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Effect of free maternal health policy on delivery of services in Machakos Level Five Hospital

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EFFECT OF FREE MATERNAL HEALTH POLICY ON DELIVERY OF SERVICES IN MACHAKOS LEVEL FIVE HOSPITAL

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DECLARATION AND APPROVAL

Declaration

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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Approval

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ABSTRACT

The World Health Organization (WHO), approximates that 830 women die every day from preventable causes related to pregnancy and childbirth with ninety-nine percent of these maternal deaths occurring in developing countries. Kenya has a high maternal mortality rate at 362 deaths per 100,000 births as compared to a target of 70 deaths per 100,00 births. On 1st June 2013, the Kenya government, made a declaration that delivery services were to be offered free of charge to encourage women to deliver under skilled health personnel. This was known as the free maternal health policy. It was developed in line with the government's pursuit of universal access to healthcare across the country and provision of the highest standard of care possible. Since its implementation, there was paucity of data on evaluation of the policy's effectiveness. This study sought to address the gaps in the policy with focus on patterns of delivery, challenges faced by health care workers and effects on health care financing. This was a qualitative study carried out at Machakos level five hospital among health care providers both in administrative and clinical work involved in implementation of the free maternity services. Data collection was done through interviews and focus group discussions and analysed using qualitative analysis software NVIVO 10. The results of this study showed that the policy met its primary objective of increasing hospital deliveries. However, there are issues in implementation due to lack of stakeholder involvement, limited commodities and infrastructure, increased workload and lack of understanding of the policy. In conclusion, there is need to re-evaluate the Free Maternal health policy and set up guidelines to include; improvement of health worker to patient ratio through capacity building, timely reimbursement of funds to ensure smooth running of the service, education of both community and implementers of the policy on what the policy entails. Further research is needed to assess financial sustainability of the policy.
Key words: free maternity, maternal mortality, skilled birth attendants, healthcare financing

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LIST OF ABBREVIATIONS

ANC	Antenatal care
DHIS	Division of Health Information Systems
FGD	Focus Group Discussion
FMHS	Free Maternity Health Services
GOK	Government of Kenya
HSSF	Health Sector Services Fund
KDHS	Kenya Demographic Health Survey
KEMRI	Kenya Medical Research Institute
KHP	Kenya Health Policy
ML5H	Machakos level 5 hospital
MMR	Maternal Mortality Ratio
MDG	Millennium Development Goals
MOH	Ministry of Health, Kenya
NBU	Newborn Unit
PNC	Postnatal care
SDG	Sustainable Development Goals
UHC	Universal Health Coverage
WHO	World Health Organization

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DEDICATION

This dissertation is dedicated to my loving wife, Wanjiku, for encouraging me to pursue postgraduate training.

To my children Dylan and Della-My greatest fans, you keep me going!

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CHAPTER ONE

1.0 Introduction

Universal health coverage (UHC) is attained when people obtain the health services they need without risking financial hardship from unaffordable out of pocket payments. It involves attainable and available good health services, physical accessibility, financial affordability and acceptability (WHO, 2013).

Kenya's economic blueprint, Vision 2030 under the social pillar, the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) are key in realization of universal health coverage. Through the rolling out of the free maternity services, the government of Kenya seeks address UHC (United Nations, 2000; Government of Kenya, 2008; United Nations, 2015).

In January 2016, the Sustainable Development Goals (SDGs) were adopted to build on the successes of the MDGs and complete what they did not achieve. This was part of the global 2030 agenda for sustainable development. SDG3 targets reduction of the global mortality to less than 70 per 100,000 live births (United Nations, 2015).

With the aim of achieving MDG 5 which targeted reducing the maternal mortality ratio by three quarters, between 1990 and 2015, the Government of Kenya in 2013 initiated the free maternal health policy. This would ensure that women give birth at government hospitals for free and under the care of trained health experts.

Decrease of maternal mortality is a global health priority and is an objective in the MDG framework 2 and an important concern of the Global Strategy for Women's and Children's Health launched by the UN Secretary-General in September 2010. So as to achieve the objective of the fifth MDG, countries needed to reduce their maternal mortality rates by 75% between 1990 and 2015(Say et al., 2014).

A key approach in decreasing the number of maternal-feotal mortality is to encourage and rally for deliveries in a health facility where skilled and experienced health providers manage labour and complications with accessibility to effective referral arrangements when special care is required (Murima, 2016).

User fee and other charges required to access maternal health care remained a major obstacle to access of maternal health services specifically among the poorest people (Moses et al., 1992). This research sought to determine the effect of the free maternal health policy on quality of care in Machakos level 5 hospital.

1.1 Background

Kenya has a high maternal mortality rate at 362 deaths per 100,000 births (Ministry of Health, 2015a). This rate is high, when compared to the worlds Millennium Development Goals (MDGs) targets which were at 147 per 100,000 births as per 2015 (Ministry of Health, 2015b).

In Kenya the lifetime risk of maternal death (0.015) shows that roughly 2 % of women, or 1 in 67 women will die due to maternal complications during birth or 42 days after delivery (Ministry of Health, 2015a). Maternal death is viewed as one of life's most heart-breaking outcomes. There is a hard irony in the death of a woman, who is engaged in the act of creating life. Her death is an incomparable loss for any children who are left behind. Such losses are almost entirely avoidable given proper medical surveillance and intervention (Orare, 2015).

History of user fees policies in Kenya

Between the colonial period and 1989 there were mixed policies on charging user fees in public hospitals. Some periods had user fees charged in public hospitals (colonial period-1965 and 1989) while other periods user fees were abolished (1965-1988)**.**To provide universal healthcare to its citizens, the Government of Kenya in 1990 introduced waivers and exemption in hospital fees for the poor and vulnerable.

This was followed by the Health Sector Services Fund (HSSF) in 2007 whose main objective was to generate and provide sufficient resources for implementing activities prioritized by health facilities and to support capacity building in management of health facilities. In the same year, the government abolished maternity care fees for normal deliveries at all public health facilities (Pyone, Smith, & Van den Broek, 2017).

The free maternity services program was introduced on 1st June 2013 following a presidential announcement to encourage women to give birth at health facilities under skilled personnel.

This was in line with the resolutions of the African Union preferring point-of-service user fees immunities for pregnant women and children under the age of five years (Wamalwa, 2015).

See figure 1-1 below.

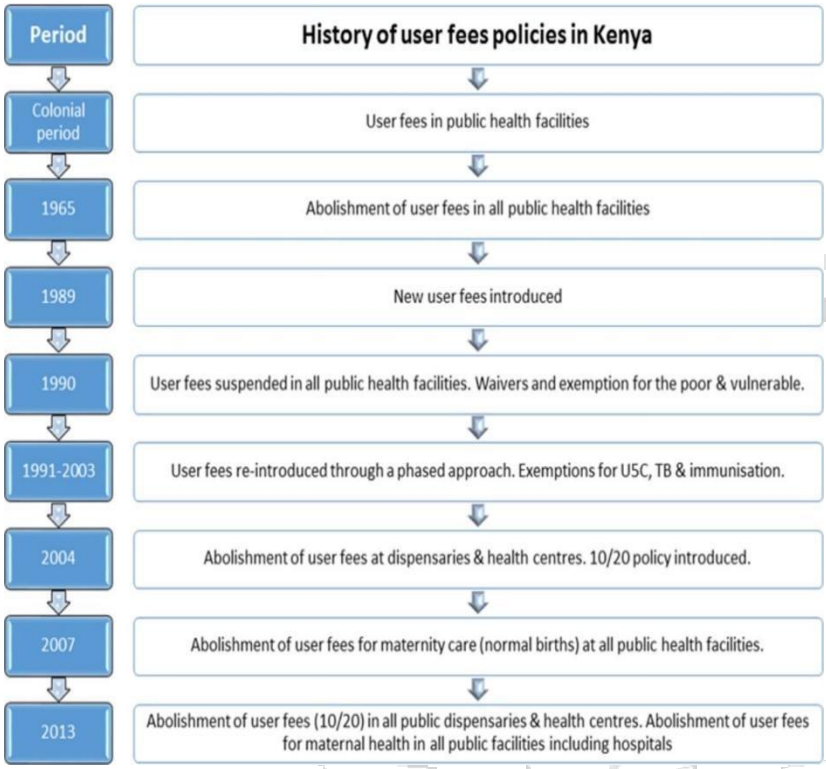


Figure 1-1: History of user fees policies in Kenya (Ministry of Health, Chuma, & Maina, 2014)**.**

In a bid to ensure affordable, quality reproductive health, the Kenyan Government has deployed resources through the Free Maternal Health policy 2013. These resources aimed at achieving the Sustainable Development Goals (SDGs) maternal mortality rate target of 70/100,000 live births (Ministry of Health & Government of Kenya, 2016).

In Kenya, 44% of the total births in the country are delivered in the presence and under the supervision of skilled birth attendants with twenty-eight percent of births being conducted by traditional birth attendants, 21% are assisted by family and friends and 7% do not receive any assistance (Bourbonnais, 2013). This is below the target of greater than 90% of all births which should be conducted by skilled and qualified health workers. Lack of access to skilled

and qualified health workers is a major cause of maternal mortality (Bourbonnais, 2013). Delivery by a skilled and qualified birth attendant is directly linked to the maternal mortality rate, as the skilled birth attendant can quickly identify and manage or refer any obstetric complications that arise.

Maternal mortality in resource-poor nations has been attributed to the "3 delays": delay in deciding to seek care, delay in reaching care in time, and delay in receiving adequate treatment (Nour, 2008). The problem is driven, at least in part, by lack of access to quality maternal health services, including ante-natal, delivery, and post-natal services (Ministry of Health, 2015b).

The major factor that determines a pregnant woman's risk of maternal death is lack of equipped health care services. In the period 1960-1970, Japan reduced its maternal mortality from 130 to 50, being a two thirds reduction in the country's mortality rates (Zahr & Royston, 1991). This achievement was as a result of improvement of living conditions, access to health care, lower fertility rates and mass immunization (Makimota & Tsukasaki, 1999). The country effected universal access to skilled care during birth; ensured all nurses and midwives were trained and ensured their availability to women during pregnancy, delivery and post-natal care (free of charge) (Orare, 2015).

The capability of a nation to provide quality maternal care services is centred on the organization of the healthcare system. A good health system delivers quality services to all people, when and where they need them (WHO, 2016). This varies from country to country but with need of well trained and adequately paid workforce, reliable information on which to base decisions and policies and with well-equipped and maintained facilities (WHO, 2016). The WHO health systems framework highlights six system building blocks that are interlinked to ensure improvement of health, protection from financial risk and improved efficiency (WHO, 2007).

In 2014, the Government of Kenya through the Ministry of health designed the Kenya Health Policy in line with the Vision 2030 long term agenda. The goal of the Policy is to attain the highest possible standard of health by supporting equitable, affordable, and high-quality health and related services at the highest attainable standards for all Kenyans. This includes

access to comprehensive maternal, neonatal, and reproductive health services (Ministry of Health, 2014a).

Developing countries face a number of challenges when implementing maternity services due to the deplorable state of their healthcare systems (Makathimo, 2015). Analyzing the quality of maternity care after introduction of free health services is important in that there is a high likelihood that with the increase in health services utilization, a higher percentage of maternal mortality and morbidity will move to health facilities (Tunçalp et al., 2015).

Daponte, Guidozzi, & Marineanu (2000), found that the institutional maternal mortality rates at a tertiary hospital in South Africa increased following fee removal. Authors speculated that quality of care deteriorated as an increased patient load was not accompanied by corresponding increases in staff and other facility resources. As was the case with studies on facility delivery, the magnitude of the effect attributable to fee changes was not estimated in any of these studies. Just like Japan, it is important that free maternal access must be accompanied by adequate staffing and staff training to reduce the triple negative effect.

In a study conducted by Yego et al (2014) in a referral hospital in Eldoret Kenya, it was identified that despite the adoption of free maternal health programme, some deterrents to consumption included; fallacies surrounding the quality of care obtained from facilities, geographic and cultural barriers, poor attitude of health care workers, insufficient infrastructure, equipment and staffing (Yego et al., 2014).

A study done on cost effectiveness of the free maternity care in Kenya showed that, initial impact assessments using hospital records pointed out to an 11% rise in the number of pregnant mothers attending 4+ antenatal visits, an increase of normal deliveries health centres by 22%, and a 47% surge in routine and special laboratory tests. These assessments also showed an increase in neo-maternal deaths by 27% and 10% respectively. This was likely to be brought about by challenges in funding and reimbursement mechanisms, unavailability of vital drugs and capacity concerns among health providers (Sidze et al., 2017).

In conclusion, free maternal access as literature demonstrates has advantages and challenges. Advantages include an increase in number of women being attended to by skilled care givers, leading to reduction in maternal and neonatal morbidity and mortality. As we have seen from case studies in Japan, South Africa and Kenya, free access to healthcare requires a holistic approach that will factor in well remunerated and motivated staff, training and resources. It

was crucial that we needed to explore the effects of free maternity in Kenya to identify gaps as well as inform policy.

1.2 Problem statement

In 2010 there were an estimated 287,000 maternal deaths worldwide. Sub-Saharan Africa accounted for 56 percent of these deaths (UNFPA & Ministry of Health, 2016). The maternal mortality and morbidity rates in Kenya has been high at 488 deaths per 100,000 births as compared to the MDG targets at 147 deaths per 100,000 births as per 2015 (Ministry of Health, 2015a).

These high rates have continued notwithstanding improvements in other health pointers over the past periods. These high rates have been attributed to lack of quality maternal services including ante-natal, delivery, and post-natal services (Bourbonnais, 2013). The Government of Kenya introduced a free maternity services program on 1st June 2013 following a presidential announcement to encourage women to give birth at health facilities under skilled personnel. This was in line with the resolutions of the African Union preferring point-of-service user fees immunities for pregnant women and children under the age of five years (Wamalwa, 2015).

The Government of Kenya has laid a solid foundation for Kenya's industrialization envisaged in the Kenya Vision 2030.This includes universal health coverage for all its citizens as one of development pillars that will support its transition from a low income to a middle income country by 2030(Government of Kenya, 2008).In the 2018 Budget policy statement, the government rolled out the 'Big Four Agenda' which includes agenda 3 that targets provision of Universal Health Coverage thereby guaranteeing quality and affordable health care for Kenyans in the next five years (Government of Kenya, 2018).

Policy directives are not always accompanied with necessary support structures and therefore limiting their operationalization. There was therefore need to explore the intended and unintended consequences that might impact on the success or failure of the policy.
There was need to identify and understand the determinants of access of a skilled birth assistant which is a key pointer to development (Mangeni, Mbugua, & Mukthar, 2012).

Despite abolishment of user fees for hospital delivery, the maternal mortality rate in Kenya is still high. This research sought to assess policy implementation through assessment of the effects of the free maternal health policy on service delivery, challenges faced by health

workforce including effects on quality of care, availability of drugs and non-consumables and effects on health care financing re-imbursement strategies and utilization of funds.

1.3 Research objectives

1.3.1 General objective

To explore the effects of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital.

1.3.2 Specific objectives

i. To describe the patterns of delivery services before and after introduction of free maternal health policy at Machakos level 5 hospital.
ii. To identify the challenges faced by health workers in Machakos level 5 hospital in delivery of maternal health services following the introduction of the free maternal health policy.
iii. To outline the effects of the free maternal health policy on health care financing at Machakos level 5 hospital.

1.4 Research questions

i. What are the patterns of delivery services before and after introduction of free maternal health policy at Machakos level 5 hospital?
ii. What are the challenges faced by health workers in Machakos level 5 hospital in delivery of maternal health services following the introduction of the free maternal Health policy?
iii. What is the effect of the free maternal health policy on health care financing at Machakos level 5 hospital?

1.5 Scope of the study

A well-functioning health system working in harmony is built on having trained and motivated health workers, a well-maintained infrastructure and a reliable supply of medicines and technologies backed by adequate funding, strong health plans and evidence-based policies (WHO, 2016).

A good health system is essential to meet both the needs of the patient and the healthcare giver. On 1st June 2013, the government of Kenya through a presidential directive, declared that all mothers were to deliver for free at public facilities across the country. This was known as the Free Maternal Health policy.

Several studies have been done on the implementation of free maternal health policy in Kenya. Literature suggests that there is paucity on data about evaluation of policy since its implementation. Our study sought to evaluate and understand the effects of the implementation of this directive, challenges and experiences of the health worker both at administrative and provider level since free maternity services begun at Machakos level 5 Hospital. This will be important in addressing their needs and identifying gaps that maybe a hindrance to provision of quality healthcare at this facility and may be replicated in other centres where this policy is in effect.

1.6 Significance of study

The outcome of this study will help both the County and national governments to identify the gains made towards achievement of SDG3 which aims at reducing maternal mortality. The findings will address the policy gaps in implementation of the free maternal health policy through identifying challenges and barriers faced by health workers and gaps in healthcare financing. Identification of the effect of the free maternal health policy on the quality of care in the county will help in evaluation of existing programs and enable the Ministries of health in both governments to address the negative outcomes of policy implementation. This will also strengthen the roll out of the UHC agenda of which Machakos is one of the selected pilot Counties. The study can be replicated in other Counties to help in improving maternal outcomes.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter gives the literature review on studies related to utilization of free maternal health policies and its effects on quality of care, challenges faced by health workers in implementing the free maternal health policy and the effect on healthcare infrastructure.

2.1 Effects of free maternal health service on patterns of delivery and utilization of delivery services

Japan has nearly reduced one of the main causes of mothers and child mortality after birth through provision of quality skilled care. This was by ensuring that all deliveries are conducted by health specialists and in equipped health facilities (Makimota & Tsukasaki, 1999).

The average woman in Africa faces a 1:16 risk of dying during pregnancy and child birth compared to a 1:2800 chances to women in developed countries. This makes the chances of a woman in a developed country dying during pregnancy more than 20 times less likely than a woman in a developing country (Hogan et al., 2010).

In a study done in Nairobi, Nduvi (2015) submits that free maternal healthcare services in Nairobi County may reduce maternal mortality rate through several factors which include providing necessary antenatal care, delivery care, newborn care and postnatal care at no cost at all.

Since Antenatal Care (ANC) coverage is high in Kenya, there is a need to scale up interventions that empower women to make at least four visits during pregnancy as recommended by international organizations where women are given two doses of tetanus toxoid and folic acid supplementation during antenatal care attendance. When women get good care through the pre-partum period, they will be at a lower level of risk of dying during child birth and suffering from delivery complications since there are high chances of delivering under the supervision of a skilled birth attendant and at a health facility (Yego et al., 2014; Davidson, 2015). Life threatening complications that increase the risk of maternal mortality and morbidity which include haemorrhage, pre-eclampsia and eclampsia, puerperal sepsis, and obstructed labour when identified early and managed effectively can reduce the rates of maternal mortality and morbidity rate. This early detection can only be achieved if and when women attend antenatal clinics and are treated by skilled health practitioners (Yego et al., 2014; Davidson, 2015).

In Kenya today, many women have died from preventable conditions that have proven cost effective interventions. This notwithstanding, maternal mortality is considered as a health indicator and maternity being not a disease, failure to prevent maternal mortality is a violation of human rights (Ministry of Health & Government of Kenya, 2016).

Bourbonnais (2013) acknowledged that absence of essential primary health care and antenatal care limits pregnancy related complications through early detection and ensures treatment before threatening the life of the mother**.** Murima (2016) observed that with the increase in health centre delivery and access to ante-natal care, there will be a considerable reduction in the maternal mortality and morbidity rates in Kenya.

Women from rural areas are less likely to visit the recommended antenatal care as compared to those in urban areas. The level of education is directly related to the antenatal coverage. There is increased risk level of women losing their lives during delivery in rural areas than their counterparts in urban areas (Mirasi, 2014). Women who died during child birth and after did not attend the required four antenatal clinics hence concluding that women who attended all clinics have a lower risk of dying during delivery (Mirasi, 2014).

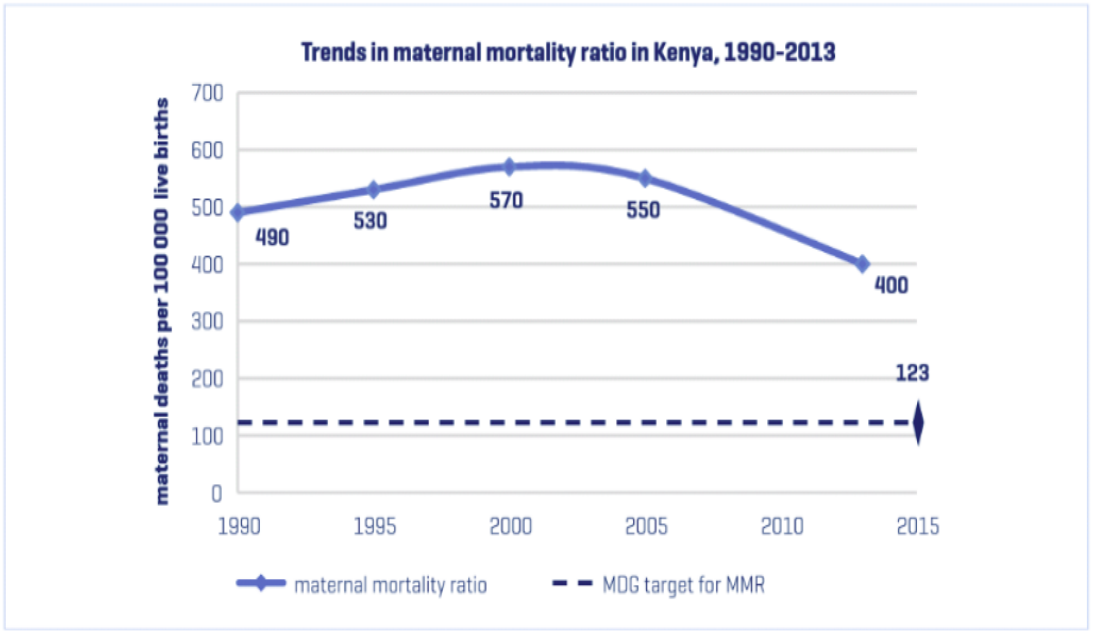
Maingi (2014) points out a low attendance rate of mothers by qualified and skilled birth attendance at health facilities in the country. Of the 93% of women who attended ANC clinics in Eastern province, only 30% delivered in the presence of qualified and skilled birth attendants while 70% did not utilize skilled birth attendants. Of every woman who dies during birth, 20-30 of them suffer serious injuries and disabilities due to complications. Sub – saharan Africa accounts for 50% of these deaths. The growth in the proportion of deliveries supervised and carried out by qualified and skilled birth attendants and skilled health specialists has had a major impact in the reduction of pregnancy related mortality (Murima, 2016).

Mangeni et al. (2012) identified that a key strategy in reducing maternal mortality is delivery under the supervision of a qualified and skilled birth attendant. However, the proportion of women delivering under the supervision of qualified birth attendants has been low from 42% in Kenya Demographic Health Survey (KDHS) 2003 to 44% in the 2008-2009 KDHS implying a 2% increase in facility delivery in a period of 7 years. The use of skilled attendants at delivery is currently at 62% (Ministry of Health, 2015a). This leaves over 30%

under the hands of traditional birth attendants, family and friends which increases the risk levels of death of a mother during child birth or within 42 days of delivery.

A study done in Machakos in 2015 acknowledged that engaging adequate qualified people to undertake deliveries in hospitals and health facilities has a major effect in lowering the maternal rates in Kenya (Orare, 2015). Improving the chances of survival of mothers and their young ones requires a combination of strategies that deals with the woman's health, provision of quality ANC, delivering under the supervision of a skilled birth attendant, quality post-natal care and fast and efficient referral system to respond to life threatening complications for mother and child (UNFPA & Ministry of Health, 2016).

The following graph shows trends in maternal mortality ratio in Kenya between1990-2013.



Source: WHO, UNICEF, UNFPA, World Bank, United Nations Population Division. Trends in Maternal Mortality: 1990 to 2013. Geneva: World Health Organization; 2014.

Figure2-1 Trends in Maternal Mortality Ratio in Kenya (WHO, UNICEF, UNFPA, World Bank, & United Nations Population Division, 2014)**.**

Figure 2- 1 shows that maternal mortality was relatively high between 1990 and 2013. Although it reduced slightly in 2015, it did not meet the MDG target of 100 deaths per 1000000 live births.

Following the introduction of free maternal care in Kenya, there has been a recorded increase in the number of women who have had their deliveries done at public health facilities from 44% in 2012/2013 to 70% in 2015/2016. This is in line with a target increase in number of

deliveries conducted by qualified and skilled health practitioners so as to identify complications earlier and reduce the number of maternal mortality rates (Ministry of Health & Government of Kenya, 2016).

See table 1 below that shows trends in type of delivery by year between 2011-2014.

Table 2.1: Trends in type of delivery, by year. source; Division of health information systems(DHIS) (Ministry of Health, 2015b)**.**

Maternal Event	2013/14	2012/13	2011/12	Average Change % (From 2012/13 to 2013/14)	Average Change % (From 2011/12 to 2012/13)
Normal Deliveries	724,154	594,673	273,698	21.8	164.6
% of ND among total deliveries	85%	85%	83.3%	-	-
Caesarean Sections	104,564	89,154	41,505	17.3	151.9
% of CS among total deliveries	12.3%	12.7%	12.6%	-	-
Breech Delivery	8,618	7,794	4,354	10.6	97.9
Assisted vaginal delivery	9,768	9,865	9,116	(1.0)	7.2
Live birth	812,486	671,524	308,073	21.0	163.7
Still birth	34,013	30,587	24,010	11.2	41.7
Underweight babies <2500gms	41,012	33,867	18,221	21.1	125.1
Pre-term babies	23,625	18,389	11,092	28.5	113.0
% of preterm babies among live births	2.8%	2.62%	3.34%		
Babies discharge Alive	769,876	633,882	283,029	21.5	172.0
Maternity Referrals	52,908	43,723	28,120	21.0	88.2
Neonatal deaths	9,969	7,866	4,553	26.7	119.0
Maternal Deaths	1,006	913	663	10.2	51.7
Institutional Maternal Mortality Rate/100,000 Live Births	124	136	215		

The above trend indicates a notable increase in number of deliveries since the FMHS began.

Effects of free maternal health policy on quality of Health care

The Institute of Medicine in America defines quality healthcare as the degree to which the healthcare services offered to the populations tends to meet the desired health outcomes set by the relevant authorities. The standards of quality are defined as minimum levels of acceptable performance or results (Field & Lohr, 1990 p.47).

Donabedian (1988) was of the opinion that in measuring quality of healthcare, the standard should be quantifiable and representative (i.e. criteria and standards of structure, process, and outcome). In his book, Spath (2009) states that quality healthcare is a health system that ensures safety to the patients and staff and effectiveness of care to patients who are unlikely to benefit from it, timeless, efficient, equitable and patient centred.

Murima (2016) measured quality of care using two aspects; high technical care, which meant that patients received services for which they required. The second aspect was that patients wished to be treated in a humane manner and were allowed to participate fully in decision making. In a bid to improve access of health facilities by expectant women, focus should be emphasized on quality of care since poor quality will erode the gains made by improved access of health care.

Kissick (1994) discovered the iron triangle of healthcare (see figure 2 below) where abolishment of the cost of healthcare in a bid to ensure access by all has a negative effect on the overall quality of care.

Figure 2-2 Iron triangle of healthcare (Kissick, 1994)**.**

The concept model shows the interdependence of cost, quality and access to health care.

Dzakpasu & Campbell (2014) identified an increase in the number of deliveries after abolition of user fees and an increase in the number of managed delivery complications. Increases in pregnant women with complications being attended (with hypertensive disease, haemorrhage or undergoing caesarean delivery) were observed following fee removal or reductions. The presence of skilled attendants during birth is also important in managing life threatening complications. This shows that there is need to improve number of skilled workers in line with expected increase in patients to be attended to meet desired health outcomes.

A report done by Health Policy Project in Kenya identified quality care as a health outcome after investing in health human resources, health infrastructure, health products and technologies and organisation of service delivery in health institutions (Perales, Dutta, & Maina, 2015).

Investing in healthcare improves accessibility, affordability and quality of healthcare provided in a country. Inaccessible, unaffordable and poor-quality healthcare are the major causes of maternal death in Kenya (Kamau & Muriithi, 2016).

An evaluation of the HSSF by Kenya Medical Research institute (KEMRI) highlighted the fact that direct financing made an important contribution to facility funding and had a positive impact on the staff motivation and quality of care (Waweru, Nyikuri, & Molyneux, 2013; Waweru, Goodman, & Molyneux, 2016).

2.2 Challenges in healthcare system to achieve Free Maternal Health Services (FMHS)

Pyone et al (2017) study observed that lack of clarity about the new health policy, weak enforcement mechanisms and misaligned incentives led to weak policy implementation. Health care workers in Kenya are unevenly dispersed with some counties enjoying more practitioners than others (USAID & Capacity Kenya, 2013). The current levels of staff meet only 17% of the minimum requirements desired for the healthcare system to operate effectively**.** With 7 nurses per 4000 residents and 1 midwife for 20 patients in Kenya against the WHO recommended 1:1 for patients with life threatening conditions and 1:4 for stable patients. There is need for efficient managing of the staff to ensure there is adequate number of skilled, qualified and motivated health sector staff to deliver the free maternity service efficiently. There exist supply side challenges in providing efficient health care services which include sub-optimal operations of the health system with irregular dissemination of the

health workforce as well as limitations in skill and incentive to the health care providers to offer quality care (Ministry of Health & Government of Kenya, 2016).

Improper health systems is one of the factors affecting maternal health this ultimately leads to maternal mortality (Ohanga-Too, 2015). Engaging adequate qualified people to undertake deliveries in hospitals and health facilities has a major effect in lowering the maternal rates in Kenya (Orare, 2015).

Despite the adoption of free maternal health programme, some deterrents to consumption included; fallacies surrounding the quality of care obtained from facilities, geographic and cultural barriers, poor attitude of health care workers, insufficient infrastructure, equipment and staffing (Yego et al., 2014). Health facilities have been characterized by allegations of negligence of patients, abuse and arrogance by staff. The staff working in these health facilities are overwhelmed due to understaffing and poor supervision (Bourbonnais, 2013). Nduvi (2015) report revealed that nurses were overworked after the implementation of the free maternal health policy, with 3 nurses aiding about 20 mothers at a time.

Edu et al (2017) cited limitations to utilization of the free maternal programme by expectant mothers to include; assumption regarding the quality of healthcare provided, geographical and traditional barriers, and arrogance by health facility staff towards patients, insufficient equipment and infrastructure, and understaffed facilities. Mosadeghrad (2014) observed that a patient's behaviour and attitude in turn affects the attitudes of the health worker attending the patient.

2.4 Effect of free maternal health services on Health care financing

Supply side challenges to healthcare provision included inadequate funding and weak supply chain management which leads to lack of essential inputs necessary for service delivery, particularly important commodities; and poor quality and consumption of routine data for evidence-based decision (Ministry of Health & Government of Kenya, 2016). One major challenge in utilization of free maternal health service was that funds were not disbursed on time to cater for hospital expenses (Murima, 2016). Health infrastructure is any investment in physical infrastructure, medical equipment, information and communication technology, or select transport (Ministry of Health, 2014b). Analytic investigations show that the aggregate resources in both public and private health facilities will tend to face a resource shortfall over financial years 2013/14–2017/18 (Perales et al., 2015). Institutional MMR at a tertiary hospital in South Africa increased following fee removal. Authors speculated that quality of

care deteriorated as an increased patient load was not accompanied by corresponding increases in staff and other facility resources (Daponte et al., 2000).

Murima (2016) study revealed that promotion of facility-based delivery also required huge investments in hospital physical infrastructure. Factors that may hinder the successful implementation of free maternal healthcare services in Machakos County included**;** hospital infrastructure which includes ward spaces, delivery coach, infant incubators, ultra sound, theatre, laboratory and ambulance services (Orare, 2015). Lack of particular drugs in government health facilities may negatively affect demand for health. When the necessary medicines are available, the demand for healthcare in public institutions increases (Mwabu, Ainsworth, & Nyamete, 1993). Further research by MOH (2015b) showed that spaces in hospitals were not enough forcing women to share beds and inadequate resuscitators and non-functioning examination lights (Ministry of Health, 2015b). Evidence also demonstrates that women with life-threatening conditions often do not make it to the facility in time. The third delay occurs at the healthcare facility. Upon arrival, women receive inadequate care or inefficient treatment. Resource-poor nations with fragile health-care facilities may not have the technology or services necessary to provide critical care to very sick patients. Omissions in treatment, incorrect treatment, and a lack of supplies contribute to maternal mortality. This affects the quality of health care being provided in health facilities and hence hinders the programme in achieving its objective in reducing maternal and neonatal mortality rates.

2.5 Summary of literature

The literature shows that there still exist high maternal mortality rates in Sub-Saharan Africa and in Kenya. User fees is among the major causes of access of health care by women in the country. Free maternal healthcare services may impact maternal mortality rate through a number of factors which include providing necessary antenatal care, delivery care, newborn care and postnatal care at no cost at all (Nduvi, 2015). Absence of essential primary health care and antenatal care limits pregnancy related complications to be detected early and treated before threatening the life of the mother (Bourbonnais, 2013). Sri Lanka has achieved a great deal in reduction of mortality being a developing country by ensuring all deliveries are conducted under the supervision of skilled birth attendants. Ninety-eight percent of all births are conducted under the supervision of skilled birth attendants hence reduction in the mortality rates in this country. The free maternal health program in itself can work in reducing the rate of maternal mortality in the country (Hathtotuwa et al., 2012). Despite the

adoption of free maternal health programme some deterrents to consumption included; fallacies surrounding the quality of care obtained from facilities, geographic and cultural barriers, and poor attitude of health care workers, insufficient infrastructure, equipment and staffing (Yego et al., 2014).

Perales et al. (2015) identified quality care as a health outcome after investing in health human resources, health infrastructure, health products and technologies and organisation of service delivery in health institutions. Wamalwa (2015) observed that since health workers require hospital infrastructure and resources coupled with the required patient to nurse ratio to effectively carry out their operations, investing in this will improve the overall quality of care.

2.6 Conceptual framework: Narrative

Need for hospital attendance fee discourages women from seeking care. Abolishing user fees in provision of maternity services helps in curbing the first maternal delay that includes decision to seek care. Free maternity services may also lead to the need for more facilities, commodities and health workers. This may be associated with health worker demotivation due to increased work load, inadequacy in supplies.

This conceptual framework is drawn from the literature review and it helps in the understanding the effects of free maternity health policy on patterns of delivery and utilization of health services, the challenges in the system and healthcare financing.

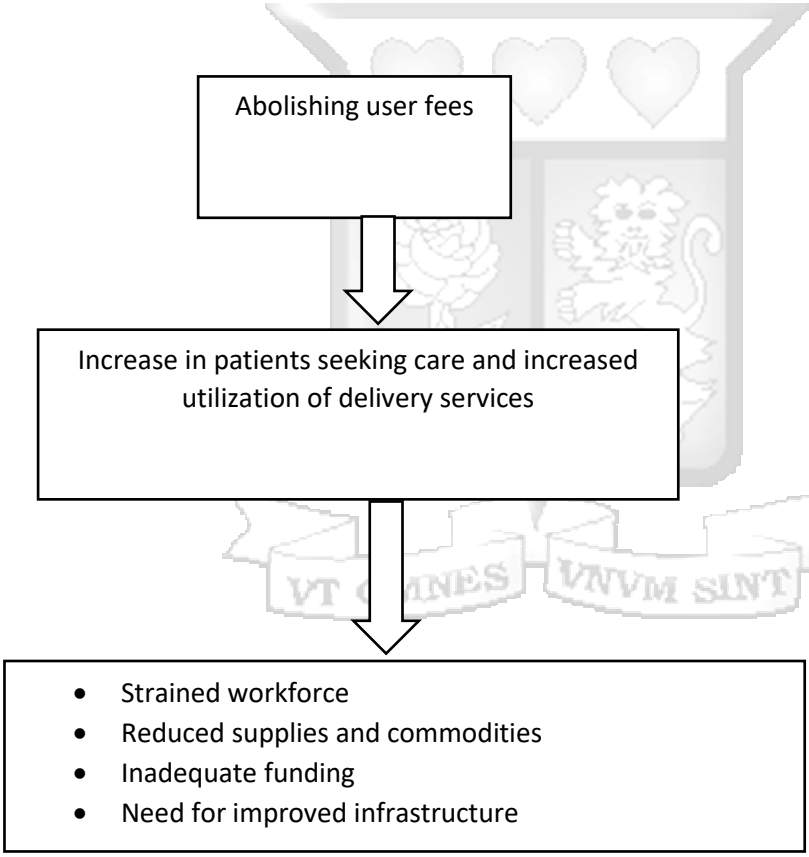


Figure 2-3: Conceptual framework

CHAPTER 3: METHODOLOGY

3.0 Introduction

This was qualitative study undertaken in Machakos level 5 hospital to explore the implications of the free maternal health services policy.

3.1 Research Design

A qualitative descriptive study was employed as it would adequately address the explorative nature of the study objectives. Qualitative study designs are appropriate for understanding phenomenon about which little is known by describing or answering questions about particular, localized occurrences or contexts and the perspectives of a participant group toward events, beliefs or practices (John W Cresswell, 2008).

3.2 Population and Sampling

To understand how the free maternity policy was operationalized, I purposively selected Machakos Level V hospital, a county referral hospital located in a peri-urban setting (thus varied socio-economic status of populations). The hospital has a bed capacity of 375, 10 of which are in the labour unit which conducts approximately 700 to 800 deliveries in a month. Furthermore, with the improved infrastructural developments in the county following devolution which included a massive revamp of ambulatory care unpublished reports indicates that facility deliveries in the hospital had increased. This provided impetus for conducting the study in this hospital as well as logistical accessibility from Nairobi given the budgetary limits for this study.

I conveniently and purposively sampled participants who were directly involved in the provision of clinical and nursing care to pregnant women, women in labour and newborn care and those who were present on the days of data collection. The informed assumption was that these participants because of their involvement with ante-natal, labour, post-natal and newborn care, they would therefore be able to speak from experience. A request to participate was sent to the heads of departments at the institutions requesting participation of department members in the discussions at suggested times and venues that were acceptable and convenient to the invited participants. A minimum of 6 participants was expected for each FGD as the recommended size of a group is of 6 – 10 people (Cresswell, 2008).

The key informant interviews were conducted with hospital administrators and relevant clinical managers with more extensive knowledge about the policy and with some level of

involvement and the policy some level of decision making regarding the policy at hospital level. These were the medical superintendent (equivalent of hospital CEO), the health administrative officer, the health records officer, the obstetrics/gynaecology consultant and the nurse manager in charge of maternity services. I then conducted focus group discussions and individual interviews with other frontline staff including nurse in-charges, medical officers, clinical officers and medical consultants. Table 3-1 below outlines the method and target respondents for the different methods.

Data collection Method	**Target respondent**	**Participant profile work experience in years and gender**	**Number**
Individual interviews	Nurse in maternity unit	25 female	6 (each of the persons listed was interviewed)
	Nurse in newborn unit	28 female	
	Nurse in antenatal unit	32 female	
	medical officer	3 male	
	Obstetrician	16 male	
	Nurse in postnatal unit	35 female	
Key informant interviews	Nurse manager	30 female	6 interviews (each of the persons listed was interviewed)
	Obstetrician-Head of department	15 female	
	Medical Superitendent	20 female	
	Health Administrative Officer	21 male	
	Health Records Officer	15 female	
	Accident and Emergency manager	26 female	
Focus group discussion	Doctors	2 females,4 male 1-2 years	1 FGD with 6 participants
	nurses	8 females(7-25 years)	1 FGD with 8 participants
	Clinical officers	5 males 4 females(1-2 years)	1 FGD with 9 participants

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The background and objectives of the study were provided before on invitation to the different interviews often 2-3 days before the proposed date of the discussion and follow up phone calls made a day before the agreed-on date to remind the participants

3.3 Data collection methods

Pretesting of the pre-designed interview guides was carried out by the principal investigator at Machakos level 5 hospital before actual data collection. Three clinical officers were interviewed. The interview guides were then analysed to inform the changes and adjustments that needed to be addressed before the final drafts were made.

Participants provided an informed verbal consent to the discussion after the study objectives were explained to them and issues of the voluntary nature of the study and confidentiality were assured to them. They were also reminded of their right to withdraw from the discussion at any time that they wished. To avoid use of names during the discussion and to maintain anonymity participants were then assigned codes to dis-identify them. Free dialogue was encouraged to ensure that there was mutual understanding and adequate interaction with the research topic.

The consenting process included obtaining permission for tape recording the conversations. The interview templates were then administered only as a guide, moving the participants from their knowledge of the free maternity policy, services included in the policy, the implementation process, probing to check health worker involvement and discussions on what was free and what was not under the policy. Participants were also asked about the effects of the policy on the number of deliveries in the hospital and on hospital resources including financing and health workforce. The interview guides also contained questions on the impact of the policy on health workers, on the community, on maternal health outcomes and ending with perceived successes/failures of the policy and suggested recommendations to improve operationalization of the policy. The guides were designed in a manner to allow the interviewer to probe beyond the formal question protocol and it was designed to allow the interviewer to accommodate the interviewee's style and responses. (see guides in the Appendix III).

3.4 Qualitative Data Analysis

All the audio taped discussions were reviewed for clarity and any hand-written notes taken during the discussions were used to address the discrepancies where there was poor clarity.

The clean audio files were then transcribed verbatim into word 2016 and then imported into NVivo 10 software, QSR International Pty Ltd ,1999 to 2012.

Data was analysed inductively by independently coded into themes felt to emerge from the data (thematic analysis) resulting into the initial coding framework using NVivo 10 software. Unanticipated themes arising from the data were incorporated into a second round of coding as free nodes representing broad categories. Further themes were then created by grouping some of the free nodes into tree nodes by making logical connections and looking for patterns across the themes. Finally, using previous literatures, the identification of the main themes and then the underlying influences of the reported themes were interrogated and presented as the main findings.

3.5 Ethical Issues

Ethical clearance was obtained from the Strathmore University Ethical Review Committee, Ethical committee of the Research unit at Machakos level 5 hospital and from the National Commission for Science Technology and Innovation.

Informed consent was sought from participants and confidentiality maintained. At the end of data collection, findings will be shared with Machakos Level 5 hospital and the Machakos County, department of health.

CHAPTER 4: RESULTS

4.0 Introduction

This chapter presents the findings of the study. Findings are from three FGDs, six key-informant interviews and six in-depth interviews. A total of 35 participants took part in the study. Data is triangulated to show similarities and differences in participant's views and is presented in line with the study objectives.

4.1 Patterns of delivery services

Overall, respondents reported increased number of facility deliveries in the hospital although it was not clear whether numbers were based on documented evidence or estimates. The outcome of introduction of FMP on hospital resources was also regarded with mixed perception, with some reporting challenges in accessing necessary resources while others reported an increase in availability of these resources post FMP implementation.

4.1.1 Impact on number of deliveries

Most respondents agreed that the policy had increased the number of deliveries at the facility as well as increased ante-natal and post-natal visits.

"What I have seen is there is increased number of deliveries, initially we used to have 10, 15 but now we are even sometimes clocking 30." ***Key informant-M7***

"In eeh, if you look at the ANC, ANC attendance since the free maternity, yeah and also the deliveries that we are getting …you get patients from Nairobi to Machakos, you get patients from Kitengela,I think it has impacted so much on umm, on the number" ***Key informant-M9***

4.1.2 Effect on maternal health outcome

All respondents reported that the policy had led to an increase in the number of pregnant women delivering in health facilities and that there was also improved maternal health outcomes

"I would say the maternal outcomes improved. Because some of the mothers who were being locked out from accessing the maternal health services, from the villages, from the poor backgrounds, at least now they could come to the hospital and get the services, knowing that they will not pay." ***individual interview-M1***

"I think maternal outcomes in general improved. Because more mothers are able to get uum, to get professional and various skilled birth delivery" ***key informant-M8***

4.1.3 Reported effects on quality of maternal health outcomes

On the quality of maternal health outcomes, respondents held multiple and often conflicting views of their perceptions on the quality of maternal health outcomes.

"INT: What is the effect of the policy on the quality of care?

PAR 1: The thing is, like when the number which is seeking for the services is higher than the service provider, there is no way the quality will be better...you have to increase the service providers. So, you are paying three consultants but you want everybody in Ukambani to come to Machakos Level 5, it will never work…

PAR 2:it has increased the number of CS's" ***FGD-1***

These views were linked to whether respondents viewed the policy as negative or positive and particularly if this viewpoint was approached from the health workers' perspective or from the patients' perspective.

"More numbers meant more mothers getting skilled delivery but at the same time there was also issues of quality of care, given that the same number of staff was attending to more women, so there were delays in getting the appropriate treatment, there were more delays" ***individual interview-M5***

4.2 Challenges faced by health workers in implementing the free maternal policy

The data showed that knowledge and understanding of the free maternal policy was unclear and it was therefore unsurprising that its implementation process was also problematic and characterized by poor health worker engagement in the implementation and workload challenges post implementation

4.2.1 Lack of involvement

From the findings, health workers complained about limited understanding of the policy, the policy being vague and lacking properly laid out procedure as well as the lack of engagement of health workers and other relevant stakeholders in the policy development and implementation.

"Yeah, we were not involved, umm, it was brought to the hospitals without umm … without umm any education to the implementers. So, most of us actually don't know what it entails." ***Individual interview-M1***

Further to the poor understanding and interpretation of the policy, was the lack of formal guidelines to guide the implementation of the policy.

"I think the way the policy was implemented; the policy did not come up with clear guidelines. They didn't define which services were to be offered, it was not backed up by structural or systemic upgrade for it to operationalize." ***individual interview-M5***

The study pointed the lack of cohesion between the policy makers and implementers of the policy. Many of those interviewed did not know the various services provided in the policy. They reported that some patients had to pay out of pocket for some services which they thought were to be offered free. Participants also raised concerns with the introduction of the 'Linda Mama' program which seemed to exclude mothers who exceeded hospital stay beyond twenty-four hours post-delivery and had no health insurance.

4.2.2 Increased workload

Health workers were mostly worried about the ability to cope with the increased number of patients in the absence of increased staffing and therefore increased work load.

"Workload of course there is umm, workload increase, and deployment of healthcare workers has also increased because there was demand, it was demand driven, because we had to complain that the number of workers were feeling a backlog and that led to adjustments, but with the free maternity policy, we have seen the availability of resources" ***key informant- M9***

"PAR1: Maybe we can also …. they can also increase the number of health workers working in the facility. Because if you compare the number of health workers and the number versus patients, the ratio is very much varying …the patients and the health workers they can get the quality health services. ***FGD 2***

Nevertheless, health workers were excited about the potential of increased access to maternity services and therefore reduction in maternal and neonatal morbidity and mortality.

"PAR2: Umm what I can say is that at least we get more mothers, they have stopped going to TBA's, which at least reduces the maternal deaths and neonatal deaths…
PAR7: It also a benefit for the mothers, as they come to us to deliver without going to the traditional attendants" ***FGD-2***

4.3 Effects of the free policy on health care financing at the hospital level

Particularly vague was the reimbursement processes in the hospitals as respondents recounted how the reimbursements were often delayed and sometimes not matching the number of deliveries conducted.

"Ideally in their system when the hospital is full we should be five...the bed capacity is 570.Though sometimes you find uum the workload is too much. So, you find there is a bit of backlog. You find eeh discharging has not been done as expected. So, you find that even admission now becomes a problem. At times we lose money in the process"
key informant-M10

"We got back the money for free maternity, as a maternity we did not get increased allocation and then there are things that we could have wished to have, e.g. a second theatre which we didn't get, yeah. So currently still the same, we are still having the same turnover in the maternity unit, and most staff who work there fairly worn out coz of the workload"
individual interview-M5

4.3.1 Impact on hospital resources

Hospital administrative staff reported increased availability in hospital resources such as drugs, consumables, bed capacity and laboratory support while health workers described limited resources in the different service areas they worked.

"There are no drugs, they get finished very quickly, okay what we used to use before and now, you find that they are not enough. You tell them maybe to go buy cotton wool or something of the sort. They think that the whatever, the items are supposed to be within the hospital. So, they imagine like we are stealing from them …" ***FGD-2***

"Umm, I think there is need of uum improvement of the funding, uum number one, there is need to look at the infrastructure, the expansion of the infrastructure is very key. The government needs to look at issues related to infrastructure and also issues related to personnel…personnel…. personnel." ***Key informant-M10***

For instance, a respondent described the strain the policy had placed on the physical space and bed capacities in the maternity and newborn area.

"We had 50 beds for example, initially Then here the number has gone up to 200. This, this eh…12B, this used to be our newborn unit. Then they could not cope with the babies. So, the other one which was ward 10was pushed there and then they did some renovation there... Up to now we are still moving … we are still …" ***individual interview-M3***

Furthermore, respondents reported challenges with laboratory equipment and supplies.

"PAR 3: We still have issues with our laboratory, we are not …most of the time we are not able to do the basic tests that we need, or ...our ultrasound also has issues, delays, that are not as reliable as we would like" ***FG- 1***

Inadvertently, the challenges with drugs, supplies and equipment compromised the quality of care and the potential benefits of the policy.

CHAPTER 5: DISCUSSION, CONCLUSION & RECOMMENDATIONS

5.0 Introduction

This chapter discusses the study's findings. It highlights the study's contribution to understanding the evaluation of the outcomes and processes involved in implementation of the Presidential directive on FMHS policy in Kenya**.**

5.1 Patterns and utilization of delivery services

My findings on influx of patients after introduction of FMHS were similar to studies done in Kenya and Nepal on effects of abolishment of user fees (Murima, 2016; Lang'at & Mwanri, 2015; Witter, Khadka & Tiwari, 2011). This increase in patient numbers necessitated structural modifications in the departments that had not been foreseen. The participants highlighted improved quality of care to the mothers who before the policy could neither have access nor afford to be attended to by skilled attendants. Complications could be detected early enough and hence reduced maternal morbidity. The quality of care was also thought to have improved as mothers at the health facilities received health education talks. This showed that the policy met its main objective (Ministry of Health, 2014a; McKinnon et al., 2014)

5.2 Health worker challenges

The health workers interviewed were quick to point out that there were no consultations on how best to roll out the new changes that came to the work place. The resources needed to comply were scarce. The increment in health workforce was not in tandem with patient influx. This was in keeping with a study done in Nairobi (Nduvi,2015). There was lack of education on the policy and what it entailed. This policy changed how things were done at the various units. There was noted to be conflict between the administration and the frontline health workers involved in direct patient care. The policy increased revenue for the hospital through reimbursement of user fee for each patient from the national government, whereas for the health workers, this resulted in increased workload and burnout. These findings were similar to a study done by Wamalwa on observing the ratio of health personnel to clients being attended to (Wamalwa, 2015).

Lack of health worker's incentives, increased work load, pulsatile availability of resources was the main challenge faced by health workers. Our findings were similar to those in Nepal which reported increased workload both technical and administrative (Witter et al., 2011). Despite these challenges the health personnel pointed out that the policy was a success.

5.3 Health care financing

The findings on health financing and disbursement of funds were not unique to Machakos and were similarly reported in a study done in Vihiga, Kilifi and Kajiado counties on the FMHS in Kenya (Tama et al., 2017).

The study participants pointed out that the resources are restrained as they did not increase in tandem with the increase in the number of patients. The results of the study showed that the reimbursement of funds from the National government was inconsistent and this caused a delay in timely provision of commodities and demotivated health workers.

Several other studies done worldwide for example in Ghana, the exemption policy to provide free delivery care was also associated with disbursement and sustaining of funds (Witter et al., 2007). The formulation of a policy includes processes that should be evidence based to have attainable objectives (McPake et al, 2011). The study reveals the issues encountered in formulation of this policy which included lack of interaction with stakeholder groups which was crucial both in design and policy implementation. Similar studies done in Kenya outlined the need for institutional arrangements during introduction of new policies (Tama et al., 2017; Pyone et al., 2017).

Abolishment of user fees through a presidential declaration in Burundi was associated with an increase in patients being attended and a decrease in flow of funds (Nimpagaritse & Bertone, 2011). Similarly, the study brings out issues in health care financing, budget supplementation in cases of lost revenue and cost sharing which was not there on initiation of the FMHS policy. This is also in keeping with a paper done on international experience on removal of user fees with initial careful planning to minimize unintended effects (McPake et al., 2011).

5.4 Limitations and areas of further research

The limitations of the study included some participants were reluctant to openly discuss some issues for fear of retribution. The data were collected in one hospital, and therefore it may be difficult to generalise the results to a different setting. Future studies could be strengthened by using surveys and review of hospital documents. Further research is needed to assess financial sustainability of the policy by both the national and county governments.

5.5 **Conclusion**

This study sought to explore the effects of the free maternal health policy on delivery of services in Machakos level five hospital by looking at patterns of delivery before and after implementation of the policy, challenges faced by the health workers and the effects of this policy on health care financing. To achieve this, we interviewed thirty-five participants, twelve of which were individual interviews and three FGDs.

Data were analysed using qualitative analysis software NVIVO 10. Findings revealed that the number of patients attending FMH increased. The health workers did not understand what the policy entailed and how they were expected to roll it out. There was increased work load, diminished hospital resources and need for improvement of hospital infrastructure.

5.6 Recommendations

There is need for guidelines from the National Government and major stakeholders in health on how the implementation of the policy should be done. Monitoring and evaluation should be done to assess the gains and hiccups already experienced and to ensure resources are allocated as per need basis. The study calls for community involvement through health talks and enrolling all expectant mothers to ensure necessary documentation improvement of hospital infrastructure, and workforce in tandem to increased workload and interlink all departments involved in maternal health. Machakos level 5 being the referral in the county, there is need to improve lower level facilities through access, infrastructure and workforce to avoid backlogs at the referral unit and workforce burnouts.

In summary, there is need to involve all stakeholders in decision making to achieve desirable outcomes. An all-inclusive approach is necessary in policy formulation and implementation.

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APPENDICES

APPENDIX I: INFORMATION SHEET

(***you will be given a copy of this document).***

PLEASE READ THIS INFORMATION THOROUGHLY BEFORE PROCEEDING WITH THE STUDY

Study Title: *Effect of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital.*

Investigators' statement

I am Elvis Gichuhi, an MPPM Student at the Public Policy and Research-SBS. As part of my Master of Public Policy and Management degree, I am conducting a study on *Effect of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital.*

I would like you to read the information below before you decide whether you would like to participate in the study or not.

Please read it carefully.

What's the purpose of the study?

The aim of this study is to assess the Effect of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital. To determine experiences of health workers since introduction of free maternity. Through this study we wish to understand the experience and challenges and use this to improve and implement appropriate systems and protocols that will assist in improving quality of care at the maternity unit.

Who can take part in the study?

Health care providers involved in provision and implementation of free maternal health services at Machakos level 5 hospital.

What will happen if I agree to take part?

This is what will happen if you agree to participate in this study. I will ask you questions about yourself, your job description, challenges that you face and on effects of the free maternity policy on quality of care**.** Privacy and confidentiality will be upheld at all times.

Participation in the study will require you to commit your time. Completing the questions will take 30-45 minutes. However, I will try to serve you as quickly as possible.

Are there any harms and benefits of taking part in the study?

We do not anticipate any harm during or after the study, however, if you feel the study has affected you in any way please contact Strathmore University or Machakos Level 5 research Committee. Contacts details are provided below. Following your participation, you will receive a copy of the final report.

What will happen to my information?

We will keep your identity as a research subject confidential. Your name will not be used in any published reports about this study. Results obtained from this study will be analysed and a report will be written and made available to you and to the hospital.

Do I have to take part?

Participation in this study is voluntary. You may withdraw from the study; refuse to answer any of the questions asked above at any time without loss of benefit or penalty.

Researcher contact

Students Registration number: 90696

Strathmore Business School P.O.BOX 59857-00200 NAIROBI

Machakos Level 5 Hospital. P.O BOX 19-90100 MACHAKOS

APPENDIX II: CONSENT FORM

Title of Study: *Effec*t *of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital.*

Thank you for considering taking part in this research. If you have any questions from the Information Sheet or would like me to explain again why we are conducting this research, please feel free to ask before you consent. You will be given a copy of this Consent Form to keep and refer to at any time.

☐	I understand that if I decide at any time during the research that I no longer wish to participate in this project, I can notify the researchers involved and withdraw from it immediately without giving any reason.
☐	I understand that I will be able to withdraw my data up to the point of publication.
☐	I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be kept confidential.

Participant's statement:

This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have questions later on about the research I can ask the investigator listed above. If I have questions about my rights as a research subject, I can contact the Ethical review committee, Strathmore University and research Committee or the Research committee at Machakos level 5 Hospital.

No coercion has been used to influence my decision to participate in the study as explained to me by

…….....

Participant's name.....

Participant's signature.....Date.....

I have fully explained the purpose, risks and benefits of the above study to the participant

Investigators signature.....Date.....

APPENDIX III: INSTRUMENT TEMPLATE

Title of Study: *Effect of free maternal health policy on delivery of maternal health services in Machakos level 5 hospital.*

Interview with frontline workers

1. What is your understanding of the free maternal health policy?
2. What services are covered under the free maternal health policy?
3. How did the implementation of the free maternal health policy in your institution impact on the number of deliveries or mothers being attended at your work station {(ANC/Labour ward/Post-natal ward/Newborn Unit(NBU)}?
4. What was the effect of the of the free maternal health policy on the quality of care of maternal health services?
5. What was the effect of the of the free maternal health policy on the maternal outcomes?
6. What aspects of care would you say were the most negatively affected by the free maternal health policy?
7. What benefits would you attribute to the free maternal health policy?
8. Do you think the free maternal health policy was a success? (Yes/No)
    a. For the answer you have provided above, why do think this is so?

Interview with Key informants (unit in-charges)

1. What is your understanding of the free maternal health policy?
2. What services are covered under the free maternal health policy?
3. How did the implementation of the free maternal health policy in your institution impact on the number of deliveries or mothers being attended at your work station {ANC/Labour ward/Post-natal ward/Newborn Unit(NBU)}?
4. What was the effect of the of the free maternal health policy on the quality of care of maternal health services?
5. What was the effect of the of the free maternal health policy on the maternal outcomes?
6. What aspects of care would you say were the most negatively affected by the free maternal health policy?
7. What benefits would you attribute to the free maternal health policy

8. How did the free maternal health policy workload and deployment of health care workers to the hospital and the unit?
9. Did the free maternal health policy influence the availability of essential resources like consumables and equipment?
10. What and how do you think the operationalization of the free maternal health policy might be improved?
11. Do you think the free maternal health policy was a success? (Yes/No)
12. For the answer you have provided above, why do think this is so?

Focus group discussion topic guide

1. What is your understanding of the free maternal health policy and the services covered?
2. What do you think were the mothers/clients' perspective of the free maternal health policy?
3. Effect of the implementation of the free maternal health policy in your institution on the workload
4. What was the effect of the of the free maternal health policy on the quality of care of maternal health services and maternal outcomes
5. What are the major benefits and risks (negative impacts) of the free maternal health policy?
6. How did the free maternal health policy workload and deployment of health care workers to the hospital and the unit?
7. Do you think there were people who tried to 'game' the free maternal health policy to maximize their returns?
8. What challenges did you experience in the implementation of the free maternal health policy?
9. What and how do you think the operationalization of the free maternal health policy might be improved?

APPENDIX VI: ETHICAL APPROVAL

Strathmore UNIVERSITY

7th May 2018 SU-IRB 0201/18

ELVIS GICHUHI
P.O Box 24814-00100
Nairobi
Kenya.

Email: gichuhih@gmail.com

Dear Elvis Gichuhi,

REF **Student Number:** MPPM/90696/15 **Protocol ID:** SU-IRB 0201/18
EFFECT OF FREE MATERNAL HEALTH POLICY ON DELIVERY OF MATERNAL HEALTH SERVICES IN MACHAKOS LEVEL FIVE HOSPITAL

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Proposal dated 27th April 2018
2. Participant Information and Consent form dated 27th April 2018
3. Study questionnaire dated 27th April 2018
4. Study Budget
5. CV

The committee has reviewed your application, and your study *"Effect of Free Maternal Health Policy on Delivery of Maternal Health Services in Machakos Level Five Hospital"* has been granted **approval**.

This approval is valid for one year beginning **7th May 2018** until **6th May 2019**.

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

Salim

Amina Salim

Regulatory Affairs Fellow

STRATHMORE UNIVERSITY APPROVED INSTITUTIONAL REVIEW BOARD

Ole Sangale Rd, Madaraka Estate, PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000

APPENDIX VII: AUTHORITY FROM FACILITY

REPUBLIC OF KENYA

GOVERNMENT OF MACHAKOS COUNTY
DEPARTMENT OF HEALTH & EMERGENCY SERVICES

Telephone: - (0145) 20594, 20847,
20234, 21685
Fax: 0145-20594

Office of The
County Director Health Services
P.O. BOX 646,
MACHAKOS

Ref: MOH/MKS/C4.VI/24

8th May 2018.

TO: ELVIS GICHUHI
PO BOX 24814-00100
NAIROBI, KENYA.

RE: RESEARCH AUTHORIZATION.

Reference is made to the ethnical approval of your protocol by Strathmore University Institutional ethics review committee dated 7th May 2018.

You are hereby permitted to conduct your study on "Effects of free Maternal Health policy on delivery of Maternal Health Services in Machakos Level 5 Hospital".

You are required to submit a copy of study report to this Office at the end of the study period. By a copy of this letter, the Medical Superintendent, Machakos Level 5 Hospital is requested to offer the necessary support.

Dr. Ruth Muthama
County Director of Health
MACHAKOS.

COUNTY DIRECTOR OF HEALTH
P.O. BOX 646 - 90100
08 MAY 2018
MACHAKOS
MACHAKOS COUNTY

Cc: Chief Officer of Health