exceeded the prescribed threshold of 0.6 with a mean score of 0.806. Random assignment of sample members to the different treatments is crucial to ensure the internal validity of the experiment by guaranteeing that, on average, any observed differences between the two groups can be attributed to treatment effects rather than to differences in sub sample composition half split test have been successfully used in various survey settings to study reliability of the instruments. Samples of 20 questionnaires were used to test validity of the tool where they was randomly divided into two (odd and even numbers) sets. According to Gomm (2008), reliability determines the consistency of a

research instrument in its performance. In this type of experimental design, the sample is randomly divided into two halves, and each half receives a different treatment.

3.7 Data Collection Procedure

Data was collected by the use of questionnaires and with the aid of research assistants supervised by the leader. Respondents were mothers who had delivered and those seeking post -natal services within 20 days post delivery in public hospitals across Machakos County.

3.8 Data Analysis Plan

Upon the completion of the data collection exercise, a team constituted to undertake data cleaning that included coding of the open ended statements. Data entry training was undertaken for the data clerks. The data was double entered into MS Access database and later exported to Statistical Package for Social Scientist (SPSS) version 22.0 and STATA version 12 for analysis. The study used descriptive analysis and principal component analysis to answer the study objectives. The qualitative data from the FGDs and key informant interviews was recorded on audio recorders and this was typed into scripts. There familiarization with these scripts so as to get details of the information before breaking it into parts.

The data from open ended questions was analyzed by examining the responses to identify any major patterns, trends and a summary of whatever was discovered from the responses generated. These was then interpreted in a descriptive text incorporating narratives directly from the respondents. The data was broken into different aspects of factors that will influence implementation of free maternal healthcare services in public hospitals in Machakos County. Data collected was analyzed both qualitatively and quantitatively as

appropriate. Data was analyzed using the SPSS programme to group data since the programme has the capability of handling recurring needs of data analysis. This enabled the researcher record variables and effect transformations.

3.9 Ethical Considerations

Ethical consideration includes, but not limited to; respect of respondent privacy and freedom, the right to self-determination, autonomy, volunteerism, confidentiality and safety. Before carrying out this research, ethical clearance was sort from KNH UON ethics committee. Research assistants sought voluntary informed consent of participants before administering the questionnaire, and without subjecting them to any form of threat or undue influence. The respondents were assured that their participation will be kept confidential and used solely for purpose of this research and they remained anonymous; they were not be allowed to write their names on the questionnaire.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

It discusses data analysis, presentation and the interpretation of data findings on the factors influencing implementation of free maternal healthcare services in Kenya. The information and data obtained were presented in form of frequency tables. The study targeted women who had given birth in public hospitals of Machakos level 5 Hospital.

4.2 Response Rate

The study targeted a sample size of 398 women who had given birth in public hospitals in Nairobi County from which 269 questionnaires were filled and returned accounting to a response rate of 67.6% .This response rate was good and representative as Mugenda and Mugenda(1999) advocate for a response rate of 50%. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting, rate of 60% is good while 70% and over is considered excellent.

4.3 Demographic Information

The study sought to establish information of respondents including age, marital status, education, occupation and average monthly income of women who delivered in public hospitals Machakos level 5 Hospital.

4.3.1 Distribution of Respondents by Age

The study sought to find out the relationship between respondents age distribution and

number of women who benefitted from free maternal healthcare services in public hospitals Machakos level 5 Hospital.

Table 4.1 Distribution of Respondents by Age

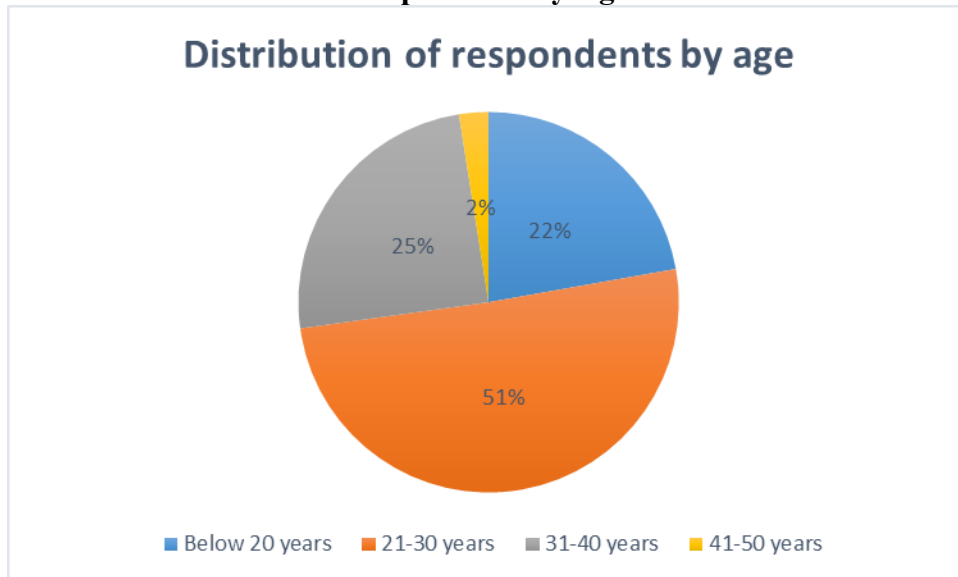


Table 4.1 revealed that 50.6% of the respondents were of the age between 21-30 , indicating that beneficiary were in their most reproductive age and possibly had their first or second born children .While 24.7% were between 31-40 years these group include mature women. This was followed by 22.2% were women under the age of 20 years indicating that those in this age group had just finished high school or women with unplanned pregnancies. The least was 2.5% of the respondents were of the age above 41 years, this cluster of respondent are women mostly likely having their last born children or unplanned pregnancies as most of their children are in high school. This study has shown that women from all the age group as indicated in the table above benefitted from free maternal healthcare services being offered in public hospitals.

4.3.2 Marital Status of the Respondents

The study sought to establish marital status of women who benefitted from free maternal healthcare services in public hospitals Machakos level 5 Hospital.

Table 4.2 Marital Status of the Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	50	30.9	30.9	30.9
Married	106	65.4	65.4	96.3
Divorced	4	2.5	2.5	98.8
Widowed	2	1.2	1.2	100.0
Total	162	100.0	100.0	

Table 4.2 revealed that 65.4% of the women were married and in stable relationships. The 30.9% were single indicating that those in this group may have had unplanned pregnancy or those who are single by choice. The least 2.5% and 1.2 % of the respondents were divorced and widowed respectively hence likelihood that these pregnancies were unplanned. This study revealed that all women irrespective of their marital status benefited from free maternal healthcare services.

4.3.3 Respondent's Level of Education

The information on the respondent's level of education was sought to find if there was relationship between the levels of education of women on the implementation of free

maternal healthcare services in public hospitals.

Table 4.3 Respondent’s Level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
None	8	4.9	4.9	4.9
Primary	18	11.1	11.1	16.0
secondary	86	53.1	53.1	69.1
College	50	30.9	30.9	100.0
Total	162	100.0	100.0	

Table 4.3 revealed that 53.1 % of the respondents had secondary education, 30.9% had college education, 11.1% primary education and 4.9% had no formal education. This study has shown that women with secondary and college education are mostly likely to give birth with the assistance of qualified / skilled personnel as compared to those who lack formal education who are likely to deliver with the assistance of traditional birth attendance. It is therefore important for the government to empower more women who lack basic education to give birth under skilled personnel.

4.3.4 Occupation of Respondents

The information on the occupation of the respondents was sought to find out if there was a relationship between the occupation of women and free maternal healthcare services in public hospitals. The findings were as follows:

Table 4.4 Occupations of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
	Unemployed	32	19.8	20.8	20.8
	self employed	82	50.6	53.2	74.0
Valid	Formally employed	40	24.7	26.0	100.0
	Total	154	95.1	100.0	
Missing	No response	8	4.9		
Total		162	100.0		

Table 4.4 revealed that majority of respondents 82(50.6%) were women who were self employed and the ones who utilized free maternal healthcare services most. This was followed by 40(24.7%) were and the least was 32(19.8%) who were unemployed. Overall, majority of the women who used these services had economic challenges due to nature of work and income. Even those who were formally employed were in lower cadre thus indicating that their net income could not properly cater for their daily today needs thus the reason why they benefited from free maternal healthcare services offered in public hospitals.

4.3.5 Respondent's Average Monthly Income

The study sought to highlight an average income of women who delivered in public Hospital of Machakos level 5 Hospital.

Table 4.5 Respondent's Average Monthly Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Ksh.10 000	32	19.8	25.8	25.8
	Ksh. 10 001 - 20 000	64	39.5	51.6	77.4
	Ksh. 20 001-30 000	28	17.3	22.6	100.0
	Total	124	76.5	100.0	
Missing	No response	38	23.5		
Total		162	100.0		

Table 4.5 showed that majority of the respondents 64(39.5%) had an income of between ksh.10,001 – 20,000. This was followed by respondent 32(19.8%) of income of below Ksh. 10,000 and the least was 28(17.3%) with income between Ksh. 20,001 – 30,000. There was a high number of response 38(23.5%) who did not respond to this question. This showed that respondents were sensitive on matters of their finances. This kind of income earned by women is insufficient to sustain a family mainly urban area such as Nairobi. The study showed that women who benefitted from free maternal healthcare services had insufficient income hence introduction on these services will go a long way to help many women deliver under the care of health professional.

4.3.6 Service Charges in Public Hospitals

The study sought to find out whether patients are paying for some services related to maternal health such as Obstetric ultra sound and ante natal profile tests.

Table 4.6 Service Charges in public hospitals

	Antenatal profile	Obstetric Ultra sound (700ksh)	Admission Charges (Free)
Ksh. 330	23.5%	0.0%	0.0%
Ksh. 700	0.0%	23.5%	0.0%
Free	76.5%	76.5%	100.0%

It was identified in Table 4.6 that all government hospitals were not charging admission fees for women who had gone to deliver in public hospitals but due to lack of equipments in some of these facilities 23.5% of the respondents paid for obstetric ultra sound at a fee of 700 while 23.5% paid for antenatal profile test and were mainly referred to carry out the test outside the hospitals. The 23.5% of the respondents who paid attended antenatal clinic in private clinic but only delivered in public hospitals. From the observation the government through MoH needs to equip more hospitals with ultrasound and also ensure that Laboratories have enough reagents to run antenatal profile without subject women to pay for these services hence implementation of free maternal healthcare will be realized.

4.4 State of Hospital Infrastructure

Hospital infrastructure consists of physical and organizational structure required to implement effective and efficient free maternal healthcare services being offered in public hospitals. This includes beds, infant incubators, toilets and bathroom, personnel midwives and others.

4.4.1 Bed Sharing Among Patients

The information on bed sharing between respondents was sought to find if respondents shared bed during hospitals stay.

Table 4.7 Bed sharing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	122	75.3	75.3	75.3
	No	40	24.7	24.7	100.0
Total		162	100.0		

It was identified in Table 4.7 that over 122(75.3%) respondents indicated that they had shared bed while 40(24.7%) respondents did not share bed. This was due to the high number of women who turned up to deliver in public hospital. Some hospitals had indicated that there was an increase of up to 25-30 % bed occupancy hence the need for patients to share beds. This showed that most of the public hospitals were ill prepared to implement free maternal healthcare services. All public hospitals through ministry of health need to mitigation measures to ensure that patients do not share beds through procuring more bed in line with patient increase.

4.4.2 Infants Sharing Incubator in Public Hospitals

The study sought to find out whether infants shared incubators in Public hospitals. The finding was as follows:

Table 4.8 Infants sharing incubator in public hospitals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	116	71.6	71.6	71.6
	No	46	28.4	28.4	100.0
Total		162	100.0	100.0	

According to Table 4.8 116(71.6 %) of the respondents revealed that their children of children shared incubator while 46(28.4%) did not share incubator. Majority of infants who shared incubators was due to lack of enough incubators in public , for instance Kenyatta national hospital had only 12 working incubator against 1300 deliveries in the month of May 2014. It is on therefore important for the hospitals to address this issued with ministry of health and request more funding from ministry of finance in order to procure more incubators for hospitals.

4.4.3 Availability of Warm Water for Shower

The information on availability of warm shower was sought to find out whether women were provided with warm water after delivery in public hospitals.

Table 4.9 Availability of warm water for shower

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	4	2.5	2.5	2.5
	No	158	97.5	97.5	100.0
Total		162	100.0	100.0	

Tables 4.9 revealed that majority of respondents 158 (97.5%) did not have hot shower while 4 (2.5%) respondents were provided with hot water for shower after delivery. Those who were provided with hot water it was done under personal request to midwife on duty but it was not a guarantee that they will always be provided with hot water. It is therefore important for the government to install solar heaters in hospitals so that women who deliver in public hospitals may have warm shower after birth.

4.4.4 Availability of Bed nets in Public Hospitals

The information on availability of bed nets in public hospitals was sought. The findings were as follows:-

Table 4.10 Availability of Bed nets in Public Hospitals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	92	56.8	56.8	56.8
	No	70	43.2	43.2	100.0
Total		162	100.0	100.0	

Table 4.10 revealed that, majority of women 56.8% were provided with bed nets while 43.2 % said they were not provided with bed nets. This indicate that the government has tried to provide these items but still there are challenges that need to be addressed in relationship with provision of bed nets in hospitals. This therefore calls for immediate action by hospitals administrators to ensure that all beds in maternity ward should have bed nets hence allocate more resources to purchase bed nets.

4.4.5 Condition of Maternity Wards in Public Hospitals

The study sought to find out the relationship between general condition of the maternity wards and the implementation of free maternal healthcare services in public hospitals. The findings were as follows:-

Table 4.11 Cleanliness of Maternity Wards

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	20	12.3	12.3	12.3
Valid Fair	100	61.7	61.7	74.1
Good	42	25.9	25.9	100.0
Total	162	100.0	100.0	

Table 4.11 revealed that 61.7 % of the respondents interviewed ranked ward cleanliness as fair, 25.9 % said the condition was good while 12.3% rated ward cleanliness as poor. Hospitals therefore ought to outsource cleaning services in order to improve on cleanliness. The government also needs to put in place regular maintenance schedule for health facilities, physical maintenance ensures that wear and tear of physical infrastructure is dealt with at the earliest opportune time to prevent further damage of the floor.

4.4.6 General Cleanliness of Toilets and Bathrooms

The study sought to find out general cleanliness of toilets and bathrooms in public hospitals.

Table 4.12 General cleanliness of toilets and bathrooms

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	34	21.0	21.0	21.0
Valid Fair	100	61.7	61.7	82.7
Good	28	17.3	17.3	100.0
Total	162	100.0	100.0	

Table 4.12 revealed 61.7% of the respondents rated toilet and bathroom cleanliness as fair, 21% said the condition is poor while only 17.3% said the condition were good. Some of the respondents indicated that blood soaked cotton wool were not properly disposed hence the need to provide dustbins in the toilet.

4.5 Nature of Human Resource in Public Hospitals

The information on nature of human resource was sought to find out the relationship between human resource and the implementation of free maternal healthcare services in public hospital. The findings were as follows:-

Table 4.13 Staffing size in public hospital

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	58	35.8	35.8	35.8
No	104	64.2	64.2	100.0
Total	162	100.0	100.0	

Table 4.13 indicated that 104(64.2%) of the respondents agreed that midwives were not enough in public hospital. While 58(35.8%) of the respondents agreed that nurses/ midwives were adequate. The findings indicated that there was a need for the government to employ more nurses to handle the increasing demand of women who delivers in public hospital. This may be achieved through implementing Abuja declaration of 2001 which proposed 15% of budgetary allocation to ministry of health.

4.5.1 Staff Attitude and Courtesy

The study sought to find out staff attitude and courtesy to patients and implementation of free maternal healthcare services in public hospitals. The findings were as follows:-

Table 4.14 Nurses/midwives attitude and courtesy

	Frequency	Percent	Valid Percent	Cumulative Percent
Cooperative	60	37.0	37.0	37.0
Reliable	92	56.8	56.8	93.8
Hostile	10	6.2	6.2	100.0
Total	162	100.0	100.0	

Table 4.14 revealed that 92(56.8 %) of the respondents indicated that midwives in public hospital are reliable ,37% of the respondents indicating that midwives were cooperative while 6.2 % said that midwives were hostile. The findings have shown that women had faith in midwives in public hospitals but 6.2 % of the patients who rated midwives as hostile. These concerns needs to be addressed through a robust customer care services .

4.5.2 Nurses Promptness in Attendance

The study sough to approximate the average time it takes a midwife to respond to patient call during labor period.

Table 4.15 Average response time

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 5 minutes	12	7.4	7.4	7.4
10-15 minutes	96	59.3	59.3	66.7
More than 15 minutes	54	33.3	33.3	100.0

Total	162	100.0	100.0
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Table 4.15 revealed that an average response time for women in labor is between 10-15 minutes as indicated by 59.3% of the respondents while 33.3 % believed that it takes more than 15 minutes for mid wives to respond to clients, this may be due to increased number of patients delivering in public hospital against the constant number of midwives who existed before the introduction of free maternity services in public hospitals. 7.4 % of the respondents said midwives took less than 5 minutes to respond to them and this may be attributed to time of delivery , when patient number are low midwives tend to assist patient faster.

4.6 Source of patient information on Implementation of Free Maternal Healthcare

Services in Public Hospitals

This study sought to find how pregnant women found out information of free maternal healthcare services being offered in public hospitals in Kenya.

Table 4.16 Source of information regarding provision of free maternity services

		Frequency	Percent	Valid Percent	Cumulative Percent
	Relatives	62	38.3	38.3	38.3
	Self	20	12.3	12.3	50.6
Valid	Mass media	24	14.8	14.8	65.4
	ANC clinic	56	34.6	34.6	100.0
	Total	162	100.0	100.0	

Table 4.16 revealed that 38.3% got information on free maternal health through relatives, while 34.6 % of the respondent got the information from hospitals during antenatal clinic

visits and service charter. Only 14.8 % of the respondents received the information through the media but this was mainly during campaign period hence the need for government to put in place mechanisms to continuously inform the general population.

4.6.1 Information Dissemination to Members of the Public

In this study sought to find out whether the general public feels that the government has done enough to disseminate information concerning free maternal healthcare services offered in public hospitals.

Table 4.17 Information dissemination

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	26	16.0	16.3	16.3
Valid	No	134	82.7	83.8	100.0
	Total	160	98.8	100.0	
Missing	No Response	2	1.2		
Total		162	100.0		

Table 4.17 revealed that 82.8% of the respondents believed that the government has not done enough while 16.3% of the respondents believed that the government had done enough. It is there important for government to put in place mechanisms aimed at informing the public on free maternal healthcare services being offered and requirements.

4.7 Patient Satisfaction with Provision of Free Maternal Healthcare Services offered in Public Hospitals

The study sought to establish patient satisfaction on the implementation of free maternal healthcare services offered in public hospitals in Kenya.

4.7.1 Patient Reception in Public Hospital

The study sought to find out relationship between patients reception and implementation free maternal healthcare in public hospitals

Table 4.18 Patient reception in public hospital

	Frequency	Percent	Valid Percent	Cumulative Percent
Poor	2	1.2	1.2	1.2
Fair	92	56.8	56.8	58.0
Valid Good	56	34.6	34.6	92.6
Excellent	12	7.4	7.4	100.0
Total	162	100.0	100.0	

Table 4.18 revealed that 56.8 % of the respondents felt that they were received fairly, 34.6% said that they got a good reception. The 7.4% termed their reception as excellent while 1.2% termed it at poor. This study revealed that hospitals need to put in place a clear process and personnel available to receive patients as they are admitted at the maternity ward.

4.7.2 Helpfulness of Staff

The study sought to find out respondents feelings on how staffs were helpful to them during hospital stay.

Table 4.19 How helpful were hospital staffs

		Frequency	Percent	Valid Percent	Cumulative Percent
	Fair	46	28.4	28.4	28.4
	Good	104	64.2	64.2	92.6
Valid	Excellent	12	7.4	7.4	100.0
	Total	162	100.0	100.0	

Table 4.19 revealed that 64.2% of the respondents rated staff helpfulness as good, 28.4% fair while 7.4% said it was excellent. This was in relation to assisting patients move round the hospital during admission and discharge. This is an indication that hospitals are doing well in relation to customer care.

4.7.3 Staff Promptness

This was used to measure respondent's satisfaction in relation to provision of free maternal healthcare services.

Table 4.20 Staff promptness

		Frequency	Percent	Valid Percent	Cumulative Percent
	Poor	4	2.5	2.5	2.5
	Fair	48	29.6	29.6	32.1
Valid	Good	100	61.7	61.7	93.8
	Excellent	10	6.2	6.2	100.0
	Total	162	100.0	100.0	

Table 4.20 revealed 61.7% of the respondents rated staff promptness as good, 29.6% rated it fair, 6.2% said it was excellent while 2.5% rated it as poor. This indicated that staff at the maternity wing were prompt in service delivery thus indicating a change of attitude as compared to when patients were paying for maternity services this may be due to routine continuous medical education and training aimed at addressing challenges they encounter as they provide services to the general population.

4.8 Principal component analysis

Principal component analysis was used to reduce the large set of variables we had in this study to a small set that still contains most of the information in the large set. The technique of principal component analysis enables us to create and use a reduced set of variables, which are called principal factors which accounts for as much variability as possible (Kaiser, 1974). A reduced set is much easier to analyze and interpret.

In this case, we will carry out a principal component analysis to see which variables account for the most variance in a step-wise approach.

4.8.1 Factor analysis summary

The factorability of the 18 variables was examined. Several well-recognized criteria for the factorability of a correlation were used. Firstly, 10 of the 18 items correlated at least .3 with at least one other item, suggesting reasonable factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .94, above the recommended value of .6, and Bartlett's test of Sphericity was significant ($\chi^2 (269) = 10482.199, p < .05$). The diagonals of the anti-image correlation matrix were all over .5, supporting the inclusion of

each item in the factor analysis. Finally, the communalities were all above .3 (see Table 1), further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was conducted with all 10 items.

4.8.2 Correlation matrix

	B e d s	Incu ba to r	War m W ate r	Bed n et s	Mat er ni ty W ar ds	Cle a nl in es s	Attit ud e	Prom ptn ess	infor m ati on	Rec ep tio n
Beds	1.000	.544	.545	.476	.517	.474	.546	.425	.424	.179
Incuba tor	.544	1.00 0	.353	.698	.589	.637	.420	.694	.260	.273
Warm Wat er	.545	.353	1.00 0	.379	.462	.472	.620	.290	.553	.153
Bed nets	.476	.698	.379	1.00 0	.621	.650	.435	.729	.298	.292
Matern ity War ds	.517	.589	.462	.621	1.00 0	.600	.594	.603	.349	.250
Cleanli ness	.474	.637	.472	.650	.600	1.00 0	.575	.653	.443	.317
Attitud e	.546	.420	.620	.435	.594	.575	1.00 0	.427	.584	.185
Prompt	.425	.694	.290	.729	.603	.653	.427	1.000	.272	.324

ness										
information	.424	.260	.553	.298	.349	.443	.584	.272	1.000	.150
Reception	.179	.273	.153	.292	.250	.317	.185	.324	.150	1.000

For this set of variables most of the correlations in the matrix are greater than 0.30, satisfying this requirement. In this “reception” is less than 0.3, therefore there was inappropriate application of a statistic

4.8.3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.940
	Approx. Chi-Square	10482.199
Bartlett's Test of Sphericity	Df	91
	Sig.	.000

The overall KMO of our correlation matrix is 0.940, and according to the Measure of Sampling Adequacy (MSA) is described as marvelous if it is 0.90 or greater, meritorious if it is in the 0.80's, middling if in the 0.70's, mediocre if in the in the 0.60's, miserable if in the 0.50's, and unacceptable if below 0.50(Kaiser, 1974). The rating according to the above table is 0.94 which is marvelous.

The Bartlett's test of sphericity was significant ($\chi^2(269) = 10482.199, p < .05$)

The individual variables are found in the diagonals of the anti-image correlation matrix as shown below:-

Anti-Image Correlation Matrix

	B e d s	Incu ba tor	War m W ate r	Bed n et s	Mat er ni ty W ar ds	Cle a nl in es s	Attit ud e	Prom ptn ess	infor m ati on	Rec ep tio n
Beds	.948 ^a	-.277	-.202	-.048	-.064	.055	-.094	.012	-.054	.007
Incuba tor	-.277	.941 ^a	-.013	-.213	-.086	-.179	.032	-.164	.079	.016
Warm Wat er	-.202	-.013	.938 ^a	-.076	-.036	-.099	-.155	.089	-.171	-.008
Bed nets	-.048	-.213	-.076	.949 ^a	-.170	-.151	.053	-.280	.005	-.015
Matern ity War ds	-.064	-.086	-.036	-.170	.952 ^a	-.063	-.175	-.095	.144	.006
Cleanli ness	.055	-.179	-.099	-.151	-.063	.959 ^a	-.175	-.153	-.140	-.093
Attitud e	-.094	.032	-.155	.053	-.175	-.175	.937 ^a	-.042	-.154	.036
Prompt ness	.012	-.164	.089	-.280	-.095	-.153	-.042	.941 ^a	.011	-.043
infor mation	-.054	.079	-.171	.005	.144	-.140	-.154	.011	.922 ^a	-.003
Recept ion	.007	.016	-.008	-.015	.006	-.093	.036	-.043	-.003	.971 ^a

4.8.4 Communalities

	Initial	Extraction
Beds	1.000	.533
Incubator	1.000	.695
Warm Water	1.000	.676
Bed nets	1.000	.708
Maternity wards	1.000	.626
Cleanliness	1.000	.664
Attitude	1.000	.739
Promptness	1.000	.781
Patient information	1.000	.609
Reception	1.000	.205
Extraction Method: Principal Component Analysis.		

The communalities represent the percentage of variance explained by the extracted components popularly known as the R squared. If the communality is very low for an item it suggests that it does not share much in common with the extracted components and is unrelated to the items in the set. In our case “reception” is very low 0.205.

4.8.5 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.168	51.198	51.198	7.168	51.198	51.198	4.735	33.821	33.821
2	1.915	13.675	64.873	1.915	13.675	64.873	4.347	31.052	64.873
3	.858	6.128	71.001						
4	.637	4.553	75.554						
5	.535	3.819	79.373						
6	.490	3.500	82.873						
7	.281	2.008	94.700						
8	.275	1.966	96.666						
9	.235	1.677	98.343						
10	.232	1.657	100.000						

Extraction Method: Principal Component Analysis.

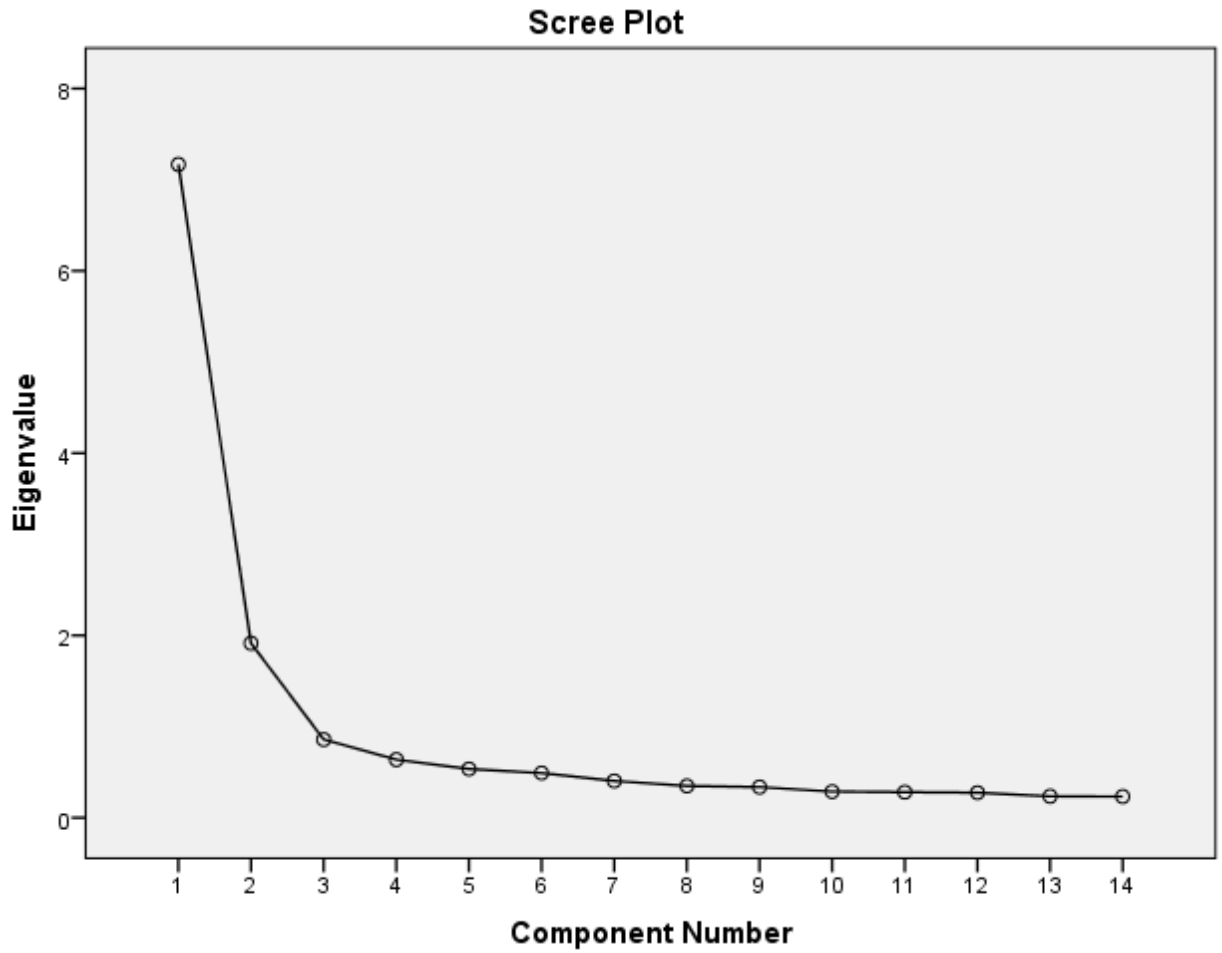
This table of total variance explained indicates how much of the variability in the data has been modelled by the extracted factors.

The Eigenvalues table indicates that the first eigenvalue accounts for 51.19% of the variation and the second eigenvalue accounts for 13.68%, for a total of 64.87% of the total variation. The contributions from the remaining eigenvalues are negligible. This analysis suggests that extracting 2 factors is appropriate.

Rotated Component Matrix ^a		
	Component	
	1	2
Beds	.851	.237
Incubator	.841	.105
Warm Water	.833	.145
Bed nets	.780	.295
Maternity wards	.780	.317
Cleanliness	.650	.491
Attitude	.586	.532
Promptness	.444	
Patient information		.777
Beds	.356	.637

During several steps, a total of two items(promptness and patient information) were eliminated because they did not contribute to a simple factor structure and failed to meet a minimum criteria of having a primary factor loading of .4 or above, and no cross-loading of .3 or above.

The resulting scree plot is as shown below:-



Overall, these analyses indicated that hospital infrastructure and availability of resources were underlying effective free maternal health services and that these factors were moderately internally consistent.

4.9 Overall Patient Satisfaction to Services in Public Hospitals

This sought to find out patients general feeling regarding service provision in public hospitals.

Table 4.21 Overall patient satisfactions to services in public hospitals

		Frequency	Percent	Valid Percent	Cumulative Percent
	Fair	32	19.8	20.0	20.0
	Good	124	76.5	77.5	97.5
Valid	Excellent	4	2.5	2.5	100.0
	Total	160	98.8	100.0	
Missing	System	2	1.2		
Total		162	100.0		

Table 4.21 revealed that 77.5% of respondent rated their satisfaction as good, 19.8% fair while 2.5% rated their satisfaction as excellent. Majority of respondent were generally satisfied with the provision of free maternity services.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND
RECOMMENDATION

5.1 Introduction

This chapter gives the summary of the findings on implementation of free maternal healthcare services in public hospitals. The section is sub-divided into summary of the findings, discussions, conclusion and recommendations.

5.2 Summary of Findings

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

5.2.1 Hospital Infrastructure on Implementation of Free Maternal Healthcare Services

The finding of the study showed that there is a recognizable relationship between hospital infrastructure and implementation of free maternity services in public hospitals .This is reflected in most government hospitals around the country .The existing government hospitals were either built during colonial period or in the late 1970's and most of which have not been expanded to match the increasing population. The 75.3% of the respondents shared bed, while 71.6% of the infants shared incubators.

5.2.2 Resources Required for Implementing Free Maternal Healthcare Services in Public Hospital

The study also established that there is a direct relationship between resource allocation and implementation of free maternity services. Resources are the enabling factors and immediate input into health system. These resources are categorized into two (human resource and the financial resources). The study has shown that 64.2% of the respondents agree that public hospitals do not have enough midwives hence there is need to employ more midwives to cope with the growing number of women seeking to deliver under skilled or professional healthcare providers. Also the government through MoH needs to provide more funds to buy or replenish consumables in hospital providing free maternal healthcare services.

5.2.3 Sources of Information for Women on Implementation of Free Maternal Healthcare Services in Public Hospitals.

The study established that there is a positive and significant relationship between patient level of awareness and utilization of free maternal healthcare services. Awareness was sighted as a major structural variable that could influence decision of women to deliver in public hospitals, such knowledge should highlight on requirement and various point of service delivery 38% of the respondents were informed by relatives while 34.6% of the respondents received the information during antenatal clinic visits at the hospital .The 14.8% of the respondents indicated that they hard the information during political campaigns. It is therefore important for the government to put in place mechanisms that will regularly inform the general public and specifically pregnant women to deliver in public hospitals in Kenya.

5.2.4 Patient Satisfaction and Implementation of Free Maternal Healthcare

Services in Public Hospitals

The study established that there is a positive and significant relationship between patient satisfaction implementation of free maternal healthcare services. Quality of service is attributed to skilled personnel who adhere to professional ethics. According to information gathered in this study 76.5% of the respondents were satisfied with services offered in public hospitals. In order to correct the misconception of women in relation to quality of services in public hospital, healthcare professionals need to adhere to the concept of caring and other humanistic attributes such as competence, confidence and compassion. Midwives also to improve on how they handle patients and this should focus on respect to religious beliefs traditions, culture and also provide feasible advice in relation to safe motherhood.

5.3 Discussion of Key Findings

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

5.3.1 Background Information of Respondents

The finding of this research revealed that the average age of respondents who benefited from free maternal healthcare services was between 21-30years. While majority were self employed or unemployed, in a study on determinants of free maternal healthcare in India by Sharif and Singh (2000), it was found that there is a correlation between average monthly house hold income and utilization of free healthcare services.

5.3.2 Hospital Infrastructure in Public Institutions

According to Nicole (2013), Free maternal healthcare services is most likely to affect Nairobi, a region with the highest rate of birth delivered under skilled profession where at least 89% of the population delivers in hospital as compared with western 26%. The government needs to expand or even build new health facilities to meet the growing demand in Nairobi County. During the study it was noted that many or all public hospitals in Nairobi are over stretched beyond their limit with some admitting up-to two times the capacity, these hospitals lack beds, infant incubator and ward space. Most of this hospitals were build in 1970's and 80's when t he population of Nairobi was about One million (1,000,000) residence against the current population of over 3.5 million.

According to national health sector strategic plan (2008-2012), there is lack of defined standard for infrastructure and equipment ,in majority of government hospitals there is poor maintenance of building were in some cases wards lack glass window to protect them from cold , toilets and bathrooms are clogged hence posing as health risk to women and the newborn . Most equipments ware broken down leading to malfunction hence the need to establish a stronger or efficient biomedical engineering to ensure timely maintenance and technical advice while procuring hospital equipments.

5.3.3 Resources Required to Implement Free Maternity Services in Public Hospital

According to Kenya health sector strategic and investment plan (2008-12). It estimates that current staffing levels only meet 17% of the minimum requirements needed for effective operation of healthcare system. Kenya has only 7 nurses per 4000 residents and

the ration of midwives to patients stand at 1:20 against WHO recommendation of 1:1 for critical patients, 1:4 for stable patients. Healthcare is a people intensive activity, effective management of human resource for human resource for health aims at ensuring that adequate numbers of appropriately skilled and motivated workers are available to deliver free maternity services. The problem of inadequate staffing has further been enhanced by the introduction of free maternity services in public hospital. Hospitals have reported increased overcrowding at maternity wards for instance Kenyatta national hospital in May 2013 reported 938 deliveries as compared to 1375 in May 2014 this increased was occasioned by introduction of free maternity services in all public hospitals in Kenya.

However, Nurses have also reported being overburdened due to the implementation of the new policy with one nurse attending to more than ten women a ratio of 1:10. In order to meet numerical staffing requirement the government ought to ensure that staff are used optimally and a number of human resource policies and practices are out in place. These policies need to include performance management, training and development through continuous professional development and it's in this note that the government need to allocate more resource to hire and train more midwives to be deployed in government hospitals.

The government needs to increase the national health budget line with the aim of strengthening health system and ensure that there are sufficient equipments, incubators laboratory equipments, ultrasound and mid wives in order to implement universal free

maternal healthcare services in public hospitals. According to 2014/15 budget, Kenya government has committed an estimated Ksh. 28.7 Billion to health sector with a focus on National Hospital 47% universal maternal healthcare 14% while equipments financing of 10% . Kenya will still lag behind in achieving 2001 Abuja declaration and

Abuja +12, where Africa governments committed to allocate 15% of the total national budget , Kenya's current budget stand at 4.2% way below what was project for 2015.

5.3.4 Source of Information on Implementation of Free Maternity Services in

Public Hospitals

This study revealed that majority of the respondents hard about free maternal healthcare services during political campaign and while attending to antenatal clinic in public hospitals. In some studies indicates that awareness is a structural variable that could influence utilization of free maternity services in public hospitals. Lack of awareness could be a major barrier to utilization of free services 56% of respondents who participated in this research got the information from the hospitals while attending prerequisite antenatal clinic (ANC) and through service charter displayed in all public hospitals. Mass media accounted for 14.8 % where respondents referred to 2013 political campaigns by the Jubilee coalition as the source of information.

5.3.5 Patient Satisfaction and Implementation of Free Maternity Services in Public Hospitals

Patient satisfaction was pegged on the concept of caring, humanistic attribute of competence, confidence and compassion .Majority of the respondents talked of respect to their religious belief, culture where midwives or healthcare professional ought to observe

these issues. The 57% of the respondents said they were received well, 64% indicated that midwives were prompt in attending to their healthcare needs while 62% said nurses were helpful. Matua (2004) reported that women who had gone to deliver in public hospitals had report negative attitude of healthcare providers. He said that women are sometimes reluctant to use maternity services in public hospitals due to the fact that some midwives/Nurses are said to be rude, insensitive and threatening mothers that they will be left to deliver without assistance. On waiting time 59% of the respondents indicated that it took midwives approximately 10- 15 minutes to attend to them while 33% said it took the more than 15 minutes to attend to them. Time taken for response may be attributed to increased number of women who deliver in public hospital since the introduction of free maternity services in public hospitals, as much as the government is rolling out this policy quality of services need not to be compromised so that many more women may have the confidence of delivering under the care of trained professional. Quality of healthcare is influenced by the capacity to use available input to deliver a desired outcome. A focus on quality of free maternal healthcare services will ensure that there is immediate response to clients. Quality may be affected by soft inputs such as care, health workers attitude, motivation.

5.4 Conclusion of the Finding

The study revealed that there is a significant relationship between hospital infrastructure and implementation of free maternal healthcare services in Kenya. Investment in infrastructure will ensure that the increasing numbers of women seeking to deliver in public hospitals is taken care of and issues of bed and incubator sharing do not take place in public hospitals. The study also revealed that there is a direct relationship between

resources and implementation of free maternity services in public hospitals. The study identified that there were few Midwives / Nurse in public hospitals and more resources are required to ensure that staffing need are well taken care of.

The study also deduced that there is a relationship between source of information and utilization of free maternity services in Kenya. Failure by the government to inform women on free maternity services may result into under utilization of free services in lower level hospitals leading to overcrowding in some hospitals like KNH and Pumwani maternity hospital.

The study also revealed that there is a direct relationship between patient satisfaction and utilization of free maternal healthcare services in public hospitals, hence the government need to employee best strategies that will ensure that patient receive the best services in public hospitals where patient are handled with care respect and professionalism. 78% of the respondents rated the quality of services as good hence the best pointer that patients are satisfied with free maternal health services.

5.5 Recommendation of the Study

The study finding unveiled a number of suggestions concerning implementation of free maternal healthcare services in public hospitals. The following are therefore recommendations on the findings:

1. The government allocates more recourses to ministry of health to help address the issues of human resource and equipment gaps in government hospitals.
2. The Ministry of health to review staffing needs in public hospitals

3. To identify the state of equipments and needs in public hospitals in Kenya.
4. MoH to encourage continuous dissemination of information regarding free maternal healthcare services in public hospitals
5. The government put more emphasis on Patient satisfaction as a way of attracting more patients to deliver in public hospitals. Ministry of health need to address soft inputs such as patient care and health workers attitude towards patients.

5.6 Suggested Areas for Further Research

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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Appendix II: Questionnaire for the Patients

Instructions

This questionnaire has been generated for the sole purpose of gathering information for research project geared towards establishing factors that will influence implementation of free maternal healthcare services in public hospital in Machakos County. You are one of the respondents who have been selected to participate in this research hence that is why you have been given the questionnaire. Please answer all the questions and give your honest answers. Do not write your name on the questionnaire.

Background Information

1. How old are you?

- Below 20
- 21- 30
- 31-40
- 41 – 50
- Above 51

2. What is your marital status?

- Single
- Married
- Divorced
- Widowed

3. What is your level of education?

- None
- Primary
- Secondary
- College
- University

4. What is your occupation?

- Unemployed
- Self-employed
- Formally employed

5. What is your average monthly income?

- Below 10, 000
- 10,001 - 20,000
- 20,001- 30,000
- 30,001 40,000
- Above 40,001

Section B: Infrastructure

6. How much did you pay for the following services?

- i. Antenatal profile.....
- ii. Obstetric ultra sound.....
- iii. Admission fees.....

7. Did you share a bed?

- Yes
- No

8. Did your baby share incubator?

- Yes
- No

9. Were you provided with bed nets?

- Yes
- No

10. Did you have worm water for shower?

- Yes
- No

11. Kindly Rate the following in the scale of 1 2 3 4 5

(a) How would you rate words cleanliness?

(b) What is the condition of toilets and bathroom?

(Response: 1. Not sure 2. Poor 3. Fair 4. Good 5. Excellent)

Section C: Human resource

12. Do you think there are enough nurses in this hospital?

- Yes
- No

13. Kindly describe their (Nurses) attitude towards patients

- Cooperative
- Reliable
- Hostile

14. Approximately, how long did they take to respond to your call during delivery?

- Less than 5 minutes
- 10 - 15 minutes
- More than 15 minutes

Section D: Level of Awareness (knowledge on free maternal health)

15. Who informed you of the free maternity services?

Relatives

Self

Mass

16. Do you think the Government has done enough to inform the public about free maternity service in public hospitals?

Yes

No

Section E: Patient satisfaction

Kindly rate in the scale of 1 2 3 4 5

19 How well were you received?

20 How prompt were staffs in serving you?

21 How helpful were hospital staffs while attending to your healthcare needs?

22 Rate your overall satisfaction to service in public hospital

Response: 1. Poor 2. Fair 3. Good 4. Excellent 5. Not sure

Appendix III: Interview Schedules for Healthcare Workers

This interview schedule has been generated for the sole purpose of gathering information for research project geared towards establishing the determinants of implementation of free maternal healthcare services in Machakos level five hospital in Machakos County.

Questions

1. What are the major maternal healthcare problems? Kindly give some examples

2. How many staffs are attached to the maternity wing?
Nurses
Gynecologist
Pediatrician.....

3. What is the nature of workload at the maternity wing?
Kindly Explain further

4. In terms of infrastructure, is it adequate for patients delivering in the hospital?

5. If, No what should the government do to improve on free maternal health care.

6. Are the patients aware about free maternal healthcare services offered in public hospitals?

7. What steps have you put in place to continuously inform the general public about free maternal healthcare services?

8. Do patients pay for antenatal profile if yes how much?
ANC.....
Obstetric ultrasound.....

9. In your view, are maternal health services free?

10. In your view, do you think introduction of free maternal healthcare services has affected the quality of services offered?

APPENDICES

Appendix I: Questionnaire for the Patients

Instructions

This questionnaire has been generated for the sole purpose of gathering information for research project geared towards establishing determinants of effective free maternity health care services in Kenya with reference to Machakos County. You are one of the respondents who have been selected to participate in this research hence that is why you have been given the questionnaire. Please answer all the questions and give your honest answers. Do not write your name on the questionnaire.

Background Information

1. How old are you?

- Below 20
- 21- 30
- 31-40
- 41 – 50
- Above 51

2. What is your marital status?

- Single
- Married
- Divorced
- Widowed

3. What is your level of education?

- None
- Primary
- Secondary
- College
- University

4. What is your occupation?

- Unemployed
- Self employed
- Formally employed

5. What is your average monthly income?

- Below 10, 000
- 10,001 - 20,000
- 20,001- 30,000
- 30,001 40,000
- Above 40,001

Section B: Infrastructure

6. How much did you pay for the following services?

- i. Antenatal profile.....
- ii. Obstetric ultra sound.....
- iii. Admission fees

7. Did you share a bed?

Yes []

No []

8. Did your baby share incubator?

Yes []

No []

9. Were you provided with bed nets?

Yes []

No []

10. Did you have warm water for shower?

Yes []

No []

11 .Kindly Rate the following in the scale of 1 2 3 4 5

a How would you rate words cleanliness?

b What is the condition of toilets and bathroom?

Response : 1. Not sure 2. Poor 3. Fair 4. Good 5. Excellent

Section C: Human resource

12. Do you think there are enough nurses in this hospital?

Yes []

No []

13. Kindly describe their (Nurses) attitude towards patients

Cooperative []

Reliable []

Hostile []

14. Approximately, how long did they take to respond to your call during delivery?

Less than 5 minutes []

10 - 15 minutes []

More than 15 minutes []

Section D: Level of Awareness (knowledge on free maternal health)

15. Who informed you of the free maternity services?

Relatives []

Self []

Mass media []

16. Do you think the Government has done enough to inform the public about free maternity service in public hospitals?

Yes []

No []

Section E: Patient satisfaction

1 2 3 4 5

19 How well were you received?

20 How prompt were staffs in serving you?

21 How helpful was hospital staffs while attending to your healthcare needs?

22 Rate your overall satisfaction to service in public hospital

Response : 1. Poor 2. Fair 3. Good 4. Excellent 5. Not sure

Appendix II: Interview Schedules for Healthcare Workers

This interview schedule has been generated for the sole purpose of gathering information for research project geared towards establishing the determinants of implementation of free maternal healthcare services in Machakos level five hospital in Machakos County.

Questions

1. What are the major maternal healthcare problems? Kindly give some examples
2. How many staffs are attached to the maternity wing ?
Nurses
Gynecologist
Pediatrician
3. What is the nature of work load at the maternity wing?
Kindly Explain further
4. In terms of infrastructure, is it adequate for patients delivering in the hospital?
5. If, No what should the government do to improve on free maternal health care.
6. Are the patients aware about free maternal healthcare services offered in public hospitals?
7. What steps have you put in place to continuously inform the general public about free maternal healthcare services?
8. Do patients pay for antenatal profile if yes how much?
ANC.....
Obstetric ultrasound.....
9. In your view, are maternal health services free?
10. In your view, do you think introduction of free maternal healthcare services has affected the quality of services offered?