

**The Policy Process, Quality and Cost of Free Maternal Healthcare in
Kenya: A Mixed Methods Analysis of Maternity Policy**

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**Thesis submitted in accordance with the requirements for the degree of Doctor of
Philosophy**

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University of Kent

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I, *Boniface Oyugi* confirms that the work submitted is my own and that appropriate credit has been given where reference has been made to the work of others.

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***“What you lack in talent can be made up with desire,
hustle and giving 110% all the time.”*** — Don Zimmer

Dedication

To my big brother and best friend, the late *Dr Alphonse Owino Ogada* – your very painful and tragic death at the tail end of writing this thesis crushed all our spirits. Thank you for the gift of loyalty, brotherhood, and friendship throughout the years. *Nind gi kwe Sibuur thiring'inyi wuod Kano!*

&

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Abstract

Background: Reducing both global maternal and neonatal mortalities are essential parts of meeting the Sustainable Development Goals (SDGs) of ending preventable deaths caused by poor access to, and utilisation of maternal and family planning services. Several countries, particularly low/low and middle-income countries such as Kenya, are eliminating the financial barriers to access of quality maternal and infant health care and enhancing the utilisation of skilled birth attendance (SBA) through incentives such as free (non-user fee) delivery (birth) policies to achieve universal health coverage (UHC). This study sought to explore the policy process, implementation, and effects on quality and cost of maternal care of the free maternity policy as implemented in Kenya.

Methods: A convergent parallel mixed methods case study underpinned by pragmatism informed the study design and allowed for an in-depth exploration of the policy, thereby strengthening construct validity. The study was set in one county and three county hospitals (high volume, medium volume, and low volume) in Kenya. Data sources were exit interviews (n=553) with mothers who utilised delivery services under the policy in the three hospitals, focus group discussions (n=10) with mothers who sought postnatal services, in-depth interviews (n=20) with healthcare workers and the county officials, key informant interviews with the policymakers (n=15), document reviews, and demographic health survey data which were collected between November 20, 2018 to September 13, 2019. Data analysis was drawn from three approaches: thematic analysis for the qualitative data, descriptive statistical analysis for the exits interviews, and difference in difference analysis of maternal and neonatal outcomes using Kenya Demographic Health Survey (KDHS) data. Qualitative data was managed through NVivo 12, while quantitative and econometrics analysis were managed by STATA 15.

Results: The introduction of the current policy was done to overcome the challenges from the previous free maternity policy and was both a political and a technical initiative. There was adequate consultation, costing, and evaluation of sustainability at the onset of the policy. Analysis of the implementation components showed that there were reimbursement delays; the claims system was fraught with challenges; there was poor communication of the policy plans; reversal of the referral system, and poorly incentivised accreditation and contracting of the providers. The County and HCWs utilised street-level bureaucrat (SLB) tactics to reshape the working practice of the policy, repurpose the policy processes, and provide services amidst challenges in order to meet the ethical and professional concerns. The majority of the mothers had a positive perception about the policy despite still bearing a mean out-of-pocket (OOP) payment of US\$3.0 on the free services that were

catastrophic at a threshold of 5% of the annual income. Overall, the policy had a significant positive impact on early neonatal mortality and neonatal mortality; but no significant impact on delivery through a caesarean section or other intermediate outcomes (skilled delivery, birth in a public facility (hospital), and low birth weight).

Recommendation: Implementation of the current policy as it is, has only partially solved the challenges from the previous free maternity policy. There is a need to promote awareness of the policy to the poor and disadvantaged women in rural areas to help narrow the inequality gap on utilisation and reduce the impoverishment of households. The implementation processes such as claims management, accreditation and contracting, fragmentation of the benefits package should be re-evaluated through multi-stakeholder consultation if the policy is to achieve its objective fully. The policy should be sustainably funded in order to achieve the UHC agenda.

Keywords: Free maternity policy, Policy implementation, Quality of maternal care, Cost, Universal Health Coverage

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List of abbreviations

AMREF	Africa Medical and Research Foundation
ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric and Neonatal Care
CEC	Cabinet Executive Member
CDoH	County Department of Health
CHMT	County Health Management Team
CHS	Centre for Health Solutions
CoG	Council of Governors
CRF	County Revenue Fund
CS	Caesarean section
CS	Cabinet Secretary for Health
Health	
CHWs	Community Health Workers
CME	Continuous Medical Education
DANIDA	Danish International Development Agency
DGH	Director General Health
DMC	Direct Medical Cost
DNMC	Direct Non-Medical Cost
EI	Exit interviews
FBO	Faith Based Organisation
FGD	Focus Group Discussion
FIF	Facility Improvement Fund (Cost sharing)
FMS	Free Maternity Services
FP	Family Planning
GDP	Gross Domestic Product
GoK	Government of Kenya
GSU	General Service Unit
HCW	Healthcare Worker
HFMC	Health Facility Management Committee
HRIO	Health Records Information Officer
IDI	In-depth Interview
IPC	Infection Prevention and Control
JICA	Japan International Cooperation Agency

KDHS	Kenya Demographic Health Survey
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Authority
KMTC	Kenya Medical Training College
KNBS	Kenya National Bureau of Statistics
KQMH	Kenya Quality Model for Health
KWTRP	KEMRI-Wellcome Trust Research Programme
LIC	Low-Income Countries
LMIC	Low- and Middle-Income Countries
LM	Linda Mama
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
MTRH	Moi Teaching and Referral Hospital
NBU	Newborn Unit
NHIF	National Hospital Insurance Fund
NMR	Neonatal Mortality Rate
OBA	Output Based Approach
OOP	Out-of-pocket
PHC	Primary Health Care
PNC	Postnatal Care
PS	Principal Secretary
RMNCAH	Reproductive, Maternal, Newborn and Adolescent Health
RMNCH	Reproductive, Maternal, Newborn and Child Health
SBA	Skilled Birth Attendance
SDG	Sustainable Development Goal
SLB	Street Level Bureaucrats
TBA	Traditional birth attendants
UHC	Universal Health Coverage
UN	The United Nations
UNFPA	United Nations Population Fund
USAID	The United States Agency for International Development
WHO	World Health Organisation

Glossary

Term	Description
Access	The ability of clients (or potential clients) to obtain/get required and available services when required within an appropriate time.
Accreditation	'Third-party verification required to a conformity assessment body, conveying formal demonstration of its competency to carry out specific conformity assessment tasks' (Kenya Ministry of Health, 2018).
Client	An individual who is being served or provided with healthcare or treatment by a healthcare provider or organization.
Healthcare provider	A person who provides (delivers) care to/ for/ on behalf of a client (individual, organization, agency, or groups) such as a doctor, nurse, or allied health professional.
Health facility	Location or place where healthcare is provided or accessed.
Partograph	A tool utilized by the healthcare workers (HCWs) during the birthing/delivery process to assess the progress of labour and identify if and when an intervention is necessary.
Referral System	'A mechanism to enable client's health needs to be comprehensively managed using resources beyond those available where they can access' (Kenya Ministry of Health, 2014b, p10).
Quality	'The degree of excellence, or the extent to which an organization meets clients' needs and exceed their expectations' (Kenya Ministry of Health, 2018).
Standard	'A desired and achievable level of performance against which actual performance is measured' (Kenya Ministry of Health, 2018).
System	The organization of policies, procedures, processes, and resources are administered, integrated, and regulated to achieve the objectives of the Standards .

Chapter 1 — Introduction

1.1. Introducing the thesis

Despite the Government of Kenya (GoK) making significant progress in improving the reproductive, maternal, newborn and child health (RMNCH) outcomes in the last decade, many women, neonates and children still experience morbidity and mortality from preventable pregnancy and child health-related causes (Keats et al., 2017). The GoK has made it a priority to improve the coverage of RMNCH services as reflected in the Constitution 2010, the Vision 2030, and the *Health Sector Strategic and Investment Plan 2019-2023*; through initiatives such as removal of user fees for Primary Health Care (PHC) and provision of Free Maternity Services (FMS) (Kenya Ministry of Health, 2016a).

Research on global free maternity (FM) policies have mainly focused on the evaluation of the utilisation of the services and neglected the policy processes. Studies have further failed to conclusively tease out other policy effects such as the quality of maternal care and the costs that cumulatively contribute to the achievement of Universal Health Coverage (UHC) (Ganaba et al., 2016, Witter et al., 2014). This is rather surprising based on the contribution of the quality of maternal care and cost to the UHC. The operationalisation of the process of implementation of FM policies (the how) could influence how it benefits women and their families. Despite the focus of FM policies being to reduce cost and improve quality, poor implementation could exacerbate the already existing problem of irregular practices; thereby, offering below-par maternal care (Lange et al., 2016).

This thesis will focus on the FM policy as it is currently being implemented in Kenya. Using mixed methods approach, I set out to explore the policy processes of its formulation and implementation, and evaluate its effect on the quality of maternal care and the cost to elucidate policy recommendations that would improve the policy and support the achievement of UHC.

1.2. Research purpose and questions

On the one hand, this thesis seeks to explore the policy processes of formulation at the macro-level (national), and implementation at the meso-level (county) and the micro-level (hospital) of the FM policy – as currently implemented in Kenya. On the other hand, it purposes to evaluate the effects of the policy and the potential impact on the quality and cost of maternal care using mixed methods approach and embedded case studies. To achieve this, the study utilises a conceptual framework that has been constructed based on the literature review of FM policies globally (chapter 2) and public policy theories. The thesis is largely guided by the approaches that have been utilised by Witter et al.

(2013) and Ridde and Diarra (2009) in evaluating other countries FM policies in their entirety (Marchal et al., 2013): the background, formulation, implementation, and effects of the policy. While the study may look like a complex evaluation, it is expected that the findings of the policy analysis will be used to draw recommendations for better implementation processes of FM policy to achieve UHC. Hence, this led to the following research questions:

1. What was the objective of the current FM policy, and how was it formulated? (from the perspective of the mothers, healthcare workers (HCWs) and key informants)
2. What are the intended and/or unintended positive and negative effects, and adjustments of policy mechanisms? (from the perspective of the mothers, HCWs and key informants)
3. What are the effects and potential impact of the policy on the quality and cost of maternal and neonatal care?

The next section provides a brief background about Kenya, the country where the study is based, and a brief history of the FM policies.

1.3. Background of Kenya

1.3.1. Geographic, demographic and socio-economic

Kenya is located on the Eastern part of the African continent lying between 5° North and 5° South latitudes, and between 24° and 31° East longitudes. The country is bordered by South Sudan to the northwest, Ethiopia North, Somalia Northwest, Tanzania South and South West, and Uganda West as shown in *Figure 1.1*.

KENYA



Figure 1.1: Map of Kenya (Source: Kenya National Bureau of Statistics et al., (2014))

The population of Kenya, which is estimated at 47.6 Million as of 2019 (Kenya National Bureau of Statistics, 2019a), is growing at an annual rate of 2.3% (The World Bank Group, 2020). Respectively, other recent and relevant demographic, and socio-economic characteristics are shown in *Table 1.1*.

Table 1.1: Demographic and socio-economic characteristics

Indicator	Unit	Year
Demographic indices		
Population (millions) ^a	47.6	2019
Population growth (annual %) ^b	2.3	2018
Population ages 0-14 (% of total population) ^b	39.8	2018
Population ages 65 and above (% of total population) ^b	2.3	2018
Urban population (% of total population) ^b	27.0	2018
Social indices		
GDP growth (annual %) ^b	6.3	2018
GDP per capita growth (annual %) ^b	3.9	2018
Health related indices^c		
Crude birth rate (%)	30.5	2015
Crude death rate (%)	10.4	2015
Population with access to improved source of drinking water (%)	71	2015

Source: ^a Kenya National Bureau of Statistics (2019a), ^b The World Bank Group (2020), ^c Kenya National Bureau of Statistics et al. (2014)

Kenya promulgated the new constitution in 2010 and established a devolved system of governance to counties (The Republic of Kenya, 2010). Subsequently, 47 semi-autonomous county governments assumed responsibilities for their function after the 2013 elections under a singular, unitary state (Oyugi, 2015).

1.3.2. Kenya's Healthcare system

The governance structure of Kenya radically changed following the promulgation of the new constitution. As outlined in *Article 6, 12, and 174* of the new constitution (2010), there was an introduction of devolution of power that altered the governance structure of the health sector. Consequently, with the new constitution, the national government was assigned the roles of the provision of regulatory and policy guidance, capacity building and providing oversight to the referral system. In contrast, the county governments were responsible for service delivery. Following the promulgation, the eventual reorganisation of the government functions and structure was only realised in 2013 after the general election following the transition period. The overall oversight of the policy process at the national level is led by *senior health management* comprising the Cabinet Secretary for Health (CS Health) - supposedly apolitical, supported by Principal Secretary for Health

(PS Health), Director General Health (DG Health) and leads of 'semi-autonomous government agencies' (SAGA) namely Kenya Medical Research Institute (KEMRI), Kenya Medical Supplies Authority (KEMSA), Kenyatta National Hospital (KNH), Kenya Medical Training College (KEMTC) and Moi Teaching and Referral Hospital (Mulaki and Muchiri, 2019, p17). As at the writing of this thesis, the MoH was undergoing reorganisation. However, the proposed structure is as shown in *Figure 1.2*.

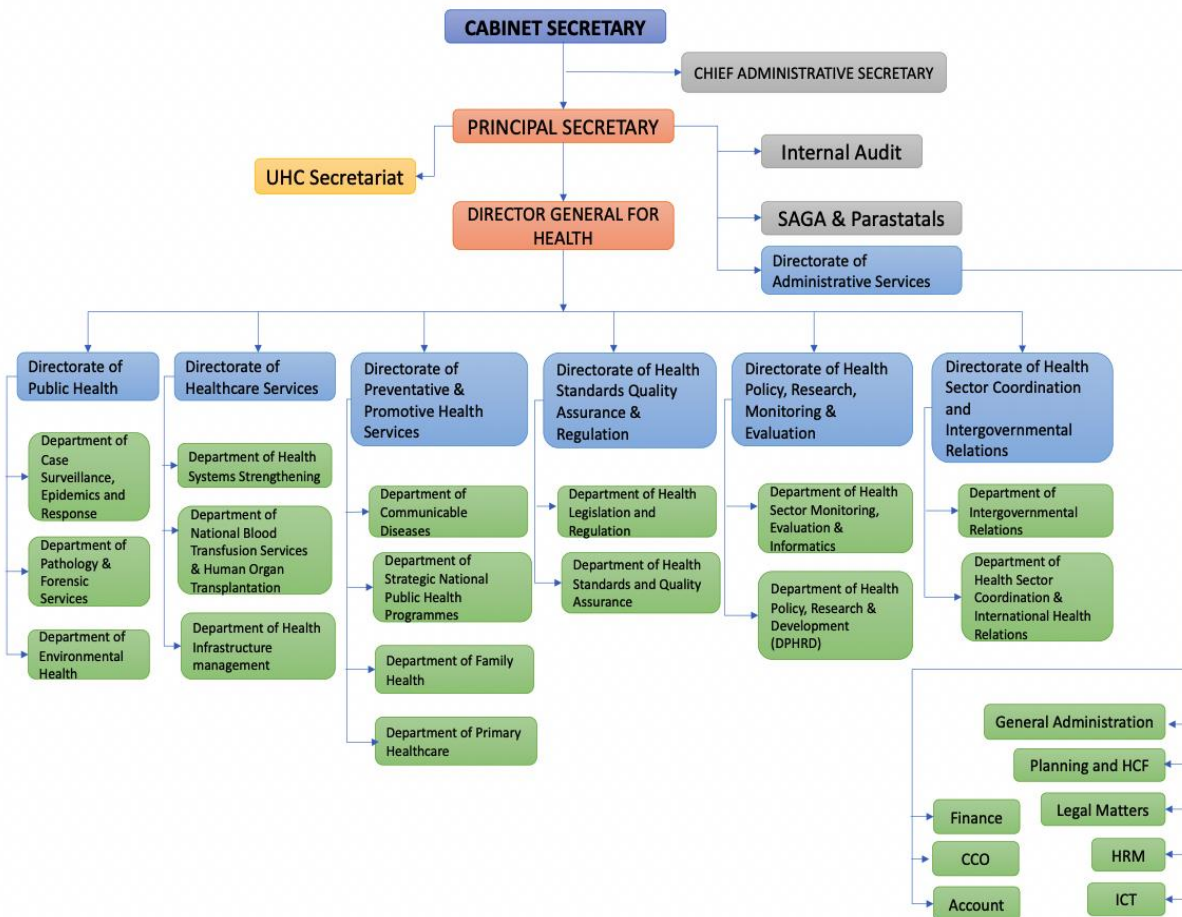


Figure 1.2: Proposed organisation structure of the MoH Kenya (Source, Kenya Ministry of Health (2019)¹)

The governance structure of the county level, envisioned through *The County Government Act number 17 of 2012* (National Council for Law Reporting, 2012), is akin to national level. It is led by a governor who appoints the county executive committee (CEC) members responsible for the policy leadership, and a chief officer of health who gives the financial oversight. Like the national level, the counties have a county director of health role, provided for in *section 19 of The Health Act number 21 of 2017* (Kenya Law, 2017, pp435-436), and is responsible for leading the county health management teams (CHMT)

¹ The proposed organisation structure was obtained through personal communication, and it only reflects the general structure and functions as they are currently. The DG and all the heads of the directorate are working in an acting capacity. The official reorganisation documents and structure are yet to be released by the MoH

comprising heads of directorates. A rather crucial link between the county and the national government is the establishment called *Health Sector Intergovernmental Forum (HSIF)*, which manages policy dialogue and intricately disseminates the relevant health policies (Mulaki and Muchiri, 2019).

The healthcare system in Kenya is pluralistic in the provision and financing of services, as they are provided by both the public and private sectors. Predominant health services provided by the public sectors are operated through a tiered system, as shown in *Figure 1.3*. Level 1 forms the community units overseen by community health workers (CHWs) whose role of providing promotive services (health education, treating minor ailments, and identifying cases that require referral to health facilities) are guided by the *Kenya Community Health Policy 2020-2030* (Kenya Ministry of Health, 2020a). Both level 2 (dispensaries) and level 3 (health centres) provide primary healthcare services in addition to coordinating the community in their areas of jurisdiction. Level 4 and 5 offer curative services as county secondary referral facilities in addition to some being training centres. Level 6 are semi-autonomous tertiary facilities offering specialised care and serving as a training institution. The three study facilities in which this study was conducted were a level 3 (considered a low volume – few numbers of clients), a level 4 (medium volume), and a level 5 (high volume). The envisioned changes in the service delivery levels as per the *Kenya Health Policy 2014-2030* (Kenya Ministry of Health, 2014a) is as shown in *Figure 1.3*.

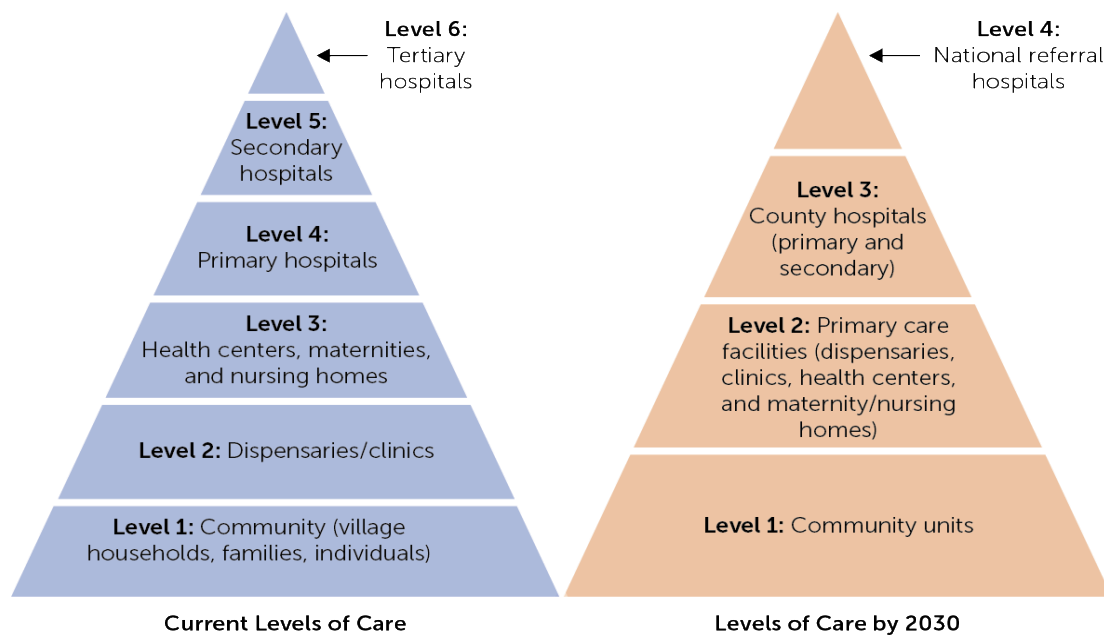


Figure 1.3: The current and proposed future service provision structure in the public sector in Kenya (source: Mulaki and Muchiri (2019))

Previous studies have failed to fully compare the health systems in Africa, given the inability to capture the required data from most countries (Azevedo, 2017). Mills et al. (1990), in an assessment of the concepts, issues and country experiences of the health systems decentralisation, concluded that it is difficult to generalise the country level experiences and effects of health systems. Further, Tsofa (2017), noted in his empirical review of the health sector decentralisation that there are numerous typologies of decentralisation within the health system, and hardly just one single form exists in any one country at a time. As such, the Kenyan healthcare system is unique, as are all the 54 African countries systems. Each country in Africa is implementing a systems with different components that favour it's heterogeneous population or geared towards strengthening the health system objective. Still, countries outside Africa, such as Indonesia, which has experienced nearly a similar health system devolution as that of Kenya, is experiencing almost the same challenges of poor guidance, limited priority setting, and limited community accountability (McCollum et al., 2018). Nonetheless, they both have improved citizen participation opportunities and transformed power relation (ibid, 2018).

1.3.3. Maternal indicators

Kenya's total fertility rate is 3.9 births per woman (Kenya National Bureau of Statistics et al., 2014), which is higher than the vision 2030 national target of 2.6 birth per woman, and lower than the average 4.9 births per mother from Sub-Saharan Africa (SSA) (National Council for Population and Development, 2013). The country's maternal and child health status has significantly improved in the last decade. For instance, the maternal mortality ratio (MMR) has decreased by 52% from 2000 to 2017 (World Health Organisation, 2019, p101); while neonatal mortality rate (NMR) has reduced from 33 to 22 deaths per 1,000 live births between 1990 to 2014 (Kenya Ministry of Health, 2016c). Maternal deaths in Kenya make up to approximately fifteen percent of all deaths among women of reproductive age (approximated at 7,300 women dying every year), and both mothers and neonates still die from preventable pregnancy-related complications (ibid, 2016c). One in 76 women in Kenya is at risk of dying from pregnancy complications (World Health Organisation, 2019). The key determinants of maternal and child healthcare are antenatal care (ANC) and skilled birth attendance (SBA). SBA has improved from 41.6% in 2003 to 43.8% in 2009, and to a further 61.8% in 2014; and ANC visits (of four or more times) have increased from 47.1% in 2009 to 57.6% in 2014 (Kenya National Bureau of Statistics et al., 2014). Other trends in key maternal and neonatal indicators summarised in *Table 1.2*.

Table 1.2: Trends of key maternal and neonatal indicators

	2003	2008/2009	2014
Health status			
Neonatal mortality rate (per 1,000 live births)	33.0	31.0	22.0
Infant mortality rate (per 1,000 live births)	77.0	52.0	39.0
Under-five mortality rate (per 1,000 live births)	115.0	74.0	52.0
Maternal mortality ratio (per 100,000 live births)	414.0	488.0	362.0
Total fertility rate (TFR)	5.0	4.7	3.9
Utilisation of essential services			
Antenatal care (ANC) visits four times or more (%)	52.3	47.1	57.6
Iron and folic acid (IFA) supplementation (% of pregnant women receiving 90+ IFA)	2.5	2.5	7.5
Skilled birth attendance (%)	41.6	43.8	61.8
Postnatal care (PNC) in 2 days (%)	48.7	47.1	52.9
Modern contraceptive prevalence rate (% of currently married women ages 15–49 using any modern method)	31.5	39.4	53.4
Full immunization (% of children ages 12–23 months) ^a	56.8	77.4	79.4
Vitamin A supplementation (% of children ages 6–59 months)	33.0	30.3	71.7
Note: ^a Full immunisation include: Measles, BCG, and 3 doses of DPT/Hep B/Hib and polio vaccine (Polio vaccine given at birth is excluded)			

Source: Constructed by the author from ((Central Bureau of Statistics et al., 2004, Kenya National Bureau of Statistics and ICF Macro, 2010, Kenya National Bureau of Statistics et al., 2014))

1.3.4. A brief history of free health and maternity policies

The ‘right to health’ of every citizen is enshrined in *Article 43(1)(4)* of the constitution of Kenya (The Republic of Kenya, 2010) and the overarching goal of Kenya’s health system is ‘attaining equitable, affordable, accessible and quality health care for all’ (Kenya Ministry of Health, 2017). Since 1965, Kenya has initiated various health sector reforms purposing to achieve the goal, enhance the quality of healthcare service delivery, improve the capacity of the workforce, increasing productivity, enhancing the national welfare; hence, triggering economic growth. A summary of the policy changes and the timelines is shown in *Figure 1.4*.

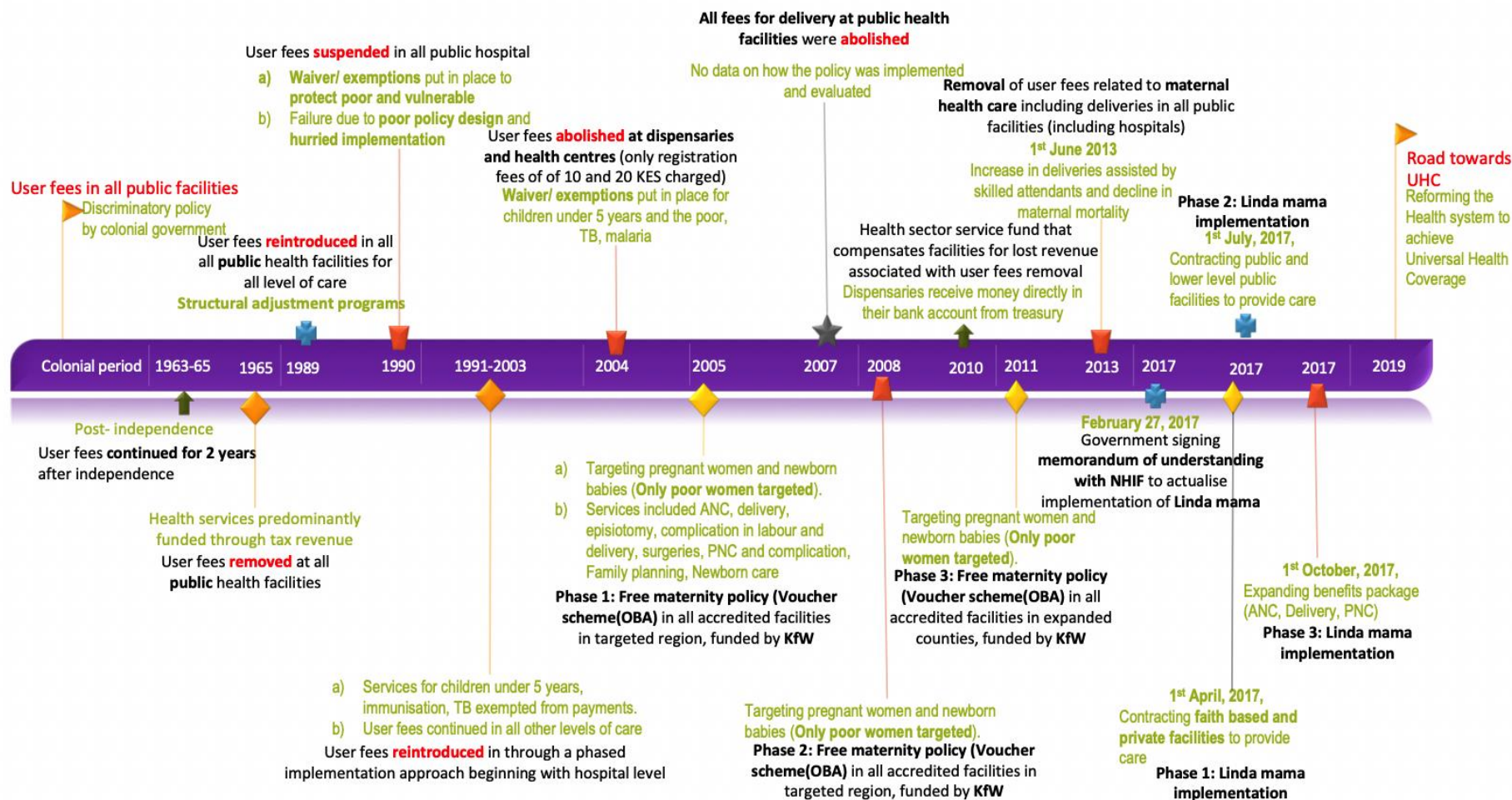


Figure 1.4: Timelines of free policy (Source: Author developed from the review of literature)

During the colonial era, under the rule of the British monarchy, prior to independence, the government of the time had a discriminatory policy that had introduced the user fees (out-of-pocket payment) for all services derived from the government facilities (Chuma and Maina, 2013). The post-colonial government continued with the discriminatory policy for two years post-independence until 1965, when UHC was made a priority, and user fees were removed from all public facilities (ibid, 2013). The free policy served the country until 1988 when Kenya acquiesced to persistent international pressure to reintroduce user fees as it was facing a financial crisis resulting from rapid population growth, the impact of HIV/AIDs, and return other diseases such as TB (Chuma and Maina, 2013, Collins et al., 1996). Subsequently, despite the reintroduction of the user fees, it was rapidly suspended in 1991 due to its haphazard implementation, resulting in the poor quality of services, reduced utilisation of services, and muddled revenue collection (Chuma and Maina, 2013, Collins et al., 1996, Mwabu, 1995, Mwabu et al., 1995). The user fees were reintroduced between 1991-2003, albeit through a phased approach, for all level of care in public hospitals except for services targeting children under five, immunisation, and consultation. The design of the policy was such that all the revenues collected at the facilities were transferred to the district to meet the district public health needs and the facilities were to detail a plan that would allow spending 75% at the source. Mwabu (1995) showed that the poor and vulnerable, and under-fives were cushioned from catastrophic expenditure, with a waiver and exemption scheme that allowed them to access services in policy paper but not in practice. While there was a short-term increase in revenue from the policy, there was a significant reduction in utilisation as was with the previous policies, and even incidences of catastrophic expenditures increased (Collins et al., 1996).

Therefore, to redress the barriers of access – financial and equity – due to the user fees policy, in 2004 the government introduced the *10/20 policy* where, with the exemption of services to the under-fives, priority services such as tuberculosis (TB) and Malaria, and services to the poor and vulnerable, a standard fee of KES 10 (USD 0.13)² was charged for registration in dispensaries and KES 20 (USD 0.25) in health centres (Chuma and Okungu, 2011). In tandem, through a three-phased approach, the government of Kenya with the support of the German Development Bank (KfW) piloted an innovative approach of using a free maternity voucher scheme – output-based approach (OBA) – from 2005 to 2016 whose aim was to provide free maternal healthcare services such as ANC, deliver, postnatal care (PNC), complications, and newborn care to women identified as poor using poverty indicators across five targeted regions (Janisch et al., 2010). The purpose of the phases, were mainly to smoothen the

² The exchange rate at the inception of the policy in 2004 was 1USD=KES 79.17; obtained from <https://www1.oanda.com/currency/converter/>

implementation, evaluate the feasibility of sustainability and expansion to accredited facilities in other districts (Abuya et al., 2012). Review of the policy showed in increased quality for targeted beneficiaries, access, and coverage (Njuki et al., 2015, Njuki et al., 2012, Obare et al., 2014, Obare et al., 2015, Oyugi et al., 2017, Warren et al., 2015). In tandem, all fees charged for delivery in all public facilities were abolished in 2007; however, there is no data to show how it was implemented and whether it achieved objective (Chuma and Maina, 2013). Hospitals, particularly the lower-level, experienced financial shortages from the policy leading to the rise of unintended consequences of informal charges (Chuma et al., 2009). Consequently, the government set up a Health Sector Service Fund (HSSF) in 2010 that would compensate the health facilities for the lost funds created by the abolition of user fees (Chuma and Maina, 2013, Chuma and Okungu, 2011, Opwora et al., 2010).

Since the promulgation of the new constitution in 2010, there has been a push to reform the health system to achievement of UHC. In June 2013, following the election of the *Jubilee government*, the government initiated waiver of the user fees payable for all maternity and primary health care services, whose aims were to reduce maternal mortality increase SBA in public facilities (Chuma and Maina, 2013). Health facilities soon began to feel the effect of this policy. On the day of the announcement, Pumwani Maternity Hospital delivered an unprecedented 100 babies (Bourbonnais, 2013). By July, the Director of Public Health and Sanitation estimated a 10% increase in deliveries across the country, with increases of 50% in certain counties (ibid, 2013). In some facilities, these numbers have been even higher; for instance, in Kenya's main referral hospital, the number of pregnant women seeking maternal care had increased by 100 per cent within a month. A process evaluation of this policy showed that it was haphazardly implemented without the full involvement of healthcare workers (HCWs), and the public hospitals were not adequately equipped and prepared to meet the increased number of mothers who came for delivery as a result of the free policy (Tama et al., 2018). Additionally, there were no adequate systems in place to verify the quality of care (QoC) due to the policy and the reimbursement claims from the hospitals to the government (ibid, 2018).

Consequently, as captured in the *Jubilee manifesto* (The Jubilee Party of Kenya, 2017, p14), it was proposed that in the next five years following the 2017 election, the government would:

- *'Achieve free, quality primary healthcare for all Kenyans...*
- *Expand the "Linda Mama" programme (free maternity programme) to mission and private hospitals and provide health cover through NHIF for all expectant mothers for a period of 12 months covering the period before and after birth...*

- *Continue the drive towards universal health care. By 2022 more than 13 million Kenyans will have health insurance through NHIF.'*

The proposal, aimed at using the National Hospital Insurance Fund (NHIF) as a driver to UHC (Mwaura et al., 2015), saw a phased approach to implementing the expanded FMS program, whose aim was to provide access to all pregnant women in private, faith-based institutions, and all level 3-6 public institutions. With an expanded package, the government signed a memorandum of understanding with the NHIF to actualise the implementation on February 27, 2017, and it was officially branded *Linda Mama (LM)* and launched on October 18, 2017. Phase one of implementation included a rollout of delivery services only to private and faith-based institutions, and it started on April 1, 2017. Phase two which took place on July 1, 2017, included rollout of delivery services only, to all public health facilities while phase three, which began on April 1, 2018, included the rollout of other additional services such as ANC and PNC besides delivery. As of the end of the financial year June 2018, the NHIF had implemented all the three phases in 458 private and faith-based facilities, and nearly 4,000 public facilities³. The NHIF has an extensive network of both public and private providers, who are accredited to provide the stipulated quality of services by tracking the policy beneficiaries through a mobile platform. The inclusion criteria for the policy are pregnant mothers above 18 years of age, with a proof of national identity (ID)⁴, and a record of having attended antenatal care (ANC); pregnant mothers who are under 18 years are included in the policy upon showing the guardian's ID card and ANC record; and pregnant women without national ID or guardian's proof of identity and are registered using ANC record.

The policy and other reforms such as the development of the Kenya Quality Model for Health (KQMH) (Kenya Ministry of Medical Services, 2012, Kenya Ministry of Medical Services and Kenya Ministry of Public Health and Sanitation, 2011), the development of a health financing strategy, and transforming the NHIF to National Health Insurance (NHI) (Kenya Ministry of Medical Services, 2012) are part of steps for ensuring the health system achieve UHC. Section 2.2 (in Chapter 2) of this thesis provides a comparison of the FM policy in Kenya to that of different countries (as guided by the integrative review).

³ Reference obtained from the NHIF Annual reports and financial statements and NHIF management reports which I obtained while conducting an assignment for the World Bank called *Evaluating the financial sustainability assessment of the NHIF special program*

⁴ A national ID is an important document for any Kenyan citizen above 18 years old. It is essential in the socio-economic, security, and political development of the country as it facilitates the identification of citizens, voting process, and promotion of economic activities.

1.4. Organisation of the study

This thesis is structured in nine chapters as follows:

Chapter 1: Introduction. This chapter introduces the thesis, provides an overview of the topic and presents the research questions. The chapter further provides the background information about Kenya (the country where the study has been conducted) as well as the progress the FM policies have undergone to date.

Chapter 2: Integrative review. The chapter begins by providing the methodology of the integrative review of the global FM policies and follows by identifying the approaches to implementation of the policies. It then goes further by highlighting the implementation gaps the quality and cost implications of the policies and concludes by identifying the research gaps which underpins this study.

Chapter 3: Methodology and methods. The chapter is presented in two sections. Section one focusses on the philosophical foundations and seeks to substantiate why the pragmatic approach was selected to underpin the embedded case study design. Section two explains the mixed methods approaches utilised in the design, data collection, sampling, and analysis utilised in the study.

Chapter 4: Findings – An exploration of the policy process and implementation of the FM policy in Kenya. The chapter starts with a brief description of the background of the current policy and then explores its process of development. It then focuses on the implementation gaps and concludes with how county officials and HCWs at the meso level are shaping the process based on their overall understanding and practice.

Chapter 5: Findings – Effects of the policy on the quality of maternal care: perspectives of the mothers, HCWs, County officials and the National Stakeholders. The chapter presents the findings on the effects of the FM policy on aspects of quality of maternal care by considering the views of key informants at the national level, county officials, HCWs, and mothers. It triangulates the quality of maternal care into two process aspect of quality: provision of care and experience of care.

Chapter 6: Findings – Effects of the policy on the cost of free maternal care: perspectives of the mothers, HCWs, County officials and the National Stakeholders. This chapter outlines the cost implications of the policy to the mothers (OOP payments), providers and facilities (cost implications borne by the provider), and the government (cost-benefit consideration and sustainability of the program).

Chapter 7: Findings – Potential impact of the free maternity policy: a methodological approach to evaluating impact. This chapter presents a methodological approach to evaluating the impact of the FM policy using three outcomes: early neonatal deaths, neonatal deaths, and delivery through caesarean section (CS) as quality outcomes.

Chapter 8: Discussion of results, research and policy implications, recommendations, and conclusion. This chapter discusses the result findings and follows it by presenting both the research and policy implications. It then provides recommendations for further research and concludes the thesis.

1.5. Chapter summary

This chapter introduced the thesis. It provides the background to the study, the research purpose and questions, and the motivation for the utility of mixed methods approach in an embedded case study. It concludes by describing the organisation of the study to orientate the reader.

Chapter 2 — Integrative Review

This chapter presents an integrative review (IR) of the approaches to the implementation of FM policy in different countries. It then goes further to synthesise the implementation gaps of the policies, and the related quality and cost implications. It concludes by identifying the research gaps which underpins this study. The chapter begins by describing IR design, and why it was appropriate for the study, then delves into the search strategy to identify relevant literature on implementation of FM policies, quality of maternal care and the cost implication. This IR has been submitted for publication.

2.1. Review methodology

2.1.1. The review designs

I utilised IR because it allowed for the synthesis of several streams of literature (Whittemore and Knaf, 2005, Yorks, 2008). The method was useful for reviewing, critiquing, and synthesising evidence from research in an integrative way that allowed new perspectives and gaps to be drawn (Christmals and Gross, 2017, Rosa et al., 2017). In particular, the IR included a wide range of literature from several fields of study which were analysed through a multidisciplinary approach. Also, it focused on peer-reviewed literature, models, frameworks, policy documents on FM and/or free delivery policies that reported on the approaches of implementation of the FM policy, elements of quality of maternal care and cost implications.

2.1.2. Search methods

I conducted the initial IR search in between March and April 2018 in databases and sources, as shown in *Table 2.1*. The search terms I utilised were alternatives (based on the databases); which were based on key MeSH words 'user fees,' 'free,' 'birth and baby care,' 'quality, cost, and UHC'; and were integrated using Boolean operators (OR, and AND) to limit and expand the search as appropriate (OR within each set and AND linking different sets) as shown in *Table 2.2*. The terms were adapted and modified from the scoping review of literature on user fees by Ridde and Morestin (2010) and a literature review of the disruptive effects of free policy by Ridde et al. (2012c). The two studies had been imperative in filling the gap on FM policies; but this IR was to further fill the gaps on the FM policies by specifically focusing on the designs, implementation gaps and the quality and cost of care and outcomes of FM policies, a combination which had not been done prior. The IR was limited to studies conducted in English. It reported on the concepts of policy design, and implementation of FM policies in addition to the quality and cost of maternal care and that were available up to March 2018.

The starting date was intentionally left open to capture elements of FM policies that existed since time immemorial. In the next step, all titles were screened for eligibility. Secondly, studies that met eligibility had their abstract further screened for eligibility after which full texts were screened for those studies that meet the eligibility criteria. The final review included experimental studies, quantitative, qualitative, and mixed-method studies done in single or multiple countries. Some of the excluded studies had no relevance to healthcare, had a poor methodological approach, and were talking about FM policy but not the quality or cost elements. The search revealed 6,047 articles and an addition of 239 identified through the web, hand searches and personal communications. After filtering for duplicates, 5,144 articles were considered for review. The articles then had their titles and abstracts screened for eligibility for which 43 articles met all the criteria and thus, included in the final stage of data abstraction. *Figure 2.1* summarises the selection of studies for review. An updated search was carried out at the writing of the discussion of this thesis (summer 2020), and it brought out 17 articles, which were used to enhance the discussion section rather than the IR section. *Appendix 1* provides an example of a literature search.

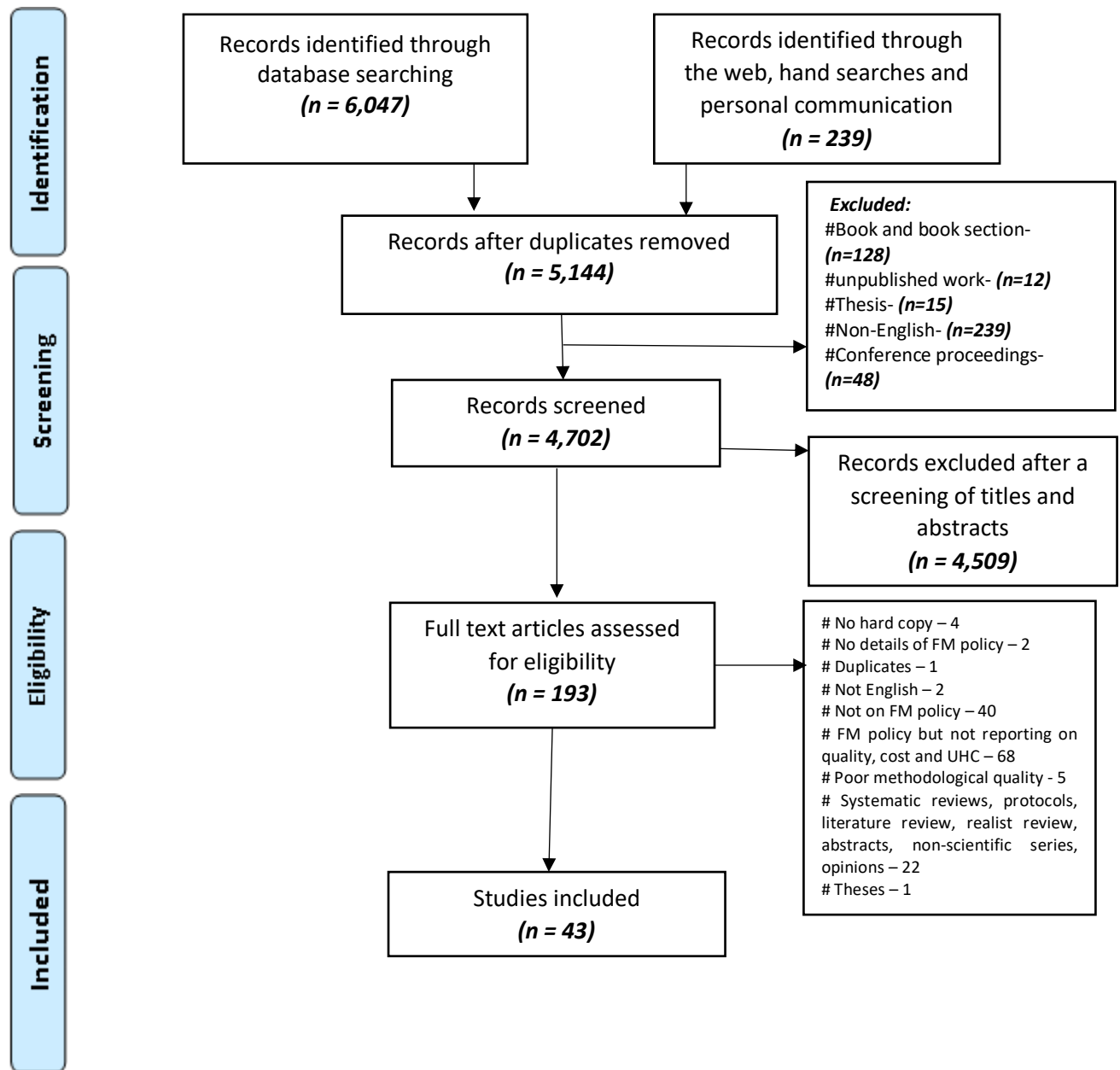
Table 2.1: Source of evidence

<i>e-journal services and electronic databases</i>	Applied social sciences index and abstracts, EBSCO Host (Academic search complete, Cumulative Index to Nursing and Allied health Literature (CINAHL), Econ Lit, MEDLINE, and PsycINFO), ArticleFirst, Cochrane Central Registry of Controlled Trials (Cochrane Library, Wiley Online Library), Emerald Insight, JSTOR, PUBMED, OVID (Social Policy and Practice), Springer Link (Springer Reference), Google scholar, and Electronic Collections Online.
<i>Health Sources</i>	International Bibliography of the Social Sciences, SAGE journals Online, Nursing/Academic Edition, Latin-American and Caribbean Centre on Health Sciences Information (LILACS), African Journals Online, SCOPUS, Science Direct, Web of Science (Web of Knowledge & Science Citation Index)
<i>Websites on health financing</i>	World Health Organisation, The World Bank, Mednar, Intute, Nexis UK, Qual page, Scirus, WorldWideScience.org, and Eldis
<i>Grey Literature</i>	SIGLE database

Table 2.2: Search words

Keywords	Alternatives (based on the databases)
User fees	("User fee*" OR "user charg*" OR "cost shar*" OR "cost recover*" OR "User Fee* Policy" OR "User Policy")) AND
Free	("Free polic*" OR "Free policy" OR "Free Health*" OR "Free Car*" OR "free care" OR "Discontin*" OR "Abol*" OR "exempt*" OR "waiv*" OR "Remov*" OR "end*" OR "Policy Chang*" OR "Chang*" OR "implement*" OR "Policy implement*")) AND
Birth and baby care	("matern*" OR "deliver*" OR "Mother car*" OR "baby car*" OR "infant car*" OR "matern* car*" OR "deliver* car*" OR "giv* birth" OR "labour" OR labor OR mother*" OR "Childbirth*" OR "birth" OR "parturit*" OR "accouch*")) AND
Quality, cost, UHC	("Quality" OR "quality car*" OR "health care quality" OR "quality outcome*" OR "cost*" OR "Expenditure" OR "Economic*" OR "Financ*" OR "effective Cover*" OR "Universal Care" OR "Universal Health Cover*" OR "Universal Health")

Figure 2.1: Flow chart of the selection of studies for review



2.1.3. Quality appraisal

In this IR, I did not do meta-analysis because there was much heterogeneity in the studies. I applied a mix of validated critical quality appraisal techniques (Wechkunanukul et al., 2017). First, I applied the checklist for writing an integrative review (Torraco, 2005) and utilised the Preferred Reporting Item for Systematic Reviews and Meta-Analysis (PRISMA) checklist (Figure 2.1) for reporting systematic reviews (Moher et al., 2015). Secondly, I did a quality appraisal of the individual study designs by using the Critical Appraisal Skills Programme (CASP) tools (Critical Appraisal Skills Programme, 2017a, b, c, d, e, f, g, h). All the articles were, through a sampling technique, evaluated by my first supervisor at

the last stage of quality appraisal and where there was disagreement, a resolution was made through consultation. The quality scores of the individual studies are reported in *Appendix 2, part 1*. The quality appraisal of 21 studies included in the review was rated as high because they reported sufficient details about the free maternity policy and highlighted robust methodologies with findings according to the appraisal tools used (Ameur et al., 2012, Arsenault et al., 2013, Boukhalfa et al., 2016, Chankham et al., 2017, Delamou et al., 2015, Ensor et al., 2017, Ganaba et al., 2016, Ganle et al., 2014, Masiye et al., 2010, Nimpagaritse and Bertone, 2011, Ravit et al., 2015, Ridde et al., 2015, Ridde et al., 2013, Ridde et al., 2012b, Steinhardt et al., 2011, Witter et al., 2007, Witter et al., 2016, Witter et al., 2010, Witter et al., 2017, Witter et al., 2011, Witter et al., 2012); 13 studies were rated medium (Asante, 2007, Bosu et al., 2007, Chama-Chiliba and Koch, 2014, Chama-Chiliba and Koch, 2016, Dalinjong et al., 2017, Koroma et al., 2017, Kruk et al., 2008, Lange et al., 2016, Nabyonga-Orem et al., 2008, Philibert et al., 2014, Ridde and Diarra, 2009, Ridde et al., 2012a, The World Bank, 2013); and six studies were rated low because they either did not report their study design or their description of the method section was not sufficient but captured enough information on the FM policy (Edu et al., 2017, Kenya Ministry of Health, 2015, Khan, 2005, Nahar and Costello, 1998, Sidze et al., 2015, Vallières et al., 2016). One study did not address the criteria for methodological quality (Luwei et al., 2011).

2.1.4. Data abstraction, analysis and evaluation

There were five steps applied in this review: data reduction, display, comparison, concluding, and verification (Torraco, 2005, Wechkunanukul et al., 2017, Whittemore and Knafl, 2005). Data reduction was classified by the subgroup classification of studies based on research design. Data were abstracted and entered into Microsoft Excel®, from where the synthesis of the text was done through thematic analysis using variables of interest and conclusions drawn.

2.1.5. Description of the studies

Appendix 2, part 1 shows an overview of all the papers included in the review. In terms of the study methods and approaches, three of the reviewed studies were fully qualitative in nature (Ganle et al., 2014, Lange et al., 2016, Witter et al., 2007); three econometrics studies (Chama-Chiliba and Koch, 2014, Chama-Chiliba and Koch, 2016, Ensor et al., 2017); nineteen quantitative studies (Ameur et al., 2012, Arsenault et al., 2013, Asante, 2007, Bennis and De Brouwere, 2012, Bosu et al., 2007, Boukhalfa et al., 2016, Chankham et al., 2017, Delamou et al., 2015, Khan, 2005, Koroma et al., 2017, Kruk et al., 2008, Luwei et al., 2011, Nahar and Costello, 1998, Philibert et al., 2014, Ravit et al., 2015, Ridde et al., 2015, Ridde et al., 2012a, The World Bank, 2013, Vallières et al., 2016); and eighteen mixed

methods studies (Dalinjong et al., 2017, Edu et al., 2017, Ganaba et al., 2016, Kenya Ministry of Health, 2015, Masiye et al., 2010, Nabyonga-Orem et al., 2008, Nimpagaritse and Bertone, 2011, Ridde and Diarra, 2009, Ridde et al., 2013, Ridde et al., 2012b, Sidze et al., 2015, Steinhardt et al., 2011, Witter et al., 2016, Witter et al., 2010, Witter et al., 2013, Witter et al., 2017, Witter et al., 2011, Witter et al., 2012).

In terms of the study design, two studies did not outrightly indicate the study design but indicated their study methods (as discussed in the paragraph above) (Luwei et al., 2011, Sidze et al., 2015); eleven of the reviewed literature had utilised a cross-sectional design (Asante, 2007, Bennis and De Brouwere, 2012, Boukhalifa et al., 2016, Chankham et al., 2017, Khan, 2005, Koroma et al., 2017, Nahar and Costello, 1998, Ridde et al., 2015, Ridde et al., 2012a, The World Bank, 2013, Vallières et al., 2016); four case control designs (Ameur et al., 2012, Arsenault et al., 2013, Philibert et al., 2014, Ravit et al., 2015); one cohort study (Nabyonga-Orem et al., 2008), and seven case studies (Ganaba et al., 2016, Masiye et al., 2010, Nimpagaritse and Bertone, 2011, Philibert et al., 2014, Ridde et al., 2012b, Witter et al., 2016, Witter et al., 2017). Other study designs indicated in the papers were: one interrupted time series design (Chama-Chiliba and Koch, 2016); 3 quasi-experimental design studies (Chama-Chiliba and Koch, 2014, Ensor et al., 2017, Philibert et al., 2014); three studies had components of before and after intervention study design (Bosu et al., 2007, Masiye et al., 2010, Witter et al., 2011); one descriptive convergent parallel mixed method design (Dalinjong et al., 2017); and one mixed method sequential explanatory design (Ridde et al., 2013).

The other studies were evaluations studies that applied varied evaluation approaches (and not one specific design). For instance, three studies used realist approaches (Ganle et al., 2014, Witter et al., 2016, Witter et al., 2017); one descriptive and analytical implementation evaluation (Ridde et al., 2013) and another policy implementation evaluation (Witter et al., 2012), two process evaluations with varied designs (Ridde and Diarra, 2009, Witter et al., 2013), one monitoring and evaluation using mixed methods (Kenya Ministry of Health, 2015) and one monitoring and evaluation using a before and after study design (Witter et al., 2011). Others are one outcome evaluation (Steinhardt et al., 2011), one policy baseline evaluation (Witter et al., 2007), and another policy evaluation (Witter et al., 2010).

A closer analysis of the articles revealed that 3 articles were multi-country studies, with two of them reporting on both low-income countries (LIC) and lower-middle-income countries (LMIC) countries (Witter et al., 2016, Witter et al., 2017) and one being a traversal analysis of entirely LICs (Ridde et al., 2012b). Twenty one articles that evaluated singular counties were on LIC countries (Ameur et al., 2012,

Arsenault et al., 2013, Delamou et al., 2015, Ensor et al., 2017, Ganaba et al., 2016, Koroma et al., 2017, Kruk et al., 2008, Lange et al., 2016, Luwei et al., 2011, Nabyonga-Orem et al., 2008, Nimpagaritse and Bertone, 2011, Philibert et al., 2014, Ravit et al., 2015, Ridde et al., 2015, Ridde and Diarra, 2009, Ridde et al., 2012a, Ridde et al., 2013, Steinhardt et al., 2011, Vallières et al., 2016, Witter et al., 2010, Witter et al., 2011), and 19 on LMIC countries (Asante, 2007, Bennis and De Brouwere, 2012, Bosu et al., 2007, Boukhalfa et al., 2016, Chama-Chiliba and Koch, 2014, Chama-Chiliba and Koch, 2016, Chankham et al., 2017, Dalinjong et al., 2017, Edu et al., 2017, Ganle et al., 2014, Kenya Ministry of Health, 2015, Khan, 2005, Masiye et al., 2010, Nahar and Costello, 1998, Sidze et al., 2015, The World Bank, 2013, Witter et al., 2007, Witter et al., 2013, Witter et al., 2012). No study from HIC countries met the criteria that emerged.

2.1.6. Definitions and frameworks of analysis

Given the difficulty in analysing and comparing heterogeneous studies, it was useful to apply a policy framework to examine the studies. The framework facilitated comparison and analysis purposes. Firstly, the design and implementation elements were analysed to reflect the approaches of FM policies, timings of introduction, benefits packages and services akin to an analysis by Richard et al. (2013) on fee exemptions in SSA; in addition to implementation challenges emerging from the policies. Secondly, quality cannot be measured by itself (Kelley and Hurst, 2006) and Donabedian broadly classifies it as structure, process, and outcome dimensions (Donabedian, 1988, 1990) which can be identified, measured, and attributed to healthcare. Structure indicators represent pointers which are inputs to or characteristics of health; process indicators represent gauges to either appropriate or inappropriate care in a targeted population which are 'consistent with current professional knowledge'; and outcome indicators are the measures of both improved or deteriorated health and is attributed to medical care (Kelley and Hurst, 2006, p10). In this review, I broadly defined the QoC using the quality of maternal and newborn healthcare framework as proposed by the World Health Organisation (2016). The framework elucidates eight domains of quality that targets mothers and their newborns in the health system (hospitals), making it likely to achieve the desired individual and facility-level outcome. The approach gives two quality improvement standards: provision and experience of care. Provision of care supports evidence-based practices for routine care and management of complications, actionable information system, and functional referral system, while the experience of care supports effective communication, respect and preservation of dignity, and emotional support. There are two cross-cutting areas of quality, namely: competent, motivated human resources and essential physical resources available. Finally, since increased cost of care is repeatedly attributed to the cause of reduced use of services (Mekonnen and Mekonnen, 2003), in

this review, costs elements are defined thematically from the perspective of the mothers, provider and the policymakers. A summary of the analysis framework is as shown in *Figure 2.2*.

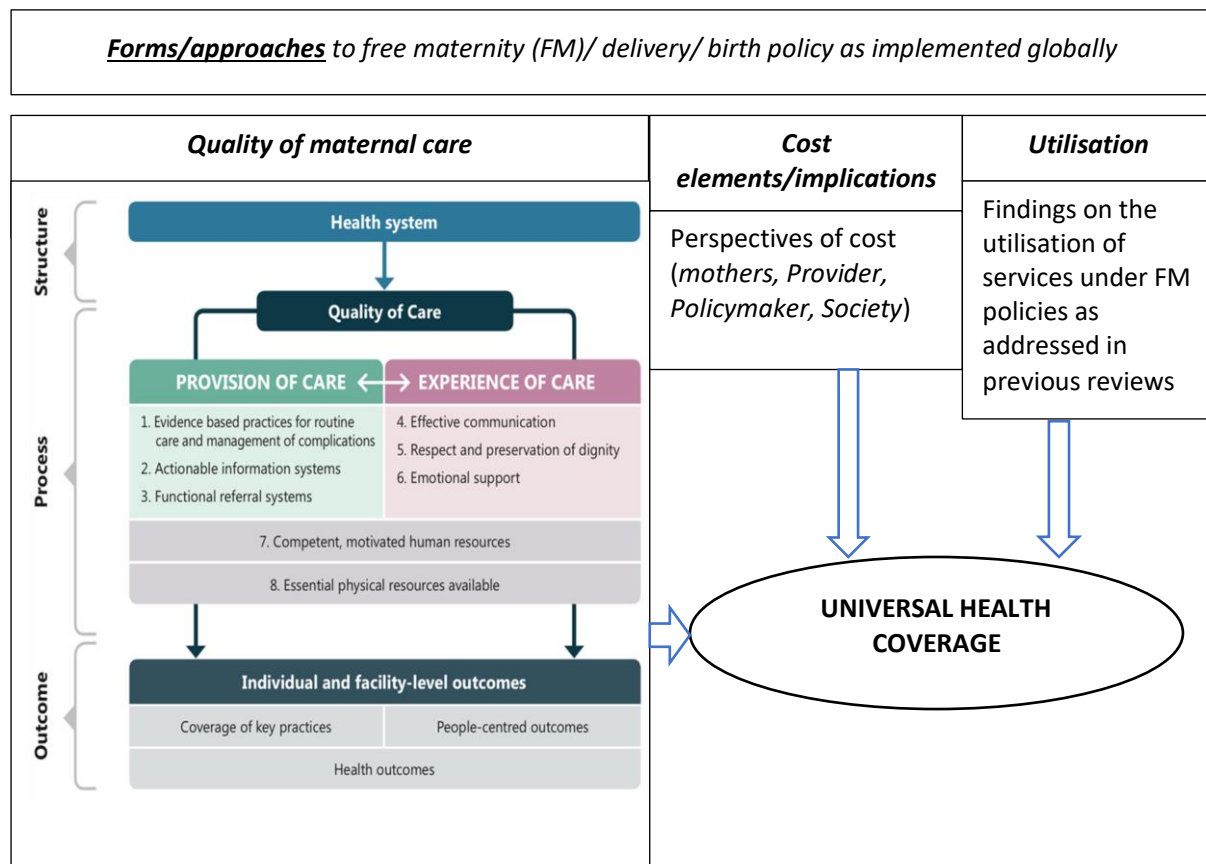


Figure 2.2: Analysis framework (source: Author modified from the literature review and Richard et al. (2013) and the World Health Organisation (2016))

2.2. Analysis of results

2.2.1. The design components and implementation gaps of FM policy by different countries

This section reports on the forms and approaches of the FM policies as implemented by different countries; additionally, it presents their policy design and the implementation challenges.

2.2.1.1. Forms of free maternity policy by different countries

Overall, 21 countries classified as either LICs or LMICs were implementing 12 different forms of the FM policies, as shown in *Figure 2.3*. Three countries, Kenya (Kenya Ministry of Health, 2015, Sidze et al., 2015), Bangladesh (Khan, 2005, Nahar and Costello, 1998), and Lao PDR (Chankham et al., 2017, The World Bank, 2013) (all LMICs) were implementing free maternity services right from antenatal care, through delivery, to postnatal care. Two countries, Zambia (Chama-Chiliba and Koch, 2014,

Chama-Chiliba and Koch, 2016, Masiye et al., 2010) and Uganda (Nabyonga-Orem et al., 2008), were implementing the FM service as part of the user fee removal for primary healthcare. One country, Sierra Leone (Koroma et al., 2017, Vallières et al., 2016) was implementing a Free Healthcare Initiative (FHCI) for both pregnant and lactating mothers and under-fives. Five countries, Benin (Lange et al., 2016, Ridde et al., 2012b, Witter et al., 2016, Witter et al., 2017), Mali (Arsenault et al., 2013, Ridde et al., 2012b, Witter et al., 2016, Witter et al., 2017), Guinea (Delamou et al., 2015), Sudan (Witter et al., 2012), and Niger (Ridde and Diarra, 2009, Ridde et al., 2012b) were implementing policies that were touching on the free caesarean section. Sudan's and Niger's CS policies were gelled to form part of other policies. For instance, Sudan's free CS policy was being implemented concomitantly with the free curative service for the under-fives while Niger's policy was coupled with the free consultation services for the under-fives. One country, Burkina Faso (Ameur et al., 2012, Ganaba et al., 2016, Philibert et al., 2014, Ridde et al., 2015, Ridde et al., 2012a, Ridde et al., 2013, Ridde et al., 2012b, Witter et al., 2016, Witter et al., 2017) was implementing subsidy policy where 80% of the cost was catered for by the government and women paid 20%. In Cross River State in Nigeria (Edu et al., 2017), FM services were provided under the cost removal policy (PROJECT HOPE); while in Ghana (Asante, 2007, Bosu et al., 2007, Dalinjong et al., 2017, Ganle et al., 2014, Witter et al., 2007, Witter et al., 2013), FM services were in the form of Free delivery exemption policy. Two countries, Morocco (Bennis and De Brouwere, 2012, Boukhalfa et al., 2016, Witter et al., 2016, Witter et al., 2017) and Senegal (Witter et al., 2010) implemented Free delivery and caesarean policy; while Nepal (Ensor et al., 2017, Witter et al., 2011) implemented a Universal Free delivery service incentive schemes. Afghanistan instituted a nationwide ban on user fees at the primary care level based on the results of the pilot resulting three schemes: free services, community health fund and standard user fee schemes (Steinhardt et al., 2011) while Burundi implemented a Free service for under 5's and women giving birth (Nimpagaritse and Bertone, 2011). One country, Ethiopia (Luwei et al., 2011) was implementing a standardised list of exempted services. Though not stated clearly in the reviewed paper, Tanzania declared the maternal and childbirth services free at the point of use in government facilities (Kruk et al., 2008).

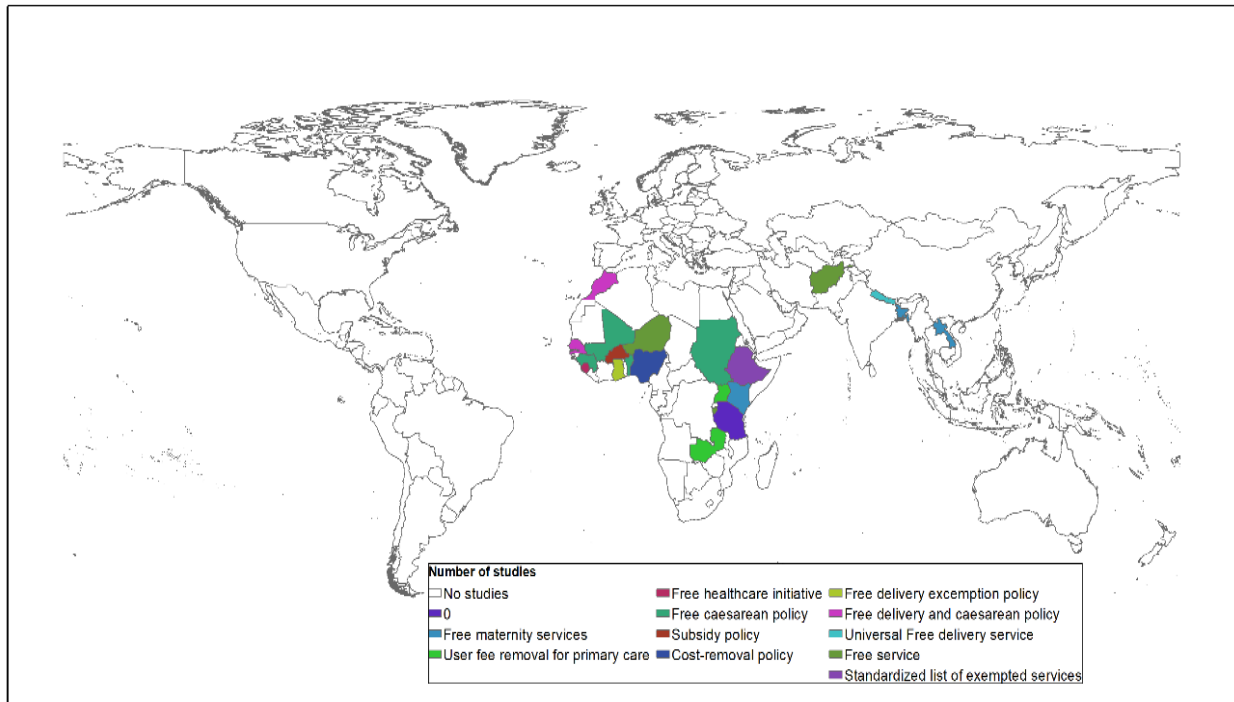


Figure 2.3: Forms of FM policies implemented by different countries (Source: Mapped from the IR)

2.2.1.2. Timings of initiation of the policies

The policies evaluated were introduced between 1992 and 2013 as shown in *Figure 2.4* (additional papers that were searched during the writing of the discussion section of this thesis revealed that amendments to the Kenyan FM policy was introduced after 2013 and Burkina Faso's policy was modified later). The policies were either implemented in phases for different countries (each targeting a specific component of maternal care or in different regions of the country) or were fully implemented countrywide. For example, Mali's policy started by implementing referral evacuation system in 2002, followed by the full exemption of CS costs in 2005, and addition of antimalarials to the package in 2007 (Arsenault et al., 2013, Ridde et al., 2012b). Nepal's had three initiatives of the maternal incentive scheme, reimbursement to facilities especially in poor districts, and universal delivery scheme each implemented at a different time (Ensor et al., 2017); while Niger's policy started as a target for CS and consultations and then free NGO intervention services were trialled in different districts and finally in the whole country (Ridde and Diarra, 2009, Ridde et al., 2012b). Lao PDRs and Afghanistan policies were first piloted before being fully implemented nationwide (Chankham et al., 2017, Steinhardt et al., 2011, The World Bank, 2013). Some timings were based on fulfilling election promises, such as in Nigeria (Edu et al., 2017) and Burundi (Nimpagaritse and Bertone, 2011).

1992	Bangladesh						
2001	Uganda						
2002	Mali (Referral Evacuation system)						
2003	Ghana (phase 1)						
2005	Ghana (Phase 2)	Senegal (Phase 1)	Mali (exemption for CS)	Niger (CS and consultation for U5s)	Ethiopia	Afghanistan (Pilot)	Nepal (maternity incentive scheme)
2006	Senegal (Phase 2)	Zambia	Burundi	Burkina Faso (CS)	Niger (2 district intervention - NGO)	Nepal (Reimbursement for facility access)	
2007	Niger (Nationwide intervention - NGO)	Mali (Anti-malarial added)	Burkina Faso (Delivery)				
2008	Afghanistan (Banned user fees)	Sudan	Ghana (Phase 2)				
2009	Nepal (Universal free delivery)	Benin	Morocco	Nigeria (Cross River State)	Lao PDR (Pilot)		
2010	Sierra Leone	Guinea					
2012	Lao PDR (full implementation)						
2013	Kenya (First FM policy)						

Figure 2.4: Policy introduction timings (Source: Review of IR literature)

Note: The different colours are country specific

2.2.1.3. Benefits package and services

Benefits package and the services include the elements of the target group, the region, implementing facilities and funding (*Table 2.3*); services (*Table 2.4*); and additional costs catered for in the policy (*Table 2.5*). All the policies in the 21 countries reviewed were targeting pregnant women. Four of the countries (Afghanistan, Ethiopia, Uganda, Zambia) had policies that were the whole population inclusive, particularly focussing on primary health care, both curative and delivery services. Thirteen of the countries policies has a component that included either newborn or children under five years (*Table 2.3*). Seventeen of the countries applied their policies nationwide and others such as Zambia (functioning in 54 Rural districts), Nigeria (in specific regions /States), Senegal (excluding capital Dakar), and Bangladesh (not clearly stated in the paper). All of the policies were being implemented in public facilities (either primary healthcare or accredited hospital) and only six touching on the private sector facilities (either for-profit or non-profit). Except for Bangladesh – which was not clearly stated in the reviewed papers – all the other policies were funded by the government, but thirteen were with the support of partners (*Table 2.3*).

A majority of the countries were implementing policies that cut across the continuum of maternal care (15 covering ANC; 18 covering normal delivery; 14 covering CS; and 9 covering PNC services). Some countries added additional incentives that were touching on additional care to ameliorate the mothers from the negative cost of seeking care such as consultations, complications, post-abortion care and immunisation (*Table 2.4*). Nearly all of the policies (eighteen) were covering hospital delivery costs (either medical or surgical depending on the type of the policy) through reimbursement to facilities after offering services and the cost of certain medication (fourteen). Other policies were covering additional complementary costs such as transport to the facilities (five); onward referral (six); laboratory tests (eight); and radiology (four) (*Table 2.5*). *Appendix 2, part 2* maps the intended FM policy objectives of the different policies and their successes. All the policies had one unique purpose in common: that of reducing maternal mortality by promoting access to SBA and reducing the financial barriers linked to the utilisation of maternal services. However, some such as Sudan's policy was introduced to ameliorate the negative effects of the user fees policies from the structural adjustment era meant for emergency and other health services (Witter et al., 2012). Others such as Afghanistan (Steinhardt et al., 2011) and Lao PDR's (Chankham et al., 2017) policy were implemented based on the justification that the pilot had shown an improvement in access to health services. Interestingly, some policy formulation processes (such as Burundi) were conducted in a rush way with unclear objectives particularly of equity and thus led to non-achievement of goals (MDGs) (Nimpagaritse and Bertone, 2011).

Table 2.3: Target groups, implementing facilities and funder for the policies

Country	Target group	Region	Facilities	Funding
Afghanistan	All population	Nationwide after pilot	Primary care level facilities	NGOs (10 facilities) and Government (3 facilities)
Bangladesh	Pregnant women (??)	??	Public facilities	??
Benin	Pregnant women (who have complications)	Nationwide	Public and private hospitals but not in private for-profit clinics	Government
Burkina Faso	All pregnant women; and newborn with complications	Nationwide	Public and private (non-profit)	Government and some Development partners
Burundi	Pregnant women and newborn	Nationwide	Public and private (non-profit)	Government and Development partners
Ethiopia	All population accessing primary healthcare (including pregnant women)	Nationwide	Primary healthcare units (health centres and health posts)	Government
Ghana	Pregnant women and newborn	Nationwide	Public and private (non-profit)	Government
Guinea	Pregnant women	Nationwide	Public facilities	Government and Development partners
Kenya	Pregnant women	Nationwide	Public facilities	Government and Development partners
Lao PDR	Pregnant women	Nationwide after pilot	Public facilities	Government and Development partners
Mali	Pregnant women (who have complications)	Nationwide	Public facilities	Government and Development partners (Antimalarials)
Morocco	Pregnant women and newborn	Nationwide	Public facilities	Government
Nepal	Pregnant women (and those have maternal complications)	Nationwide	Public and some private facilities that are accredited	Government

Country	Target group	Region	Facilities	Funding
Niger	Pregnant women (who have complications) and newborn	Nationwide	Public facilities	Government and Development partners
Nigeria	Pregnant women and newborn	Specific regions /States	Facilities that are accredited	Government and Development partners (Tulsi Chanri Foundation)
Senegal	Pregnant women	Nationwide (Excluding capital Dakar)	Public facilities	Government
Sierra Leone	Pregnant women and newborn (Lactating mothers with children below five)	Nationwide	Public facilities	Government with other support (??)
Sudan	Pregnant women (Who are accessing CS services) and Under fives	Nationwide	Public facilities (though not fully adapted)	Government and development partners (local health insurances)
Tanzania	Pregnant women and newborn	Nationwide	Primary healthcare units (and some mission hospitals – though not explicitly clear in the paper)	Government and partners (churches)
Uganda	All population accessing primary healthcare (including pregnant women)	Nationwide	Public primary healthcare units	Government
Zambia	All population accessing primary healthcare (including pregnant women)	In 54 Rural districts	Public primary healthcare units	Government and Development partners

Note: ?? – Not clearly stated in the reviewed paper

Source: Author mapped from the IR literature (It is plausible that some components may have been omitted because they were not apparent in the reviewed literature)

Table 2.4: Mapped services for the policy

	Consultation	ANC	Complication in pregnancy	Delivery	Complication in labour	CS	PNC	PNC complication	Post-abortion care	FP	Newborn care	Immunisation
Afghanistan												
Bangladesh												
Benin						& HST +EP		??				
Burkina Faso		FDP	DOC							FDP		
Burundi												
Ethiopia												
Ghana												
Guinea												
Kenya												
Lao PDR												
Mali			DOC									
Morocco	External consultation											
Nepal												
Niger		FDP				& HST+EP				FDP	FDP	
Nigeria												
Senegal						& HST				FDP		
Sierra Leone										FDP		
Sudan				Some facilities								
Tanzania												
Uganda												
Zambia												

Notes: **DOC** – Direct Obstetric complications; **HST** – Hysterectomy; **EP** – Ectopic Pregnancy; **FDP** – Free through different policy; **??** – Not clearly stated in the reviewed paper

Source: Author mapped from the IR literature (It is plausible that some components may have been omitted because they were not apparent in the reviewed literature)

Table 2.5: Mapped additional costs for the policy

	Transport from Home	Referral	Lab tests	Radiology	Drugs	Outpatient costs	Hospital costs (medical and surgical)
Afghanistan							
Bangladesh							Delivery
Benin		Mother	Mother	Mother	Mother		Cs and other surgeries (Hysterectomy and EUP); transfusion and 7 days hospitalisation
Burkina Faso							Hospital cost and medical care (mother and newborn), surgical care (mother)
Burundi							
Ethiopia							Delivery
Ghana							
Guinea							Delivery (Normal and CS)
Kenya			Some				Delivery
Lao PDR							
Mali		Mother	Mother	??	Obstetric drugs only (mother)		Hospitalisation cost and surgical care (mother)
Morocco				Not in the pilot	All drugs		Mother
Nepal							Delivery
Niger							

	Transport from Home	Referral	Lab tests	Radiology	Drugs	Outpatient costs	Hospital costs (medical and surgical)
Nigeria					Some		Delivery
Senegal							Delivery kit
Sierra Leone						For common illnesses	
Sudan							
Tanzania						??	Delivery
Uganda							Delivery
Zambia							

Note: ?? – Not clearly stated in the reviewed paper

Source: Author mapped from the IR literature (It is plausible that some components may have been omitted because they were not apparent in the reviewed literature)

2.2.2. Positive learnings in design and implementation

This section reports on the positive learnings of the designs and implementation of the different policies reviewed.

2.2.2.1. Increased awareness of the policy

In overall, the studies showed an increased awareness of the policy. For instance, a study done in Lao PDR to evaluate the level of knowledge of the mothers concerning the FM policy revealed that women were aware of the policy and that the government had sensitised them enough on it (Chankham et al., 2017). This was because this policy was mainly built on the positive experiences from the pilot that was funded by the Health Services Improvement Project (HSIP) mainly in two districts, and another ongoing Health Equity Funds (HEFs) project which was targeting the poor for free deliveries and other health services (The World Bank, 2013). In an evaluation of four countries policies (Benin, Burkina Faso, Mali, and Morocco), Witter et al., (2017) revealed that there was increased awareness by the health workers on the policy guidelines.

2.2.2.2. Timely reimbursements to facilities and flexibility of use of the funds

In a review of Nepal's policy, staff revealed that the government in Nepal was reimbursing hospitals the cost of free delivery policy appropriately without any delay and was even allowing them the flexibility of using the money based on their proposed needs. This was seen as a potential positive incentive for the staff (Witter et al., 2011).

2.2.2.3. Adequate planning for the policy

There was evidence of adequate planning for the different policies. In the first year of the implementation, the government of Uganda had already formalised the policy by increasing its budget allocation for healthcare to 0.52 USDs per capita in its subsequent year's budgeting process (Nabyonga-Orem et al., 2008). Aside from cushioning the healthcare facilities against loss of resources from user fees charges, it had increased the non-wage allocation of finances to the facilities by 66% for hospitals and 165% for health centres. Nabyonga-Orem et al. (2008) in their longitudinal study of user fees elimination in Uganda, noted that the government instituted a pull system of commodity management, new guidelines for government grants, and improved management of workers' pay to ensure the implementation of the process was successful and efficient without affecting any service delivery. Like Uganda, a grant from the Department for International Development (DfID) for the

Zambian case was being used to purchase more drugs, provide a cushion to the District Health Management Teams (DHMTs) against loss of revenue from the user charges, monitor the progress of the new policy besides conducting mass communication (Masiye et al., 2010). On the other hand, Burkina Faso was involved in a detailed planning process of the national delivery subsidy policy where the government offered 80% reduced fees for complicated deliveries, CSs and neonatal care in all public hospitals. The government used a targeted approach where normal deliveries were covered at 80% reduced fees in health centres, and 60% reduced fees in tertiary hospitals with an additional full exemption of cost for the indigents (Witter et al., 2016). The government through the parliament was involved in passing and approving the policy with mothers co-paying the 20% of the direct costs for neonatal and delivery care in health centres. In Niger, the implementation process took a well-structured top-down management approach which was effective in supporting medical evacuation, communication of the policy, and provision of adequate incentive for the health workers (Ridde and Diarra, 2009).

2.2.3. Gaps in the formulation and implementation

This section reports on the gaps and challenges that exist in the formulation and implementation of the FM policies reviewed.

2.2.3.1. *Difference in design and the implementation*

In overall, there was a difference in the implementation of the planned schedule of benefits and services, and the understanding of the policy. An analysis of the Senegalese policy showed that there was a difference in the costing done at the design phase and the cost of the operations during implementation (Witter et al., 2010). The reimbursements to facilities at the implementation phase were more than what was costed. In essence, the differences in the costs were attributed to inadequate planning and allocation of resources. The findings are similar to the Kenyan FM policy, where despite having a uniform circular highlighting the services under the FMS, the key informant reported that there was a different understanding of the policy by the different implementers (Kenya Ministry of Health, 2015). In Sudan, different national stakeholders had a different interpretation of the package and the services covered thus what was on the paper was different to what was being practised at different levels (Witter et al., 2012). In the evaluation of the four countries (Benin, Burkina Faso, Mali, and Morocco) policy, Witter et al. (2016) found out that there were no written specifications concerning the policy and that the effectiveness of the policy at the public facilities was undermined because there were different modifications and interpretations as there was no clear guideline on the same. Similarly, there were no written specifications of the policy in Sudan following

its implementation, thus resulted in modifications at the facility level, altering the efficiency of delivery of service (Witter et al., 2012). In the transversal analysis of the six West African exemption policies, Ridde et al. (2012b) argue that FM policies in the countries are fraught with implementation challenges of financing, reimbursement complexities, and lack of implementation guide. In Nepal's policy review, there were challenges such as understaffing and loss of revenues that they earned before the policy from cost-sharing fees; hence, resulted in the health workers charging the patients some covert fees (Witter et al., 2011).

2.2.3.2. Inadequate monitoring and evaluation; and supportive supervision

The evidence pointed to a weak or inadequate monitoring and evaluation, and supportive supervision. While it is not clear from the two reports by Nahar and Costello (1998) and Khan (2005) on the how the government of Bangladesh coordinated the implementation of the FMS with the health facilities, the authors argued for a rectification of the payment systems, and the monitoring and evaluation by setting official realistic payment schemes based on the assessment of the level of poverty. Of importance is to engage the hospital administrators in the payment conversation because they are the implementers of the policy at the meso level. The evaluation of the Kenyan policy was also silent on monitoring the aspects of quality and the supervision of the outcomes of interests (Kenya Ministry of Health, 2015). A case-control study by Ameur et al. (2012) sought to evaluate the need for careful implementation by comparing the medical expenses in two locations where the government was providing the 80% subsidy policy with an area where an NGO HELP was helping the patients meet the further 20%. The study showed that the implementation gaps could be reduced by strengthening the monitoring system. In Sudan, there was a fragmented method of monitoring and evaluation as evidenced by different health facilities keeping information on medication and drugs and not the financial data. It was due to poor supervision on the budget at the local level with coupled with a lack of transparency on the allocation of funds (Witter et al., 2012).

2.2.3.3. Poor coordination and unpredictability in resources

There was some evidence to suggest poor coordination of the implementation and unpredictability in resources. For example, in Senegal the reimbursements were poor, particularly for lower-level hospitals (Witter et al., 2010). Kenya's policy also had the issue of poorly coordinated reimbursements which needed proper functioning with other county officials and stakeholders (Kenya Ministry of Health, 2015). In Niger, while bonuses to the health workers were attractive, they had perverse effects, and there was a lack of involvement of the community management committees' hence poor support of the system. Coordination of the free services was also reported as a challenge, particularly

in different levels of the health system (Ridde and Diarra, 2009). In Sudan, there lack of transparency in the allocation of the funds to the facilities as the resources were both unpredictable and inadequate (Witter et al., 2012).

2.2.3.4. Duplication of services

Some evidence suggests that some governments were duplicating policies. For instance, in the initial comprehensive review of the implementation process of the maternity services that was done two years after the implementation of the FM services in Kenya, it was shown that the government was implementing two similar concepts (OBA and fixed reimbursements by the NHIF) in tandem. This was viewed as duplication, particularly in reimbursements which brought about complexity in costing the FM approach (Kenya Ministry of Health, 2015). In Niger, the same implementation process was seen as a parallel system to the previous government supported Bamako Initiative resulting in issues of double payments (Ridde and Diarra, 2009).

2.2.4. Quality of maternal care

This section reports on the quality of maternal care using the WHO proposed framework (*Figure 2.2*) from the perspective of the managers, service providers, and users. The elements reported are provision and experience of care.

2.2.4.1. Provision of care

This sub-section starts by presenting analysis of data from the three areas of provision of care: evidence-based practices for routine care and management of complications, actionable information systems and functional referral system.

Evidence-based practices for routine care and management of complications

Eight studies reviewed had positive, evidence-based practices for routine care and management of complication with the FM Policy (Bosu et al., 2007, Delamou et al., 2015, Edu et al., 2017, Kenya Ministry of Health, 2015, Koroma et al., 2017, Sidze et al., 2015, Steinhardt et al., 2011, Vallières et al., 2016, Witter et al., 2016), seven studies had contrary evidence (Ganaba et al., 2016, Koroma et al., 2017, Lange et al., 2016, Sidze et al., 2015, Witter et al., 2007, Witter et al., 2016, Witter et al., 2012), while three showed no change after implementation of FM policy (Chama-Chiliba and Koch, 2016, Kenya Ministry of Health, 2015, Luwei et al., 2011).

For instance, the authors linked the policies to improved perception of QoC index by hospitals (Steinhardt et al., 2011) and mothers (Koroma et al., 2017). FM policies have been linked with an increase in the number of ANC visits (Kenya Ministry of Health, 2015), improved screening for vital signs such as weight, foetal movements (Koroma et al., 2017), measurements of BP (Koroma et al., 2017, Sidze et al., 2015), screening of urine and blood, and maternal immunisation for tetanus at ANC (Sidze et al., 2015). Equally, they were linked with increased immunisation of children (Vallières et al., 2016) and more mothers being counselled on breastfeeding and pregnancy-related complication during ANC (Sidze et al., 2015). Maternal complications were either identified early, referred and hospitalised as appropriate (Delamou et al., 2015, Edu et al., 2017) or declined (Kenya Ministry of Health, 2015) leading to reduced maternal deaths (Bosu et al., 2007, Kenya Ministry of Health, 2015). Importantly, the policies are associated with a reduction in the stillbirths, underweight babies, and preterm babies (Kenya Ministry of Health, 2015). Significantly, there was a reduced transmission of HIV at birth from mother to child (Kenya Ministry of Health, 2015), and some hospitals had the best technical quality care measured by reduced delays, low omission scores, and low fatality rates for adverse complications (Witter et al., 2016).

In some policies, the HCWs were poorly using a partograph (Witter et al., 2007), others were not adhering to treatment guidelines and procedures (Witter et al., 2012) or were using treatment methods perceived as not sterile (Lange et al., 2016). Still, others had critical omissions in routine procedures (Witter et al., 2016) and even concentrated more on complicated and surgical deliveries than vaginal deliveries (Ganaba et al., 2016). From a hospital perspective, facilities were unable to manage emergencies such as infections, pre-eclampsia, haemorrhage, anaemia, breech birth because they lacked essential lifesaving skills and emergency equipment (Koroma et al., 2017). Others showed increased maternal complications such as obstructed labour (Sidze et al., 2015) and increased burden of maternal and neonatal near misses (Witter et al., 2016).

Luwei et al. (2011) revealed that there was little significant difference between facilities providing free care and facilities charging a fee on the standard parameters of quality such as the use of a partograph to monitor labour, availability of oxytocin, managing direct obstetric complications, and the availability of new-born resuscitation procedures. There was limited evidence of better patient safety measures and of assuring/monitoring adherence to expected care standards (Kenya Ministry of Health, 2015). In Zambia, a before and after analysis of the free primary care demonstrated that there was little or insignificant difference in uptake of ANC despite the likelihood of good quality of ANC influencing the use of a health facility for delivery (Chama-Chiliba and Koch, 2016).

Actionable information systems

Two studies reported on information system (Chankham et al., 2017, Ridde and Diarra, 2009). Ridde and Diarra (2009) in their process evaluation of FM services in Niger highlighted that the new policy introduced a parallel operating system to the already existing system which meant that the HCWs mainly had to provide care to different groups of patients registered in the free program and the old program resulting to increased workload. Chankham et al. (2017) noted that the provision of information at the health facilities enhanced satisfaction with the quality of service provision.

Functional referral

Nine studies reviewed reported on the element of the referral system relating to FM policies (Delamou et al., 2015, Edu et al., 2017, Ganle et al., 2014, Nimpagaritse and Bertone, 2011, Ridde and Diarra, 2009, Ridde et al., 2012b, Sidze et al., 2015, The World Bank, 2013, Witter et al., 2007). Studies showed that FM policies resulted in proper referral where patients were referred from lower-level to higher-level facilities (Edu et al., 2017, Sidze et al., 2015) which in turn resulted in early detection of complication (Edu et al., 2017). Reimbursement strategies played a role in referral. For instance, hospital reimbursement strategies that were pegged on successful referral helped to improve quality outcomes (Witter et al., 2007). However, reimbursing hospitals based on the number and type of deliveries conducted resulted in some unintended consequences. Some unintended consequence included lower facilities not referring patients for fear of losing revenue as is the case of Ghana (Witter et al., 2007), or HCWs choosing caesarean section over normal birth even if un-warranted for higher revenues as the case in Laos PDR (The World Bank, 2013).

With regards to the implementation of the FM policies, it was evidenced that there was uncoordinated and unreimbursed referral strategies (Witter et al., 2007) and some faced lack of critical staff to handle referred emergencies (Ganle et al., 2014). In some counties such as Guinea, there was a significant decrease in unmet obstetric need after implementation of the policy as hospitals were incentivised to handle complications hence reduce referral (Delamou et al., 2015). By including the transport component to the FM policy, there was improved satisfaction outcomes and satisfaction with the services (Ridde et al., 2012b). However, specific gaps in referral after policy implementation such as inadequate or lack of follow-up to ensure the evacuated mothers received care as intended (Ridde and Diarra, 2009) or in cases where implementation is done rapidly, there was a disruption of referral system (Nimpagaritse and Bertone, 2011).

2.2.4.2. Experience of care

This sub-section presents findings on the experience of care which highlights three main areas of quality: cognition and effective communication, respect and preservation of dignity, and emotional support.

Cognition and effective communication

Three studies highlighted how cognition and effective communication influenced perception or technical elements of quality (Edu et al., 2017, Lange et al., 2016, Witter et al., 2016). How the HCWs communicated to the mothers determined their perception of confidence in handling complications (Edu et al., 2017). The studies showed that the nurses had not informed mothers well about delivery procedures and that there was lack of proper reasoning for the procedure in cases of emergency (Lange et al., 2016). Equally, poor communication between HCWs and mothers influenced the lack of informed consent for surgery and poor bedside manners (Witter et al., 2016). Besides, nurses took time to decide between having to do a CS or normal delivery with inconsistencies in scheduling a CS because of the surgeon's unavailability (Lange et al., 2016). Mothers perceived some negligence by HCWs who provided inadequate care and support of the perineum during vaginal delivery (Lange et al., 2016).

Respect and preservation of dignity

Eight studies reviewed highlighted components of respect and preservation of dignity (Edu et al., 2017, Ganle et al., 2014, Kenya Ministry of Health, 2015, Masiye et al., 2010, Nabyonga-Orem et al., 2008, Philibert et al., 2014, Witter et al., 2007, Witter et al., 2016). Some highlighted respect concerns were harsh treatment from some HCWs (Edu et al., 2017), negative attitude towards the women (Ganle et al., 2014, Witter et al., 2007), staff being too few, rude, and not available when required (Nabyonga-Orem et al., 2008), and poor interpersonal relationship between the mothers and HCWs (Witter et al., 2016). In the same facets, the women distrusted the knowledge, practices, skills, and competence of the maternal healthcare providers mothers because they were chided and scolded for not attending ANC early and a high number of patients made it difficult to maintain privacy for the mothers during procedures (Ganle et al., 2014).

However, some studies showed that HCWs had shown a kind attitude (Edu et al., 2017) and excellent interpersonal skills (Kenya Ministry of Health, 2015) towards pregnant mothers. Others had little indication to propose that staff courtesy had deteriorated after the policy change (Masiye et al., 2010),

or that the provider-patient interaction, nursing care, and the delivery environment had changed (Philibert et al., 2014).

Emotional support

Only one study reviewed captured the elements of emotional support. The study showed that mothers who were experiencing difficulty with breastfeeding had received emotional support from their HCWs, who provided adequate breastfeeding counselling (Sidze et al., 2015).

2.2.4.3. The aspect that cut across both provision and experience of care

Competent, motivated human resource and essential physical resources available are two areas that cut across both provision and experience of care. The section also presents other quality element findings that do not fit across the eight categories.

Competent, motivated human resource

Sixteen studies reviewed highlighted the components of competency and motivation of HCWs following the implementation of FM policies (Bosu et al., 2007, Chankham et al., 2017, Ganle et al., 2014, Kenya Ministry of Health, 2015, Koroma et al., 2017, Lange et al., 2016, Masiye et al., 2010, Nabyonga-Orem et al., 2008, Nimpagaritse and Bertone, 2011, Sidze et al., 2015, Vallières et al., 2016, Witter et al., 2007, Witter et al., 2016, Witter et al., 2017, Witter et al., 2011, Witter et al., 2012). Factors that were highlighted as determinants of competency and motivation were the functionality of infrastructure (Witter et al., 2012), the type of working conditions (Vallières et al., 2016), presence or absence of incentives from reimbursements for services (Koroma et al., 2017, Vallières et al., 2016, Witter et al., 2012), transparency in the use of reimbursements by in-charges (Masiye et al., 2010), timeliness of reimbursements (Kenya Ministry of Health, 2015), weak guidance on the use of reimbursements (Kenya Ministry of Health, 2015), flexibility in the use of reimbursement to reward HCWs by hospitals (Lange et al., 2016, Witter et al., 2011), and changes in workload following free policies (Ganle et al., 2014, Kenya Ministry of Health, 2015, Koroma et al., 2017, Lange et al., 2016, Nimpagaritse and Bertone, 2011, Vallières et al., 2016, Witter et al., 2007, Witter et al., 2016, Witter et al., 2017, Witter et al., 2011, Witter et al., 2012).

The factors highlighted above resulted to increased corruption by the HCWs as a result of the loss of incentive that came with user fees (Lange et al., 2016, Witter et al., 2012) or poor pay (Lange et al., 2016), difficulty in recruitment of HCWs because of poor working conditions (Vallières et al., 2016),

unequal distribution of HCWs because of the functionality of infrastructure (Witter et al., 2012). In some cases where workload increased, there was reduced productivity by the HCW (Witter et al., 2016) which saw them spend less time with mothers as a way of coping with the higher numbers at the clinic (Edu et al., 2017). Though, in others, the policy resulted in better birth outcomes and more deliveries due to HCWs working longer hours (Bosu et al., 2007, Witter et al., 2017) which Witter et al. (2017) called an efficiency gain. Some HCWs perceived workload as acceptable (Ganaba et al., 2016) or reasonable (Witter et al., 2017) since nurses took an equal amount of time with the patients like before the policy (Masiye et al., 2010). Despite the workload changes, often the mothers and HCWs perceived either increased waiting times resulting from the policies (Ganle et al., 2014, Sidze et al., 2015, Witter et al., 2016, Witter et al., 2012) or waiting times that remained the same (Chankham et al., 2017, Masiye et al., 2010) but were highly satisfied with the staff behaviour and because of the belief that they were dedicated and working beyond their abilities to cater to the increase in the workload (Nabyonga-Orem et al., 2008, Witter et al., 2012).

Essential physical resources available

Fifteen studies reviewed showed mixed findings on physical resources, medication and equipment (Boukhalifa et al., 2016, Chama-Chiliba and Koch, 2014, Chankham et al., 2017, Edu et al., 2017, Ganaba et al., 2016, Kenya Ministry of Health, 2015, Masiye et al., 2010, Nabyonga-Orem et al., 2008, Nimpagaritse and Bertone, 2011, Ridde and Diarra, 2009, Ridde et al., 2012b, Sidze et al., 2015, Steinhardt et al., 2011, Witter et al., 2016, Witter et al., 2011). Some of the components of physical resources that were perceived positively by both the HCWs and patients after the FM policy implementation were the improved physical condition and cleanliness of hospitals (Masiye et al., 2010) and the health facility environment (Chankham et al., 2017). In other aspects, availability of amenities such as water and toilets in the majority of the health facilities (Kenya Ministry of Health, 2015), unrestricted access to latrines and more use of treated water (Witter et al., 2016) were perceived positively. However, two studies reported that there was lack of or unstable electricity coupled with a lack of or inadequate water facilities in the hospitals after the free policy (Edu et al., 2017, Nabyonga-Orem et al., 2008), and one showed that there was no consistent evidence of an increase in investments on things such as infrastructure (Kenya Ministry of Health, 2015).

In terms of medication and equipment, there was a perceived readiness of medicine and medical equipment after the policy implementation (Chankham et al., 2017), increase in drug availability (Chama-Chiliba and Koch, 2014, Masiye et al., 2010, Nabyonga-Orem et al., 2008, Ridde and Diarra, 2009), and adequate and well-organised supply of drugs (Ridde and Diarra, 2009). In cases where the

drugs were not available, HCWs in Uganda sent the patients to buy them from the private clinics and drug shops (Nabyonga-Orem et al., 2008). Also, in Niger, HCWs were even educated on using essential generic drugs and new treatment protocols, especially for malaria (Ridde and Diarra, 2009). Eight studies highlighted increased shortages of drugs after the implementation of the policy (Boukhalifa et al., 2016, Edu et al., 2017, Ganaba et al., 2016, Nabyonga-Orem et al., 2008, Nimpagaritse and Bertone, 2011, Ridde et al., 2012b, Sidze et al., 2015, Witter et al., 2011) in addition to constrained equipment and other consumables (Ganaba et al., 2016, Nabyonga-Orem et al., 2008, Witter et al., 2011). Despite the shortages, the interviewed HCWs painted a rosy picture of the drug situation in Morocco (Boukhalifa et al., 2016) and Nepal (Witter et al., 2011). One study showed that there was no negative impact on the availability of drugs despite increased care-seeking behaviour by the patients after removal of fees (Steinhardt et al., 2011).

Other quality elements

Four studies highlighted the roles of traditional birth attendants (TBA) as an influencer or a hinder to the achievement of QoC (Chama-Chiliba and Koch, 2014, Edu et al., 2017, Ganle et al., 2014, Vallières et al., 2016). Two studies showed that the choice to be attended to by TBA, rather than skilled personnel in the health facility, particularly in the rural areas could not be adjusted by the changes in the cost of delivery (Chama-Chiliba and Koch, 2014, Vallières et al., 2016). The negative experiences of delivery under the new policy were pushing the mothers to TBAs (Ganle et al., 2014). One study showed that some mothers chose to deliver in health centres rather than through TBAs because of the poor QoC that was received in a previous pregnancy conducted by TBAs (Edu et al., 2017).

2.2.5. Cost elements of FM policies

This section reports on the elements of cost of maternal care from the perspective of the managers, service providers, and users through thematic analysis.

2.2.5.1. Out-of-pocket (OOP) expenditures

Twenty-three of the reviewed studies showed that households in different countries still bear the burden of OOP expenditure despite the implementation of FM policies (Ameur et al., 2012, Arsenault et al., 2013, Bennis and De Brouwere, 2012, Boukhalifa et al., 2016, Chama-Chiliba and Koch, 2016, Chankham et al., 2017, Delamou et al., 2015, Edu et al., 2017, Ganaba et al., 2016, Khan, 2005, Kruk et al., 2008, Lange et al., 2016, Luwei et al., 2011, Masiye et al., 2010, Nahar and Costello, 1998, Nimpagaritse and Bertone, 2011, Ravit et al., 2015, Ridde et al., 2015, Ridde et al., 2013, Vallières et

al., 2016, Witter et al., 2016, Witter et al., 2010, Witter et al., 2011, Witter et al., 2012). Some of the costs families are bearing include food (Bennis and De Brouwere, 2012, Boukhalifa et al., 2016, Chama-Chiliba and Koch, 2016, Khan, 2005, Nahar and Costello, 1998, Ravit et al., 2015, Witter et al., 2011, Witter et al., 2012), drugs and other medical supplies (Arsenault et al., 2013, Boukhalifa et al., 2016, Chankham et al., 2017, Khan, 2005, Kruk et al., 2008, Lange et al., 2016, Luwei et al., 2011, Nahar and Costello, 1998, Ravit et al., 2015, Ridde et al., 2013, Vallières et al., 2016, Witter et al., 2016, Witter et al., 2010), laboratory and other diagnostic tests (Khan, 2005, Kruk et al., 2008, Nahar and Costello, 1998, Witter et al., 2011), lodging or accommodation of the mothers or their accompanying relatives (Chama-Chiliba and Koch, 2016, Kruk et al., 2008, Witter et al., 2016, Witter et al., 2010), transport (Arsenault et al., 2013, Bennis and De Brouwere, 2012, Edu et al., 2017, Khan, 2005, Kruk et al., 2008, Nahar and Costello, 1998, Ravit et al., 2015, Vallières et al., 2016, Witter et al., 2016, Witter et al., 2010) either because it was not part of the policy or was part but caused significant burden, blood transfusions (Lange et al., 2016, Ravit et al., 2015, Witter et al., 2011), wound cleaning (Lange et al., 2016, Witter et al., 2011) and other complications (Witter et al., 2010). Other causes of OOP were referral (Bennis and De Brouwere, 2012), issuance of a child with a birth certificate (Ridde et al., 2013), a family certificate to be able to access the free services (Nimpagaritse and Bertone, 2011), care of new-born (Lange et al., 2016, Witter et al., 2016), hiring nurse aid (Nahar and Costello, 1998) and hospital admission fee (Khan, 2005). One study estimated the opportunity cost of for temporarily ceasing work as a result of hospitalisation (Bennis and De Brouwere, 2012).

The OOP paid by the households differed based on type and complexity of delivery (Boukhalifa et al., 2016, Luwei et al., 2011, Nahar and Costello, 1998, Ravit et al., 2015, Witter et al., 2007), type of hospital (Bennis and De Brouwere, 2012, Ganaba et al., 2016), distance to the hospital (Arsenault et al., 2013), area or residence whether rural or urban (Ravit et al., 2015), income level and education (Khan, 2005, Nahar and Costello, 1998), and the type of interviewee (if HCW or patients) (Ameur et al., 2012, Ridde et al., 2013, Ridde et al., 2012b). For instance, mothers who underwent CS and complicated delivery had more OOP than those who had a normal delivery or assisted birth (Boukhalifa et al., 2016, Luwei et al., 2011). Also, the average cost of giving birth was lower in the district hospital than the regional hospital as regional hospitals were specialised hospitals (Ganaba et al., 2016). Mothers who were living closer to the health facility were paying less OOP than those living far (Arsenault et al., 2013), and women in rural areas spent more (Ravit et al., 2015). In Bangladesh, 21% of interviewed families revealed that they were spending more than half their monthly income on maternal care, while 27% reported spending 1-8 times the income (Nahar and Costello, 1998). Also, couples with better income and education were more willing to pay OOP expenditure (Nahar and Costello, 1998). There has been differing opinion between the amounts and causes of OOP

expenditure between the HCWs and patients (Ameur et al., 2012, Ridde et al., 2013, Ridde et al., 2012b) with the patients overstating the cost and HCW indicating that lack of the essential materials was due to implementation gap of the policy which created the shortages (Ameur et al., 2012).

2.2.5.2. Catastrophic expenditure

Five studies highlighted the element of catastrophic expenditure (Arsenault et al., 2013, Dalinjong et al., 2017, Ganle et al., 2014, The World Bank, 2013, Witter et al., 2012). Catastrophic expenditure is the consequence of suffering the burden of disease by households whose OOP spending in healthcare is more than a certain threshold of household income (Ekman, 2007, Li et al., 2012). Highlighted cause of catastrophic expenditure was expensive, lengthy drug therapies required particularly for eclampsia and post-partum infections (Arsenault et al., 2013), emergency blood transfusion (Arsenault et al., 2013, Dalinjong et al., 2017), hospitalisation cost, consultation, lab test, transport, meals during inpatient visit (Dalinjong et al., 2017) and other cost related to the policy-making healthcare spending more expensive than the food (Witter et al., 2012). Others were the prohibitive cost of travelling to the health care facility to seek free treatment or for free birth was making them choose to self-medicate over the visit (Ganle et al., 2014). The World Bank (2013) showed that the mode of delivery determined OOP spending in childbirth (whether vaginal or CS), choice of institution (whether public or private), cultural practices, and level of the health facility.

2.2.5.3. The financial effect of the policy on facilities

Nine studies highlighted the financial effects free policies had on the facilities (Chama-Chiliba and Koch, 2016, Dalinjong et al., 2017, Ensor et al., 2017, The World Bank, 2013, Witter et al., 2007, Witter et al., 2016, Witter et al., 2011, Witter et al., 2012). Due to funding differences, facilities in Morocco had a considerable increase of healthcare budget to support the implementation of the free caesarean policy (Witter et al., 2016) while in Sudan, facilities were facing a shortfall in funding, particularly remote ones (Witter et al., 2012). Different reimbursement strategies incentivised the facilities differently. For instance, Zambian facilities faced higher ANC uptake due to reduced direct costs that the patients used to face before the policy, and they reported that their income that they had been using to incentivise TBAs, buying cleaning agents, and food for inpatients had been reduced by the policy (Chama-Chiliba and Koch, 2016). The reimbursement rates of the new maternal policy in Lao PDR resulted in a marginal decrease in revenue for every delivery for their hospitals (The World Bank, 2013). However, a future increase in demand for delivery would increase revenue for the hospital. Equally, while Nepal's policy reimbursed health facilities a higher amount for CS, there was no perverse incentive for the hospitals to choose CS over normal delivery (Ensor et al., 2017).

Health facilities in Ghana reported experiencing delayed reimbursement of funds meant for the free services and were thus, faced with inadequate supplies and higher OOP for patients (Dalinjong et al., 2017). Equally, there was a disproportionate reimbursement to facilities based on regions, and complexities of deliveries (Witter et al., 2007). Also, the difference in reimbursements was caused by some regions billing based on materials used rather than the government fixed rates while others were structuring their reimbursement plans to cater for things like training of the TBAs (Witter et al., 2007). Facilities reported that they had lost incomes from petty sales to women (Witter et al., 2007). Despite the policy in Ethiopia, some facilities were requesting patients to pay for normal delivery or buy birth-related supplies, and others were performing emergency delivery only when there were advanced payments made (Luwei et al., 2011). In Nepal, facilities received adequate money to cover the cost of essential services and even had a surplus which they were using to incentivise their staff for excellent performance and also improving the outlook of the hospitals (Witter et al., 2011).

2.2.5.4. Informal payments or tips

The review had mixed findings on informal payments from eight studies (Bennis and De Brouwere, 2012, Boukhalfa et al., 2016, Edu et al., 2017, Khan, 2005, Lange et al., 2016, Masiye et al., 2010, Vallières et al., 2016, Witter et al., 2016). Reasons commonly identified for a tip and informal payment were to get favours and preferential treatment (Witter et al., 2016), for performing routine activities such as pushing the patient's trolley to and from the labour/operation room by security guards, and for HCWs to shave patients before delivery/surgery, give them enemas, and get favours such as having a bucket of hot water (Khan, 2005). In other cases, especially in hospitals that had scarce resources, patients tipped the HCWs to skip long waiting queues (Vallières et al., 2016). Other payments were either overtly or covertly asked from patients by HCWs without giving clear reasons (Lange et al., 2016). In other cases, it was not linked to the actual care (Bennis and De Brouwere, 2012, Boukhalfa et al., 2016) and in others, it existed in the form of under the table charges (Edu et al., 2017).

2.2.5.5. Survival tactics

Eight studies highlighted the survival tactics that families were adapting to meet the OOP (Arsenault et al., 2013, Bennis and De Brouwere, 2012, Dalinjong et al., 2017, Khan, 2005, Kruk et al., 2008, Nahar and Costello, 1998, Witter et al., 2016, Witter et al., 2012). Some of the methods included using savings (Dalinjong et al., 2017, Witter et al., 2016, Witter et al., 2012), seeking help from other family members (Khan, 2005, Nahar and Costello, 1998, Witter et al., 2016), handouts and loan from money lenders (Bennis and De Brouwere, 2012, Khan, 2005, Nahar and Costello, 1998, Witter et al., 2012), selling both household and personal stuff such as carpets, chicken, jewellery (Bennis and De Brouwere,

2012, Dalinjong et al., 2017, Khan, 2005, Kruk et al., 2008, Nahar and Costello, 1998). Besides, some were selling livestock (Dalinjong et al., 2017, Khan, 2005, Nahar and Costello, 1998), others sold land, asked for an advance from employers, dug into their business capital, and sold rice or food (Khan, 2005, Nahar and Costello, 1998), or as is in Mali, sought support from the relatives living abroad and while the poor borrowed from friends and relatives (Arsenault et al., 2013, Kruk et al., 2008, Witter et al., 2012). In Tanzania, mothers decided to cut down on their spending (Kruk et al., 2008) while in Sudan, some families chose not to receive care at all, which was even more detrimental to their lives (Witter et al., 2012).

2.2.5.6. Equity concerns from FM policies

Eleven studies showed that despite the policies being free or were subsidised to mothers, there was a difference in the benefits received based on wealth categories (Ameur et al., 2012, Arsenault et al., 2013, Asante, 2007, Ganaba et al., 2016, Ganle et al., 2014, Khan, 2005, Philibert et al., 2014, Ridde et al., 2012a, The World Bank, 2013, Witter et al., 2007, Witter et al., 2016). The studies showed a difference in access to normal or emergency care (Ganaba et al., 2016), level of exemption, whether fully or partially (Ameur et al., 2012, Ridde et al., 2012a), selection of type of facility, whether private or public (Witter et al., 2016), and effects and amounts of OOPs on maternal care (Arsenault et al., 2013, Asante, 2007, The World Bank, 2013, Witter et al., 2007) based on wealth quantiles of the mothers. Families in rural areas in Bangladesh, for instance, had more difficulty paying the extra cost than urban households (Khan, 2005). Equally, the satisfaction level with provision of services differed based on wealth level with poor women being more satisfied (Philibert et al., 2014).

2.2.5.7. Overall expenditure of the policy and sustainability

Only four studies highlighted concepts of the overall expenditure of the policy (Ganaba et al., 2016, Witter et al., 2016, Witter et al., 2010, Witter et al., 2011). All the four studies showed that the funds allocated for the FM policies were adequately covering the cost of the essential services. Some of the policies were implemented in phases as a strategy of ensuring sustainability. Additionally, the policies reviewed were financed domestically and were potentially sustainable, mainly if they were implemented thoroughly (Witter et al., 2016).

2.3. Limitation of the review

The review entailed only descriptive analysis; hence, alternate methods such as meta-analysis was not appropriate due to policy interventions, multiple outcomes, and the heterogeneity of studies. Given

the heterogeneity of designs in the studies, elements of formulation and implementation of the policy were scarcely presented in the papers reviewed; thus, a detailed analysis of the two elements may be missing some imperative components. Few papers looked at FM policies in their entirety (from formulation to implementation, to effects and impacts). Details on the formulation and implementation may be available on the papers that entirely focus on the two elements and do not necessarily look at the quality and the cost of services. I reviewed all studies without prior limitations of dates till 2018, the studies that were published after 2018 may have shown some significant changes to the individual policies. However, I used them to focus the discussion of results as nothing significantly new was brought up on the formulation and implementation of the FM policies, and quality and cost of maternal care. The focus of the review was to capture best the discourse of initiation of UHC and gaps in the literature; thus, some of the FM policies may have changed in design after the review date. Also, given the differences in the mapped content of the policies based on reviewed papers, it is plausible that some components may have been omitted because they were not apparent in the reviewed literature.

2.4. Gaps in the literature

Given the limitations, the gaps in the literature that this IR highlighted, and that would be utilised to review current Kenya's FM policy in this thesis were:

1. What's the appropriate way to comprehensively review FM policy in its entirety (from formulation to implementation, to effects and impacts)?
2. How was the FM policy formulated and what were the processes involved?
3. What were the policy implementation challenges under each of the policy functions?
4. How do governments address the challenges and do facilities and HCWs adapt to the challenges using SLB mechanisms?
5. What is the impact of the policy on the HCWs, staff, and facilities?
6. What is the impact of the policy on the experience of the women?
7. How has the policy addressed the burden of quality outcomes?
8. How much OOP payments do families pay for the FM policy services?
9. How do marginal costs and benefits of the policies compare to alternatives?
10. How sustainable are the policies?

2.5. Chapter summary

This chapter has presented the IR of literature. The first part of the review has highlighted several approaches of FM policy that are being implemented in different countries and has shown components of the formulation of the policy and the implementation gaps. However, from the review, there is a gap in identifying the actual policy formulation processes, actors, the context and the detailed content for which this thesis seeks to build on, albeit for the Kenyan FM policy. The review has also shown the quality of maternal and cost issues that arise from the FM. I have argued that from the literature, the element of provision and experience of quality elements vary based on the implementation patterns of each of the individual country's policy, but it is unclear if the same could apply to the current Kenya's policy since no study has entirely looked at the implementation of the policy with a focus to quality. Equally, the review has shown that the cost elements (OOP, catastrophic expenditure and equity issues) are dependent on the design and implementation of the policy itself. Given this consideration, it would be imperative to note if and by how much do the beneficiaries of the Kenyan FM policy make OOP payments and how does it affect the households? Overall, while there is evidence on the quality and cost implications of the policy, there is little evidence of studies that have done a detailed analysis of the FM policies in their entirety (formulation, implementation, and finally focusing on the effects of quality and costs). This shows that it is difficult to achieve this objective without a mix of multiple approaches under one study.

The next chapter highlights the underlying methodology for which this thesis is anchored and the rationale for the utility of mixed methods approach in addressing the research questions.

Chapter 3 — Methodology and methods

This chapter outlines the methodology, which is 'a theory of how [the] inquiry should proceed,' (Schwandt, 2007, p193) and the methods, which are 'tools employed by the researcher to investigate a problem' (Bazeley, 2013, p8). The methodology section outlines the use of mixed methods as a suitable approach to tackling the research question. Additionally, it emphasises the philosophical approach utilised in the study and justifies why pragmatism was chosen to underpin the use of mixed methods within the case study. The subsequent section outlines the methods for data collection, management and analysis. The chapter concludes by highlighting approaches of objectivity, validity and reliability, and the role of the researcher.

3.1. A suitable methodological approach to answering the research question

From the onset, this PhD project set out to evaluate the policy processes (formulation and implementation) of the FM policy in Kenya, its effects and impact on the quality and cost of maternal care. With a methodological gap in the analysis of policy-implementation research, researchers have taken multifaceted approaches to examine the processes of policy success or failures (Ridde et al., 2020). Since policy-implementation science involves not only analysis of the implementation, but also the process of the interventions, implementation fidelity, and the interaction of the actors and contexts (Moore et al., 2015, Patton, 2008), it utilises both the qualitative and quantitative data to bring out the true picture of the FM policy implementation (Ridde et al., 2020).

Traditionally, scientific research has been characterised by a dichotomous paradigm split between naturalists or interpretivist – mostly qualitative – and positivist often quantitative. Acknowledging that naïve positivism and relativism have gaps, policy evaluations, especially in health sciences, draw from dual perspectives of constructivism and post-positivism, and have been marred with incongruous results. In so doing, I took a pragmatic epistemological (section 3.3) approach, which asserts that it is possible to distinguish between true or false beliefs based on an objective criterion. Pragmatic enquiry involves taking a practical approach to a problem by finding a practical solution using a mix of methods that would enhance reaching a certain level of interpretation. I did so through a transparent and reflexive approach and, the choice allowed for interaction between different components within the research questions. Borrowing from the proponents of the complex intervention of policy models, many components of the policy interact within a complex cultural context. For instance, from this FM policy intervention, there are many groups or organisations involved in the policy. Also, variable

datasets and findings are envisaged, especially from the 'difficulty of behaviours required by those delivering or receiving the intervention or involved in the phenomenon' (Craig et al., 2008, p7).

3.2. Mixed method approach

Mixed method approach is a rich technique of investigation in social science. It is preferred when researchers want to 'add meaning' to 'numbers' using a combination of data points such as 'words, pictures, and narratives' (Johnson and Onwuegbuzie, 2004, p21). This section will discuss the mixed method approach as the overarching foundation of this work and demonstrate why it is suitable for answering the research question. The discussion will follow the six fundamental issues of mixed-method approach as proposed by Teddlie and Tashakkori (2003): definition, use, philosophical basis, design consideration, inference, and logistics.

3.2.1. What is mixed-methods research?

Following a review of 19 different definitions, a mixed-method is defined as:

'.....type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purpose of breadth and depth of understanding and corroboration' – (Johnson et al., 2007, p123).

Therefore, utilising both qualitative and quantitative approaches in a study forms the foundation for mixed methods.

3.2.2. Why conduct mixed-method research?

Hesse-Biber (2010, pp3-6), following the work of Greene et al. (1989), summed up five – potentially overlapping – reasons for conducting mixed methods as follows:

1. *Triangulation*: Establishing a convergence of data collected to build-up the credibility of research findings.
2. *Complementarity*: Utilising findings from one research method (say, quantitative or qualitative) to clarify results from the other method.
3. *Development*: Utilising findings from one method (say, quantitative or qualitative) to inform or develop the other method.

4. *Initiation*: Utilising different methods of building up a new study or perspective from contradictory findings, and that raises further questions.
5. *Expansion*: Utilising different research methods from a different component of research to expand the breadth and inquiry range.

There are varied reasons and justifications for the use of mixed methods; all of which are dependent on the researcher's theoretical perspectives and values, position, and aims of the study. Many protagonists of mixed methods have argued that the approach is better suited to answer complex questions that single methods – either qualitative or quantitative – cannot address conclusively (Tashakkori and Teddlie, 2003b). Equally, the approach broadens understanding. Besides, the methods elucidate better inferences on account of the divergent views that are incorporated. Moran-Ellis and colleagues (2006) outlined five distinct purposes of conducting a mixed-method study. One, to strengthen the accuracy and the level of confidence of research finding; two, creating new knowledge by synthesising results from different approaches; three, constructing multiple phenomena by hearing multiple voices; four, rationally implementing a theoretical framework; and five, reflecting the difficulty and multidimensional ontology that make a phenomenon. Contrarily, while some antagonists of mixed methods agree that it broadens the understanding of concepts, they argue that it does so only to fit the researcher's objectives when required (Morse, 2003).

Contemporarily, there is a diverse use of mixed methods. Bryman (2006) pointed out 18 possible reasons, and key among them is complementarity as has also been identified by Hesse-Biber (2010, pp3-6) above. The results of mixed methods may not be necessarily obvious but could be unpredictable as the study progresses (Bryman, 2006). Whereas in practice, it may not be straight forward to follow the 'rigid scheme' of mixed methods as suggested by Bryman, it is essential to clarify the reasons from the onset of the study. The multiple reasons espoused by different authors may apply to different studies and could be used to fortify methods and results. All in all, careful not to be caught up in ontological debates, it is imperative to clarify that the use of mixed methods in this particular thesis is appropriate in answering the objectives at hand.

3.3. Philosophical approach: Pragmatism

This section begins by exploring the world view (paradigm) that overarch the research process. It then discusses pragmatism and shows why it is best suited to answer the research question concerning the mixed-method approach. The section concludes by providing inferences and logistics of conducting mixed methods.

3.3.1. Personal standpoint

A paradigm is a batch of propositions that are often used in a philosophical sense to 'describe a coherent worldview' (Bazeley, 2013, p19). Paradigm forms the foundation for exploring methodological principles (Lincoln, 2010), understanding ontology ('nature of reality' or the world we inhabit), and epistemology (the knowledge of reality) (Bazeley, 2013, p19). These knowledge claims (Creswell and Creswell, 2017) or mental models (Greene, 2007) guide researchers on what is considered reasonable, legitimate, and appropriate in the research process; and illuminates the assumptions essential for the discussion of truth or reality. Paradigm, as is often used, describe a set of shared beliefs, literature and traditions amongst a community of researchers which gives the basis for framing investigative questions within the community (Morgan, 2007). Essentially, a paradigm explains what the researcher thinks of knowledge, and the source of it: the standpoint. There has been an ongoing debate about paradigms positing two broad approaches: relativism (although fundamentally different, is used interchangeably with perspectivism, constructivism, interpretivism, or anti-foundationalism) and positivism (synonymous with empiricism, objectivism, or universalism) (Clark et al., 2008).

Often, researchers apply them solely. On the one hand, the quantitative paradigm encompasses empirical research with an assumption that there is some social truth derived from evidence, and objectivity with independence between the investigator and concept being investigated. Using positivist research solely misses the opportunity to develop research techniques that could potentially espouse new knowledge or utilisation of a wider set of choices available to researchers (Morgan, 1983, p392). On the other hand, research from the qualitative paradigm – based on constructivism – assumes that reality is socially constructed (Denzin and Lincoln, 2011), or the interpretivism that assumes that truth is less static and subjective based on social context (Bryman, 2008).

Amidst the 'paradigm wars' arose pragmatism, to encapsulate the strengths of both extremes and make a better testing tool. A 'constellation' of the two paradigms is useful in providing a multifaceted view of a phenomenon (Moran-Ellis et al., 2006, p16). Besides, the pragmatic philosophy contends that knowledge, science, and beliefs are best viewed from a practical angle and 'emphasises practical application of ideas by acting on them to actually test them in human experiences' (Agon, 2016, p79). A standpoint helps the researcher to mediate the wars from the protracted debate of the value of science; and provides a framework that encapsulates the diversity of scientific enquiry without 'compromising epistemic integrity' (Wylie, 2003, p26). As a healthcare professional, pragmatism resonates with my standpoint based on the combination of my experiences of working in maternal

and neonatal care space, which encapsulate translating policy to practice based on 'reality' on the ground, and the policy experience of conceptualising policy from evidence. The work is in understanding how the two interlinks to produce desirable policy outcomes. Using the framework adapted from Crotty (1998), *Table 3.1* summarises the theoretical approach for this study.

Table 3.1: Philosophical underpinning

Aspect	Definition	Utilised in this study
Paradigm worldview	Beliefs including axiology, ontology, epistemology	Pragmatist worldview
Theoretical lens	Stances	Social science theories
Methodological approach	Research design	Mixed methods
Methods of data collection	Techniques	Interviews and secondary data

Source: Author

3.3.2. Rise of mixed methods approach

The different methodological approaches utilised in behavioural and social science can be traced back to as early as one hundred years ago (Onwuegbuzie and Leech, 2005, p269). A review of these different methodological approaches with their philosophical underpinnings is useful in understanding the origin of mixed-method approaches. At the initial phase of the epistemological stances, that ended in the late 19th century, positivism was the most dominant and its tenets were hinged on objectivism, hypothesis-driven quantitative methods. However, the onset of the 20th century saw positivism challenged and overturned by interpretivist/constructivist stances, which had its basis on subjectivism, inductivity and use of emerging qualitative methods. The third phase was characterised with the emergence of these new ideas. Positivism was transformed into post-positivism: a compromise between qualitative and quantitative paradigm, based on the agreement that it was impossible to attain true objectivity. New qualitative approaches and philosophies of postmodernism and post-structuralism then emerged triggering a debate between its adherents and those of quantitative approaches; in a 'paradigm war' due to incompatibility of their methodologies: '*incompatible thesis*' (Onwuegbuzie and Leech, 2005, p270). Equally, the paradigm debates were characterised by the distinct divide between qualitative and quantitative approaches (Gage, 1989, Smith and Heshusius, 1986).

The history of methodological approaches as postulated by Onwuegbuzie and Leech (2005) above, which characterises the two approaches as distinct entities, is problematic because; one, the distinction between qualitative and quantitative is often overstated; and two, qualitative inquiry is

composed of many traditions; three, the classification of non-positivist work as 'qualitative' is so as to place the many researchers with a divergent world view in the same domain under one banner (Giddings, 2006). Rather, Onwuegbuzie (2000) argue that research approaches fall on an epidemiological continuum with quantitative (post-positivist) and qualitative (constructivists) on either end, and only 'purists' can place themselves at either end of the continuum. However, I acknowledge, following into Johnson and Onwuegbuzie's (2007) argument that the positions of the two approaches in the continuum in 'real-life' are not clear, as suggested above. Therefore, taking into consideration the two distinct traditional approaches: qualitative and quantitative, and following into Reinhardt and Cook's work (1979), their definition and distinction can be summarised as follows (*Table 3.2*). It is pegged on the debate that qualitative paradigm is concerned with 'words and narrative' such as those obtained from focus group discussion (FGD) and in-depth interview (IDI), and that quantitative paradigm is concerned with 'numbers and statistics' such as structured survey questions obtained from closed-ended questions (Giddings and Grant, 2007, p9).

Table 3.2: Characteristics of the qualitative and quantitative methods

Quantitative inquiry	Qualitative inquiry
Advocates the use of quantitative methods	Advocates the use of qualitative methods
Positivism/ post-positivism	Interpretivism/ constructivism
Obtrusive and controlled measurement	Naturalistic and uncontrolled observation
Objective	Subjective
Removed from the data: the 'outsider perspective'	Close to the data: the 'insider perspective'
Ungrounded, verification-oriented, confirmatory, reductionist, inferential, and hypothetico-deductive	Grounded, discovery oriented, exploratory, expansionist, descriptive and inductive
Outcome-oriented	Process-oriented
Reliable; 'hard,' and replicable data	Valid; 'real' and 'deep' data
Generalisable; multiple case studies	Ungeneralisable: single case studies
Particularistic	Holistic
Assumes a stable reality	Assumes a dynamic reality

Source: Adapted from Burt (2010, p77)

Also, Teddlie and Tashakkori (2003) review the schools of thoughts around the paradigm debates, whose basic canons are the commensurability of the qualitative and quantitative approaches as summarised in *Table 3.3*.

Table 3.3: Schools of thought around the paradigm debate

Stance	Argument
Paradigmatic stance	- Research should work without considering the epistemological, methodological, and the broader metaphysical discourse.
Incompatibility thesis	- There is a fundamental difference in the quantitative and qualitative approaches; hence, they cannot be mixed.
Complementary strength thesis	- It is agreeable to mix research methods as long as researchers retain assumptions from each method, and only use the other methods to triangulate the results.
Single paradigm thesis	- A suggestion of a single paradigm and philosophical underpinning to define a mixed-method approach
Dialectic stance	- Exploring the disagreement that arises from mixed-method research
Multiple paradigm stance	- Linking different approaches based on the study conduct and research design, rather than the traditional epistemological underpinning and the methodological variation

Source: Author constructed from a review of literature and Burt (2010, pp79-82)

In overall, the distinction of the approaches is outlined based on epistemology, research purpose, research approach, and researcher's role (Firestone, 1987). Positivist worldview – quantitative approaches – are overall characterised by cause-and-effect (determinism) thinking; reductionism (focusing of specific variables to interrelate); measurement of variable and empirical observations; continually refining tested theories (theory verification). Constructivism worldview – qualitative approaches – are characterised by understanding the meaning of a phenomenon formed from participants subjective views that are gained through social interactions. They are mainly focused on generating theories. Transformative approaches are focused on 'need for social justice and the pursuit of human rights'; They emphasise emancipating the 'marginalised communities' through collaborative approaches (Creswell and Clark, 2017, p37). Table 3.4 summarises world view and implications of the practice of the approaches, leading to the discussion of the emergence of mixed methods. Furthermore, borrowing from the proponents of multiple paradigm stances, it is imperative to link

different approaches based on the study conduct and research design, rather than the traditional epistemological underpinning and the methodological variation.

Table 3.4: Elements of paradigms and implication for practice

Basic Beliefs	Post positivism	Constructivism	Transformative	Pragmatic
Axiology (<i>nature of ethical behavior</i>)	Respect privacy; informed consent; minimize harm (beneficence); justice/equal opportunity	Balanced representation of views; raise participants' awareness; community rapport	Respect for cultural norm; beneficence is defined in terms of the promotion of human rights and increase in social justice; reciprocity	Gain knowledge in pursuit of desired ends as influenced by the researcher's values and politics
Ontology (<i>nature of reality</i>)	One reality, knowable with a specified level of probability	Multiple, socially constructed realities	Rejects cultural relativism; recognises that various versions of reality are based on social positioning; conscious recognition of consequences of privileging versions of reality	Asserts that there is a single reality and that all individuals have their own unique interpretation of reality
Epistemology (<i>nature of knowledge; relation between the knower and would-be known</i>)	Objectivity is important; the researcher manipulates and observes in a dispassionate, objective manner	Interactive link between the researcher and participants; values are made explicit; created findings	Interactive link between researcher and participants; knowledge is socially and historically situated ; need to address issues of power and trust	Relationships in research are determined by what the researcher deems as appropriate to that particular study
Methodology (<i>approach to systematic inquiry</i>)	Quantitative (primarily); interventionist; decontextualized	Qualitative (primarily); hermeneutical; dialectical; contextual factors are described	Qualitative (dialogic), but quantitative and mixed methods can be used; contextual and historical factors are described , especially as they relate to oppression	Match methods to specific questions and purposes of research; mixed methods can be as researcher works back and forth between various approaches

Source: Adapted from (Mertens, 2018, p15)

3.3.3. The pragmatic approach and utility of mixed methods research

3.3.3.1. Pragmatic approach

Whereas philosophers coined classical pragmatism in the late nineteenth and early twentieth century (Giddings, 2006), there is no one definition which can be offered. Nonetheless, its key tenet is the attachment of the principles to practical consequences (Cherryholmes, 1992). The pragmatic approach is determined by the anticipated consequences which guide the questions to be asked and how they are asked (Morgan, 2007). Axiologically, pragmatists, pursue objectives based on the context (political, historical, and social) in which an event occurs and the researcher's values (Mertens, 2018, p15). Hence, the answers to the objectives may vary based on the time of occurrence. Ontologically, pragmatists affirm that there exists a single reality for which each individual has his/her unique

interpretation. Epistemologically, pragmatists argue that researchers determine the relationships in studies based on what they deem as appropriate (Creswell and Clark, 2017, Mertens, 2018). Finally, pragmatists acknowledge the imperativeness of matching different methods to the purpose and specific research questions, by working the back and forth of various approaches (Mertens, 2018). Subsequently, Tashakkori and Teddlie (2003a) posit that pragmatism is applied and practical. The pragmatic approach focusses on the consequences of actions and research, emphasises the on the question asked in lieu of the method (problem-centred), and on the use of mixed methods of data collection to inform the objective of the study (Creswell and Clark, 2017, pp36-37) Therefore, it is pluralistic and gravitates towards 'what works' and 'real-world practice' (Creswell and Clark, 2017, p37).

New strands of pragmatic approaches have emerged from the works of Rorty (1980) and Cherryholmes (1992, 1994). For instance, *epistemological pragmatism* argues that knowledge is generated by the thinking process rather than a set of rules. On the other hand, *Meta-methodological pragmatism* conforms to the ideologies of utilising the concepts and principles of pragmatism to evaluate research methodology (Baert, 2004, Maxcy, 2003). Moreover, *methodological pragmatism* can be the use of pragmatic concepts to guide the choice of research methods, or pragmatism being a broader inquiry method by itself (Teddlie and Tashakkori, 2003). All in all, the approaches acknowledge that a researcher is situated in a context for which they provide meaning.

One significant criticism of pragmatism in the validation of beliefs is that, sometimes despite our beliefs being consistent, they may be incorrect or that there may be a difference between bodies of beliefs that are internally consistent. Avis (2003), while defending the application of the pragmatic approach in qualitative research, posits that a possible shared belief that exists between researched work and the researcher could enhance an understanding of a problem or a situation. He further argues that, from a pragmatic approach, it may be unlikely that our beliefs are entirely false or incommensurable since researchers manage to attach meaning to others, norms and behaviour.

3.3.3.2. Linking pragmatism to mixed methods

At the risk of sounding *ad hominem*, the link between pragmatism and mixed methods in this thesis has been borne from the gaps presented in the arguments of the single paradigmatic approaches. The link, as argued by a majority of the proponents of mixed study approaches, forms the 'third paradigm' (Teddlie and Tashakkori, 2003). Qualitative researchers such as Giddings and Grant (2007) and Maxcy (2003) have argued that pragmatism and mixed methods approaches are similar to those presented by post-positivist paradigm; however, Maxcy in her argument adds that methodological pragmatism

is only relied on for an empirical view of effectiveness. Contrarily, Giddings (2006) in a different work, shows that mixing the two methods – quantitative and qualitative – results to the marginalisation of their methodological diversity.

By acknowledging the usefulness of both qualitative and quantitative research, Morgan (2007, pp70-73) offers an alternative opinion in the linkage debate between pragmatism and mixed methods. He suggests three useful themes in the discussion: abductive, intersubjectivity, transferability. He posits that abductive reasoning – connecting the theory and with the data – has been used by researchers who sequentially combine qualitative and quantitative methods. On the other hand, he views subjectivity and objectivity as unrealistic ideals; hence, intersubjectivity offers shared meaning and better communication from the research process. Finally, he dispels the universality and context-specific knowledge by insisting on the significance of reflexivity of using the result in different context besides developing inferences and implications from data. This position contrasts the generalisation, objective, deductive approach fronted by the quantitative research proponents or the contextual, subjective, inductive position that is taken by qualitative researchers.

Given the debates for mixed methods, such as moving away from situationists and purists by Rossman and Wilson (1985); or the proposed reconciliation mechanisms of the two traditions Reichardt and Rallis (1994) and Bryman (1988); or even the suggested move past the paradigm wars by Greene and Caracelli (1997) and Tashakkori colleagues (1998); it is still unclear how pragmatism whittles mixed methods. However, I find the views posited by Morgan (2007, pp70-73) as a holistic approach to tackling mixed methods research questions since it encapsulates the practical aspect in addition to the philosophy of mixed methods. Therefore, I situate the design and conduct of research of my study on Morgan's approach, particularly the intersubjectivity that focuses on the relationships in the research process.

3.3.4. Conduct and design of a mixed-method study

Designing a mixed-methods study can be challenging, but the key consideration is in the process of combining the qualitative and quantitative strands (Creswell and Creswell, 2017). There is an ongoing debate on the nature of the combination of the strands, but Creswell and Clark (2017, p52) broadly categorise the design concepts as fixed, emergent, or a combination. A fixed mixed-method design, they argue, is predetermined at the onset of a research study; an emergent one arises in the course of the study when the researcher perceives one strand as inadequate; the latter utilises the two design strands.

In the recent debates, there has been an emphasis on the typologies and interactive approaches to mixed methods to guide the researcher. However, Morse (2006) has argued that the typologies are just a reflection of the search for an ultimate mixed-method design. Critically, Bryman (2006) emphasises the dimensions of the typologies as:

1. The relative timing of utility of the qualitative and quantitative strands (whether sequential or concurrent)
2. The relative priority, importance and weighting placed on the strands (whether qualitatively driven, quantitatively driven, or equivalent status)
3. The level of interaction or interdependence that occur between the strands (e.g., synergistic approach, or interactive system-based approach based on research goals, questions, conceptual framework, methods and validity)
4. The reason for interaction (e.g., triangulation or complementarity)
5. The point of an interface of the strands (whether at data collection, or analysis, or interpretation)

Amidst the debates, it is vital to note that the typologies have been formulated at least theoretically and that they do not essentially relate to the definite accomplishment of mixed methods research (Bryman, 2006). So, whereas the typologies are imperative to guiding the design of mixed methods, I deem that the research problem should shape an appropriate mixed-method design.

3.3.5. Inferences and logistics of mixed methods

Subsequently, the concept of inference proffers a useful framework for the design and conduct of research; hence, it is critical in mixed methods studies (Burt, 2010). Manifestly, it is critical to distinguish between the actual study results and the inferences made from the results. Whereas results are the outcomes of the analysis of data, inferences are the postulations obtained from the research the inductive, inductive, or abductive interpretation of the results by the researcher (Burt, 2010). Furthermore, the inference quality could be used in research to describe the internal validity or credibility of a research study through its two categories of methodological rigour (design quality) or the accuracy standards for the conclusions (interpretive rigour) (Teddlie and Tashakkori, 2003). Certainly, the debate about inference quality is therefore important in mixed methods studies just like in other singular approach studies for the reason it helps in assessing the quality, rigour, and clarity of the approach.

One important argument about the use of mixed methods lies on creating an inference of both quantitative and qualitative approaches to create a holistic picture of the issue under study. Erzberger and Kelle (2003) have suggested the use of integration rule for the two singular approaches into convergence (drawing inferences from both qualitative and quantitative data), complementariness (using both to supplement each other), and divergence (contradicting each other). In all cases, the integration approaches utilised are based on theoretical consideration and empirical data (Kelle, 2005). In cases where data diverge, then researchers are obliged to clarify whether it is due to the rigour of the study conduct, or a mismatch in the empirical and theoretical assumptions.

In following the philosophical foundations and debates around the utility of mixed methods, I acknowledge that there are implications of conducting such studies. Some authors in health research who have based their studies in the dual approaches of constructivism and post-positivism have had conflicting results or have had problems drawing inferences from both strands (Moffatt et al., 2006). To avoid such scenarios, I propose to utilise a pragmatic framework to help in choosing research questions and designing the study as also suggested by Giddings and Grant (2007) or Fetters et al. (2013), but I also note its challenges and potential for non-integration of results.

In summary, this study utilises pragmatic epistemology. Pragmatism affirms that there is no need to know the similarity between independent reality and our beliefs; hence, they reject the notion of reality existing through social construct (existence of social reality as a body of knowledge that can only be understood from within), or that knowledge represents reality. Therefore, it should be possible to elucidate at least a criterion that can be used to distinguish true or false beliefs, and that research provides validation of our beliefs. Pragmatic approach evaluates all arguments of epistemological beliefs from empirical evidence. Particularly, all inquiries are important precincts for the addition of knowledge, and there is no epistemological divide between techniques used in evaluating facts and with the ones used on the human experience. Consequently, all inquiries are useful in the addition of knowledge, and thus pragmatism fits mixed-method research.

This first section has outlined the methodology. It has provided the philosophical pinning of the mixed methods approach, where I have identified pragmatism as the basis.

3.4. Method

The previous sections focused on the methodology of the study that outlines the philosophical approach that the study and the researcher have taken and its lucidity with the research questions. The following chapter will outline the 'the tools employed by the researcher' to address the research

questions (Bazeley, 2013, p8). It includes the components that describe the chosen study design, approach to data collection, management and analysis.

3.4.1. Planning and preparation

I consciously started planning for my PhD study in 2014, a few months to the completion of my master's degree in London. I was drawn to studies on 'devolution in Kenya' as the country had just promulgated the constitution that saw governance move away from the central government, to among many things enhance 'delivery of health services' (Tödtling et al., 2018, p28). The PhD concept did not work then after failed attempts at seeking funds. However, I found myself seconded by the University of Nairobi to work at the national policy level of the MoH on an interesting programme of voucher scheme targeting the poor and vulnerable pregnant mothers in five counties in Kenya (briefly described in section 1.3.4) and that was running in tandem with the FM policy.

During my time on the programme, I literally digested huge chunks of data and literature on maternal and childcare. It is at this point, other than during my master's degree, that I consciously took an interest in policy evaluation and implementation research in maternal and child health. I also spoke to a few health economists at the MoH and the University of Nairobi. It was not until the rainy season of 2016 in Kenya – or spring if using the British weather patterns – that I secured a full scholarship funding and started focusing on my current research question.

My preparation entailed shaping the research questions, conducting a literature review and sharpening my research skills. Most of the skills included learning different regression analyses in addition to econometrics methods. Besides the preparation, I took a qualitative analysis course and introduced myself to interviewing skills and methods of analysis of qualitative work. The development of the protocol – that Yin (2018) describes as a tool for enhancing reliability – took time, but it helped in identifying the right research questions. Finally, I was fortunate to meet a health economist, 'a pair of mentoring hand,' who hosted me in his team (Health Economics Research Unit (HERU)) at KEMRI-Wellcome Trust Research Programme (KWTRP) during my data collection period. Being at KWTRP, I had a fresh pair of ideas and the intellectual stimulation that not only led to a pair of ideas, but also allowed me to take a deep, honest and holistically reflection of different perspectives.

3.4.2. Study setting (County and hospital selection)

Kiambu county was chosen purposively because of its proximity to Nairobi heeding the cost implication that accompanies data collection. Besides, the county has, what I called 'interesting'

economic and sociodemographic characteristics, health indicators and population size. The county covers a total of 2,543.5 Km² and lies in the former central province (County Government of Kiambu, 2018). It is bordered by counties of Machakos to the East, Kajiado and Nairobi towards the south, Murang'a on the North, Nakuru on the West, and Nyandarua on the North West (County Government of Kiambu, 2018). It is the second-most populous county in Kenya after Nairobi City county with a population of 2,417,735, of which 50.59% are female and 49.1% male (Kenya National Bureau of Statistics, 2019a). Kiambu has 12 administrative units, as shown in *Figure 3.1*, and is 60% urban and 40% rural (County Government of Kiambu, 2018). As of 2014, there was 93.4% of births happening in a health facility and 92.6% of births provided by a skilled provider in Kiambu county (Kenya National Bureau of Statistics et al., 2014). Of the population in Kiambu, 26.9% are female of reproductive age (15-49 Years) and are estimated to be 534,116 as of 2017 (County Government of Kiambu, 2018). Median age at first marriage is 21.6 years with a total fertility rate of 2.7 (Kenya National Bureau of Statistics et al., 2014). The county has 364 health facilities spread across the categorisation levels, with a doctor to population ratio of 1:17,000, nurse to population ratio of 1:1,300, and an average distance to a health facility of seven Kilometres (County Government of Kiambu, 2018).

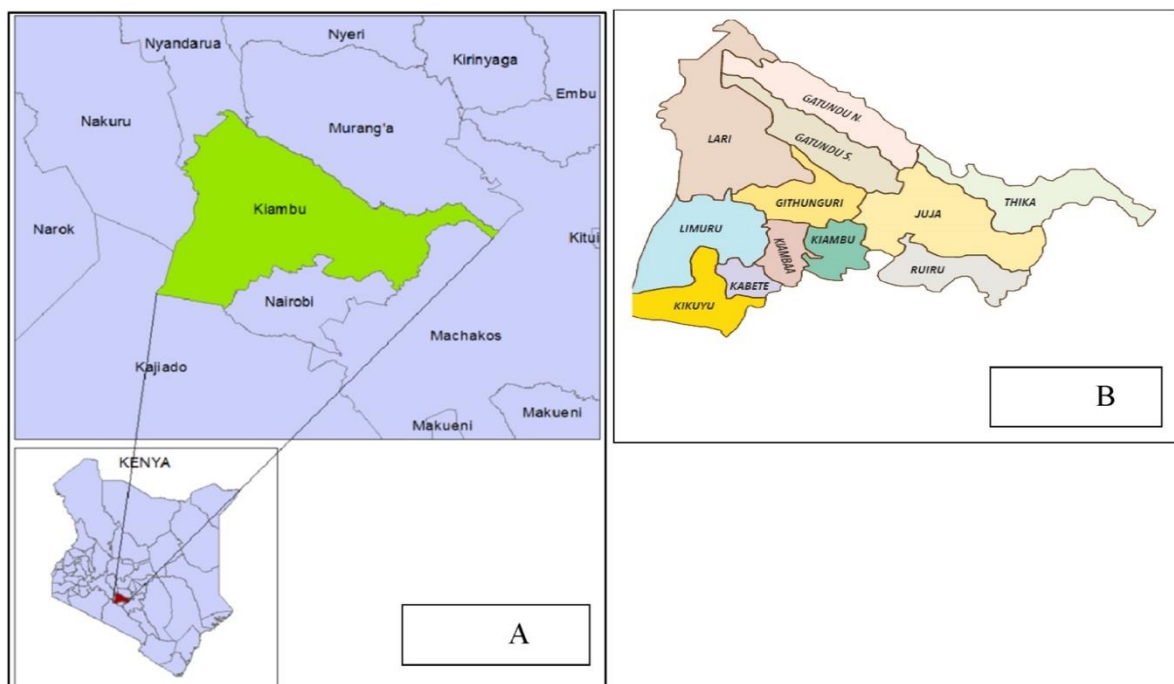


Figure 3.1: Map of Kiambu county boundaries (A) and the sub-counties (administrative units) (B) (Source: Adapted from Mwangi and Crewett (2019))

To provide an understanding of the dynamics of continuity of FM services from the previous policy to the current LM policy provided across the different levels of government facilities within the sub

counties, three facilities were purposefully selected as case study centres. The facilities were a high-volume referral hospital (Level 5 Hospital), a medium-volume hospital (Level 4 Hospital), and a low-volume hospital (Level 3 Hospital). The three facilities were purposefully selected because they were both rich in information and characteristics (Table 3.5).

Table 3.5: Characteristics of the three hospitals

	Level 3 Hospital (Hospital A)	Level 4 Hospital (Hospital B)	Level 5 Hospital (Hospital C)
Bed and cots capacity ^a	10	46	289
Number of staff ^b	35	115	262
Estimated annual deliveries ^c	1,076	5,635	9,152
Estimated annual outpatient care ^c	88,829	156,108	281,379
Estimated annual inpatient care ^c	764	7,223	14,205
Notes: Estimates for annual delivery, outpatient care and inpatient care were for the financial year July 2018 – June 2019. The outpatient total is an aggregate of both new and revisits			

Source: ^aKenya Master Health Facility List (Kenya Ministry of Health, 2020b), ^bIn-depth interview with health facility in-charges of the individual facilities; ^cKenya Health Information System (KHIS) for aggregate reporting (DHIS2, 2020)

3.4.3. Design

The focus of the design phase was to define the convergent parallel mixed-methods case study design. The focus of the design is the definition of the convergent parallel mixed-methods approach as well as outlining the borders of FM as the case study by specifying the ‘case’ and its parameters, and identifying the ‘unit of analysis’ (Yin, 2018).

3.4.3.1. Approach of the mixed methods used within the study

In a pragmatic mixed-methods study, it is crucial to elucidate the relationship between the selected study design and the research questions from the onset of the study. A well-defined research area and question drive the choice of the methods (Fetters et al., 2013). Essentially, the emphasis of pragmatism is the use of methods that generate appropriate data for the study question, instead of asking questions that only fit specific epistemological methodologies or viewpoints, and methods. Ideally, a mixed-methods approach suit studies that have several interrelated objectives. My thesis objectives sought to explore, locate and measure the FM policy formulation and implementation and

each objective required a different method and that data generated from each of the objectives would be essential to strengthen the result of each other (*Figure 3.2*). Therefore, the use of mixed methods approaches in my study was related to triangulation (establishing convergence of data collected to build-up credibility of research findings) and complementarity (utilising findings from one research method to clarify results from the other method).

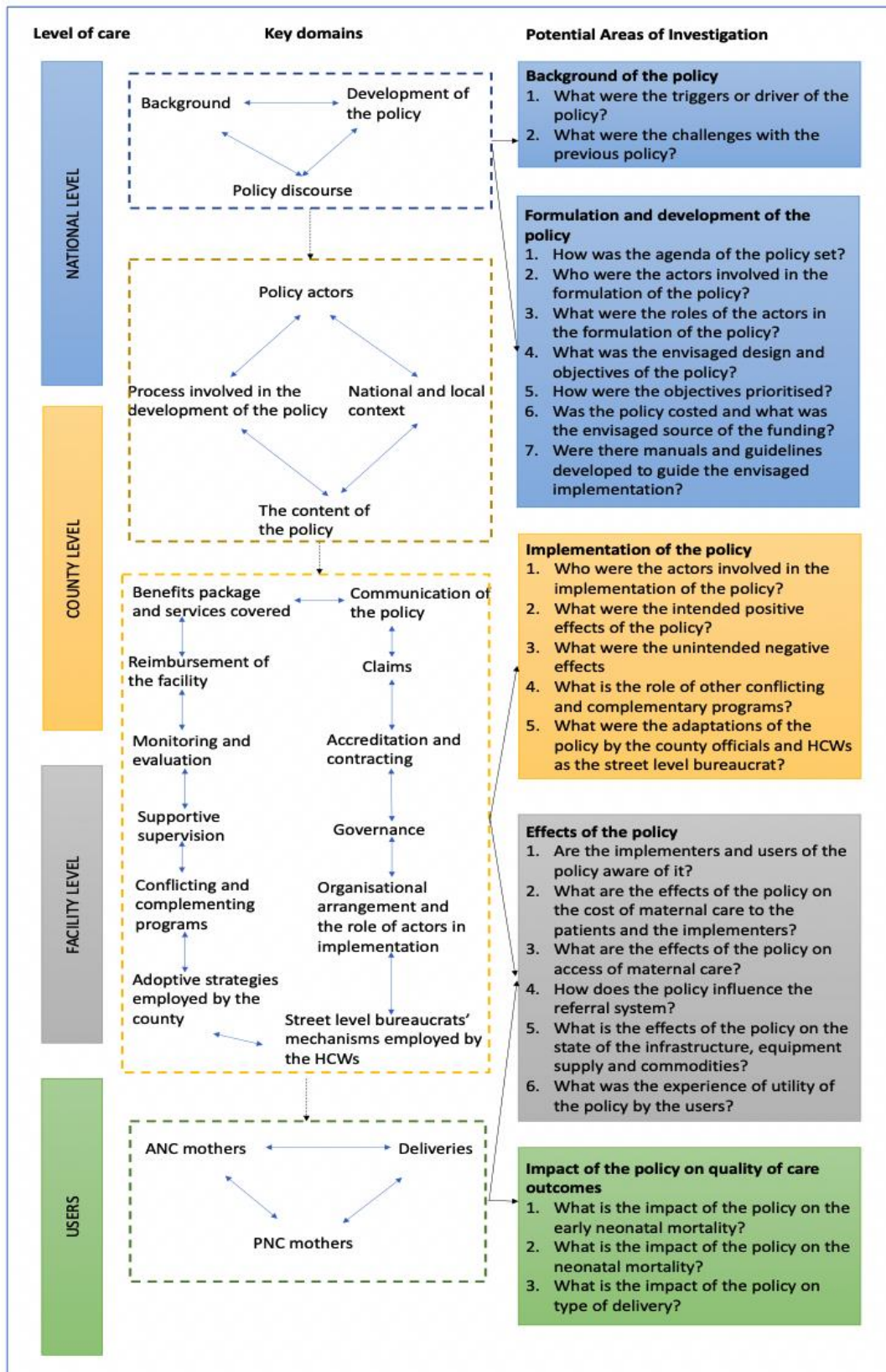


Figure 3.2: The pathway to the policy analysis and key research questions (source: Author)

The choice of study design in the mixed methods approach is defined through methods of data collection, data analysis, reporting (Creswell et al., 2003), and which 'best matches the research problems and reasons for mixing' to make the 'study manageable and straightforward to implement and describe' (Creswell and Clark, 2017, p65).

This study utilised the convergent design as the 'core mixed methods design' (Creswell and Clark, 2017, p65) (*Figure 3.3*) in which results of qualitative and quantitative data were analysed separately, compared, then combined to get a nuanced understanding of the FM policy as implemented in Kenya. The convergent approach was chosen because, from the onset, I had anticipated that the findings from each part of the study would increase the depth and breadth of understanding of the 'issues at hand' (Creswell and Clark, 2017). Specifically, I used the parallel-database variant (Creswell and Clark, 2017, p73) of the convergent design to synthesise and compare the two sets of independent results at the discussion stage. Qualitative analysis provided an in-depth exploration of the policy itself, description of the quality and cost issues that were specific to the context of the FM care while quantitative analysis gave the generalised causal relationships and impact of the policy (*Figure 3.3*).

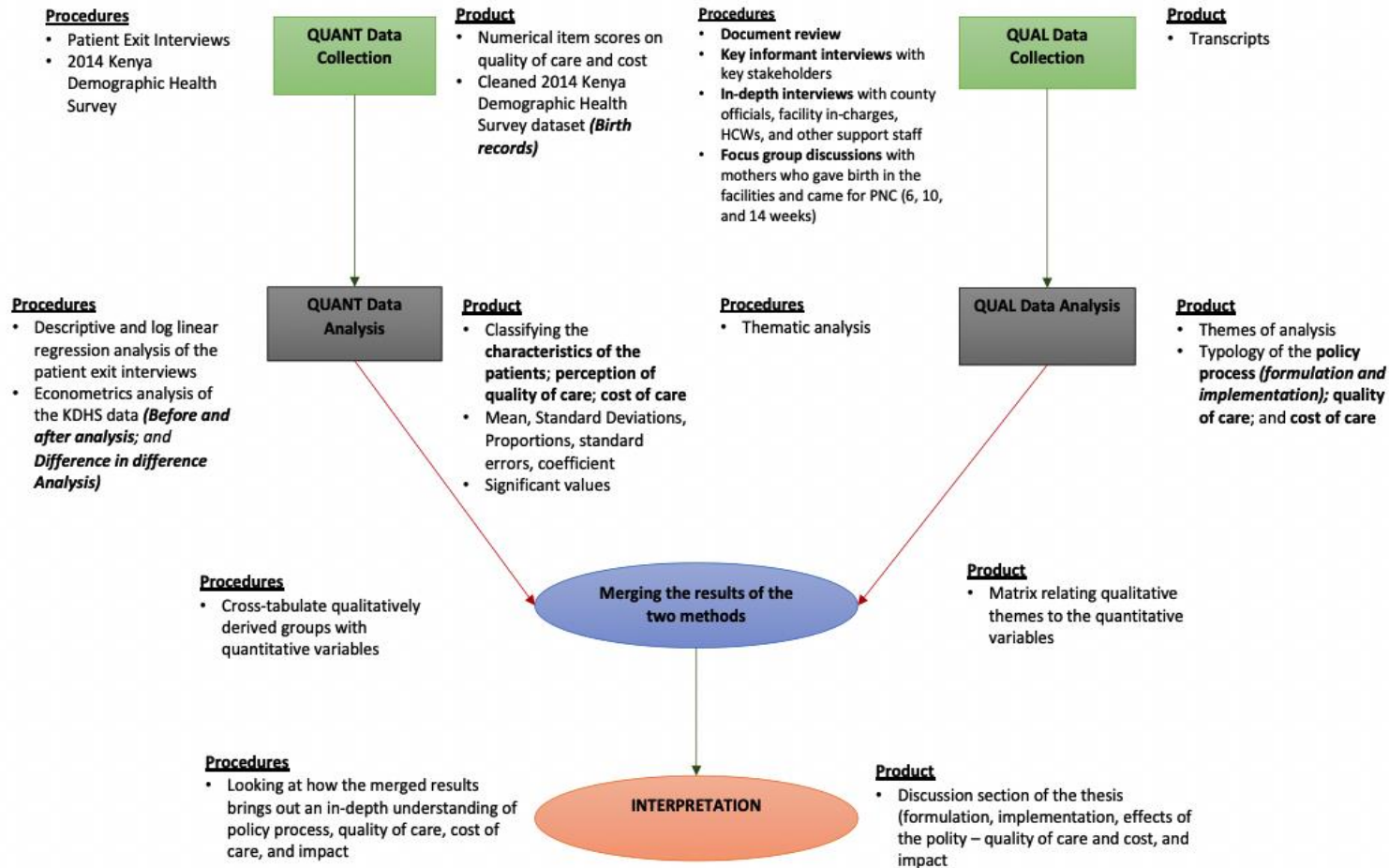


Figure 3.3: Convergent design as applied in this thesis; (Source: Developed by the author based on modifications from Wittink et al. (2006) as cited by Creswell and Clark (2017, p76))

3.4.3.2. Defining the case of free maternity

Three seminal authors – Yin, Merriam, and Stake – have diverged the definition and procedures followed when conducting a case study research (Creswell et al., 2007). Yin (2018, p13) presents a case study as a favored method when the researcher is asking the ‘how’ or ‘why’ questions about a contemporary event/s for which he/she has no or little control over. Although not outright, Yin’s presentation of the case study approach, favors the positivist philosophical stance (Yazan, 2015). Unlike Yin, Stake takes a stand point of non-determinism (existentialism) and constructivism in which ‘knowledge is constructed rather than discovered’ (Stake, 1995, p99). Stake (1995, pxi) describes case study as studying the complexity and particularity of one case in order to ‘understand its activity within important circumstance.’ Like Stake, Merriam approach of case study is more towards constructivism and describes case study as ‘an intensive, holistic description and analysis of a bounded phenomenon such as program, an institution, a person, a process, or a social unit’ (Merriam, 1998, pxiii).

Given the three distinctive approaches and acknowledging that Yin’s argument can be reductionist, I find that the approach resonates well with my work in line with the pragmatic stand I have taken; and for the reason that he examines a ‘contemporary phenomenon’ with more depth by focusing on the ‘real-world context’ (Yin, 2018, p12). The distinctive features of case study design are the focus on the case which is a ‘concrete entity’ (such as a person, organisation, community, program, process, policy, practice, or institution, or an occurrence such as a decision) or a ‘totally abstract’ entity (such as arguments, claims, or propositions) that occur within a particular setting (Yin, 2018, pp31-32). However, the case is often bounded using defined parameters which sometimes is unclear (Robson, 2011, Yin, 2018).

A case study is used in circumstances where the context of the study is imperative for the phenomenon being examined and where the actions of the actors involved in the phenomenon cannot be manipulated (Keen, 2006). Besides, it is predominantly suitable when exploring policy change in a set-up where the investigator has no control over the change (Keen, 2006), which is a common characteristic for policy evaluations particularly in SSA setting. The main strength of a case study is that it allows complex interventions in the socio-political context to be studied in depth (Simons, 2009) and for phenomenon to be studied from multiple lenses at the same time (Baxter and Jack, 2008).

Under the case study design, a ‘case’ becomes ‘in effect, the unit for analysis’ depending on the research question being explored (Baxter and Jack, 2008). Yin (2018, p32) posits that the case is a phenomenon or ‘a concrete entity’ which is the ‘main subject of study.’ In this thesis, the case is new

expanded FM policy dubbed *Linda Mama (LM)* as is being implemented currently by the Kenyan government under the National Hospital Insurance fund (NHIF) since 18th October 2016 (Kenya Ministry of Health, 2016b). The policy is being implemented in all public and low cost private and faith-based facilities in the country's devolved set-up of 47 different county government. As aforementioned, through the policy, FM health services were expanded to include antenatal care, perinatal, and postnatal care. Consequently, the focus or the unit of analysis is the policy process, QoC and costs of care. The temporal boundaries were described as the time periods of the policy from the commencement date 18th October 2016) to-date. The case parameters were those that the policy affected directly (mothers who have given birth under the current policy) at the micro level, the HCWs at the facility level and county officials implementing the policy at the meso level, and the decision makers (key stakeholders) involved in both the design and implementation of the policy at the national level (macro level) (Figure 3.4).

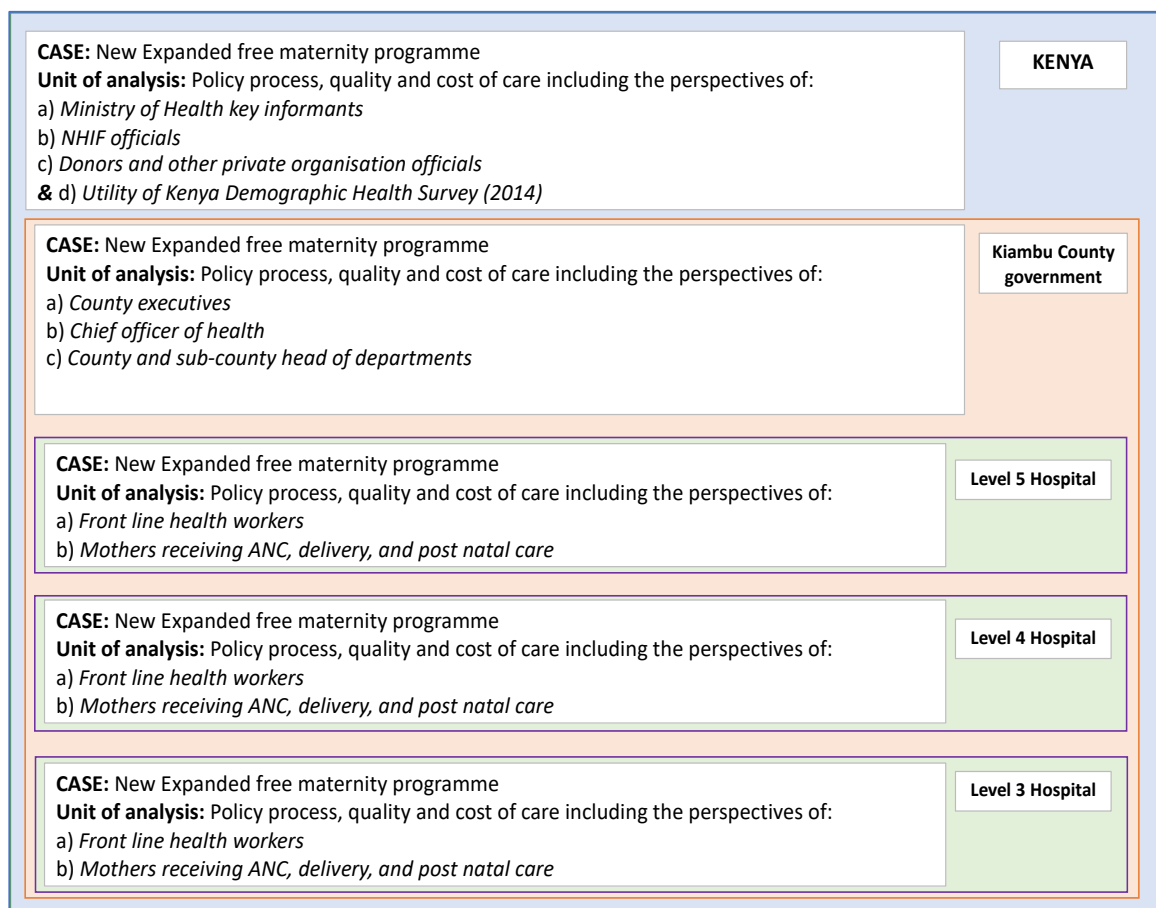


Figure 3.4: Embedded case study approach (source: Author)

3.4.3.3. Policy analysis (conceptual and theoretical frameworks)

To guide the multiple components of the study from the pragmatic approach, I developed a conceptual framework based on the preceding literature review (chapter 2) in addition to health policy analysis frameworks (Gilson et al., 2018). Five components guiding the analysis of the FM policy in this work is shown in *Figure 3.5*. One, the background of the policy is derived from Hercot et al.'s (2011, pp17-ii8) work which focuses on the 'preliminary situation analysis' of user fees policies thereby giving an understanding of the origin of the policy. Essentially, it emphasises on the portrayal of existing window of opportunity needed towards restricting the 'inventory phase' of a policy (Patton and Sawicki, 1993). Two, policy formulation process drawn from Walt and Gilson's (1994) policy triangle of actors (whose roles, power, and influence during formulation and implementation was analysed through a stakeholder's analysis (Brugha and Varvasovszky, 2000, Crosby, 1992, Varvasovszky and Brugha, 2000)) following into its application in the SHIELD project (Gilson et al., 2012), processes involved during formulation, context (political, social and economic, local and national that affects policy) of the policy, and content (envisaged design) of the policy formulation (Buse et al., 2012). Three, implementation of the policy focusing on the unintended positive and negative impact, and the intended impact on implementation components (benefit package and services, communication, reimbursement, claims, referral system, accreditation and contracting, monitoring and evaluation, supportive supervision, governance and organisational arrangements) (Hercot et al., 2011); in addition to adaptation of the policy using SLB mechanisms as described by Lipsky (1980). Four, the effects of the policy on the structural and process element of quality of maternal care using the quality of maternal and newborn healthcare framework as proposed by the World Health Organisation (2016) and costs; and five, the impact of the policy on the outcome (early neonatal mortality, neonatal mortality, delivery through CS) elements of quality of maternal care.

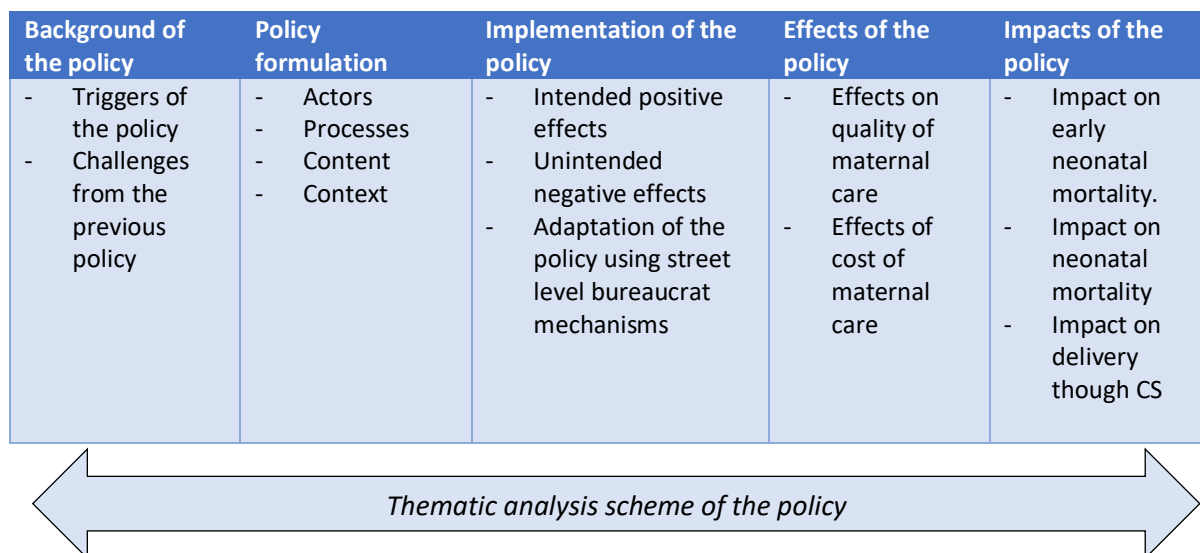


Figure 3.5: Guiding framework for evaluating the free maternity policy (Source: Author constructed from literature review)

3.4.4. Data collection methods

Multiple evidence sources used in the mixed methods approach allows for the convergence of evidence or triangulation to build up the credibility of research findings (Hesse-Biber, 2010). This section outlines the reasons for the choice of the type of data, followed by the next section that describes the challenges and practicalities.

3.4.4.1. Document reviews

A review of documents helps to augment and corroborate findings from other sources of evidence (Yin, 2018), and is a ‘means of triangulation’ (Bowen, 2009, p28). The use of documents allows for in-depth analysis and interpretation of information to elucidate new meaning or understanding of an already existing concept. Besides, documents can provide contextual data of research and a means of tracking changes and over-time development (Bowen, 2009). However, the use of documents may be hampered by authors biases (Sarantakos, 2013) and incompleteness or inaccuracies (Patton, 2014). I requested the national and county level key informants for relevant government policy documents, manuals, circulars, and concept notes on the LM policy.

3.4.4.2. Key informant interviews

Key informants are a primary or expert source of information for elements such as political structures, economic systems, and organisations (Tremblay, 1957) due to their ‘position within a society’ or personal skills (Marshall, 1996, p92). Key informants are characterised by their role in the community,

in-depth knowledge, willingness to communicate the knowledge, communicability and impartiality (Tremblay, 1957, pp14-15). Key informant interviews (KII) or technique involves interviewing a select group 'key informants' likely to give insight in a particular subject, idea and policy (Kumar, 1989); have status, special knowledge, access to information that is inaccessible to the researcher (Preissle and Le Compte, 1984); give insider account (Crabtree and Miller, 1992); and provide an accurate cultural understanding of observations (Gilchrist, 1992). However, if key informants are not carefully chosen, KII are unlikely to be representative (Marshall, 1996). I decided to use key informants to solicit complementary and in-depth information from individuals with prior knowledge on the emergence and the policy process of FM policy, covering information that was least likely to be in policy documents, such as the role of actors and interest in the FM policy. The individuals targeted were at the national (macro) level, including participants from MoH, NHIF officials, donors, and civil society, including representatives of health service providers that are supporting the LM policy. The KIIs were conducted jointly with colleagues from KWTRP, HERU who were also doing a national FM policy process evaluation, and our target key informants were the same individuals. I utilised a semi-structured interview guide (described in detail in section 3.4.4.4).

3.4.4.3. In-depth interviews

In-depth interviews (IDIs) – also known as unstructured interviews – are 'conversations with a purpose' that often generate knowledge about the social world (Ritchie et al., 2013, p138). IDIs are described as either 'miners metaphor' where 'the interviewer digs nuggets of data or meaning out of a subject's pure experience, unpolluted by leading questions' or 'travellers metaphor' where the interviewer leads the respondents in a conversation that 'reveal their story' (Kvale, 1996, pp3-4). Pragmatism uses IDIs, together with other methods, to provide access to the meaning of respondents experiences and attitudes (Legard et al., 2003). They provide 'richly textualised accounts of events, experiences and underlying conditions and processes,' or policy realities that reveal a state of social reality (Smith and Elger, 2012, p14). The principal tenets of interviews are that they provide the flexibility of structure that permits issues or topic to be covered in a way suitable to the interviewee; are interactive and allows further probing and exploration of responses by the researcher; provide a new sense of knowledge, and where possible are often conducted 'face-to-face' hence can the depth of interviewee's body language which needs to be 'captured in its natural form' (Ritchie et al., 2013, pp141-142). Essentially, as is with this research, interviews explore perspectives of a situation, program (such as FM policy) or idea (Boyce and Neale, 2006). Maximising the utility of interviews and reducing any nuanced biases includes application of techniques that query inconsistencies and challenging the accounts where possible. Besides, it further entails focusing initial attention on specific

events; allowing comparison of occurrences between different episodes and events; probing for details; testing provisional theories and analyses with participants and paying attention to the respondents' standpoint. Such techniques strengthen interviews, particularly reduces inaccuracies from poor recall (Yin, 2018).

In this work, IDIs were targeted to the county and the sub-county level officials from the County Department of health, county treasury and county assembly at the county (meso) level; and the facility in-charge as well as HCWs in charge of maternal care/services at the facility (micro) level. With the difference in the level of participation in the implementation of the FM policy at different levels, and careful to place the questions in an ethically bound way, I grounded the interviews in an appropriate context by asking specific questions and not generalities based on the fact that people attribute their lives on the everyday routine experiences (Mason, 2002). Also, power differentials play a role in interviews; for instance, because of the nature of top-down approach of policy implementation, the county officials may be regarded higher than the facility in-charges, or in charges may be considered higher than a hospital nurse. Therefore, I used the ladder approach in two ways (Price, 2002). First, I started by interviewing the HCWs and other health facility workers, then facility in charges, and finally County officials. Secondly, I tailored the questions to start with the descriptive and less intrusive ones to set the scene, then graduated to more invasive ones that highlighted knowledge gaps, and then concluded with more invasive that highlighted personal beliefs and philosophy (Price, 2002).

3.4.4.4. Interview guides

There are three categories of interviews as suggested by Robson (2011): unstructured, fully structured, and semi-structured. Of the three, an interview guide, which is an *aide-memoire* that contains a list of topics, themes, topics, and areas that a researcher seeks to cover, is used in semi-structured interviews (Kvale, 2007, Lewis-Beck et al., 2004). Interview guides provide the researcher with the flexibility for modifying the questions to fit the context (Robson, 2011); and should always be carefully constructed to minimise potential biases (Yin, 2018).

Three semi-structured interview guides were developed based on the integrative literature review (chapter 2), study objectives, and questions (chapter 1 and *Figure 3.2*). The first semi-structured interview guide (*appendix 10*) targeted the key informants described in section 3.4.4.2 and was developed jointly with colleagues from KWTRP, HERU. The guide captured elements of the emergence of the LM policy, the experience of implementation, benefits package and access, strategic purchasing, and the future of the programme. Before the onset of the interviews, it was piloted on one development partner official in Nairobi county. The second semi-structured interview guide (*appendix*

11) targeted the county and sub-county officials, and I piloted it on a non-participating official in Kiambu County; while the final semi-structured interview guide (*appendix 12*) was for facility in-charges, HCWs, and other hospital staff, and I also piloted it with a HCW in a non-participating facility in the county of study.

3.4.4.5. Focus group discussions

Focus group interviews are group discussions, with participants sharing similar experiences or backgrounds, exploring specific topics, theme, or area of significance to the researcher (Dawson et al., 1992). They are often guided by moderators or group facilitators, who introduces the discussion topic and controls the interactions amongst the group members by encouraging natural and lively discussions by themselves (Boddy, 2005).

The design of the focus groups discussions (FGDs) was to follow-up issues that had arisen in the exit interviews (EI) in more depth. The FGD format allowed the participants to discuss freely issues that they shared in common or experienced in a more detailed way than was elicited from EI. The choice of focus groups over one-on-one IDIs was to facilitate group debate and discussion. The discussions were designed to explore the delivery experience of the mothers who had given birth and came back for the 6, 10, or 14 weeks postnatal visits. Mainly, they focused on issues relating to the QoC around birth such as treatment received (pain management during and after delivery); SBA support (emotional and actual HCWs support); appropriateness and timeliness of care; and perceptions on the LM policy (cost of delivery, payments, communications, and benefits package) (*appendix 13*).

3.4.4.6. Mothers exit interviews

EI are interviews conducted to patients at the point of their exit from a healthcare facility or a clinical set up (Geldsetzer et al., 2018, Hrisos et al., 2009, Turner et al., 2000). They have been used to assess patient's perception of QoC, satisfaction with the services received, out-of-pocket (OOP) payments, utilisation of health services, and knowledge about health conditions (Geldsetzer et al., 2018). However, the EIs are prone to 'courtesy bias' where respondents potentially give approving responses, particularly when interviewed in institutions they are familiar (Sah and Kumar, 2015). In this instance, the design and choice were influenced by the nature of the interview responses being quantifiable.

The design of the EI was to utilise a structured questionnaire, adapted from Kenya Ministry of Health's (2015) evaluation tool and Dalinjong et al. (2017), to elucidate perception of the quality of maternal care that the mothers received during delivery and ANC care, experiences with the FM policy, any

costs – both direct medical costs (DMC) and direct non-medical costs (DNMC) – that the patients incurred while seeking care under the FM services. The structured questionnaire had three components (*appendix 14 and appendix 15*). Section one solicited the socio-demographic information of the women; section two sought information on access of the patient to maternal health services during pregnancy including prior visit to the facility and referral; section three had 23 items that measured perceived qualities of the LM services disintegrated into health facility factors, healthcare delivery aspects, staff interpersonal aspects, and the overall satisfaction with the services; and section four had questions about costs that were incurred during the pregnancy process by the mother and the sources of fund for meeting the costs.

3.4.4.7. The diary method

Diary method involves documentation of feelings, personal interpretation of events, interactions and discussions in an unstructured journal form throughout the data collection period. It is a useful method because it approximates a researcher's activities, reduces memory errors common in retrospective interviews, and provides access to abounding detailed information that would otherwise be done in longer interviews (Palojoki, 1997). A diary entry was done at the end of each day to provide a reflection of the day's activities and any other useful information to the research under study. An example of a diary entry is in *appendix 16*.

3.4.4.8. Use of Kenya Demographic Health Survey

The utility of Demographic and Health Survey (DHS) – a nationally representative household survey – provides an array of indices essential for both monitoring and impact evaluation (Croft et al., 2018, ICF International, 2018). The design to use the 2014 Kenya Demographic and Health Survey (KDHS) was to allow for impact evaluation of the FM policy on quality outcome indicators: early neonatal mortality, neonatal mortality, and additional intermediate outcomes (delivery through CS, SBA, birth in a public hospital and low birth weight (LBW)). Detailed discussion of the choice of the outcomes is in section 3.4.8.3 below.

3.4.5. Sampling approach and in/exclusion criteria

This section explains the sampling strategies, sample size, and the data saturation approach for all the data collection methods. Also, it explains the inclusion and exclusion criteria for the key populations of interest.

3.4.5.1. Sampling strategy

Sampling designs applied in a mixed-method study draws from the strength of the qualitative approaches, which seeks to ascertain ‘truth’ of the social world with the aim of making generalisation, and quantitative approaches, which seeks to ensure that the results are representative of the general population (Hesse-Biber, 2010, p49). Non-probabilistic sampling, categorised as either convenience or volunteer sampling, and purposive sampling are often used in qualitative research to select individual and sites that possess the characteristics relevant to the central phenomenon being studied (Creswell and Clark, 2017). In this study, I utilised purposive sampling to identify key informants at the national (macro) level (described in section 3.4.4.2); county and the sub-county level officials at the county (meso) level; and the facility in-charge as well as a health care provider in charge of maternal care/services at the facility (micro) level. Some national and county respondents who were not initially purposively selected were referred through snowballing by the interviewed respondent who indicated that they would be an interesting respondent to interview. FGD participants mothers were also purposively selected based on a common interest which is having given birth in the hospital and came back for the 6, 10, or 14 weeks post-natal visits.

Probabilistic sampling, also known as random sampling, is often used in quantitative research to select an individual who represents a population segment or ‘a large number of individuals representative of the population’ (Creswell and Clark, 2017, p176). Random sampling, through Stat Trek’s Random number generator (instruction on use is found here: <http://stattrek.com/statistics/random-number-generator.aspx>) was used to identify mothers for the EI in the post-natal ward who had given birth recently; had been discharged home from the facility but had not yet left the hospital. In each hospital, I first identified the number of mothers who delivered in each of the day then gave them numbers (say 1-10). The next step involved hitting the calculate button on the ‘Random Number Generator’ and producing a table with five random numbers if the number of mothers who delivered was 10. The mothers who agreed to participate were included in the sample frame to collect information on patient characteristics, health-seeking behaviour, payments and cost of care, and satisfaction with QoC (women who had recently delivered under the free program). Data from 2014 KDHS did not require further sampling as it was already nationally representative.

3.4.5.2. Sample size and saturation

Endeavouring to predetermine the sample size in qualitative research can sometimes prove futile because it is dependent on several factors (Morse, 2015a). Having performed a literature review on sample size determination, Guest et al. (2006, p61) noted that several researchers – though vaguely

defined – had recommended continuing with the sampling until ‘theoretical saturation’ was achieved. Whereas, data saturation has its origin situated in grounded theory (Glaser and Strauss, 1967); it is used more generally to refer to a point in the research process – data collection and analysis – when no new information or insights are discovered (Nelson, 2017). Saturation is used in qualitative research work to gauge the adequacy of the sample size, which can either be noted in advance in research protocols or operationalized at data collection (Hennink et al., 2017). Generally, in many literatures, the concept of saturation has not been adequately defined or operationalized. However, Hennink et al. (2017, p594) provide a distinction in two saturation concepts: *code saturation* (‘the point when no additional issues are identified and the codebook begins to stabilise’) and *meaning saturation* (‘the point when we fully understand issues and when no further dimensions, nuances, or insights of issues can be found’). In this study, the number of respondents in the interviews (at national, county, and facility) was determined by *meaning saturation*, where interviews amongst the participants were stopped when there was no new information forthcoming. In overall, there were 15 national key stakeholders’ respondents, and 21 county, sub-county, facility in-charges and HCWs interviewed (*Figure 3.7*). For FGDs, it is postulated that 90% of themes are discoverable in 3 to 6 FGDs and that three FGDs are ideal for identifying prevalent themes (Guest et al., 2017). In this study, I conducted 9 FGDs as new information kept emerging on the experience of the mothers with the policy and their overall birth experience. The FGDs had a range of 5-12 participants. At the coding stage, when exploring all the qualitative data, I kept even the less pertinent data in case I needed to use it later in the analysis as suggested by Morse (2015b).

For the EI, I determined the sample size of the patients interviewed from each of the facility using the formula proposed by Gorstein et al. (2007) as shown below:

$$n = \frac{1.96^2 p(1-p)(DEFF)}{d^2} \quad (1)$$

The sample size (n)⁵ for the three facilities was estimated to be 553 (three entries were dropped at the analysis stage as pertinent data on perception and demographic characteristics were incomplete). I divided the number based on the proportions of birth in each of the three facilities as obtained from the Kenya Health Information System (KHIS) for aggregate reporting (DHIS2, 2020), (see, column 4 of *Table 3.5*).

The 2014 KDHS data, did not require further sample size calculation, as it was a national representative survey whose design had allowed for representative estimates for different indicators at the national

⁵ The estimation used a width of $\pm 3\%$ (± 0.03) (margin of error/level of absolute precision), an average design effect (*DEFF*) of 2, and a non-response rate of 5%.

level with rural and urban areas assigned differently, at the regional level (formerly called provinces), and for selected indicators at the county level (formerly called districts). The sample was designed to have data from 40,300 households obtained from 1,612 clusters (617 urban areas and 995 rural areas). Of the households, 39,679 were sampled, 36,812 were occupied at the time of fieldwork, and 36,430 were success interviewed (Kenya National Bureau of Statistics et al., 2014).

3.4.5.3. Inclusion and exclusion criteria

As noted earlier, national-level key informants included in the study were those individuals from MoH, NHIF officials, development partners, and civil society including representatives of health service providers that were knowledgeable on the subject, had participated in the policy formulations, and were supporting the implementation of LM policy. Also, the county, and sub-county respondents the county (meso) level; and the facility in-charge as well as health care provider in charge of maternal care/services at the facility level were those individuals who were active in the implementation of the FM policy.

The key population of interest included in the EI were mothers who had delivered in the facility of study and were in the post-natal ward waiting to go home after being procedurally discharged home from the facility. Only the mothers who agreed to participate in the survey were included. The mothers may have or may not have utilised LM services as we were also interested in evaluating utility and knowledge of the policy. FGD participants were mothers who had come to the facility for 6-, 10-, and 14-weeks postnatal care visit.

3.4.6. Data collection strategy

The data collection for each of the category of respondents kick-started once the research ethics (*appendix 4 and 5*) and permission to conduct the study (*appendix 6 and 7*) had been granted. This section explains the process of recruitment for each of the respondents and the challenges encountered.

From the onset of data collection, I created a database using NVivo 12 software; a computer supported software for qualitative data analysis. It aided in filling all documents, audios, and transcripts according to the format or content, and source; thereby easing the tracking of any record when needed, and it also aided in maintaining primary data separate from analysis as a way of keeping an audit trail (Yin, 2018).

3.4.6.1. National key informants

My host at KWTRP institution is a health economist who was also leading a process evaluation of LM at the same time as my research data collection and had worked with nearly all the national respondents. Through his contacts, and with another colleague at the institution, we were introduced to the national respondents with whom we made contacts through emails or telephone to arrange for an appointment. I provided them with information sheets (*appendix 8A*) during the interview prior to obtaining their formal consent (*appendix 9A*).

3.4.6.2. County respondents, facility in-charges, and HCWs

I first made contact with the research and development in-charge at the county who provided me with permission to conduct the study in the county (*appendix 6*) and listed several respondents at the county health management teams (CHMT) whom he perceived as relevant for the study and introduced me to them. Like with the national key informants, I provided them with information sheets (*appendix 8B*) during the interview prior to obtaining their formal consent (*appendix 9B*) and asked for their preferred location for the interview and time for the interviews. The interviews lasted more than six months.

For the facility in-charges, I walked into each of the facilities on different days and introduced myself to the in-charge. In this initial visit, I explained the purpose of my being there and provided the ethics letters and the permission to conduct study letters from the county (*appendix 6*); in addition to outlining the plans for the research work. Given the seeming sensitive nature of part of my enquiry (especially those touching on resources), I emphasised to the administration that my role was on examination of the FM policy rather than an audit. With a view of building trust between the facilities me, this assurance was critical because it paved the way for sharing of views and other data sources. I then made appointments with the in-charges, for the interviews at the time of their convenience. While I endeavoured to have the interviews conducted a quiet place, not always was it possible and I ended up conducting some in the busy maternity ward areas, which ended up interrupting some interviews. However, a majority were conducted in their offices after seeking their consent until theoretical saturation was achieved. Hospital C – being a teaching and referral hospital and having its own internal ethical approval – took one more month to consent to commence the study until my protocol was approved by the hospital (*appendix 7*).

After the initial introduction, the in-charges introduced me to the heads of the maternity sections after which I explained the purpose of my study and subsequently undertook IDIs with them and

respective HCWs in their department (ANC, labour wards, and PNC wards). All the interviews were conducted at the respective facilities at varied times based on convenience of the respondents. It was pleasantly surprising at how the county, facility in-charges, and HCWs were welcoming and were open.

3.4.6.3. Mothers

Since the targeted number of mothers in the EI were many, I sought to work with four of my mentees (whom I had worked with in my previous organisation on other projects) to collect the data. They were knowledgeable about research designs, data collection methods, and skills. I trained them for two days before data collection on ethics in addition to reviewing the questionnaire. As soon as they were comfortable with the tool, we piloted it together (in a non-participating facility in the county). Therefore, for the EI, I went together with them to each of the facilities and introduced them to the administration and maternity department heads after which we were granted access to the mother. We all had name tags that we used to identify ourselves to the mothers. Each morning of the interview, we went to the in-charges office to identify the mothers that had been discharged (using bed numbers) and were waiting to go home. We used the number of the mothers per day to randomly sample (section 3.4.5.1) the mothers we intended to interview for the day. The mothers were then invited to participate in the study, and the interviews were done until I attained the intended sample size. Each mother was taken through the information sheet (*appendix 8C*) and until they were comfortable to participate, then were the consent form handed to them. Only one mother, declined to participate.

The mothers in the FGD were recruited from the child welfare clinic when they had brought the children for the vaccination. The reason for not conducting the FGD immediately after birth was to allow the new mother to fully recover from the birth trauma and bond with the new baby. The FGDs in each of the facility was organised with the help of a nurse from the departments, who during each of the discussions booked for us a room at the department. The nurse and I engaged the mothers as the children were being vaccinated and asked if they were willing to participate in the study. Those who agreed to participate were asked if they were willing to spare an hour or two to participate in the discussions; after which they were all let to the interview room that had been booked in advance. The intention of the study was again explained to them, and they were taken through the study information sheet (*appendix 8C*). The mothers were allowed to ask questions after which they were handed a consent form (*appendix 9C*) that was translated in Swahili (local dialect). Until they were all comfortable and content to participate in the study, then did the discussions begin. The process of organising the FGDs was rather challenging based on the first two that I conducted because some of

the babies who were with the parents were crying, and we kept posing until the mothers were comfortable. Also, it was rather difficult to evaluate whether to allow the men who had come with their wives in the clinic in the discussion.

3.4.6.4. Kenya Demographic Health Survey data

The study utilised the births recode (BR) file (whose unit of analysis is birth) of the 2014 KDHS, which was obtained from the DHS Program on 08/08/2018 (*Appendix 3*). The 2014 KDHS data is a national representative survey, based on the Fifth National Sample Survey and Evaluation Programme (NASSEP V) – a master sampling frame for Kenya, that was collected from May 7 to October 20, 2014. The design of the 2014 KDHS was to allow for representative estimates for different indicators at the national level with rural and urban areas assigned differently, at the regional level (formerly called provinces), and for selected indicators at the county level (formerly called districts). Of the sampled 40,300 households, 36,430 were successfully interviewed. The survey questionnaire targeted women of reproductive age 15-49 and asked a limited number of questions about their complete fertility history and detailed questions on births that occurred within five years that preceded the data collection. Other topics covered in the women questionnaire are shown in *Figure 3.6*; however, most of these variables are only available at the time of the interview and not the time of birth which affected the choice of control as will be discussed in the subsequent section.

- Background characteristics (education, marital status, media exposure, etc.)
- Reproductive history
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Women's work and husbands' background characteristics
- Childhood mortality
- Awareness and behaviour regarding HIV and other sexually transmitted infections
- Adult mortality, including maternal mortality
- Domestic violence
- Female circumcision
- Fistula

Figure 3.6: Topics covered in the questionnaire for women aged 15-49 years (Source: (Kenya National Bureau of Statistics et al. (2014))

The overall sample shows that the total number of births in the last 5 years from the 23,245 mothers interviewed was 83,591. Using maternal history question presented using variable *midx* (which

contained up to six entries of births in the last five years prior to the interview), I choose only births that occurred in the last five years. The overall analytical sample contains information on 14,949 mothers with 20,964 births. The methodology field manual and toolkit utilised by the DHS are available for more details on sampling and data collection (Croft et al., 2018, ICF International, 2018).

3.4.7. Description of the samples

In overall, 553 EI, nine FGDs, twenty-one IDIs with the county, facility in-charges and HCWs, and fifteen KIIs were conducted between 20th November 2018 and 13th September 2019. *Figure 3.7* shows a summary of the recruitment process, professionals interviewed, and the sample per category. The hospital descriptions have been provided in the study site section (section 3.4.2 and *Table 3.5*).

University of Kent, SSPSR Student Research Ethics Committee Approval: 5 th September 2018 AMREF Ethics and Scientific Review Committee (ESRC) Approval: 22 nd October 2018 Kiambu County Clearance to conduct research: 31 st October 2018 Hospital C Approval to carry out research: 12 th November 2018		
PART A: Patient exit interviews (PEI): Mothers who gave birth in the hospitals under the free maternity policy, and were preparing to be discharged home		
Hospital A: 20 th November – 20 th December 2018 (42)	Hospital B: 19 th November – 3 rd December 2018 (170)	Hospital C: 4 th December 2018 – 15 th February 2019 (338)
PART B: Focus Group Discussions: Mothers gave birth in the hospitals and had come back for post natal care at either 6, 10, or 14 weeks		
Hospital A: 20 th November – 20 th December 2018 (3)	Hospital B: 19 th November – 3 rd December 2018 (3)	Hospital C: 4 th December 2018 – 15 th February 2019 (3)
PART C: In depth Interviews: County officials, facility in charges, Healthcare workers, other hospital support staff working on the free maternity policy: 21 st November 2018 – 04 th June 2019		
County officials: Senior level manager (1) Middle level manager (2)		
Hospital A: 22 nd November – 12 th December 2018 Facility level manager (1) Department in charge (1) Nursing officers (4) Accounting officer (1)	Hospital B: 21 st November 2018 – 04 th May 2019 Facility level manager (3) Department in charge (1) Clerical officers (1)	Hospital C: 1 st December 2018 – 30 th January 2019 Facility level manager (2) Department in charge (1) Nursing officers (1) Clerical officers (2)
PART D: Key Stakeholders Interviews: Ministry of Health officials, Development partners, Civil society organisations 1 st June 2019 – 13 September 2019		
Ministry of Health officials (5) National Health Insurance fund officials (3) Development Partners (7)		
Total Number of respondents	<i>Patients exit interviews (553)</i> <i>Patients Focus group Discussion (9)</i> <i>County and HCWs In depth interviews (21)</i> <i>National Key stakeholders' interviews (15)</i>	

Figure 3.7: A flow diagram of the sample and recruitment (Source: Author); (Note: the brackets show the number of respondents)

Nine of the key informants interviewed were female while six were male; 15 were from the MoH, three from NHIF, and seven from development partner agencies. Fifteen of the respondents in the

IDIs were female and six were male. In general, one was a senior county level manager, two county middle-level managers, six facility-level managers, three departments in-charges, five nursing officers, three clerical officers, and one accounting officer. The range of the number of mothers that participated in the FGDs was between 5-12.

A summary of the characteristics of respondents in the EI is, as shown in *Table 3.6*. In overall, 550 entries were included in the analysis and three were dropped because of the incompleteness of pertinent data on perception and demographic characteristics. Comparatively, the number of women of reproductive age (between 15-49 years) in the county is 722,916 (Kenya National Bureau of Statistics, 2019b, p194). A majority of the respondents were aged 24 years and below overall (46.18%), hospital A (42.86%), and hospital B (54.12%), and between 25-34 years in hospital C (47.34%). Most of the respondents in all the hospitals (hospital A (69.05%), hospital B (56.47%), hospital C (65.99%) and general (63.27%)) had a household income of between 5,001 – 10,000 KES (49.24 – 98.47 USD)⁶ (27.09%); and had more than three people in their households. 49.64% of all respondents were unemployed, and 64.00% had a parity of between 2-5. A majority in all the hospitals and overall were Christian protestants (hospitals A (66.67%), B (72.94%), C (75.15%), and overall (73.82%)); had attained secondary education (hospitals A (52.38%), B (43.53%), C (45.27%), and overall (45.27%)); and were married ((hospitals A (71.43%), B (85.88%), C (82.84%), and overall (82.91%)).

Table 3.6: Socio-demographic characteristics of the mothers

Variable		Total Frequency (%)	Hospital A n (%)	Hospital B n (%)	Hospital C n (%)
Estimated annual deliveries^a			1,076	5,635	9,152
		n=550	n=42	n=170	n=338
Age	24 and below	254 (46.18)	18 (42.86)	92 (54.12)	144 (42.60)
	25-34	242 (44.00)	16 (38.10)	66 (38.82)	160 (47.34)
	35 and above	54 (9.82)	8 (19.05)	12 (7.06)	34 (10.06)
Number of people in the household	Three and below	202 (36.73)	13 (30.95)	74 (43.53)	115 (34.02)
	More than 3	348 (63.27)	29 (69.05)	96 (56.47)	223 (65.99)
	5,000 and below (below 49.23 USD)	107 (19.45)	12 (28.57)	29 (17.06)	66 (19.58)

⁶ The cost data in this study was collected in Kenya shillings (KES), but was converted to US dollars (USD) using an exchange rate of 1 USD = 101.555 KES; which was an average exchange rate from September 2018 – March 2019 as obtained from OANDA currency converter (see, <https://www1.oanda.com/currency/converter/>).

Variable		Total Frequency (%)	Hospital A n (%)	Hospital B n (%)	Hospital C n (%)
Household income per month (KES)	5,001 – 10,000 (49.24 – 98.47 USD)	149 (27.09)	12 (28.57)	34 (20.00)	103 (30.47)
	10,001 – 15,000 (98.48 – 147.70 USD)	89 (16.18)	5 (11.90)	26 (15.29)	58 (17.16)
	15,001 – 20,000 (147.71 – 196.94)	95 (17.27)	5 (11.90)	34 (20.00)	56 (16.57)
	20,001 and above (196.95 and above)	110 (20.00)	8 (19.05)	47 (27.65)	55 (16.27)
Occupation	Student	19 (3.45)	2 (4.76)	9 (5.29)	8 (2.37)
	Unemployed	273 (49.64)	12 (28.57)	86 (50.59)	175 (51.78)
	Self-employed	197 (35.82)	18 (42.86)	53 (31.18)	126 (37.28)
	Salaried/formal employment	55 (10.00)	9 (21.43)	20 (11.76)	26 (7.69)
	Other (Casual labourer)	6 (1.09)	1 (2.38)	2 (1.18)	3 (0.89)
Parity	Primigravida	192 (34.91)	15 (35.71)	63 (37.06)	114 (33.73)
	Para 2-5	352 (64.00)	27 (64.29)	107 (62.94)	218 (64.50)
	Parity of above 5+	6 (1.09)	-	-	6 (1.09)
Religion	Christian protestant	406 (73.82)	28 (66.67)	124 (72.94)	254 (75.15)
	Christian Catholic	131 (23.82)	12 (28.57)	42 (24.71)	77 (22.78)
	Other or no religion	13 (2.36)	2 (4.76)	4 (2.35)	7 (2.07)
Marital status	Single	94 (17.09)	12 (28.57)	24 (14.12)	58 (17.16)
	Married	456 (82.91)	30 (71.43)	146 (85.88)	280 (82.84)
Number of ANC visits attended	Two or less	85 (15.45)	6 (14.29)	25 (14.71)	54 (15.98)
	Three times or more	465 (85.55)	36 (85.71)	145 (85.29)	284 (84.02)
Education	Primary or no education	197 (35.82)	11 (26.19)	63 (37.06)	123 (36.39)
	Secondary	249 (45.27)	22 (52.38)	74 (43.53)	153 (45.27)
	Tertiary	104 (18.91)	9 (21.43)	33 (19.41)	62 (18.34)

Note: Source ^aKenya Health Information System (KHIS) for aggregate reporting (DHIS2, 2020); to show the proportion of the sample against number of deliveries in the facilities (Estimates for annual delivery were for the financial year July 2018 – June 2019).

The sample characteristics of data from 2014 KDHS are presented in chapter 7. A detailed description of how the data was prepared is discussed below in the section 3.4.8.3 *'preparation of the data for analysis'* following into the discussion on *'related literature and theory of change.'*

Description of the document reviewed is provided in *Table 3.7*. The documents were accessed via government and other websites. Additionally, the key informants were asked for relevant documents, reports, manuals that were not available publicly. The county and sub-county respondents and facility in-charges were requested to provide relevant document and information on local policies strategies, relevant work plans, and any other documents that were deemed useful for the study. To minimise bias, I ascertained the authenticity and completeness of the document before including them as part of the review.

Table 3.7: Documents reviewed

Category	Item
Legal documents	<ol style="list-style-type: none"> 1. The Constitution of Kenya (Article 187, Article 43) 2. The Health Act (Article 2, Article 5, Article 6, Article 7) 3. National Hospital Insurance Fund Act 4. The county government act 5. Intergovernmental Relations Act (section 25) 6. Legal Notice 137–183 of August 2013 whereby in Exercise of the powers conferred by section 23(1) of the Transition to Devolved Government Act, 2012 7. Legal Notice No.34 National Government Regulation
Websites	<ol style="list-style-type: none"> 1. The standard group PLC 2. The Nation Media Group 3. Kenya Ministry of Health 4. The World Health Organisation 5. The World Bank
Other documents	<ol style="list-style-type: none"> 1. Linda Mama implementation manual 2. NHIF PowerPoint presentations on Linda Mama (2) 3. Draft free maternity service policy 4. Rapid assessment of Linda Mama report 5. Other Linda Mama case studies reports (2) 6. Facilities maternal and child health progress charts and wall hangings/ posters

3.4.8. Data management and analysis

This section outlines the process and rationale of data management utilised for the three approaches (qualitative, quantitative, and econometrics).

3.4.8.1. Qualitative Data management and analysis

Effectual data management in qualitative work is imperative for organising voluminous data and was essential for ensuring the transparency of the analysis process. All recorded interviews were transcribed verbatim. All the raw data, including recorded audio files, full interview transcripts, field notes, and documents gathered from fieldwork, were imported into NVivo 12 for ease of management and transparency of the analysis process. From the onset of my PhD work, I switched between Endnote and NVivo to conduct the integrative review (chapter2). NVivo gave me the flexibility of moving between audio files, transcripts, codes, nodes, annotations and memos and keeping track of any coding decisions I made during the process. Imported data was then organised according to source and type of respondent (FGDs from patients or IDIs from county officials and HCWs or key stakeholders' interviews). As I progressed with analysis, I added data in the form of search queries and concept maps (Table 3.8).

Table 3.8: Management of data using NVivo 12

		Policy	QoC	Cost
Internal source: Folders and subfolders	Key stakeholders at the macro level: Key stakeholders' interviews - Government officials - NHIF officials - Development partners	√ √ √	√ √ √	√ √ √
Internal source:	County health management team, senior and middle-level managers, Healthcare workers at the meso level: In-depth interviews and notes from diary method - County officials - Healthcare workers - Other support hospital officials	√ √ √	√ √ √	√ √ √
Internal source:	Focus group discussions - Mothers who gave birth and came for PNC	√	√	√
Internal source:	Documentation - National level: Legal document, reports, websites - County and facility level: implementation manuals, reports, posters	√ √	√ √	√ √
Memos/annotations:	- General / across the category of interviewees groups - Across the data collection method	√ √	√ √	√ √
Queries: using text search	- Terms included (across the categories on interviewees; across data	√	√	√

		Policy	QoC	Cost
	collection methods): <i>policy, matern*</i> , <i>implement*</i>			
Maps	- Concept and Mind maps: for mapping themes across sites	√	√	√

Qualitative data were analysed using a thematic approach. Thematic analysis was chosen because it provides a clear, succinct, and transparent methodical account of coding that is epistemologically neutral (Braun and Clarke, 2006, Clarke and Braun, 2017, Terry et al., 2017). Additionally, it allows for both theoretical flexibility and flexibility in ‘approaches to meaning generation’; can be used ‘within a “critical” framework’ that permits interrogation of the patterns around a topic; fits analysis using small or large datasets; and allows for both deductive (driven by theory) or inductive (driven by data) analyses that elucidate explicit and underlying meaning (Clarke and Braun, 2017, pp297-298). In this study, I followed the steps involved in framework thematic approach for applied policy research as outlined by Ritchie and Spencer (2002, p178).

Familiarisation of the data

Familiarisation of the data was done through ‘immersion’ where I repeatedly read and reread the transcripts and the field notes diary, in addition to listening to the audio recordings. Braun and Clarke (2006) have argued that the act of transcribing data should be considered as an interpretive act of the analytical process in lieu of a mechanical one. In my case, it was not possible to have the experience because I sought help for transcription from a qualified transcriber since it was taking rather too long-a-time. Nevertheless, given that I had collected the data, I was able to reflect through the data as I immersed myself and even developed analytic thoughts and interest. In this phase, I wrote down the preliminary coding ideas and searched for potential meaning, patterns and themes on a notebook which was also supplemented by talking to a colleague from my department. I started by analysing two transcripts per each of the internal source category (KIIs, IDIs, and FGDs) using NVivo, as did two of my supervisors with whom I had shared one sample of each category. We then compared the codes as a way of understanding abstract ideas and helping me to articulate the coding decisions.

Coding the material

The subsequent step, akin to Attride-Stirling’s (2001, pp390-391), included reducing the data in two steps: devising ‘a coding framework’ and dissecting ‘text into text segments using the coding framework.’ At the onset of the phase, I had to decide on how to analyse the different data collected through different methods, whether jointly per subtopic of policy, quality and cost; or through

combining each of the different data components into one before analysis. Importantly, from joint data analysis through any of the two methods, the focus was on the shared meaning obtained from the interaction; and the end goal of knowledge construction (Polak and Green, 2016). I chose the first perspective, to inform rather than dictate the analysis. Guided by the research questions under the analytic components (policy, QoC and costs perspectives), theoretical and conceptual framework, and the initial ideas that emerged from the 'immersion' in the data, I started by developing 'lower-order premises evident in the text' (Attride-Stirling, 2001, p388) through open coding (assigning codes to portions of data) (Urquhart, 2001, p5). Through it, I was able to create an initial coding framework which was more descriptive for each category of data (KII, IDIs, and FGDs) per analytical component of the policy, QoC, and cost. Throughout this initial process, I did not attempt to interpret the data but rather kept codes as close as possible. In the subsequent step, I then used the axial coding technique where the overlapping categories of codes were further refined by grouping together codes that that succinctly summarised the text.

Identifying themes and constructing the networks

I then refined the codes into basic themes by reading through the groups of related codes (Attride-Stirling, 2001). I found this process flowing as the data had been reduced into components that I found manageable. Significantly, I then rearranged the basic themes into clusters of larger organising themes using the issues that were explaining each of them. For instance, in the policy component of the study, the key issues were on the formulation of the policy, implementation, and the effects and impact. *Appendix 17* shows an example of how the themes were organised. At this point, I shared the themes that I had developed with my supervisors, and we had a discussion around them. After agreeing on the organising themes, I then organised them into networks of global themes which are 'super-ordinate themes that encompass the principal metaphors in the data as a whole' (Attride-Stirling, 2001, p389).

Describing and exploring thematic networks

In this part of the process, I cross-referenced each of the thematic networks in turn by describing the contents using the text segments. Through the woven texts, then I was able to weave through patterns right from the basic themes through to global themes to identify the patterns of interpretations. I was able to evaluate what the organising themes were contributing to the global theme, and the ones that were not in overall relevant were moved to another section. In this regard, the flexibility of NVivo to code and un-code became very helpful in supporting the interpretation.

Summarise thematic network

In this section, I evaluated the relationships across the multiple categories of the multiple respondents and categories/perspectives. I was looking for overlaps (inconsistencies and gaps) and convergence. I preserved all evidence, even the contradictory ones, to use them for explaining possible rival interpretation (Yin, 2018). For instance, in situations where the KII indicated that the patients were not paying any cost for accessing LM services, but the patients themselves indicated how they had to pay for drug or other services. This part of the process was supported by having a discussion with my supervisors, in addition to reflecting on the analysis.

Interpreting patterns

As a final step, I critically examined each of the thematic networks with the data interpretation entailing the identification of key concepts and perceptions and explaining the integrated relationships. Also, the process involved explaining the relationship between the theoretical conventions and the data; and identifying the policy implications in such a way that the findings were larger than the 'sum of parts.'

3.4.8.2. Quantitative data management and analysis

The management of quantitative data was done in both Excel software and STATA 15. Given that the EI data was collected using a structured questionnaire, I first entered it in Excel software. I found the process rather tedious and was prone to errors; however, I ensure caution as I entered the data. I then utilised the Excel function of *filter* to clean the data. Through the Excel software, it was easier to pick data elements that were irregular or off tangent. Eventually, the data was then loaded to STATA 15 for analysis. In STATA, the data was coded and labelled using the formulae *lab def* to assign codes to the responses as they appeared in the questionnaire, which was then used to create a codebook in four sections: Socio-demographic information, access to maternal health services during pregnancy (including the aspects of visiting the facility such time taken to the facility, waiting time, and referral), perceived quality of LM services (health facility, healthcare delivery, and interpersonal aspects), and costs.

Analysis of the data was done in STATA 15. The socio-demographic characteristics and the maternal health access characteristics were analysed descriptively using proportions and chi-square to see if there was a significant difference in the characteristics of the patient across the three facilities. The 23 questions on perceived QoC (health facility, health care delivery, interpersonal) whose responses

was in Likert where 1 was 'Completely disagree,' 2 'Disagree,' 3 'Not sure,' 4 'Agree,' and 5 'Completely agree' were analysed in using proportions. The questions on level of satisfaction, prospects of delivery in the same hospital in future, cost of care (source of funds and proportion of the population paying OOP payments) were done descriptively using proportion, and measures of dispersion and that of central tendency.

Further analysis on STATA also included running a t-test (for continuous data) and one-way ANOVA test (for categorical data that had more than two categories) to determine the difference in the mean overall direct expenses (ODE) based on patients' characteristics as follows:

Using the method adopted from Dalinjong et al. (2017, p3), I categorised the OOP payments in childbirth as either DMC or DNMC. DMC were either service the patients incurred as inpatient or outpatient (herein, *services paid for (SPF)*) or items they were told to buy as either inpatient or outpatient (herein, *told to buy (TTB)*) as defined in *Table 3.9* and is a sum of the two costs. DNMC were cost incurred due to the admission process (inpatient). The overall direct expense (ODE) a sum of DMC and DNMC and is expressed in the form of descriptive statistics of mean, standard deviation, median, maximum and minimum. As part of the sociodemographic characteristics, income was estimated by asking the respondents the detailed questions about the income of the patient, and household income per month which included any work-related earnings, welfare payments, or government assistance.

To measure the financial risk protection, I estimated the extent of catastrophic expenditure which is a disruption to the household consumption patterns. Catastrophic expenditure is defined as having healthcare expenditure of care-seeking episode that is equal to or that exceeds a threshold of household resources, either expenditure or income (Dalinjong et al., 2017). Several authors have defined the threshold as varying from 5-40% (Amaya-Lara, 2016, Borghi et al., 2006, Dalaba et al., 2015, Hoque et al., 2015). In this thesis, I estimated the impact of the OOP payments on the overall monthly household income by taking the ODE incurred divided by the monthly household income and defined it as catastrophic if it was more than 10% of the overall income as has been defined in other studies (Goli et al., 2016, Hoque et al., 2015, Wagstaff, 2008). The cost data in this study was collected in Kenya shillings (KES), but was converted to US dollars (USD) using an exchange rate of 1 USD = 101.555 KES, which was an average exchange rate from September 2018 – March 2019 as obtained from OANDA currency converter (see, <https://www1.oanda.com/currency/converter/>).

Table 3.9: Categorisation of OOP expenditure that incurred during childbirth

Type of cost	Description	Recall period
Direct medical cost (DMC)	Is the summation of the services paid for yet should be free and things told to buy	Calculated
Services paid for (SPF)	Cost of service received by the patient during the birth process, defined as the period during ANC, birth and PNC. The costs include registration fees, hospital card, consultation, admission, lab-tests, ultrasound, payment for surgery (caesarean section or any theatre fees), blood, and drugs, and other related costs. The cost is either inpatient or outpatient.	Birth process
Told to Buy (TTB)	Cost of payment for items that the patient was told to buy. The costs include cotton wool, basin, bandages/gauze rolls, syringe, drugs and other related costs. The cost is either inpatient or outpatient.	Birth process
Direct non-medical cost (DNMC)	Costs such as transport cost to and from the hospital, accommodation cost for self and accompanion while the patient is admitted, and any form of informal payments. The cost is either inpatient	Birth process
Overall direct expenses (ODE)	Is the summation of the direct medical cost and direct non-medical cost	Calculated

The final set of cost analysis was a log-linear regression to determine if the characteristics of the patients were predictors or determinant of the ODE used in the facility. The basic log-linear model was:

$$\ln Y = \beta_0 + \beta_1 X_\pi \quad (2)$$

Where $\ln Y$ is log of ODE; β_0 is the intercept and X_π are the patients characteristics. The model was differentiated for ease of interpretation as:

$$\frac{\delta Y}{Y} = \beta_1 \delta X_\pi \quad (3)$$

Where β_1 provides an instantaneous change (a percentage change in ODE) for Y is associated with a unit change in X_π patient characteristics.

3.4.8.3. Econometrics data management and analysis process

All the DHS data had already been cleaned and curated using a standard methodology field manual and toolkit (Croft et al., 2018, ICF International, 2018). Despite using the Croft et al.'s (2018, pp1.13-1.18) guide in the structure and component of the DHS data, it was not as straightforward to identify the dataset that was relevant for my study. At the start of the study, I utilised the women's individual record (IR) dataset in which the woman interviewed was the point of reference; thus, I reshaped the data long using stata command (*reshape long*) to make the births the point of reference. I learnt, albeit late in the process of data management and analysis, that the birth recode (BR) dataset had already been cleaned and reshaped to fit my analysis. Therefore, I subsequently loaded the BR dataset in STATA 15 for analysis. An initial descriptive analysis was conducted. The overall sample showed that there were 23,245 mothers and 83,591 births (*identified using the egen command*). Using maternal history question presented using variable *midx* (which contained up to six entries of births in the last 3-5 years before the interview), I choose only births that occurred in the last five years. Generally, children born in the 5 years ($b19 < 60$). The overall trimmed sample also showed that there were 14,949 mothers and 20,964 births (*identified using the egen command*).

However, before further analysis, I had to specify the gaps in the impact analysis of FM policy in Kenya, review literature associated with the outcome of interest leading to the proposed theory of change and the addressed question (discussed in the following subsection).

In this section, I evaluated overall effect the FM policy (implemented in 2013), rather than the LM policy, best captured by both early neonatal and neonatal deaths as quality outcomes. Both early neonatal and neonatal deaths were chosen as an outcomes because, one, it is a measurable quality outcome that can be cumulatively averted by a series of quality processes and inputs within the continuum of maternal care (Kerber et al., 2007, Lawn, 2015); and, two, it was curated from the dataset using the reported age at death for each of the babies in the sample. The other maternal outcome indicators (discussed below in details) were limited by the fact that in the KDHS data is captured for the last birth that the mother had rather than all births in the dataset.

Related literature and theory of change

This section presents the literature on the different characteristics that elucidate the expected impact of the FM policy on neonatal mortality.

Some literature has shown a significant association between maternal and infant outcomes with the utilisation of *antenatal care (ANC) services, maternal characteristics such as socio-economic, demographic, and biological, delivery, and neonatal factors* either through using a survey or cross-sectional data.

Concerning the association between *utilisation of ANC services* and maternal and neonatal outcomes, Chama-Chiliba and Koch (2016) reported that utilisation of ANC services stimulates familiarity of the mothers with the health care system and allows the HCWs to promote skilled delivery services. Schlembach et al. (2006) showed that ANC services such as skilled attendance and urine analysis accorded to the mothers during pregnancy play a critical role in determining the outcome of a delivery and neonatal mortality. Other ANC services such as checking for blood pressure (BP) and intake of iron-folic acid (IFA) supplement are recommended since they decrease the risk of preterm birth, LBW, anaemia, and neonatal mortality (Zeng et al., 2008). A higher number of ANC visits increase chances of early identification of complications leading to better delivery outcomes (Arunda et al., 2017). Additionally, tetanus injections during ANC services prevent mothers from acquiring tetanus, and lack of it is associated with neonatal mortality (ibid, 2017).

Regarding *maternal characteristics, either biological, socio-economic, or demographic*, several factors in them have been shown to have an association with attending skilled delivery and potential for affecting neonatal mortality. For example, the 2014 KDHS concluded that infants born to mothers who are too young (under age 18) or too old (over age 34) had a higher probability of dying in early childhood (Kenya National Bureau of Statistics et al., 2014). Additionally, it revealed that it was twice as likely for a baby to die if the mother had a birth interval between the children of less than two years compared to three or more years (ibid, 2014). One study postulated six times higher deaths in the neonatal period among neonates who were multiple births compared with single births (World Health Organisation, 2006). In their evaluation of the socio-demographic characteristics of infant mortality in Kenya, Mustapha and Odimegwu (2008) revealed that ethnicity was the second most important determinant after breastfeeding. They argued that there was a significant socio-economic inequality between the mothers based on their ethnicity. For instance, the low probability of infants dying among the Kikuyu infants could have been attributed to numerous socio-economic advantages such high urbanisation of their regions, greater wealth, and a low proportion of non-educated women among this group (Mustafa and Odimegwu, 2008). Also, mothers' level of education was seen as a contributor to seeking delivery services, child survival, and, therefore, associated with better health-seeking behaviour (Caldwell, 1979). For instance, more educated women are likely to marry and get to motherhood later, get fewer children, and utilise ANC care and immunise children (Hobcraft, 1993).

Regarding household wealth, children from wealthier households are at a lower neonatal and post-neonatal mortality risk compared to those from poorer backgrounds (Ikamari, 2013). Similarly, the region of residence is a significant determinant of both neonatal and post-neonatal death in Kenya, potentially due to differences in the socio-economic and ecological environmental conditions (Ikamari, 2013). Area or place of residence – categorised as either rural or urban – is a crucial socio-economic determinant of infant mortality in Kenya; and the availability of health services in urban areas could enhance the survival of the child (Ikamari, 2013).

Regarding delivery, Tura et al. (2013) argue that *place of delivery* and *skilled assistance* plays a significant role in maternal and neonatal birth outcomes in that there could be a 29% reduction in neonatal mortality if mothers deliver in health facilities. Further, Abdullah et al. (2016) show that infants delivered at home under the care of traditional birth attendant (TBA) are six times likely to die compared to infants born in a hospital. Also, the potential for death among neonates born through CS is significantly high (Signore and Klebanoff, 2008). However, this estimate is not causal, given that doctors recommend CS to high-risk pregnancies, which in itself is related to higher mortality risks to the newborns, and not because of the procedure.

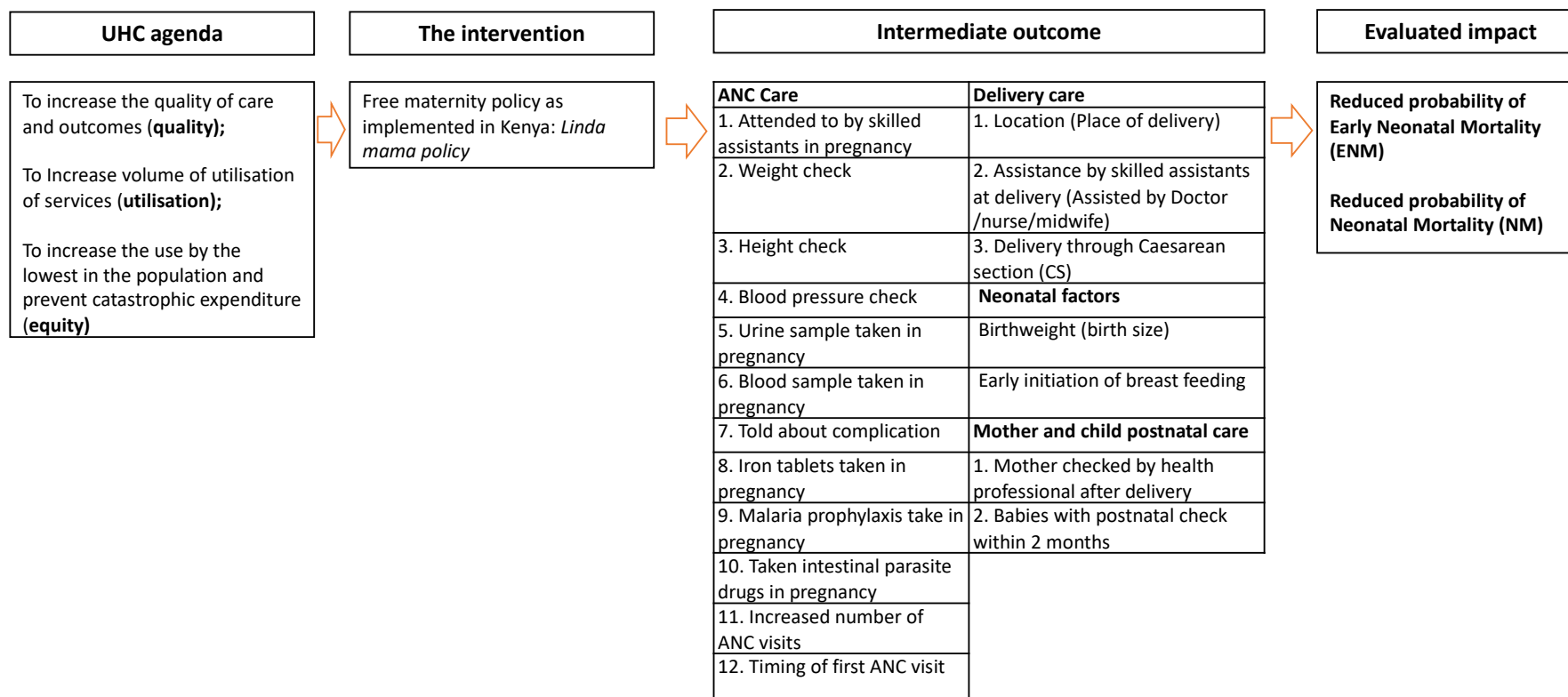
About neonatal characteristics, the gender of the baby, birth size, APGAR (**A**ppearance (skin colour); **P**ulse (heart rate); **G**rimace response (reflexes); **A**ctivity (muscle tone); **R**espiration (breathing rate and effort)) score of the baby, and early initiation of breastfeeding have been identified as critical determinants of maternal and neonatal outcomes. The mortality rates among male children in the early neonatal period are significantly higher than among female children (Abdullah et al., 2016) as males are more likely to die in their first year of life than females (World Health Organisation, 2006). Neonates who are born with LBW, often defined as being less than 2500 grams (Nakimuli et al., 2015) are twice as likely to die in their first month of life than those whose weight is categorised as average or larger (Kenya National Bureau of Statistics et al., 2014). Additionally, the risk of neonatal death is six times higher among neonates born with low APGAR scores as compared to those with a normal APGAR score and that neonates who had both LBW and the low APGAR score had 28 times higher risk of neonatal death compared with those with normal APGAR scores (Abdullah et al., 2016). On the other hand, failure to initiate early breastfeeding was shown to increase the risk of neonatal death (Debes et al., 2013, Mullany et al., 2008). For instance, Abdullah et al. (2016) highlighted that neonates who were not initiated on early breastfeeding had 20 times more risks of death than those who were breastfed early. Edmond et al. (2006) elucidated that 16% of neonatal mortality was preventable if all infants were breastfed from the first day and that 22% preventable deaths if breastfeeding started within the first hour.

Also, variables outside the health services such as *availability of drinking water* and *toilet facilities* in homes have a significant net effect in maternal and neonatal outcomes. For instance, children from households without a water supply and a toilet facility have a significantly higher risk of both neonatal and post-neonatal deaths compared to the children who had both in their homes (Ikamari, 2013).

Literature above suggests that causes of the outcomes of maternal and infant outcomes (such as early neonatal and neonatal mortality) are multifaceted. The FM policy is an effective and useful intervention that could address some of the outcome challenges. Some studies from Kenya on the FM policy have described the patterns and potential causes of neonatal outcome using cross-sectional data obtained from 77 health facilities (Gitobu et al., 2017a, b, 2018a). Additionally, Lang'at et al. (2019), evaluated the implementation of the FM policy using an interrupted time series analysis (2 years before and 2 years after the policy) using maternal health indicators reported monthly and collected in three counties in Kenya. While the above studies have attempted to elucidate cause and effect, they have not addressed the causality conclusions related to the FM policy. By using cross-sectional data from a select number of counties, they may have potentially under or overestimated the maternal, and neonatal outcomes as the studies cannot be generalised to the whole country. Equally, their methods were descriptive and only compared the differences before and after the policy implementation. With these limitations, I applied a robust policy evaluation methodology of difference in difference using national dataset and comparing the effect before and after within the same mother to bridge the cause-and-effect gap of the FM policy.

Based on the literature described above, I have proposed a theory of change (*Figure 3.8*) that seeks to evaluate the neonatal outcomes (early neonatal and neonatal mortality). Neonatal outcomes were chosen as main outcomes from the policy because they are a measurable quality outcome that can be cumulatively averted by a series of quality processes and inputs within the continuum of maternal care (Kerber et al., 2007, Lawn, 2015); and it was possible to curate them from the dataset used (using the reported age at death) for each of the babies in the sample. Maternal outcomes were considered as intermediate outcomes (mediators) because the policy affected them, and they affected the outcome of interest. For instance, delivery through the CS has been incorporated as an additional intermediate outcome, since as denoted by Yisma et al. (2019), it is increasingly associated with neonatal mortalities especially for babies in poorer health. I have also included the confounding factors (that affect both the policy and the outcomes). Additionally, the results could be worthwhile in prioritising the scarce resources allocated to the FM policy and maximise the child health benefits. I propose the following hypotheses that this component of the study will address: *does the FM policy reduce the probability of early neonatal mortality and the probability of neonatal mortality; does it*

increase the probability of skilled delivery through CS (or other intermediate outcomes); and what is the cost benefit consideration of the policy? The final framework of analysis is as shown in *Figure 3.8*.



Potential confounders causes: *Demographic characteristics* Age of the mother at birth, Age of the mother at first birth, Preceding birth intervals (excluding first order births), Parity, Multiple pregnancy, Ethnicity, Highest level of education of the mother; *Social economic characteristics* Wealth index (quintile), Religion, Regional difference, Type of place of residence, Drinking water, Toilet facilities; *Neonatal factors* Gender of the baby (being male)

Figure 3.8: Framework for impact analysis (Source: Author)

Preparation of the data for analysis

Outcome variables: The two main outcome variables are **a)** early neonatal mortality (deaths to live births within the first seven days of life); and **b)** neonatal mortality (deaths at ages 0 to 30 days, including deaths reported at age zero months). The two were calculated using the reported age at death. I also explored other intermediate outcomes under ANC care, delivery care, neonatal factors and mother and child postnatal care as follows:

ANC care: Attended to by skilled assistants in pregnancy was recoded from question 409 of 2014 KDHS to reflect skilled service provision by either a doctor, nurse, or a midwife (Kenya National Bureau of Statistics et al., 2014, p456). *The variable was binary: 0 – “No”, and 1 – “Yes.”* *Weight check, height check, blood and urine sample taken in pregnancy* were recorded from question 413 of the questionnaire of 2014 KDHS that asked if any of the above was conducted at least once in the last birth and were binary: 0 – “No”, and 1 – “Yes” (ibid, 2014, p455). *Iron tablets taken in pregnancy* was curated as binary: 0 – “No”, and 1 – “Yes” from the question 421 of the questionnaire that asked if, during the last birth, the mother was given or bought iron tablets/syrup (ibid, 2014, p421). The response ‘do not know’ was treated as missing. Variable *took intestinal parasite drugs* curated as binary: 0 – “No”, and 1 – “Yes” from the question 423 of the questionnaire that asked if the mother took intestinal parasite drugs in the last pregnancy (ibid, 2014, p456). The response ‘do not know’ was treated as missing. *Malaria prophylaxis in pregnancy* was recoded as 0 – “No”, and 1 – “Yes” to reflect whether the respondent received malaria prophylaxis in pregnancy or not. It was based on responses to questions 425-429 on the questionnaire. The *timing of the first ANC* and the number of ANC visits during pregnancy were curated following the MoH recommendations (Kenya Ministry of Public Health and Sanitation and Kenya Ministry of Medical Services, 2012). For instance, that first visit was recoded as 1 if it happened ‘16 weeks or less’, and 0 – ‘above 16 weeks,’ and the *number of ANC visits* were recoded as 1 – ‘4 and above ANC visits during pregnancy’, and 0 – ‘less than four’ (ibid, 2012).

Delivery care: Delivery through the CS which was obtained from question d ‘was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?’ (Kenya National Bureau of Statistics et al., 2014, p459). The question targeted all births that happened in the last five years before the interview. The outcome variables were binary: 0 – “No”, and 1 – “Yes.” Equally, *assistance by skilled assistants at delivery* was recoded to reflect skilled service provision at birth by either a doctor, nurse, or a midwife; the variable variables were binary: 0 – “No”, and 1 – “Yes” and birth in public hospital birth was considered to reflect the operationalisation and implementation of FM policy

deliveries in all public facilities (including hospitals) and not private for-profit or not for profit facilities (Chuma and Maina, 2013).

Neonatal factors: *Low birth weight (birth size)* was recorded based on Nakimuli et al.'s (2015) definition of LBW being that less than 2500 grams; hence were categorised as either; 0 – 'No' and 1 – 'Yes.' *initiation of breastfeeding* was categorised as 1 – 'immediately'; 0 – 'After 1 hr or later' based on Debes et al.'s (2013) definition of early breastfeeding.

Postnatal care: both variables of *the mother being checked by a health professional after delivery* and *babies with a postnatal check within two months* were recoded as binary: 0 – "No", and 1 – "Yes" based on the interview responses.

Explanatory variables: They were categorised as either demographic characteristics of the mother, socio-economic characteristics, and neonatal characteristics. Data were categorised and prepared as follows: *Age of the mother at birth of the baby* was constructed using the variable century month code (CMC) which is described as the difference between 1,900 and year of an event, multiplied by twelve and then adding the month of the event (Croft et al., 2018). The value was calculated by taking the CMC at the birth of the child minus CMC at the birth of the mother then divided by 12 as no question explicitly asked about the year. It was categorised as 1 – 'Less than 20'; 2 – '20-34'; and 3 – '35 years and above' and the breakpoints were selected because they captured three reproduction trajectories of adolescence, young adults, and older adults as also been used by Mustafa and Odimegwu (2008). *Age of the mother at first birth* was categorised as a binary variable, either 1 – '18 years and below', and 0 – '19 years and above' to capture the effect of teenage pregnancy on neonatal mortality. *Preceding birth intervals* was categorised binary as either 1 – 'Less than two years', and 0 – '2 years and above' constructed from the preceding birth interval (months) variable. *Parity*, which Kozuki et al. (2013) define as the number of times a woman has given birth to a live or dead foetus of a gestation age of 24 or more weeks, was constructed as 0 – 'parity 1, 2, and 3'; and 1 – 'parity 4 and above' to capture parities as either low multiparity or grand multipara as suggested by Bai et al. (2002). I used the variable *bord* (birth order) to curate it as noted in the DHS 7 guidelines (Croft et al., 2018, p1.62). *Multiple pregnancies* were categorised as binary, either 0 – "No" or 1 – "Yes" whether the mother had twins. *Wealth index (quintile)* was presented as had been collected during the survey 1 – Poorest; 2 – Poorer; 3 – Middle; 4 – Richer; and 5 – Richest. *The religion of the mother* was constructed as a vector of dummies for each of the categories of the variables under religion. The categories of the variables were 1 – Roman catholic; 2 – Other Christian; 3 – Muslim; 4 – Other (those with no religion were combined in the category 'other'). *Mother's occupation* was constructed as either 0 – 'not working'

or 1 – ‘working’. Given Kenya’s great diversity of culture and people; and with more than 42 main ethnolinguistic minorities (tribes) (Kenya Ministry of East African Community and Regional Development, 2019, Makoloo et al., 2005, p10), *the ethnicity of the mother* was classified into seven broader categories following Mustafa and Odimegwu’s (2008) classification. The categories were 1 – ‘Kalenjin’; 2 – ‘Kamba’; 3 – ‘Kikuyu’; 4 – ‘Luhya’; 5 – ‘Luo’; 6 – ‘Somali’ and last category 7 were all the rest of the mothers whose ethnic categorisation had less than 50 observations. *Highest level of education of the mother* was constructed using a vector dummy of each category, with the categories being as 1 – ‘Primary’; 2 – ‘secondary’; and 3 – ‘Higher’ and 4 – ‘No education.’ *Gender of the baby* was categorised as 0 – ‘female’; and 1 – ‘male.’

Two economic status of the mother were categorised as follows: *Available toilet facilities* were categorised as 0 – ‘Not available’; 1 – ‘Yes Available’. Responses about toilet facilities of ‘no facility’, ‘bush/field’, ‘other’, ‘not a de jure resident’ of variable v116 were classified as not available. The question on the *source of drinking water* could not be classified into either ‘available’ or ‘not available’ since each of the respondents indicated some source of drinking water. Instead, I used classifications as described by Ikamari (2013) where they were classified as 1 – ‘Piped’; 2 – ‘Well’; or 3 – ‘Other sources.’ The response ‘other sources’ was treated as either spring, rain, open, tanker, carts, bottled, other or not a de jure residence from the variable v113 (which was based on the question to the interviewees about their source of water). For ease of orientation of the reader on the summary of the variables and the results, they were presented in section 7.2 (*Table 7.1*).

Empirical strategy

In this study, the empirical strategy applied is based on the difference-in-difference approach used to estimate the impact of removing user fees on two main outcomes: early neonatal mortality and neonatal mortality that happened before and after the institution of the FM policy. The choice of other intermediate outcome was restricted by the availability of data – as most questions which would be interesting to explore (as explained in the subsections above) were only asked about the most recent pregnancy, which would have precluded the analysis taking into account unobserved mothers’ heterogeneity. Therefore, the analysis was only possible for birth through CS, skilled delivery, birth in a public facility (hospital), and LBW as additional intermediate outcomes. The starting point of the policy, June 1, 2013, is defined as the day the policy came into effect and is estimated for each birth using the date of the birth variable. The starting point was based on the assumption that the policy affects only the births that occur after June 1 and not the births before the policy came into effect. However, it is possible that there are women who knew about the policy before it came into effect

and may have planned their pregnancy to coincide with it, or that some components of the policy were gradually introduced. Therefore, this means that the boundary between the treatment and control period is blurred. Also, the fact that pregnancy lasts several months may affect the choice of the boundary. For example, if the policy was introduced unexpectedly, then the effect may only be observed fully at least nine months later, but we do not have so many data points after the policy if we were to set the after-treatment period in April 2014. So, I expect the estimated effect of the strategy described in this section to be an underestimate of the true effect.

The starting basic OLS regression model using data limited to children born in the last five years is denoted as:

$$y_{it} = \beta_0 + \beta_1 after_{it} + \beta_2 bbm_{it} + \beta_3 bby_{it} + X_{it}\beta_4 + \varepsilon_{it} \quad (4)$$

Where, y_{it} is the outcome (early neonatal death, neonatal death, and delivery by CS) which is a binary measure for newborn i , at time t ; β_0 is the intercept; β_1 is the slope associated with the independent variable; $after_{it}$ is the variable *birth after the policy* ($after=1$); which was formulated to estimate the effects of FM policy in outcome variables with OLS in time approach using robust standard errors; bbm_{it} is the birth month, and bby_{it} is the birth year varying across time and newborn; X_{it} is the vector of the included characteristics, and ε_{it} is the intercept. To estimate the *seasonality effects* of the policy that could happen, but not related to the policy; I add the month and the year of the births as independent variables.

From the literature review above, the outcomes are associated with health inputs such as maternal characteristics (socio-economic, demographic, biological); neonatal factors; and economic status. Whereas utilisation of ANC services has been shown as significant in the literature review, they remain as intermediate outcomes of the FM policy because the policy affected them, and they, in turn, affected the outcomes of interest. The same applies to delivery care elements including the location of birth and SBA as is neonatal factors such as LBW, early initiation of breastfeeding, and mother and child postnatal care factors. Also, because of the limited data available around the time of the birth, it is impossible to control for the time-variant variables. Occupation, type of place of residence, wealth index, the region of residence, the highest level of education of the mother, and the economic status (source of drinking water and toilet available), which are shown in the literature to determine maternal outcomes and neonatal mortality, are only measured at the time of interview. Hence they could have been completely different at the time of the birth. Additionally, our model does not include the APGAR score as a confounder because it is not captured in the DHS data. Hence, the final control variables included in the models (represented by X_{it}) includes the age of the mother at the birth of

the baby, age of the mother at the first birth, birth intervals (excluding first-order births), parity, multiple pregnancies, ethnicity, religion, and gender of the baby (male).

In the final model, when searching for the right specification, I explored the joint significance of the following vectors of variables – indicator variables for the birth months, ethnicity and religion using the F-test. The vector of birth months' indicators was excluded from the regression (because the F statistic was not greater than 0.49 in any of the models, and the p-value was not lower than 0.9128). The final model becomes:

$$y_{it} = \beta_0 + \beta_1 after_{it} + \beta_2 bby_{it} + X_{it}\beta_3 + \varepsilon_{it} \quad (5)$$

The model above represents the average treatment effect of the policy using data of all children born in the last five years. The estimates of the average treatment effect from the OLS model with all children born in the last five years have three limitations. First, as mentioned above, some of the controls that have been mentioned in the literature are not available at the time of birth; hence the further I go in time from the interview the more difficult it is to assume that they would not matter. Second, there could have been different things happening in Kenya that could have affected the policy (e.g. policy regimes in other areas of life, micro economic conditions, welfare etc.) thus the births before cannot be compared to births after for reasons completely unrelated to policy, and this would be exacerbated the further back I go with births included in the analysis. Third, the number of births before is much larger than the number of births after hence technically, what is happening before will be dominating what happens after. To address the concern and achieve a balanced sample, I limit the data to include only the births that happened one year before and one year after policy implementation.

But even still, the remaining concern is that the policy could have had an effect on the case mix of mothers giving birth. For example, mothers with poor health endowment could have avoided giving birth prior to the policy because it would have been too expensive or maybe did not carry the pregnancy to birth/term. But now that it is free, mothers with poor health conditions could have chosen to give birth, or those with at risk pregnancies carried them to birth. All of these considerations, could have resulted in a completely different case mix of births after the policy as compared to before which cannot be accounted for by the observed control variables. To summarise, the cross-sectional approach does not allow to account for the unobserved heterogeneity of mothers since mothers who gave birth before could have different unobserved characteristics to mothers who gave birth after, which may have an impact on birth outcomes. If indeed the case mix of mothers after the policy introduction has poorer health endowment, then the cross-sectional set-up would lead to

an underestimation of the true effect of the policy. Thus to eliminate the bias resulting from the changing case mix, I need to account for the mother fixed effect (get rid of the individual mother unobserved heterogeneity). To achieve this I further restricted the sample to only mothers who have at least one birth before and at least one after the policy implementation, and, effectively, compared pairs of births to the same mother – one before and one after the policy introduction.

One concern remains, though, that the mother fixed effects approach may potentially overestimate the effect given that the sample after the policy would not include any women for which this was their first birth, while the sample before would. To evaluate the importance of this concern, I restricted the sample further to include only mothers who have at least one birth – specifically second and onwards births (excluding first births) – before the policy and at least one after the policy implementation. This was based on the distinct patterns of relationship between birth order and mortality in the neonatal period, where 'first-born children are slightly more susceptible to the risk of dying young compared with children of second and third birth order' (Mishra et al., 2018, p604). Whereas the same study shows that the last-born children (i.e., fourth and higher-order births) are at the worst risk, the mothers in the sample utilised had not passed the child bearing age thus one cannot ascertain with authority if this was their last born. In that regard, I did not exclude them from my sample calculation – as the mothers may have potentially been planning to have more babies in the future. In this way, I am generating an experiment by making the births happening before and after more comparable, because they occur to the same mothers. Hence, I formulate the fixed effects model as follows:

$$y_{it} = \beta_0 + \delta_0 \text{after}_t + X_{it}\beta_2 + a_i + \varepsilon_{it} \quad (6)$$

As is in the above model, y_{it} is the outcome (early neonatal death, neonatal death, and delivery by CS) which is a binary measure of observation i , at time t ; after_{it} is the variable *birth after the policy* is a dummy variable that is equal to 0 ($\text{after}=0$) when the birth occurred before the policy and equal to 1 when the birth occurred after ($\text{after}=1$). β_0 is the average mortality rate before the policy introduction for $\text{after}=0$, and the intercept for $\text{after}=1$ is $\beta_1 + \delta_0$; X_{it} is the vector of the included characteristics (age of the mother at the birth of the baby, age of the mother at the first birth, preceding birth intervals, birth year, parity, multiple pregnancies, ethnicity, religion, and gender of the baby (male)); and a_i is the unobserved effects (fixed effects) and the ε_{it} is the intercept. Together with the fixed effects, all of the time-invariant mothers' characteristics are also controlled for (even though it is impossible to estimate the coefficients for them). The estimate of the effect of the policy is derived from the comparison of the neonatal mortality outcomes (and other intermediate outcomes) between babies born to the same mother (from the restricted sample) and averaged across

all mothers, i.e., the average treatment effects of the policy. This approach is preferable because it removes the time-invariant unobserved effects (Wooldridge, 2020, pp439-440) at the level of the mother from the model. Fixed effects model are useful when ‘(1) time-constant unobserved heterogeneity is likely to be a problem (e.g., concerning selection into the treatment), (2) one is not interested in societal group-level differences, (3) time-varying unobserved heterogeneity is unlikely to pose a problem, and (4) the direction of the causal effect is theoretically clear (i.e., if there is likely no problem with reverse causality)’ (Collischon and Eberl, 2020, p297). However, one key limitation of the fixed effect models, as concluded by Leszczensky and Wolbring (2019, p21f), is that they are ‘hardly a silver bullet if causal inference is threatened by reverse causality.’ In my case, reverse causality is not a problem because in my sample, each individual mother and her birth outcomes do not have an effect. Moreover, I am estimating within the mother effects.

To ascertain if the coefficients from the two methodological approaches described above i.e., fixed effects (with first born sample) and fixed effects (without first born sample), are either under or overestimated, I employed the *z score test* described as:

$$z - score = (\beta_1 - \beta_2) / \sqrt{(\varepsilon_1^2 + \varepsilon_2^2)} \quad (7)$$

where β_1 and β_2 refer to the coefficients of *birth after the policy (after=1)* in the two groups of regressions (fixed effects (with first born sample) and fixed effects (without first born sample)); and ε_1^2 and ε_2^2 are the standard errors of β_1 and β_2 , respectively. Using equation (7) and estimates obtained from equation (6) for both the fixed effects (with first born sample) and fixed effects (without first born sample), I first calculated the z scores manually. Then using the *Z score and probability converter* obtained from Calculator.net (see, <https://www.calculator.net/z-score-calculator.html>), I interpreted the results using $p(x>Z)$; where any *p value* (the probability) that is greater than the critical value (0.05) means that there is no statistical difference in the estimates of the outcomes.

At this point, the design could not allow for exploration of the other intermediate outcomes (except skilled delivery, birth in a public facility, and LBW) as the corresponding DHS questions were based on the respondent’s last birth rather than births in the five years (Kenya National Bureau of Statistics et al., 2014). Birth in a public facility is of interest because the FM policy as implemented in 2013 was operationalised to cater for deliveries in all public facilities (including hospitals) and not private for-profit or not for profit facilities (Chuma and Maina, 2013) (described in section 1.3.4).

The evaluation of the impact of the policy implementation as presented above potentially has some limitations. It assumes the average treatment effect across time, yet the impact does not permit for

heterogeneity of treatment analysis because some policy components may have been gradually implemented (in stages). It is possible that policy impact could be dependent on the duration and timing of the implementation that the model does not account for and does not refute a possibility that the births before the policy are systematically different from those after the policy and if this difference has any impact on the validity of the estimates of the treatment effect as unrelated government actions or events may have influenced them; thus, resulting to an increased or reduced estimate of the outcome. To address the problem Moffitt (1991, pp300-301) proposes that 'adding a single pre-treatment data point permits the computation of an estimator of the treatment effect... that may be correct in circumstances in which the estimator using a single posttreatment is not.' The procedure, triple-difference (also referred to as difference-in-difference-in-difference), helps to recover impacts of the programs that is not possible to identify using double differencing and it 'allows for essential heterogeneity' (Wagstaff, 2010, p206). However, in this case, it was not possible to apply triple difference because the strategy would require that I have a group of mothers of the same characteristics for whom the policy does not apply. Because the policy is accessible by all women, and there are no other groups of the population who can give birth to children, there is no way to introduce a triple difference. Instead, this experiment is based on a repeated cross-section setting. However, the fixed effects estimation is the triple difference, because I am estimating the effect within the same woman, so effectively using this as a third difference.

Therefore instead, I applied a placebo test as proposed by Gertler et al. (2016) as an alternative estimation procedure to test the validity of the procedure applied above (6). In this strategy, the treatment effects in equation (6) applies to same outcomes (early neonatal and neonatal mortality; and the additional intermediate outcome of delivery through CS) but applied in the unrelated (placebo or 'fake') time rather than when the policy took effect. I used three random times that happen before the actual policy dates (as placebo): August 2012 (randomly chosen), November 2012 (randomly chosen), March 2013 (purposefully chosen to capture the election month and formation of county governments). Statistical significance of these 'fake' treatment effects on the outcomes would reflect the differential time trends rather than the true effects of the policy. The test would serve the purpose to show that the fixed effect model above – having considered the differential time trend – shows the true effects of the policy. An alternative procedure of the placebo test would be to use a different outcome (say, a disease or a disability) that does not relate to the births and that cannot plausibly be affected by the project. However, the procedure was not feasible because there was no single disease or disability outcome that could be linked to the same periods when the births in the analytic sample happened.

In this study, I went further and designed a limited cost-benefit analysis (CBA) to assess the net social benefit of the FM policy; which answers the question: '*is the programme worthwhile?*' a question to enhance allocative efficiency (Drummond et al., 2015, p212). A CBA values a programme consequences in monetary units, to allow ease of direct comparison of 'programme's incremental cost consequences with incremental consequences incommensurate units of measurements' (Drummond et al., 2015, p211). A complete CBA of the FM policy is limited as it is hard to assess in monetary terms the probabilities of change of the maternal and neonatal indicators. Hence, I used the most appropriate cost-effectiveness indicators and compared the average annual per maternity cost of the FM policy and the average annual per maternity benefit. The average annual per maternity cost of the FM policy utilised was the amount spent on the policy in the financial year 2013/2014 as postulated by Mulaki and Muchiri (2019). The average annual per maternity benefit was calculated first by taking the average live births between the years 2013 and 2014 as recorded in the World Population Prospects 2019 by United Nation (2020). Secondly, I calculated the average neonatal deaths in the same period by taking neonatal mortality rate obtained from Kenya National Bureau of Statistics et al. (2014) per 1,000 live births multiplied by average live births between the years 2013 and 2014 (calculated above). Thirdly, I estimated resultant benefit of the policy (number of deaths avoided because of free policy or saved lives of infants from the implementation of the policy) by taking the estimated impact of the policy on neonatal Death (from *Table 7.3, FE (without first born)*) and multiplied by the calculated average neonatal deaths for 2013-2014. I then calculated the annual benefit of the policy by using the value obtained from the resultant benefit of the policy and multiplied by the estimates of Kenya's value of statistical life (VSL) as reported by Viscusi and Masterman (2017). Finally, the CBA ratio was then obtained by dividing the calculated annual benefit of the policy by the amount spent on the policy in the financial year 2013/2014 obtained from Mulaki and Muchiri (2019). The formulas are presented in the cost-benefit consideration *Table 7.7* (section 7.5).

3.4.9. Enhancing rigour of methods

Rigour is the means of showing 'integrity and competence' in research, and 'it is about ethics and politics' no matter the paradigm (Tobin and Begley, 2004, p390). Given the differences in the study methods applied in the qualitative and quantitative methodology, there are different ways of assessing rigour for each. Wisdom et al. (2012, p740) calls for mixed methods studies that are 'warranted or defensible' in their processes and that are 'transparent in terms of clarifying the logic underpinning the inquiry.' While the criteria for the assessment of rigour in quantitative research are: generalisability, replicability, reliability and validity (Bryman et al., 2008), the rigour assessment debate in qualitative research is ongoing despite transferability, confirmability, and dependability

being postulated as the ‘gold standards’ (Lincoln and Guba, 1985, Sparkes and Smith, 2013, p179). Therefore, mixed methods studies require additional consideration for enhancing rigour. The framework proposed by O’Cathain (2010) provides the basis of *good reporting of a mixed-method study (GRAMMS)* as a research piece by focusing on the quality of research rather than the rigour. In this study, I rely on the proposed framework by Harrison et al. (2020) whose basic principles focus on four components: rigour in data collection methods (both qualitative and quantitative), rigour in data analysis (of both methods utilised), integration of both methods, and description of the design type. Beyond the four elements, other researchers have called for adding a discussion on the purpose and aims of mixed methods (Creswell and Clark, 2017). O’Cathain (2006, pp60-63) better captures Harrison et al.’s (2020) proposal as methodological rigour (‘quality of the part,’ ‘quality of mixing,’ and ‘quality of integration’) and further adds interpretive rigour. *Table 3.10* below shows how I have incorporated the criteria into the study.

Table 3.10: Enhancing rigour in the convergent design

Rigorous elements of mixed methods	Best practice for high rigour	Application for this study
Aim and purpose	Includes the rationale, questions, and discussion about the value of mixed methods	The aim of the study is to evaluate the FM policy processes, implementation, and effects from multiple perspectives and respondent in the policy implementation process (section 1.2).
Data collection	Includes the collection procedure of both strands	Both qualitative data and quantitative data were both collected at the same time (parallel-database variant) (section 3.4.3).
Data analysis	Reports the analysis procedures for both the strands	Each of the data strands was first analysed independently (section 3.4.8).
Data integration	Linking both strands	Results were merged for triangulation and complementarity purposes (Chapter 4, 5, 6, and 7).
Design type of mixed methods	Defines the design type	The convergent design was utilised as the core mixed-method design.

Rigorous elements of mixed methods	Best practice for high rigour	Application for this study
Elements of writing	Refers to mixed methods studies	The results have been synthesized and compared for convergence and divergence at the writing of results and discussion (chapter 8).

(Source: developed by the author)

3.4.9.1. Credibility (construct or internal validity)

Credibility – also referred to as internal validity – is the concept that ascertains the verisimilitude between the data presented and the phenomenon offered by the data to establish if the analysis and interpretation presented by the researcher are believable or credible (Guba and Lincoln, 1982). Credibility is about the ‘truth’ from my findings; thus, elements such as the utility of direct quotes from the respondents in thematic analysis enhances credibility. Further, ‘members checks’ is a sting measure to ascertain credibility. In this study, members checking was achieved in two ways: one, I shared the transcripts with the key informants and the preliminary findings with the three hospitals to obtain their feedback. Two, I presented the preliminary findings in the in-house seminars at KWTRP, and five international conferences and workshops. During the data collection for the KIIs, I had regular meetings with colleagues who were doing process evaluation of LM policy, and we reviewed the data collection tool together to ascertain the flow and the content.

Also, the convergence of evidence and triangulation of data strengthens the construct validity, especially in case studies (Yin, 2018). Yin (2018, p128) suggests four triangulation methods: *data triangulation* related to multiple sources data; *investigator triangulation* among different investigators or researchers; *theory triangulation* of perspectives involving the same dataset; and *methodological triangulation* of methods. However, some authors such as Moran-Ellis et al. (2006) have criticised triangulation as a test of validity. Particularly, Mays and Pope (2000) have argued that the process of corroborating and overall interpretation, or looking for patterns of convergence is controversial as a test of validity but could be an imperative way to establish reflexivity in data analysis and enhance the comprehensiveness of data. In this study, I was able to use multiple sources of data which were complementary and bridged the gaps in the weaknesses of each. Additionally, through integrative review, I was able to pick essential gaps (section 2.4) that was important to the analysis credibility.

3.4.9.2. Generalisability or external validity (Transferability)

Generalisability – also referred to as external validity (or transferability in qualitative research) – is ‘making an inference about the unobserved based on the observed’ (Polit and Beck, 2010, p1451). Firestone (1993) depicts three typologies useful in framing the concept of generalisability as statistical generalisability (extrapolation from a calculated sample to a population); analytical generalisation (generalisation from broader theory or constructs), and transferability (case to case translation, or using results of an inquiry to a different setting or group). Analytical generalisability was ensured through the utilisation of a nationally representative KDHS data to evaluate the impact of the study, and the findings were meant to show the impact of the FM policy in the whole country. Also, statistical generalisation was enhanced by utilising appropriate sample sizes that would permit diversity and saturation of information collected (section 3.4.5.2). However, given the pragmatic approach, I was mindful of the plausible clash between ‘naturalistic generalisation’ (derived from experience) and ‘scientific generalisation’ (derived from conceptual knowledge) (Stake and Trumbull, 1982, p6). Some scientific generalisation has resulted in changes that have been rejected, proposing improved practice from changing researcher conviction or in emphasising functional and practical application of findings for naturalistic generalisation (Stake and Trumbull, 1982).

Transferability was enriched by providing the detailed account of the conduct of the embedded case study design (Yin, 2018) and other research processes of sampling (for both methods), data collection, and analysis. This was essential as it would provide some assurance to the reader and other researchers to evaluate the transferability of the findings or replication of the process in another setting (Schwandt et al., 2007). Whereas the sufficiency of the detailed description of the process is arguable (Schwandt et al., 2007), I adopted a pragmatic approach that allowed utility for triangulation and convergence of results from several methods.

3.4.9.3. Reliability (Dependability)

Reliability or dependability is showing that the study operations, such as data collection and analysis, are replicable to produce the same results (Hesse-Biber, 2010, Yin, 2018). Though qualitative aspects are flexible and thereby could bar replication, an audit trail should outline all decision and steps taken (Guba and Lincoln, 1982). Hereof, I have documented all the steps I took in the procedures of data collection and analysis of the methods. Reliability in quantitative work could also be defined as the extent to which an instrument or measures are consistent over time (Bowling, 2014). In this regard, the EI were not subjected to test-retest reliability (repeating the same measure for a second time) or parallel form reliability (‘administering different version of the tool to the same group of individual’)

as these concepts did not apply (Mohajan, 2017, pp11-12). However, as further noted by Mohajan (2017, p13), I ensured interrater reliability in the EI through consistency in the data collection.

3.4.9.4. Objectivity (Confirmability)

Objectivity regards confirmability of data rather than of the researcher (Guba and Lincoln, 1982). Three strategies that are recommended by Guba and Lincoln (1982, p248) are: triangulation of data (already discussed); reflexivity (covered in the next section); and confirmability audit in which the interpretation of the data is 'reasonable and meaningful' and the findings can be aptly tracked back through analysis to the original information or data. I created an audit trail for both the qualitative and quantitative analysis that would allow an independent reader/ researcher to follow all the steps of the process. Further confirmability was ensured through the review of all transcripts, themes, and final analysis by two of my supervisors.

3.5. Reflexivity

Reflexivity of the doctoral process and the methodology is to enable the researcher to tease out biases and assumptions that may have some effects on the study (Ritchie et al., 2013). It enables the researcher to account for the influence of their perspectives and values, experiences and the background on the conduct of research (Creswell and Clark, 2017, Creswell and Creswell, 2017). While it is often recognised to be shaping the findings and nature of qualitative enquiry (Green and Thorogood, 2018), Kingdon (2005) shows that it is also applicable to quantitative work because all research work is seen from the perspective or the lenses of the investigator.

I present my reflexivity in the three dimensions as proposed by Finlay and Gough (2008): a) reflexivity based on personal experiences, b) within relationships, and c) through collaborations. My academic background, professional experience, and views may likely have influenced the research process. While I currently view myself as a health policy and health economics researcher (based on the nature of work and engagements I have undertaken in the past eight years), my basic training was in nursing sciences. I spent one year working as a graduate nursing officer for MoH Kenya. This may have influenced my interest in engaging in a study that is based within hospital settings. My work engagements with the MoH at the policy level on a demand-side financing maternal health policy program called the OBA may have influenced my interest in researching on the FM policy. It made it easy and comfortable for me to evaluate the FM policy and spend prolonged time in the facilities engaging with the mothers, HCWs, and the county officials in a setting I was familiar with. It gave the sense that the interviewees, particularly the HCWs and the county officials perceived me to be 'one

of them' in their interaction with me and may have been more open to air their views. Some of the respondents were staff I had worked with while working under the OBA policy. My professional and academic background may have played a role in the power imbalance between the participants and myself throughout the data collection process for both FGDs and IDIs. However, using the mixed-methods approach in the study, and engaging with the familiar faces may have enhanced the trustworthiness of the process and the results.

During my basic training as a nurse, I developed a keen interest in maternal and neonatal healthcare work based on the health systems challenges that I witnessed at the facilities I worked in. It also helped that my mother's story of having undergone four miscarriages before she could have me as her firstborn, cemented the desire to focus my interest in maternal and neonatal healthcare work. While working at the MoH, I led the OBA team in conducting facility-based studies that evaluated the quality of maternal care (Oyugi et al., 2018). It could be argued that such an experience may have had an influence on the conception of the study with a focus on quality. However, my focus was on the whole of the policy process of the FM was on the doing (the actual process of the study) rather than copying the work.

Also, while observation was not a data collection method applied in this study, I kept a diary of the daily occurrences (described in section 3.4.4.7) as part of documenting my feelings, personal interpretation of events, interactions and discussions in an unstructured journal form throughout the data collection period. While recognising that observation is an ethnographic method, I made notes of the observed things and events which occurred during the day, and they may have changed the way I asked the mothers questions and even analysed them as they brought out the concept of power and authority which I did not expect, and which was not outright. For instance, the support staff who served mothers with food and warm bathing water after delivery wielded so much power that some emotionally treated the mothers harshly when they could not follow their instructions. Also, the administrators of the hospitals showed power-over the nurses, as they made financial decisions on LM reimbursements.

3.6. Ethical consideration

Unique ethical reflections that bind the conduct of mixed-method research and guide the research process are 'procedural ethics' and 'ethics in practice' (Guillemin and Gillam, 2004, p263).

3.6.1. Procedural ethics

Before beginning the study, I sought ethical approval from the University of Kent, SSPSSR Students Ethics Committee at (*appendix 4*) and AMREF Scientific and Ethics Review Unit in Kenya (*appendix 5*). Additionally, I obtained clearance to conduct the study from the MoH Kenya and the research unit of the county of study (*appendix 6*). At the referral hospital C, I obtained a separate ethical approval which was a requirement since it is a teaching institution (*appendix 7*). At the onset of the study, I introduced myself to each of the hospital management team and the purpose of the research and obtained verbal consent in the other two hospitals (A and B).

Before all the interviews, each interviewee first received a verbal explanation – contingent upon their level of comprehension – on the purpose of the study and their rights as a respondent. Additionally, they received a research information sheet (*Appendix 8*) about the study, including details of how collected information would be utilised, and time requirements for study participation. The mothers informed consents were translated to Swahili while all the rest were in English since I had anticipated from the onset of the study that, all respondents aside from the mothers would have a tertiary level of education; thus, comprehend English. I further explained the content of the information sheet to the participant(s) and answered all the questions they had concerning the study after which they were requested to append their initials as a way of consenting and agreeing to participate. Mothers who were unable to read or write were requested to provide an oral agreement, followed by them appending thumbprint as consent in the presence of a witness.

Regarding the confidentiality, of identifiable respondents' information, I took several steps to comply with the data protection policies of the University of Kent and the Kenya Ministry of Health. For instance, all respondents were assigned a pseudonym at the entrance of the study with which they were identified throughout as shown in *Table 3.11*. The EI and the transcribed data were anonymised, and a cover sheet which linked the name to the number was stored separately. All the audios recorded were only listened to by the transcriber, who signed a confidentiality agreement at the onset: the supervisory team and me. All the interview notes and paper questionnaire were transported to England and kept under lock while the transcripts were stored in a laptop protected by a password.

Table 3.11: Example of codes used to anonymise participants

Identifier	Meaning
R022MoHO	Respondent 022, Ministry of Health Official
R025NHIFO	Respondent 025, NHIF official
R029DAO	Respondent 029, Development agency official
R001DICHB	Respondent 001, Department in-charge, Hospital B
R005FLMHA	Respondent 005, Facility-level manager, Hospital A
R006AOHA	Respondent 006, Accounting officer, Hospital A
R002COHB	Respondent 002, Clerical officer, Hospital B
R014NOHC	Respondent 014, Nursing officer, Hospital C
R016CSLM	Respondent 016, County Senior-level manager
R017CMLM	Respondent 017, County Middle-level manager
FGD001HB	FGD 001, Hospital B

3.6.2. Ethics in practice

Ethics in practice consider moments of ethical importance that have the potential to harm the participants, such as sensitive information (Marilys and Lynn, 2004). I encountered some ethical challenges during the data collection process. For instance, during the interviews, it emerged that some information received would potentially negatively impact individuals either in the hospitals of study, the county, or the organisations at the national level (MoH, NHIF). Particularly, in areas where information was pointing to allegations of corruption or negligence. In the course of the study, I endeavoured to conceal all their identities; however, in the in-depth descriptions particularly as applied in case studies and mixed methods, it may be still possible to use the information to identify the individuals. Also, some information revealed at the hospitals pointed to sensitive information that linked some of the county offices senior individuals, private and government entities at the national level to double-crossing and unscrupulous acts. Ethics in practice can be culturally and politically determined. In many socio-political systems, the question of corruption or unscrupulous acts by officials would be less important than direct harm to a patient caused by the research, and this is more of indirect harm that as a researcher I do not have much control over. Still, nonetheless, I am trying to protect the participants for the greater good. As an example of utilitarian ethics, this is an important part of the decision-making process in research from a basic stance of doing no harm and the Declaration of Helsinki concerning moving forward with difficult decisions throughout the research process (World Medical Association, 2001, 2018). I purpose to minimise this risk of the respondent's

details by using pseudonyms; and by minimising the exposition of the individuals mentioned by providing feedback and policy recommendations in a cross-cutting way rather than focusing on the individual and behaviour.

3.7. Involvement and engagement of other scientists and the public

The public is anyone who utilises the services, the HCWs and county officials who implement the services, and the national level experts who develop the policy. Involvement of the public is defined as carrying out the research 'with' or 'by' participants of the public rather than 'to', 'about' or 'for them' (Hayes et al., 2012, p6). Involvement is a process that is rather socially constructed and subjective, but that can be difficult to evaluate (Barber et al., 2012). That said, it is an essential process to do as it helps in producing better research (Oliver et al., 2008) and reflects on accountability and transparency of the research process (Barber et al., 2012). Additionally, as has been shown in the RAPPOR study that was based on a wide number of NIHR case studies, involvement encourages inclusion, equity and diversity amongst research participants (Wilson et al., 2018). In this study, I involved different cadres of participants, both formally and informally, to improve the design and as a reflection of the ethical choice of inclusiveness.

I started by engaging with my host (during data collection) at the KWTRP – as a leading expert in Kenya's health systems research – on my thesis idea via email (Mon, September 4, 2017, 9:01 PM) and informal discussion. He gave positive feedback and even pointed me other new and relevant studies that had been conducted with the same topic line and thoughts. I then discussed the same thoughts with the researchers he had pointed me to to get their perception and understanding of their work and the questions they were addressing. Additionally, I engaged with three more colleagues (both in 2017 at the start of the thesis and in 2018 during data collection) in the same institution who had done a policy evaluation on a neonatal study to discuss the sampling procedures and the processes of data collection. These engagements highlighted to me the process evaluation protocol on the LM policy that my host institution was preparing to conduct within a year of our engagement.

In mid-2018 (before I embarked on data collection) I engaged the county research lead (the purposive county of study) whom I discussed with the choice of facilities of the study and my sampling criteria for the mothers and key informants. The experience was insightful because we ended up evaluating the choice of one of the initially chosen facility because – despite being gazetted as a level three facility providing FM services – in was in practice a level two facility offering only curative services and the HCWs present were not even aware of the FM policy in the country. The discussion was rather

imperative because he introduced me to all the relevant senior county officials and hospital heads that I needed to engage.

During the process of developing the protocol and at the start of data collection, I attended five conferences and presented my literature review results and the protocol and received feedback from the experts in the field which I incorporated in my actual work. I also presented my work in a seminar discussion (September 2019) at my host institution, which elucidated an important point on three aspects of quality (input, process, and outcome). Through the pilot of the tools, I benefited from talking to and observing the experiences the pregnant and the postnatal mothers were going through in the pilot facilities. I also talked to and observed the provision of care by the HCWs. These gave me a perspective in understanding the different views of the policy. Engagement with the national stakeholders who were not interviewee was based on the need for their pointers to information (particularly documents) that were not in the public domain for document review rather than the actual content. All these engagements helped to critically evaluate the changes in the data collection document, analysis and the writing up.

Finally, I benefited from advice from a colleague at my department (Centre for Health Services Studies – CHSS), who was my go-to person whenever I needed advice. She provided input and ideas on my protocol (before I went to Kenya for data collection), and in the later stage of data analysis (winter 2019 and spring 2020). This was an informal process that helped me reflect on the processes and progress of the doctoral journey.

3.8. Chapter summary

In this chapter, I have presented the choice and a critique of the methodology and the methods utilised in the study. The methodology highlighted the pragmatic approach underpinning the utility of mixed methods. The case was the expanded FM policy dubbed *Linda Mama* as is being implemented currently by the Kenyan government under the NHIF since 18th October 2016 and the choice of the county of study and the three facilities were purposefully made. The data collection utilized and discussed were from several sources such as document reviews, KIIs with the national stakeholders, IDI with both the county and the HCWs, the FGDs and patient EIs with the mothers who were users of the services; and use of secondary data. Data analysis drew on multiple methods: econometrics, qualitative and quantitative to explain the policy processes, effects and potential methodological approach to the impact. The chapter concluded by a discussion on enhancing the rigour of the methods, the ethical considerations, reflexivity of the process and the involvement and engagement of the public.

The next chapter explores the perspectives of the mothers, key informants at the national level, county officials, and HCWs on the background of the current policy. This includes the process of development of the current policy, which then leads to the ideal structure of implementation as was envisaged at the design phase. The discussion then focuses on the implementation gaps and concludes with how county officials and HCWs at the meso level are shaping the process based on their overall understanding and practice.

Chapter 4 — Findings: An exploration of the policy process and implementation of the free maternity policy in Kenya

4.1. Introduction

This chapter focuses on the views of key informants at the national level, county officials, HCWs, and mothers. It begins with a brief description of the background of the current policy from the respondents' perspective, with the underlying challenges and experiences of the previous policy. It then explores the process of development of the current policy, which then leads to the ideal structure of the policy implementation as was envisaged at the design phase. The discussion then focuses on the implementation gaps and concludes with how county officials and HCWs at the meso level are shaping the process based on their overall understanding and practice using thematic analysis scheme below.

4.2. Background of the policy

This section distils the background of the policy. It explores the triggers or causes of the current policy in addition to the challenges of the previous FM policy. The multiple perspectives from the national stakeholders, the county and HCWs respondents – as key policy actors – are considered in relation to setting the current FM policy in the national agenda.

4.2.1. Triggers of the policy

The current policy is *'informed by the...legal instruments..., our constitution...2010, [which] is very clear that every person has a right to quality health services' – (R035DAO)*. Most respondents across the three levels – macro, meso, and micro – pointed out the need to achieve Sustainable Development Goals (SDGs) as the main triggers of the policy:

'As previously we had been given the MDGs [Millennium Development Goals], but they didn't work for the 15 years. So now we are working on the SDGs [Sustainable Development Goals]. So being a healthcare worker we are trying our best to ensure that the country and our county achieves its objective' – (R003NOHA)

The acknowledgement about maternal and neonatal health, that most women had inadequate access to SBAs, in addition to the need to eliminate financial barriers, would enhance pregnant women to access FMS. Many respondents also noted concerns of other barriers of access such as geographical, where many thought that the marginalised and those in rural areas would have equal access; socio-

cultural barriers, where there was a perception that use of traditional birth attendants (TBAs) would reduce; and service availability, where services such as testing at ANC that were previously not available would enhance the achievement of UHC:

‘Linda Mama also informs Universal Health Coverage because Universal Health Coverage seeks to enhance, seek to embrace access to health care providers.’ – (R034NHIFO)

Some respondents perceived that the policy was a political tool used by the government to fulfil a campaign agenda captured in the president’s *Jubilee campaign Manifesto (2017)* made during an election year to acquire power as it was strategically announced during a public holiday. Given the political angle as indicated by a nursing officer, **(R003NOHA)**, *‘the goal [of the policy] was part of the big four agenda’* that the president formulated after the election and policy makers and implementers had no option but to actualise it:

‘it was used as a political tool by one of the parties to be able to achieve and acquire power... So, I can tell you in terms of even conceptualizing the idea implementation politics played its part, and I think the president announced in 2013 during, is it Madaraka day [Kenyan public holiday], I can’t remember, so there is always politics behind some of these things but I think it was politically appearing so usually the health workers have no cause for, I mean they have no choice but to actually actualize’ – (R026DAO)

Equally, there was the need to rope in the private sector, who were not implementors in the previous FM policy. The move was aimed at decongesting public facilities and giving the mothers more choice; thereby, improving efficiency:

‘one was we weren’t including private and as you know private almost takes care of 40% of our population only 60% more often that uses GOK, so there was a feel we are leaving a few people behind especially in Nairobi where we have more private facilities than public. it was brought the public facilities the low cost, cause that is where you find people who mostly are not able to afford maternal health go to, so that was one of the driving force FBOs [Faith Based Organisation] also thought left behind, who are our partners in so many ways and that was also a vulnerable consideration. There was also the consideration of the far front areas where there are private and mostly even FBOs and there is no GOK facility around but there is a lot of FBOs especially in Turkana so it was thought for us to improve on access and efficiency we need to bring them on board but of course they were coming on board under our terms because there were those rates

we were paying and if you were comfy with it you can come on board if you are not no one was being forced’ – (R032MoHO)

The respondents felt that the policy was triggered by the need for uniformity of service provision across the counties which would enhance competition amongst counties and eliminate the incentive to seek care in only developed counties:

‘So, I guess the structure levelled out the advantage that counties which are already developed would have in terms of service delivery to its citizens. Because all we need is a card or a registration, it doesn’t matter from which county you came, and you will be able to access your care from whichever county you go. That is very different from the roll-out you see in other counties where a county is rolling out its own program and you can only get that care if you are from that county and you are registered as a member of that county. That discrimination also ruled out the advantage of having your citizens access care in your neighbouring and not pay for it somebody else pays for it was clearly based on the counties that were on the low end of service delivery.’ – (R010FLMHC)

Importantly, the policy was to cover for the loss of funding that was previously charged on the mothers for the services but that would no longer be available. The facilities needed to continue sustaining the health facilities costs; but it was also linked to the need and urge to improve the QoC from the reimbursements to the facilities. HCWs mentioned that the funds would help purchase equipment that the government had been unable to provide, motivate staff through incentives, and employ additional staff:

‘You know cost sharing; in the past you know maternity used to generate cash and now it’s zero because it’s free and services have to run. Me I think it’s purely because of financial reasons’ – (R004NOHA)

‘Quality of care because of that money, if it comes back to the facility, we will be able to improve on some of the things and that will lead to improvement of care’ – (R007DICHA)

Still, as pointed out by **R023MoHO** ‘in 2013 the SARAM [Kenya Service Availability and Readiness Assessment] survey was done, and it showed that we did have the sub-standard care taking place in facilities’ hence LM was an incentive to boost quality of maternal care through an enhanced FM policy. The report had indicated ‘deterioration of quality in the facilities which now made our facilities death traps and disease traps because we have seen an increase in sepsis;’ worsened maternal and neonatal

mortalities; rise in home deliveries that created missed opportunities; and *'an increase in caesarean sections which raise the question of was it driven by the incentive for getting more money or is it that because we have more women accessing care.'*

4.2.2. Challenges of the previous free maternity policy

Most respondents showed some awareness of the implementation challenges that were experienced in the previous FM policy, and perceived them as substantial reason for the shift to the current LM policy. The respondents at both the national and the county level referred to the challenges that had been noted by Tama et al (2018). in the process evaluation as: *lack of exhaustive service package* through inadequate costing of the services; *data problems*, where facilities were using inflated utilisation numbers, rather than mothers' unique identifiers, to get claims from the MoH that were unverifiable; *poor quality of care*, since traffic was pushed to the public hospitals which were ill prepared to tackle the rather high number of mothers because of inadequate infrastructure. Additionally, there was *lack of or inadequate communication* of the policy to the grassroots level that led to poor clarity of the content of the policy, *disappointed and dissatisfied clients* with the services. The key informants mentioned noted that the work was overwhelming to the MoH department of policy and planning, and the reproductive health, who did not have the capacity to manage both the payments and the services.

'Data fraud, issues about data verification, data validation to be able to monitor the utilization rate, second the issue of disbursement of money, proper disbursement of money from the Ministry of Health to the health facilities, thirdly is the fact that private sector was left out.' –
(R029DOA)

4.3. Policy formulation process

This section reviews the process of development of the FM policy. It draws broadly from the Walt and Gilson's (1994) policy analysis triangle encapsulating the actors involved, the context, the content, and the process. A summary of the features of the process of the policy development are summarised in *Table 4.1*. The section considers the multiple perspectives from the national stakeholders, the county and HCWs respondents as key policy actors.

Table 4.1: Features of the process of development of the policy

Category	Composition
Actors	- Role of stakeholders in the policy formulation
Content and context	- The context (national (micro); county (meso); and facility (micro) level settings) and envisaged design - Source of funding of the policy - NHIF chosen as the ultimate purchaser of services
Processes	- Committee to discuss the formulation agenda - Politics of private sector interest at the formulation - Costing of the policy and perception about the costing approach - Development of manual and the guidelines - A gap in the quality manual and guidelines

Source: Author from the themes in the analysis

4.3.1. Committee to discuss the formulation agenda

At the formulation, there was a committee that was set up involving stakeholders such as development partners, the MoH representatives, and NHIF officials where a concept note (comprehensive implementation document) was developed to review the whole FM policy process and share tasks:

‘There was a committee that was set up that involved World Bank, there was participation of the ministry and NHIF where a concept note was developed to review the whole process.’ – (R026DAO)

‘The brief meeting, we had it was more of sharing of tasks, so that you come up with up a comprehensive document on how we would want Linda Mama to look like.’ – (R030DAO)

4.3.2. Role of stakeholders in the formulation

Obtained from document reviews and IDIs, Table 4.9 and Table 4.11 summarises the actors who participated in the formulation of the policy and their roles. Characteristically, the influential participants at the formulation were the development partners (The World Bank, WHO, JICA, UNFPA, and USAID) who together supported the initial technical design. Of all the partners, the World Bank and JICA were more involved as they were the co-funders of the previous FM policy. At the national

level, the Presidency outlined the agenda; the appointed officials at the National Treasury allocated the budget; and the MoH through the Principal Secretary and the director general's office provided oversight. Interestingly, while FM policy was targeted at improving maternal and reproductive health, the members of reproductive health were not involved as noted by **R023MoHO**: *'but not the team from the reproductive health stakeholders, they have not been largely involved, I mean, that is why I was saying we are all in the dark like facilities.'* Equally, despite the policy aimed at improving the quality of service provision of maternal care, the MoH players managing the quality and standards were not included as noted by **R034MoHO**: *'that the players who are charged with quality just need to be roped in.'*

The other players involved included the council of governors who provided the modalities of implementation at the counties; the NHIF as the chosen purchaser of the fund who provided implementation framework; the member of religious interest groups, private sector alliance interest group, and workers unions. Population Services International was included and was focused on persuading the committee to empanel the private sector facilities mostly in the informal settlement that was working in collaboration with the organisation to improve access.

From the document review, the civil society and the beneficiaries (individual citizens and HCWs from both the private and the public sector) were involved through community forums. However, the FGDs with the women and IDIs with the county officials and the HCWs showed that they were not involved and did not know about the policy:

'Involved? You know now, okay the change I would talk about is maybe they start involving us the people on the ground' – **(R014NOHC)**

'I: Were you involved in the design of the free maternity of the Linda Mama? R: No' – **(R016CSLM)**

4.3.3. Politics of private sector interests at the formulation

The discussion at the formulation was characterised by pushing of different organisations agenda especially those who were justifying the inclusion of the private sector. For instance, **R035DOA** observed that *'I mean the Linda Mama came in, you will realize it worked very well under the private facilities but at the public it did not work.'* The organisations pushing the private sector agenda, besides pushing their agenda at the national level, opted to control formulation discussions through the county level leadership and even leveraged on their individual network of community health volunteer which would give them acceptance when the policy was finally rolled out. Additionally, it gave them

the opportunity to prepare the private health facilities for advance accreditation using internal quality of health standards and guidelines before the actual LM accreditation. Equally, they communicated the packages of the policy in advance:

'But I think dealing with NHIF at the National level is just one hurdle. And I think we gave our input at the National level, but also, we realized that we needed to do some groundwork at the County level because these are two independent Governments. So not just at the... so at the MOH level, so we went out to the CHMT's at the community level and just made them understand what we are trying to do and why this is important and why they should support us for them to be able to deliver on free maternity care through the private sector. And so what we saw the CHMT's do is that they attached themselves to our teams and they did routine supportive supervision with us on a sampling basis just to ensure that what we were telling them was what was on the ground' – (R030DAO)

In fact, the organisations pushing the agenda of a network of private sector noted that the NHIF was not able to manage the extensive quality of service that private sector had achieved so far because the private sector reimbursements were unattractive:

'Within our providers, our 400 plus providers.... NHIF cannot manage that quality and you see there are so many things. You see there are so many things, it's creating access, and it's creating equity in term of it reaching the poor.....not so many people appreciate it because it's not attractive in terms of profit but there are a lot of private sectors that are actually improving on that.' – (R029DAO)

As further noted by **R029DAO**, *'We [private sector] would like to join Linda Mama but they [government] have to raise it [reimbursement price] a bit higher. If they raise it a bit higher, we will join the scheme because this is an NGO, a Non-Governmental Organization, we don't make profits, we are there to serve the poor, but you know you have to break even. That was also proposed 'because of the level of our infrastructure, the fact that we pay rent, the fact that the staff cost is quite high.... It has to be balanced, that is why I say a rate of 6000/= [USD 57.5] can change people's perspective in Linda Mama. We are not saying you put it at 10000/= [USD 95.9], we are saying put it at 6000/= [USD 57.5] there will be demand and they will increase. And then contract other facilities to support you, contract other quality organizations like PSI, MSI who are known for quality in terms of SRH to support the Government in terms of quality.*

4.3.4. Costing of the policy at the formulation

At the conception as noted by **R025NHIFO**, *'the idea behind Linda Mama was to get it to an insurance package.'* It was envisaged that the mothers would use a LM cards which would guarantee care for up to a year after birth before transition to NHIF card:

'when the Linda Mama is almost expiring, we also need to think about NHIF, because the NHIF will help you for outpatient services, inpatient services and.... choosing facilities of their choice.' – **(R002COHB)**

The argument was based on; one, health being a free good, two, introducing sustainability in developing provision of maternal care; and three demographic characteristics, as noted by **R024MoHO**, *'the population and you look at women of childbearing age, down to how many would get expectant in a year.'* Therefore, it was estimated that there were *'almost 1 million and 1.2 million mothers delivering in the country every year'* with a conservative estimate of 25% being insured by other entities than NHIF. It was anticipated that the FM policy could reach seven hundred thousand mothers by the first year of roll up, who at the end of having utilised the services and seen the value of it, would be attracted to it as some form of insurance. Consequently, it was further envisaged that 25% of those who use the free policy services, especially those in quantile 1 and 2, could transition to full insurance after expiry of LM at start paying for it. The formulation idea was that – in the following years of the policy – with the mothers in quantile 1,2 and 3 paying a monthly contribution fees to the NHIF for themselves, then it would ease pressure on the treasury fund meant for the policy.

Additionally, there was a projection of the prospective number of both normal delivery and CS that was envisaged with an assumption that 15-20% would complicate:

'So, all those were projected, the caesarean section how many do were expected, close to 10%, 15%, the normal ones...' – **(R032MoHO)**

'when the fund was being put in place, it was assumed that at least fifteen to twenty percent would complicate. So, they will be catered for by everything else.' – **(R024MoHO)**

The overall projection cost of the policy was estimated at KES 6.5 billion (USD 62.3 million)⁷, but the national treasury allocated the MoH KES 4.2 billion (USD 43.1 million) which was deemed ‘sufficient to meet the need’ – **(R024MoHO)**.

‘the projection was coming to 6.5 but the allocation we [MoH] got was 4.2 but treasury was like if we exhaust, we are able to get you money’ – (R032MoHO)

4.3.5. Poor perception about the costing approach

There was a mismatch in the perception that the costing had been done in a consultative way. While a majority of the national stakeholders perceived that that the policy had been sufficiently costed and even the future sustainability looked at, some felt that the program had rather been arbitrarily costed in programmatic approach rather than in an academic way and had made many costly assumptions:

‘we cost it according to what we spend and then we put an arbitrary amount for miscellaneous, we are not thinking of what is the cost benefit of this like can you relate every cost you put in, like for every a hundred bob we put into healthcare, how many maternal deaths are averted..... we don’t know why; we cannot justify why we put a mark of four billion at least scientifically’ – (R023MoHO)

Consequently, the respondents at the meso level felt that the costing was somewhat dubious based on the implementation experience that had left them with more cost to absorb from the service provision:

‘You don’t know how the figures of reimbursement were arrived at and noting that every county is a market in its own way, with its own influencers of supply, demand and price, giving one cut line of a price disadvantages those counties where services are provided at a higher cost compared to counties where services are provided at a lower cost. So, for you to remain in the system you had to absorb some cost and absorbing the cost you have to lose. And again, with coming to be like a revenue loss for the county to keep on reimbursing services for which their people are asking for but for which the money funding is not adequate per case.’ – (R010FLMHC)

⁷ Exchange rate used is 1 USD = KES 104.32 which was the rate as of 1st January 2017 at the initiation of the first phase of the implementation of Linda mama (obtained from <https://www1.oanda.com/currency/converter/>)

4.3.6. Source of funding for the policy

Unlike the previous policy that was co-funded by the development partners (JICA and The World Bank), the current policy was mainly conceived as tax funded by the national government. However, the responded note that it was not earmarked taxes:

'It is largely funded by our taxes, so it is tax funded.....we are financing our health from taxes and they are not earmarked, so that means that they could easily be rerouted somewhere else.' – **(R023MoHO)**

4.3.7. NHIF chosen as the ultimate purchaser of services

At the formulation stage, NHIF was the proposed agency to run the FM fund as it had the capacity to manage resources efficiently. There was no other consideration of transitioning the policy to other organisations rather than through NHIF. A majority of the respondents were of the opinion that NHIF was undergoing reforms at the time aimed at transition to UHC; hence, they had better accountability structure. Additionally, NHIF had existing structures and networks of facilities across the country that could be leveraged as opposed to creating a different program. Besides, NHIF had already been working with the private sector and so it was easy to attract a considerable number of facilities enrolled. Therefore, the whole design was to utilise use NHIF instruments to track elements such as average length of stay, QoC, access, fraud, complaint system and payment of providers:

'No there were no other options, yeah cause Linda mama the whatever, even when we are talking about the efficiency and everything else, we wanted really to involve the low-cost privates to improve the access to mothers which we would not have done as MOH cause MOH can't pay money to private but the law allows NHIF to pay to do that. So that was one of the driving force[s], NHIF can pay private I mean they have contracts with them, so it was easy we weren't going to start something new' – (R032MoHO).

While some respondents felt that there were no legal hurdles in working with the NHIF – a semi-autonomous agency under the MoH – document review revealed that civil society organisations had been pushing the narrative of illegality of the process (see, KELIN Kenya (2019)). Additionally, engaging the NHIF would remove the challenge of returning unconsumed money to the treasury as was the case when the program was managed by the MoH during the previous policy. The process would allow for exhaustive use of the finance allocated for the project in the rolling years:

‘So, what happens when the money is within the ministry of health, when the financial year comes to the end, that money goes back to national treasury, through the process, the government budgeting process and it is availed again the following financial year. So in such a scenario where now it goes to NHIF such a body corporate, that money does not have to go back and perhaps if there are pending reimbursements like for instance if I am doing reimbursements for the last quarter of the financial year, April, May, June, and you see like for end of June or end of May, the facilities have to report, then it is compiled, then it is paid, which means it will be paid post, the financial year is ended and the money will already have gotten back. So, they won’t be paying for that period. So that kind of challenges they required an institution that can be able to handle that’
– **(R024MoHO)**

4.3.8. Development of manuals and the guidelines

The formulation committee developed a policy document and a concept note which were eventually taken to the Cabinet for approval. In addition, an implementation manual and a communication strategy were also developed:

‘the implementation manual for most of the managers just to know what you know services entitlements to Linda Mama, service providers, implementation arrangements which you were asking about, monitoring and evaluation, client feedback mechanisms, which we are trying to do in facilities to see where the issues are’ – **(R017CMLM)**

To kickstart the process of implementation, a memorandum of understanding (MoU) between the MoH and the NHIF was signed:

‘MOU with the ministry whereby we looked at how to bring in a bit of technology to assist in the registration of women so that through NHIF system we are able to register first, once you register, the next step is that there has to be a confirmation of pregnancy. So, we signed an MOU on what will be our roles in line with the implementation of this product’ – **(R025NHIFO)**

Correspondingly, financial guidelines were also developed but it was envisaged that the HCWs would rely on the clinical and service provision guidelines that were in use prior to the policy:

‘Most of the guidelines were financial, I think there was an assumption that clinical and care guidelines were already in existence because we were giving this service for many years. Before Linda Mama we had free maternity and before free maternity...I mean there has always been a

cover somewhere to cover for mothers. So clinically the guidelines were not changed but financially the guidelines were there.’ – (R010FLMHC)

4.3.9. A gap in the quality manuals and guidelines

Notwithstanding that the MoH through department of quality standards developed the Kenya Quality Model of Health (KQMH) to provide a structured support to counties for general QoC, there was no other guideline on quality maternal care developed at the formulation of the policy as noted by **R022MoHO**, *‘we are now coming up with areas where they will be addressing in maternal [care]. There was a feeling that the little attention was being paid to quality guidelines but more on the implementation. The private organisations and development partners proposed to fill up the gap in quality through their own project such as *safe care* which trains and teaches the facilities on improvement of quality:*

‘...not squarely on the government, but thanks to development partners and private entities...there are very clear projects or approaches that come into address some of these gaps that are identified. So, I say the facilities are willing, but it only works where they have development partners’ – (R035DAO)

4.3.10. The context and envisaged design

At the formulation of the FM policy, ***implementation would take a top-down approach from the national through the county, and facility levels.***

Envisioned inclusive benefit packages is as summarised in *Table 4.2* and cuts across maternal care from ANC, delivery, to PNC care in addition to complications and referral services. Furthermore, it was envisaged that it would take care of the infant within one-year period in the program.

Envisioned investment in more infrastructure and human resource; at the formulation it was projected that the workload would increase and hence more investment in infrastructure and human resource was anticipated:

‘We did not go into those details but we also said as a, the government need to invest on human resources, we are anticipating some increases in human resources, I mean increases in workload, I think that should be followed by investment in human resources, investments in commodities and also even infrastructure, other infrastructures, renovation of the maternity wards, those were

things that we had anticipated and we recommended investments in those areas as to whether that happened is a different issue.’ – (R026DAO)

As further noted by R026DAO, ‘so the **transport element was not factored in**’ at the formulation hence mothers would spend money on transport.

Table 4.2: Benefit packages for Linda mama

Services for all pregnant women and newborns, for a period of one year	
Antenatal care (ANC)	-ANC Profile including Hemoglobin levels, Blood group, Rhesus, Serology, screening for tuberculosis, HIV counseling and testing and urinalysis -Preventive services including tetanus toxoid, intermittent preventive treatment for malaria, deworming, iron and folate supplementation -Prevention of Mother to Child Transmission of HIV (PMTCT)
Delivery	-Skilled delivery (including caesarean section) in public facilities and accredited not-for-profit and for-profit private health institutions. -Neonatal care including costs related to pre-term births
Postnatal care (PNC)	-Within 48 hours after birth: Analgesics, vitamin A, iron and folate supplementns, long lasting insecticide nets, family planning, PMTCT for HIV positive mothers, treatment or refer any complications for mother, and care for newborn (tetracycline eye ointment, Vitamin K, immunization and birth polio, Infant prophylaxis for HIV if indicated, treat or refer any complications). -Within 1-2 weeks after birth (mother and baby): Screening for cervical cancer, sexually transmitted infections and tuberculosis; and treatment/preventive measures if not previously administered -Within 4-6 weeks after birth: Family planning services, screening for cervical cancer, STIs and tuberculosis among others; and immunization as per schedule and early infant diagnosis of HIV -Within 4-6 months after birth: Family planning services, screening for cervical cancer, STI and tuberculosis among others; and immunization as per schedule and vitamin A supplementation
Emergency referrals	-Ambulance service
Conditions and complications during pregnancy	-Outpatient treatment in in accredited public, faith-based and selected low-cost private-for-profit facilities -Inpatient treatment in accredited public, faith-based and selected low cost private-for-profit facilities
Children under 1 year	
Care for the infant*	-Outpatient services including treatment and child welfare clinics in accredited public, faith-based and selected low-cost private-for-profit facilities -Inpatient services in accredited public, faith-based and selected low cost private-for-profit facilities

*Care for the infant is within the one year period in the programme.

Source: Adopted from Implementation manual for program managers (2016, p4)

The reimbursement of the schemes is as shown in Table 4.3. However, **the reimbursement tariff was not acceptable to the private sector:**

Table 4.3: Reimbursement rates

FACILITY TYPE	SERVICES	FACILITY LEVEL		
		Level II and III	Level IV and V	Level VI
Government healthcare facilities	<i>Normal delivery</i>	KES 2,500	KES 5,000	KES 6,000
	<i>Caesarean section</i>	N/A	KES 5,000	KES 17,000
	<i>Antenatal care</i>	KES 600 for 1st visit then KES 300 for each of the 3 subsequent visits	KES 1,000 for 1st visit then KES 300 for each of the 3 subsequent visits	KES 1,000 for 1st visit then KES 500 for each of the 3 subsequent visits
	<i>Post Natal care</i>	KES 250 per visit	KES 250 per visit	KES 250 per visit
	<i>Ambulatory services</i>	Transport for emergency referrals available at a fixed rate based on the number of services		
Private and faith-based facilities	<i>Normal delivery</i>	KES 3,500	KES 6,000	KES 6,000
	<i>Caesarean section</i>	N/A	KES 17,000	KES 17,000
	<i>Antenatal care</i>	KES 1,000 for 1st visit then KES 500 for each of the 3 subsequent visits	KES 1,000 for 1st visit then KES 500 for each of the 3 subsequent visits	KES 1,000 for 1st visit then KES 500 for each of the 3 subsequent visits
	<i>Post Natal care</i>	KES 250 per visit	KES 250 per visit	KES 250 per visit
	<i>Ambulatory services</i>	Transport for emergency referrals available at a fixed rate based on the number of services		
KEY:	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; background-color: #d9e1f2; padding: 2px 10px; margin: 2px;">OUTPATIENT CARE</div> <div style="border: 1px solid black; background-color: #fce4d6; padding: 2px 10px; margin: 2px;">INPATIENT CARE</div> <div style="border: 1px solid black; background-color: #e2efda; padding: 2px 10px; margin: 2px;">AMBULANCE SERVICES</div> </div>			
NOTES:	<p>1. N/A – Not Applicable</p> <p>2. Exchange rate 1 USD = KES 104.32; as of Jan 1, 2017 (https://www1.oanda.com/currency/converter/)</p> <p>3. Outpatient care: Facilities are reimbursed based on the number of beneficiaries they provide care. The amounts are risk adjusted</p> <p>4. Deliveries (either CS /normal): Facilities are reimbursed as a delivery package where delivery is treated as an event.</p> <p>5. Inpatient care: Facilities are reimbursed for additional inpatient services other than deliveries as a rebate (based on the number of days the patients have taken in the hospital)</p>			

Source: Adopted from Implementation manual for program managers (2016, p9)

4.4. Implementation of the policy

This section reviews the process of implementation of the FM policy. It presents the intended, unintended positive, and some unintended negative impact of the policy using the framework summarised in Table 4.4. The analysis concludes by presenting the SLB mechanisms employed by the HCWs; and the adoptive strategies employed by the county to make the policy work better.

Table 4.4: Features of the implementation of the policy

Features of implementation
Benefits package and services covered
Communication of the policy
Reimbursement of the facility
Claims
Referral systems
Accreditation and contracting
Monitoring and evaluation
Supportive supervision
Reporting channels
Organisational arrangement and the role of actors in implementation
Conflicting and complementing programs
SLB mechanisms employed by the HCWs
Adoptive strategies employed by the county

4.4.1. Benefit package and services covered

4.4.1.1. Perception that there is no difference between previous FM policy and the current LM

Across the three facilities, some HCWs perceived that there was no difference between LM policy and FM as was previously implemented: *'You know when there was free maternity delivery, it was free, when Linda Mama came it is free. So, me I don't see the difference, so everything is free'* – **(R009NOHA)**. LM policy was seen as a continuation of the services provided before and that it had given the patients cards to be identified:

'So, the free maternity there was nothing to show the mothers, but now the antenatal card that is the Linda Mama card, the mother at least has something to own, to show maybe the government has done this for me through maternity, through delivery services and even after delivery that is postnatal' – **(R002COHB)**

4.4.1.2. Adequacy and awareness of the benefit package and services covered

Despite the positive perception of the scope of the services covered as highlighted by **R019FLMHB** *'I find it quite adequate especially for our level of health care,'* there was a mixed level of awareness

about the services and the benefit package. A majority of county and facility respondents knew the benefit packages and the reimbursements rate. There was particularly good awareness of the services among the NHIF clerks and records personnel but poor awareness among facility in charges and some HCWs despite overseeing and providing the services.

'I understand it was to cover the child up to 18 months but I'm not sure, I'm not sure about that. But generally, we've continued to take care of the children, after all the policy that has been there has been taking care of the under-fives' – (R003NOHA)

'I don't know the nitty-gritties of it, but I know it's supposed to cover the antenatal care for the patients, it's supposed to cover the delivery and four visits post-natal' – (R005FLMHA)

The lack of awareness amongst the HCWs may have been due to the perception the policy imperatives was not their role as noted by **R008NOHA**; 'Now for me let me say it's very hard for me to know because that's is the work of the administration' or because of the difference between the policy on paper and policy on practice 'but there are a lot of information gaps on what the customer is supposed to receive and what actually ends up happening in the facility.' – **(R030DOA)**.

However, while there was a consistent effort to educate the mothers on the policy, they showed some lack of clarity on its content. For instance, some mothers were spending money where they should not or skipping policy procedures and LM services for lack of know how:

'R3: When someone comes for ANC, they should continue informing us about Linda Mama. If it is possible, you know it's not like I had money to pay for the baby at NBU but now I had to pay because we were told it doesn't cover. If it is possible, they can fix all of them.....R4: I would like to say during the first visit at the clinic you should be told there is Linda Mama and that it's free. Free maternity so that when you go to the lab you do not pay anything. Then I think even if there is a computer, they register your name in so that when you go during delivery they just log in your name and it brings everything, and you pay nothing.' – **(FGD006HC)**

On the other hand, some women despite knowing about the policy content, were ignoring the call to utilise the services as they did not see the need while some neither knew the services covered nor the timings and had to rely on family and friend for the information:

'you know there are women who come and hear about Linda Mama but ignore, they ask what Linda Mama is for; yet I almost delivering?' – (FGD001HB)

‘What I have not understood is this how long does this Linda Mama cover the baby’ – (FGD001HB)

Table 4.5 provides a summary of the causes of information gap and contributors to poor awareness of the policy as obtained from the interviews and the document reviews.

4.4.2. Communication of the policy

4.4.2.1. *There was concerted effort among many partners to communicate the policy from the national level to the facilities and then to public*

The policy was communicated to the implementers from NHIF through circulars, workshops, mass media, partners:

‘They were different, there were some workshops that were to introduce the program, there were some circulars that came from the financing arm, this thing is financed by NHIF. There were some circulars that came from the NHIF side for financing the same. And we had quite a number of meetings exchanging views on how it should go’ – (R010FLMHC)

‘Okay there were posters. The radio and the TVs they were talking about the Linda Mama.’ – (R014NOHC)

In certain instances, the NHIF has used government instruments such as chiefs and chief Barazas to communicate the policy to the public. Besides, the county of study has been utilising community health workers (CHWs), free medical camps, and roadshows to communicate the policy:

‘So, I think there are many of those women who have not been reached and I think using the government’s instruments like the chiefs, the sub chiefs, it could have really worked well. I know, I hear of AMREF having some connection with the community health workers but well that is also bringing enough numbers to, for registration is a different issue.’ – (R026DAO)

‘They hold free medical camps, a county can do a free medical camp or NHIF can do a road show or our branch network can go to the markets when we have market days or go to churches and make announcements or rather religious institutions also the mosques, yeah, so they are able to share this information with as many people as they can reach and then also encourage them to come to the branches and you find we collaborate a lot with the counties where if they have an activity they will loop NHIF in. it may not necessarily be for Linda Mama but we are able to sell all that NHIF does. That there is Linda Mama, there is this for the informal sector, etc.’ – (R027NHIFO)

Cognisant that there was no structured way of communicating the nitty-gritty of the policy to the HCWs, HCWs In facility A took a personal initiative to learn the policy from the accountants and the records clerks who by themselves had also taken a personal initiative to follow up the issue of claims from the NHIF team:

‘we learnt from the records people. The accountant actually is the one who informed me about it. When they realized the facility, we have so much workload and so little money coming in, so he went to follow up from NHIF and it was assumed no one is claiming those Linda Mama. So, he is the one who actually informed me about that.’ – (R004NOHA)

Some county managers, in the county of study, reached out to the NHIF office to facilitate training of the HCWs about the policy:

‘Because NHIF in terms of information is when we request trainings for example for the MOs in level twos and threes and in charges, superintendents in the level five and fours. So, I have to facilitate something for them to come and communicate for us. So, it’s actually the will of for example my will, yes. I have to push to get dates arranged, to make sure there is a venue, to make sure that three people come and talk about it. I think also that they were also a bit overwhelmed, because of the claims that are coming in on a daily basis.’ – (R017CMLM)

There were varied means and methods utilised by the HCWs to communicate the policy to the patients. For instance, in one FGD session, the mothers noted that they had a one-on-one talk with the HCWs in the labour ward and maternal and neonatal health clinics to educate them on the policy:

***R1:** It was announced even in the radio you could hear them talk.; **R2:** Even when you come here, they would tell someone to get the card.; **R3:** When you came for clinic, they would tell you to get Linda Mama – (FGD001HB)*

4.4.2.2. There was a challenge in dissemination of the policy guidelines and lack of policy document at the implementation level

There were multiple challenges with the dissemination of the policy as noted by **R033DOA** *‘I think issue is that there is dissemination of [the policy] which...was a bit lagged....or is not well disseminated to the extent that many of the facility’s managers or the few that we contacted are not exactly sure what is the score or what coverage what does Linda mama cover other than just saying that yes, I’m under Linda mama project, I have this card this is my facility and it covers for my delivery, the antenatal*

care what other services within the package of services.’ The dissemination of the policy documents and the entire LM framework did not happen as it should have as there were gaps in awareness of the policy. In addition, the implementation of the policy was happening at a time when *‘another thing [government policy] which is now coming up of course of late is the UHC program which is now also going on board; we have it in the mind we have been in UHC so how does it work out?’* This was creating confusion without adequate elaboration on how multiple projects were supposed to work in tandem.

The blueprints entailing the policy formulation were not circulated to the implementors, however, **R010FLMHC** noted that: *‘though I don’t think at implementation level those would-be critical documents, would be critical documents at formation level. That would be found maybe at ministries, the headquarter level. The blueprints and the policy documents and what, they were not shared to the providers.’*

However, the facility level managers across the three sites were more aware of the guidelines than the HCWs actually implementing the work of providing maternal care as stipulated in the policy. More nurses on the ground noted that they had never seen the policy documents, and indicated that the communication of the current policy was worse than the previous one:

I: Okay, and do you think there were even policy documents or documents that were detailing these guidelines?

R: Even if they were, me I didn’t see them.

I: Okay.

R: I didn’t see them in the hospital and in several hospitals, I’ve been to I haven’t seen.’ – (R003NOHA)

‘Personally, I have never seen the guidelines that we as nurses were given. Especially now like in this setup you see most people are nurses, I sit mostly at records, but from last week we have been given information about it. Initially we didn’t know much about it actually, we just knew there is Linda Mama’ – (R004NOHA)

Table 4.5: Causes of information gap and contributors to poor awareness of the policy

Category of information gap	Causes of information gap/ information not trickling down
County government	- Poor infrastructure and road networks hence inability for the mothers to register (Remoteness of the county)
Community	- Socio-Cultural practices by some communities e.g. a. Pastoralists who have to move very long distance to ensure they are not accessible b. Belief in traditional birth attendants c. Male factor forcing mothers to give birth at home
Healthcare providers	- <i>Lack of adequate policy training or policy document</i>
Beneficiaries	- <i>Lack of education amongst the women hence not able to understand the content of the policy</i> - <i>Language barriers hence cannot understand registration instructions</i> - <i>Lack of registration phones and poor internet connectivity</i>

Source: KIIs, IDIs and document review (**Bold are from KIIs; Italics are from IDIs with the County officials and HCWs**)

4.4.3. Reimbursements to facilities

4.4.3.1. There are delays in reimbursements of claims to facilities across all sites

While all the three facilities noted that the LM policy reimbursements were beginning to come, the respondents noted that there were constant delays in receiving the reimbursement. According to the national, county and HCWs respondents', delays were precipitated by several factors from several sources as summarised in Table 4.6. Given the nature of government bureaucratic process, a delay in one arm of government would cause a ripple effect across the whole system affecting the facilities.

Table 4.6: Sources of delays in reimbursements

Source of delay	Kind of delay
The National Treasury (the-exchequer)	<ul style="list-style-type: none"> - Delay in releasing fund to MoH - Issuance of fund to the MoH intermittently and not as a whole block as required - Failure, through Kenya Revenue Authority, to collect adequate funds from taxes - Reallocation of resources meant for LM and other health issues to other urgent government matters of national interests
MoH	<ul style="list-style-type: none"> - Delays in receipt of money from the National Treasury, occasioned by bureaucratic processes of ending the financial year (amount of work involved); money ends up coming in September
NHIF	<ul style="list-style-type: none"> - Sourcing for funds from other sources when the money from the exchequer delays - Lack of proactiveness of the NHIF officer supposed to transfer the funds to the facilities - Logistical processes of reviewing the claims and reimbursements
County Treasury	<ul style="list-style-type: none"> - <i>Delayed in releasing the funds from the County Revenue Fund (CRF) account to the facility account</i> - <i>Accounting for the 5% deduction done at the county for administration cost</i> - <i>Lack of accountability and transparency in the deductions made at the county treasury</i>
Public facilities	<ul style="list-style-type: none"> - <i>Waiting for the authority to incur expense from the chief officer of health</i> - <i>Lack of motivation by the HCWs as they perceive that the reimbursement job is the work of the administration</i>

Source: KIIs, IDIs and document review (**Bold are from KIIs; Italics are from IDIs with the County officials and HCWs**)

4.4.3.2. The reimbursement funds are inadequate

Aside from the delays and the unpredictability of the funds, facility in charges and HCWs across the three sites noted the funds were **inadequate**; and it was pushing facilities into rolling debts and

borrowing: *‘Right now, we are working with a lot of debts because as I said there is delay in disbursement of funds’ – (R005FLMHA).*

However, some respondents thought that the funds were adequate if only they are made aware of the claims rejections and the processes and paid timely:

‘I think they are reasonable, if they could be paid up, we’d could be a step ahead. Maybe the review, they can review maybe after two years or so to see where we are. But if payment is the prompt and they are made to understand what to claim, I think that revenue for the time being can actually improve the quality of services and the infrastructure.’ – (R003NOHA)

4.4.4. Claims

4.4.4.1. The claim process is fraught with multiplicity of challenges

A majority of the respondents, national, county and HCWs, noted that the claim process was fraught with challenges that have been summarised in *Table 4.7* whose sources were either from the NHIF office, health facility, health records officer (HROs) and other HCWS, and the mothers. The challenges were causing facilities to lose out on significant reimbursements.

Table 4.7: Challenges in the claim system

Source for claim challenge	Kind of claim challenge
NHIF office (National and local)	<ul style="list-style-type: none"> - Overwhelmed by the number of claims to handle - Not sharing reasons for rejection of claims with the county or facilities
Health facilities	<ul style="list-style-type: none"> - Infrastructure problem e.g., lack of printers and photocopy machines to print the IDs and the paperwork - Claim automated and requires internet and many facilities are not connected to the grid - Lack of or inadequate number of computers - Many requirements such as IDs that the mothers do not have or cannot access - Identification of the women still a challenge

Source for claim challenge	Kind of claim challenge
	<ul style="list-style-type: none"> - Some public facilities, having participated in the previous package, and were not accredited by the NHIF this time round, did not know that they were to claim for certain aspects of work - Higher-level facilities have more than one source of income and so do not get motivated to make the claims - Lower-level facilities are receiving other sources of fund from capitation and do not want to through the hustle of paperwork to 'chase after' small money
HROs and other HCWs	<ul style="list-style-type: none"> - Lack of training on the claim process, hence, do not know what to claim for - Lack of motivation or incentive to make claim because they do not get the right amount of money from the previous claims - Feeling demotivated that the private sector has to claim and earn more than the public sector; and because the county does deduct money from the public sector - Requires a lot of paperwork making the process tiresome for the facilities and the mothers
Mothers	<ul style="list-style-type: none"> - Mother required to register themselves through the phone (via a mobile platform), but some cannot do that because of lack of phone - Lack of knowledge on the mother (hence gap in awareness of the policy)

Source: KIIs, IDI and document reviews

4.4.5. Referral system

4.4.5.1. *There is policy confusion and perverse incentives on referrals and referrals claims*

According to some HCWs '*referral system has improved our system*' – **(R001DICHB)**. A referral process is akin to cascading a ladder where patients are meant to move from a lower-level facility to a higher-level seeking more specialised treatment that cannot be handled by lower-level facilities. However, '*if there is an issue, a complication that arises that cannot be handled at a certain level, the facility is required to refer to the next higher-level facility*' – **(R027NHIFO)**; therefore, referral forms a critical

part of the LM policy. However, there is a policy confusion because the referral aspects in paper differs from practice. Document reviews showed that referring facilities are supposed to be reimbursed for ambulatory services at a fixed amount based on the number of services, which is yet to be agreed upon (Table 4.3). However, LM manual is both 'contradictory and unclear' on referral reimbursement package. For instance, the manual says that the contracted referring facilities cater for costs of transport to a higher facility, and 'costs of outpatient services which the referring facility is unable to provide e.g. laboratory, imaging services (ultra sound) etc' (Kenya Ministry of Health and National Hospital Insurance Fund, 2016, p7). The statement is not clear on who between the referring and referred to facility makes the claim. The assumption at the policy level is that the facilities work on modalities on how to reimburse each other when the claims are made:

'So, in that scenario, you didn't deliver in Pumwani [maternity hospital in Nairobi County], but they had checked you in and then you were admitted and then something happened, already we [NHIF] have a notification in the system for a delivery. So, what they do, once they refer you, they will be required to reimburse KNH [National referral centre in Nairobi County] once we, because the claim will start the process from Pumwani. So, we will reimburse Pumwani and they will reimburse KNH because you will not be able to raise two claims to the same person, to the same period of time, the system will not allow.....the facility is required to refer to the next higher-level facility and the arrangement is that where you have referred from it will reimburse the other facility because you did not do the delivery or anything, it was a complication you could not handle, you referred or you referred after delivery, so maybe the mother developed hypertension I don't know, complication or something and they need referral to another facility so the facility that referred is required to reimburse the other facility, yeah, that is the way it works' – (R027NHIFO)

Additionally, in practice, if a mother develops complication before giving birth, and are referred to a higher-level facility, the referring facility are neither reimbursed for the transport cost, or for the cost of services they provide before referring, but the referred to facility claims for both complications received and birth (perverse incentive):

'The referrals are addressed initially because when somebody comes, they are registered with NHIF, they bring in their cards, their Linda Mama cards we just claim regardless of where they came from. The next one is a person who comes with all the identification documents and they have not been registered, we register them, and we claim.' – (R010FLMHC) [referred facility]

'1: And reimbursements, is the hospital reimbursed?

R: *Nothing. And sometimes our ambulance is very old we get stuck on the way.* – **(R009NOHA)**
[referring facility]

Also, when a mother gives birth in a facility and either the baby and or the mother develops complication after birth and are referred, then referring facility claim for LM fees or NHIF package depending on the type of registration, and the referred to facility only claims for inpatient services offered:

I: *...how do you deal with referrals; how do you claim for referrals?...*

R: *For referrals we normally claim them as inpatients, yes. Just as a normal inpatient as if you are in any other ward at the hospital. We don't use the fixed amount; we just claim the bed like any other in patient.*

I: *Even if they are maternity?*

R: *Yeah, even if they are maternity.*

I: *Why would you claim as an inpatient and not as either Linda Mama or maternity?*

R: *Because they have not delivered here. As far as they have not delivered here, we cannot treat you as a maternity patient. You just came with your baby in the ward like any other patient in any other ward. So just count the number of days you stay. That is what we claim.* – **(R011COHC)**

'Okay at times when mothers move to level threes that are accredited then for one reason or another, they are referred to another facility, the facility where she will deliver is the one that will be reimbursed. The referring facility despite having used their items of course they won't be reimbursed this money. So, there is, need to look at the referring facility and do for them.' – **(R016CSLM)**

The other perverse incentive that comes with the referral is that faith-based facilities that are located near some lower-level government facilities are scheming for referral from lower-level facilities because of the challenge of accessing ambulance care. The act is so open that even government facilities advice mothers on the referral:

'For example, in [the] sub county where I was working before, I came here, there is no level four hospital and the level two hospitals that are there are not accredited for Linda Mama, but we have a faith-based hospital that is accredited. So, we would register our mothers and refer them to the faith-based hospital, sometimes even when they are in a state of emergency instead of referring them to a place like [facility C] which is far away we just register them in the ambulance very fast and take them to the faith-based hospital. So, number one not all facilities have it but even those

who do not have it registers and tell the people about the facilities around them that have.’ – (R016CSLM)

HCWs reported that while the mothers were referred from dispensaries (level 2 facilities), they chose to bypass the middle-level facilities (level 3) and seek treatment from higher-level facilities (level 4 and 5), which is then creating more workload in referred to facilities (receiving facilities):

‘The dispensaries, the level 2s they refer patients to us, but you find most of the time they pass us to go to the level 5s.’ – (R005FLMHA)

Due to increase in referrals, the county has provided ambulances to support facility referral process for all facilities across the county. However, given the high number of facilities that are served by the few ambulances, sometimes referring from a smaller facility to a higher-level facility proves to be a challenge. Additionally, the poor working state of the ambulance poses a significant challenge:

‘With this small facility theatre...a mother maybe needs an operation we have to refer. So, referring is also a challenge because like even our ambulance, we have reported to the county. Most of the times it does not work well and most of the time it is sent to the county. So, we have a call centre but since it is far, maybe there are times even we call an ambulance from [facility B], you know it takes time. So maybe if we get a new ambulance, this one is old.’ – (R007DICHA)

In irony, some lower-level facilities – because of mothers’ preferences and location closer to the market centres – are having to treat and deal with significantly higher numbers of mothers than their higher-level counterparts who are located within the same vicinity. The challenge of this on referral is that, in so being, the higher-level facility, rather than refer upwards, then refer to the lower-level facility, hence a perverse incentive for reverse referral:

‘No, it has been like that [facility A] being a level 3, there is another hospital level 4... in the same sub-county, it is a level 4, but the workload is lower than [facility A] because they conduct like 25 deliveries in a month.... but...we had 97.... yet we are level 3. It’s nearer and also, I have heard they [patients] like this place. So maybe you know what people are taking it seriously, they are doing the necessary to offload us...’ – (R007DICHA)

4.4.6. Accreditation and contracting

4.4.6.1. *Current accreditation process is compromising quality of care in the public service facilities*

The mandate of the accreditation of the facilities to ensure that they meet the quality government standards is traditionally *'embedded in the department of standards and regulations'* – **(R023MoHO)** and the facilities are registered in different service provision levels based on the Kenya Essential Package for Health (Kenya Ministry of Health, 2020a). Ideally, accreditation of the facilities should meet a set threshold of quality on infrastructure, equipment, human resource, etc. However, the transfer of the mandate of accreditation to NHIF and the expansion of the packages, and the requirement of NHIF to do a blanket accreditation and contracting of all public facilities irrespective of whether they met the standards or not alters the quality standards of services:

'NHIF has an accreditation process but for the public, the public is not able to do that accreditation process. So, they are given a blanket of approval and I think, if I am not sure they have given a blanket to all health centres, but the issue is whether they have that capacity to provide those services. So NHIF there is faced with a bigger challenge because their clients are saying that you have capitulated us in this facility, but they don't have drugs, we are going there, and we are given a prescription to go and buy those drugs.' – **(R026DAO)**

'The public sector is really struggling with level two and three that do have delivery services because there are so many things that they have to, the bare minimum for accreditation they have got to meet, they are not able to they don't have any training on how to do it, these things like data and the things you are supposed to upload and do, they just have no capacity.' – **(R023MoHO)**

Besides the initial accreditation process of the facilities, the NHIF and MoH have not put in adequate measures to ensure that there is the monitoring of quality beyond that initial accreditation. The independent professional associations come into the process later when facilities are facing quality challenges, yet they should be at the forefront of protecting consumers interest right from the start of the process:

'but there are usually those spot checks by those what they call by these, pharmacy and poisons board, these associations that they go closing facilities, they only respond when there is an issue but those quality checks that come with the accreditation and inspection are not there, I think they are usually one off' – **(R026DAO)**

Through accreditation, when the NHIF used the same checklist across all levels of hospitals, whether a referral hospital or dispensary and a health centre, then it became disadvantageous for the lower-level facilities as they are exempted from meeting standards. This is despite the fact that dispensaries and HC already lost funds from the free primary health care that was introduced concurrently with the FM policy. However, while the public facilities were meant to be given blanket accreditation due to it being the source of access of maternal care, they were not:

‘Well the funding flow, maybe for lower facilities is a special case, because you see now user fees were abolished in 2013 or so, and this is a facility, when you look at the initial thought of free maternity, it was to strengthen primary healthcare because delivery is really not something that is necessary have to take place in very high facilities because delivery can happen even in the community, it can happen in the midwives and then somebody comes later, most people are delivering as long as there is care, but now dispensaries and health centres were disadvantaged when the fund went to NHIF because first of all NHIF before was only accrediting hospitals, so this time they were to bring now dispensaries and health centres on board, which I think did not happen as per the MOU because last year in 2018 when we were doing readiness assessment, for instance in Machakos county, when we were looking at the facilities accredited by NHIF, none of the dispensaries was accredited by NHIF or being engaged by NHIF.’ – (R024MoHO)

Equally, while the NHIF have developed a checklist to use for accreditation to ensure that facilities are only contracted to services for which they provide, and despite the fact that *‘there is a quality assurance department in NHIF’* – (R033DOA), their monitoring of the quality assessment processes are not as routine – twice a year rather than quarterly – as was with the MoH in the previous FM policy, hence, many accredited facilities could compromise on quality for not being appropriately monitored:

‘So that is why you find a few places have a lot of compromise and of course recently there has been that argument whether should NHIF which funds should they be the ones mandated to check quality again?’ – (R033DOA)

4.4.6.2. Private facilities are having a field day in accreditation

However, the process of accreditation and contractual agreement on the other hand is working seamlessly for the private sector because as postulated by **R023MoHO**, *‘the private sector is thriving because they are used to this accreditation business.’* They have participated in rigorous quality monitoring processes before the LM policy. **R026DOA** noted that *‘there are only a few private facilities those that I would call, not the bigger ones not, but the other lower-level or middle-level hospitals,*

private hospitals they are providing those [LM] services and they have entered into contractual arrangement with, yes. And also, the faith based not all of them because the Mater Hospital for me is a faith based but I don't think it is participating in that scheme. Only those middle-level facilities and of course they have been accredited and given a contract by NHIF' depending on whether they accept the reimbursement rates, and once in the contract, they build up 'a process to ensure that those [LM] services are available to guarantee quality services' to the public.

4.4.6.3. Development partners supporting private facilities in informal settlement worked very hard to support their accreditation

Some development partners that work with private facilities through social franchising schemes, particularly in the informal settlements in the country, strategised well and thoughtfully on how to have many of their supported facilities accredited to offer LM services. For instance, the organisation capitalised on the power play and communication breakdown between the national NHIF office and the county NHIF office, to ensure their interests of having their facilities accredited and contracted. Besides, they invested in providing their facilities with prerequisite registration information, through training, before the actual accreditation by the facilities to ease the process of accreditation for the facilities. Additionally, they instigated their internal accreditation to mimic NHIF's procedures for actual accreditation as noted by one respondent:

'... to put private providers on the Linda Mama scheme, we also had to ensure that these providers were in panels or were empanelled or were created by NHIF to provide the services. And so, we realized that the head office can't help much in terms of getting these facilities accredited. So, what we did is we had to go to the branch offices at NHIF. Unfortunately, these two people like don't talk to each other that often or somehow somewhere there is a communication breakdown. So, you can discuss one thing with head office but when you go to the branch, they are very powerful and almost autonomous, so you have to start the process all over again. So, we found that despite spending significant time trying to put our case across at head office we almost had to start afresh when we went to the counties. Start having relationships with the Branch Managers at NHIF and making them understand why it's important first of all accredit private health facilities and for them to come to our facilities and see that these are the facilities that they would otherwise be looking for. But once the accreditation process was done, they would also come in with NHIF teams on the ground to support Linda Mama registration. It has been quite a process, I think like any other program where you are working with the Government, I think you need to be ready to put in some time investment.' – (R030DAO).

Table 4.8: Summary of barriers of accreditation process

Barriers
There is a confusion and lack of clarity of the roles of different players in accreditation
Facilities, mostly public, are not incentivized enough to meet the quality standards
The support of the professional bodies only comes in during problems rather than at the start of the accreditation
Lack of involvement of all the players

Source: KIIs, IDIs and document reviews

4.4.6.4. Reforms have separated the roles of accreditation and contracting; and there is a national quality taskforce to monitor the quality of care

At the writing of the results of this section, and as noted by **R024MoHO**, '[we] have set various bodies, they are supposed to look at the quality, the joint inspection that needs to be done' and as had been proposed by the health financing NHIF reform team, the role of accreditation has been reverted to the MoH and NHIF now has an easier role of just contracting to enhance efficiency as noted by Tanui (2019). Additionally, there is a new national quality improvement taskforce called a joint inspection board called a joint inspection board which more like a technical working group, checking the quality outcomes of maternal care in reality verses what is in a checklist which is modelled around the KQMH:

'from last year, I happened to see that we have the national quality improvement task force, no, the technical working group.... just to check against the checklist like this is what is supposed to be happening and this is what is happening in reality.... it is a requirement that all the twelve thousand plus facilities in the country, public, they will go through this inspection.... we are beginning to see some improvement because of that quality improvement aspect, I mean the component, it is a very specific program, and we have a very clear framework for quality improvement, the Kenya quality model for health that every facility at whatever level is supposed to adhere to.' – **(R035DAO)**

'I think there was a time we were coming up with a joint inspection check list, but I think there are talks about the Kenya Quality Model for Health (KQMH) which is being rolled out' – **(R032MoHO)**

4.4.7. Monitoring and evaluation

4.4.7.1. *There is a system for monitoring and evaluating the progress of the policy effects and outcomes in facilities and the county*

In all the sites, there is a standard way of monitoring and evaluating the progress of the policy. The facilities are monitoring deliveries, ANC visits, PNC visits (workload), and complications by recording and documenting the numbers in an A3 charts that is hung on the notice boards in the corridors or at the entry of maternal care unit in the full view of the mothers and visitors:

‘when we assess how many of our mothers deliver here, how many of our mothers have had any complications, how many of our mothers lose their babies, how many of our mothers have attended the antenatal clinics as required? And when you look at all that you are able to see any differences that have been achieved as far as during this time. Do we have less mothers coming with ruptured uteruses from there, do we have fewer mothers coming with, delivering macerated stillbirths because they had complications out there and they didn’t want to come to the hospital because they thought we were going to do other things that we will need them to pay for it. So, when we look at all that we are able now to see kind of like are we making any progress.’ – (R015FLMHC)

The records of the workload and claims are made into a monthly report and discussed amongst facility managers, HCWs, NHIF officials in monthly review meetings:

‘But so far so good because we always have a report every month maybe to tell us if we are achieving or not, or even to do some extra work.’ – (R002COHB)

‘We have review meetings, starting from the national government, from the committee, others from NHIF.’ – (R010FLMHC)

At the county level, there are independent groups that meet monthly to look at unfavourable outcomes with a learning experience:

‘We have a group, a body called MPDSR [Maternal and Perinatal Death Surveillance and Response] that looks into maternal deaths and unfavourable outcomes. Apart from the ones that are at the facility, we have one at the county that includes people from different parts of the county. That committee meets once in a month and they go through all the cases that happened. And of course, every time we have a maternal death or neo natal death or unfavourable outcome,

some members of the team usually join the team at the hospital to go discuss what issue it is and to make it a learning experience and not necessarily a punitive experience unless there is need, yes’ – (R016CSLM)

Furthermore, the county focal person collaborates with the hospital clerks in the whole county to do a quarterly report about LM and disbursements as a way of identifying the gaps and need for efficiency:

‘I normally do a quarterly report, mostly about the reimbursement and disbursement, but we also have the people who are doing the Linda Mama and we meet them. The clerks who are also doing Linda Mama. So, I am able to know what issues they are currently facing and what the mothers, but so far, the mothers there is a system and a regiment, a system that’s working efficiently’ – (R017CMLM)

4.4.8. Supportive supervision

4.4.8.1. *There is adequate supportive supervision to oversee overall maternal care*

On support of working practice, the facilities have adequate supportive supervision from the national government and the county. The supervisions happen quarterly but, in some instances, can be random just to ensure the facilities are doing the right thing in practice of maternal care. In addition, the visits identify practice challenges and make recommendations for improvement:

‘sometimes they can do at random, but quarterly we get...support supervision from the county... Sometimes even we get from the national government when they come on the ground, they see the challenges that you are facing....let me mention about the national government supervision, the latest one they come, they found a challenge. They could not even believe that those mothers are delivering in that small unit. They could even see the congestion, you see when they are on the ground and that’s when they sat down and got how they can...we can do...we can expand the postnatal, we can have a newborn unit.’ – (R020FLMHB)

Equally, facility managers are doing daily facility supervision by monitoring reports during ward rounds to identify gaps such as departmental workload that can be sorted out without waiting for the county and the national government:

‘our supervision is we do it daily, especially in maternity because...like a day like two you have to make two rounds. You have to make a round in the morning, and you have also to make a round

in the later afternoons. And during those rounds, you are going and identifying the gaps, where maybe there is overload so that even you can be able to withdraw staffs from another department which is not busy and add to them. So, let me say we do it at least twice a day, utmost.’ – (R020FLMHB)

In addition to the county officials, Facility A had a subcounty nurse, who oversees supervision of all subcounty hospitals, and would schedule supervisions:

‘Then from there we have the county people, the Director of Nursing. Yeah. As regarding to how often I don’t know whether it’s actually on schedule how often it should happen, but this being the facility where the office of the sub-county nurse is, so she is able to oversee it very often most of the time.’ – (R004NOHA)

4.4.8.2. There is no adequate support supervision from the NHIF officials on LM policy implementation aspects

There was lack of monitoring and evaluation and support in meeting LM aspects of the work particularly as soon as the process of LM kick started at the facility:

‘NHIF I can tell you it’s a flat no. So, once they do the accreditation process you will never see them again unless there is a problem. So, when they are coming down it’s actually not quality assurance its inspection and you are going to be in trouble.’ – (R030DAO)

‘For us here we are just supposed to make sure it is implemented, but there is no M & E [monitoring and evaluation] aspect of it, yeah. Not because we don’t want to but because if you are not supporting us in terms of how to go about checking if the guidelines...we don’t even have the indicators that they are using you know.’ – (R005FLMHA)

4.4.9. Organisational arrangement and role of actors in implementation

The analysis showed that implementation of the FM policy takes the top-down approach and are in three levels: the national, county, and facility levels (*Figure 4.1*). There are more actors in the implementation than the formulation.

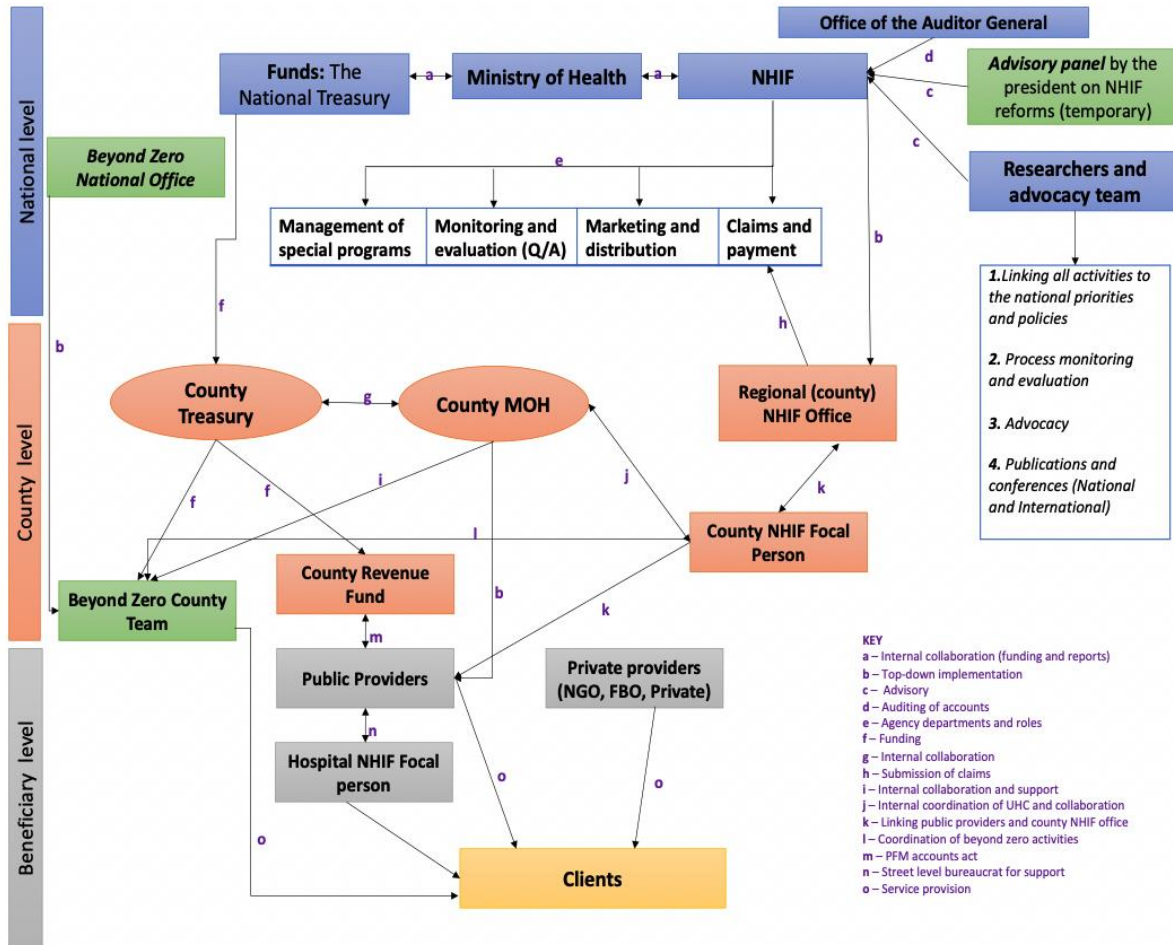


Figure 4.1: implementation arrangement of the free maternity policy as it is being implemented (source: document review and interviews)

4.4.9.1. Joined up government at the centre

The policy imperatives emerging from the national level are de facto priority of the government as captured in the president’s 2017 Jubilee campaign Manifesto. At the national level, The Presidency, development partners, NHIF, MoH, The National Treasury, Office of the Auditor General, the Council of Governors (CoG) and the Parliament are joined up in what Exworthy and Powel (2004) call ‘horizontal dimension – joined-up government at the centre’ and perform multiplicity of implementation roles as shown in Table 4.9 and Table 4.11. MoH is a powerful and influential actor at the national level. Three entities in MoH: CS Health, PS health, and DG Health are strategic policy experts, who source for funds from the National Treasury and provides strategic, future policy direction in line with the presidential directive of UHC (Table 4.10). In terms of a governance structure, **R028MoHO** noted that it is imperative to have a proper reporting structure at the national level that would monitor the implementation of the program, ‘that is why I was talking about that structure,

having a steering group that has everybody in the table, you would need to have that kind of governance body.’ However, there is a break down in the reporting channels and as such monitoring system, leading to a gap at the national level. The resulting effect is that the principal secretary (PS), who represent the MoH, would be receiving many communications concerning challenges of implementation from several sources which could be misinformation. At MoH, the implementation is overseen by the equally powerful and influential department of preventative and promotive health (Division of Family Health), together with the NHIF, they have provided adequate social marketing to the policy through social mobilisation and communication of the providers and beneficiaries. Also, upon receiving claims and utilisation reports from the NHIF, the MoH is able to track the level of remaining funds in the pot and mobilises additional reports from the National treasury. However, the team from division of family health at MoH – despite being concerned with the reproductive health – was not involved in the formulation but passively participate in the implementation as noted by one respondent:

‘...but not the team from the reproductive health stakeholders, they have not been largely involved’ – (R023MoHO).

Other departments at the MoH that are less powerful and have a medium level of interest are the division of health policy and planning, division of healthcare financing, standards and quality assurance and regulations, and monitoring and evaluation unit. The units provide strategic policy direction to the NHIF on their areas of strength and concern.

Similarly, the national treasury plays a critical role but has a less influential role in the implementation process of the policy; however, they liaise with the parliament to approve the required budget for the policy. Since the introduction of the policy, they have been able to provide the funds as required. Besides linking with the MOH, the National Treasury links with the county treasury to provide other statutory funds not necessarily linked to the running of FM policy.

Equally, the NHIF is a powerful actor drawing from its mandate as an overall overseer of implementation of FM policy – as a managed fund under its department of programs and schemes – and primary purchaser of services. As a purchaser, the NHIF uses its extensive network with service providers to accredit and contract providers – not previously registered on their system – for FM policy services provision. The NHIF timely reimburses the providers for services rendered through its automated database for registration and authentication of beneficiaries. Through the use of government ID numbers, NHIF verifies the claims and redresses any complains arising from the providers on the mothers served. The NHIF has the mandate to report the claims and utilisation data

for service provided, which is then yearly audited by the influential office of the auditor general. Besides, auditing the reports, the office of the auditor general is not concerned with the daily running of the implementation process.

The development partners, equally play critical roles in the implementation such as developing financing strategies, demand generation, capacity building, and collaborations as noted by the respondents:

‘We do capacity building at the provider level.... it’s important that both the public and private understand the process of claim because of accreditation, process of contracting, understand issues to do with strategic purchasing in terms of service, how do they pay, how do they select just the whole aspect. Demand generation is one of our key aspects in terms of creation awareness.’ – (R029DAO)

‘We were working with NHIF to help them first of all package their informal sector product’ – (R030DAO)

Still, at the national level, there are two other key players: the advisory panel, researchers and advocacy team, that are less influential in the process of implementation of the policy but play an important role. The advisory panel was developed by the minister of health, albeit late in the implementation process (on 18th April 2019) in line with the Health Act of reforming and repositioning the NHIF as a strategic purchaser (The Kenya Gazette, 2019). The team comprises the development partners, private sector, researchers, government technocrats, and advocacy coalition teams and their role is to provide the technical and financial support for NHIF, part of which is management and implementation of the NHIF. On the other hand, the researchers, mostly research institutions, and the advocacy teams, mostly the civil society, are working independently or together with the NHIF to link the activities at the county and facility levels to the national priorities, participate in the process monitoring and evaluation, provide advocacy especially of the weak and vulnerable such as adolescents, and scientific publication which are meant to improve knowledge.

4.4.9.2. Joined up governance at the periphery

At the county level, several players work towards the implementation of LM as one respondent noted: *‘...it’s almost everyone, it’s like a teamwork’ – (R004NOHA)*. The two key ministries at the county that play the biggest roles in the implementation process are the treasury and health. The county treasury is concerned with receiving finance from the national treasury and providing financial support and

monitoring the flow of funds at the County Revenue Fund (CRF). On the other hand, the members of the MoH at the county who oversees the implementation of the policy form the CHMT and are composed of several dockets such as nursing, clinical services, monitoring and evaluation, research and development, pharmacy and administration. The dockets report to the county executive officer of Health. Overall, the county governor *'see [oversees] all the activities in the county, like especially in such free maternal its working and supervision, and supervising.'* – **(R009NOHA)**.

However, as part of the CHMT, the most influential and active player in the implementation of the LM policy at the county is the chief officers of health as noted by the respondents:

'So now our relationship to the county is probably linked to the chief officer, through the chief officer. Because if we have issues with the implementation, then we are supposed to address them to the chief. But other people we don't know because we don't really see them.' – **(R005FLMHA)**

The county has adopted the UHC agenda of the central government by employing a county focal person for NHIF, who is important but less influential player and has a role in *'moving forward not just with NHIF but the UHC goals of Kiambu County as a whole'* – **(R017CMLM)**. The regional offices of the NHIF at the county also plays a significant role of receiving, batching, and quality assurance check of all the claims from the facilities in the county and sending to the national offices.

At the service provider level, there were two kind of providers: the private and the public providers, who provide services that are responsive to needs of clients and in line with contracted terms. The public providers were part of the previous FMS that was run before while the private sector joined the service in 2017 when the new service was moved to the NHIF. They all provide the service delivery as per the benefit package and reporting of services:

"I will say that the hierarchy and the organogram of hospital management kicks into play any time there is an issue that touches on the hospital, whether it's Linda Mama or any other thing. We don't have separated organs to deal with Linda Mama outside other operational issues." – **(R010FLMHC)**

Finally, the most interested but less powerful stakeholders are the beneficiaries. They are responsible for registering with the NHIF either through self-registration or HCWs assisted, utilise services and provide feedback. A summary of all roles, interests and power are in *Table 4.9, Table 4.10, and Table 4.11*.

Table 4.9: Actors roles, interest, influences and position on the formulation and implementation process of the free maternity policy

	Category of actors	Role in formulation	Role in implementation	Interest	Level of power	Position
Elected officials	The Presidency	+	+	High	High	Supportive
	The members of parliament and senate	No	+	Low	Low	Middle support
	County Governor	No	+++	Medium	High	Middle support
	Member of county assembly	No	+	High	High	Middle support
Appointed officials/ offices	Office of the Auditor General	No	+	Low	Low	Middle support
	Council of Governors	+++	+++	High	High	Supportive
	The National Treasury	+++	+++	High	High	Supportive
	Cabinet secretary, Principal secretary for health, and Director General (National)	+++	++	High	High	Supportive
	MoH-Department of policy, planning and health Financing (Division of Health Policy and planning and division of healthcare financing) (National)	+	+	Medium	Medium	Supportive
	MoH-Department of preventative and promotive health (Division of Family Health) (National)	+	+++	High	High	Supportive
	MoH-Other departments and divisions (Standards and quality assurance and regulations, M and E)	+	+	Medium	Medium	Middle support
	County Executive Committee (CEC) – Health	No	+	Medium	High	Supportive
	County Chief officer of health (County)	No	+++	High	High	Supportive
	The summit ((CHMT) County directors of Health, Administration and planning and their deputies)	No	+++	High	Medium	Supportive
	The County Treasury (Includes County accountants)	No	+++	Medium	Medium	Supportive
	County NHIF focal person	No	+++	High	Low	Supportive

Category of actors		Role in formulation	Role in implementation	Interest	Level of power	Position
Purchaser of health services	NHIF (National level)	+++	+++	High	High	Supportive
	NHIF (County offices)	No	+++	High	Medium	Supportive
Member of interest groups	The Church (SUPKEM, Council of churches)	+	+	Medium	High	Supportive
	The Kenya Private Sector Alliance	++	+++	High	High	Supportive
	HCWs Unions	++	+++	High	High	Supportive
Donors and development partners	The World Bank	+++	+++	High	High	Supportive
	WHO	+++	+++	High	High	Supportive
	JICA	+++	+++	High	High	Supportive
	UN agencies (UNFPA)	+	++	High	Medium	Supportive
	AMREF	+	++	High	High	Supportive
	USAID	+++	+++	High	High	Supportive
	Marie Stopes International	+	+++	High	Low	Supportive
	Population service International	+	+++	High	Low	Supportive
	PharmAccess					
Civil society	Kenya Human Rights Commission	+	+	Low	Low	Immobilised
	KELiN	+	No	Low	Low	Immobilised
	Centre for Reproductive Rights	No	+	Low	Low	Middle support
Beneficiaries	Individual citizens (Men and women)	+	+++	High	Low	Supportive
	Private health facilities	+++	+++	High	High	Supportive
	Public health facilities	+	+++	High	Medium	Supportive
Academia and researchers	Kemri Wellcome Trust	No	++	High	Medium	Supportive
	Population Council	No	+	Medium	Low	Middle support
	Mannion Daniels and Options Consultancy	No	+	Medium	Low	Middle support

Category of actors		Role in formulation	Role in implementation	Interest	Level of power	Position
	ThinkWell	No	+	High	Low	Middle support
Media	Local and international media	++	+++	High	High	Supportive
Other	Beyond Zero	No	+++	High	High	Supportive
	Jacaranda Health	No	+++	High	Low	Supportive
	Philips	No	++	High	Low	Supportive
	AfyaTu	No	+	High	Low	Supportive
Key:	+++ : Very good involvement; ++ : Good involvement; + : Partial or weak involvement; No : no evidence of involvement.					

Source: Author, extracted from a review of documents in Table 3.7

Note: It is plausible that some actors may have been omitted because they were not apparent in the document reviews or the IDIs, KIIs, or EIs.

Table 4.10: Force field analysis map showing the level of influence and power of actors

Level of power	Proponent				Opponents		
	High support	Middle	Low	Non mobilised	Low	Middle	High opposition
High	The Presidency	County Governor					
	Council of Governors	Member of county assembly					
	The National Treasury						
	Cabinet secretary, Principal secretary for health, and Director General (National)						
	MoH-Department of preventative and promotive health (Division of Family Health) (National)						
	County Executive Committee (CEC) – Health						
	County Chief officer of health (County)						
	NHIF (National level)						
	The Church (SUPKEM, Council of churches)						
	The Kenya Private Sector Alliance						
	HCWs Unions						
	The World Bank						
	WHO						
	JICA						
	AMREF						
	USAID						
	Private health facilities						
Local and international media							
Beyond Zero							
Medium	MoH-Department of policy, planning and health Financing (Division of	MoH-Other departments and divisions (Standards and					

Level of power	Proponent			Opponents			
	High support	Middle	Low	Non mobilised	Low	Middle	High opposition
	Health Policy and planning and division of healthcare financing) (National)	quality assurance and regulations, M and E)					
	The summit ((CHMT) County directors of Health, Administration and planning and their deputies)						
	The County Treasury (Includes County accountants)						
	NHIF (County offices)						
	UN agencies (UNFPA)						
	Public health facilities						
	Kemri Wellcome Trust						
Low	County NHIF focal person	The members of parliament and senators			Kenya Human Rights Commission		
	Marie Stopes International	Office of the Auditor General			KELiN		
	Population service International	Centre for Reproductive Rights					
	Individual citizens (Men and women)	Population Council					
	Jacaranda Health	Mannion Daniels and Options Consultancy					
	Philips	ThinkWell					
	CHS						

Source: Author, extracted from a review of documents in Table 3.7

Note: It is plausible that some actors may have been omitted because they were not apparent in the document reviews or the IDIs, KIIs, or EIs.

Table 4.11: Role of the actors

	Category of actors	Role in formulation	Role in implementation
Elected officials	The Presidency	Outlining the <i>Jubilee Agenda</i>	- Outlining the <i>Jubilee Agenda</i>
	The members of parliament and senators	No	- Approving the government spending on Linda mama
	County Governor	No	- Supervision of the CHMT for service provision and financial allocation - Working in collaboration with other similar projects that are targeted at achieving UHC
	Member of county assembly	No	- Working with the pregnant mothers who provide feedback about the services received
Appointed officials/offices	Office of the Auditor General	No	- Statutory audit of FM policy reports
	Council of Governors	- Supporting initial technical design (technical capacity) - Modalities of implementation at the county level	- Collaborating with the counties to form council of health ministers from the counties to ensure efficient implementation of the policy at the county level
	The National Treasury	- Resource and budgetary costing	- Resource and budgetary allocation
	Cabinet secretary, Principal secretary for health, and Director General (National)	- Oversight of the discussion and direction - Overseeing the implementation of the previous Linda mama Services and transition from the previous FMS to the current Linda Mama	- Providing funds to the NHIF - Source for funds from the National Treasury and provides strategic, future policy direction in line with the presidential directive of UHC
	MoH-Department of policy, planning and health Financing (Division of Health Policy and planning)	- Limited involvement except advisory	- Limited involvement - Advisory on Health financing strategies not linked to Linda mama

Category of actors	Role in formulation	Role in implementation
and division of healthcare financing) (National)		
MoH-Department of preventative and promotive health (Division of Family Health) (National)	- Limited involvement except advisory	- Providing the overall oversight of the implementation of Linda mama (Providing the technical lead on behalf of MoH) - Monitoring and evaluation of the progress of implementation of UHC for which Linda mama is part
MoH-Other departments and divisions (Standards and quality assurance and regulations, M and E)	- Limited involvement except advisory	- Limited involvement except advisory
County Executive Committee (CEC) – Health	No	- Coordinates health services at the county
County Chief officer of health (County)	No	- Hands on in overseeing the implementation of Linda mama at the county level
The summit ((CHMT) County directors of Health, Administration and planning and their deputies)	No	- Supervision of the policy outcome - Providing continuity of supplies and supporting the referral system - Communication of the policy to the healthcare workers - Employment of the clerks and supervising them
The County Treasury (Includes County accountants)	No	- Providing approvals to the facilities to spend the cash - Accountant oversees financial operations
County NHIF focal person	No	- County NHIF point person who streamlining the hospital accounts and making sure they do the right things. - Overseeing the UHC project for which the Linda mama is part

	Category of actors	Role in formulation	Role in implementation
			<ul style="list-style-type: none"> - Linking with the Beyond zero project to ensure free camps maternal camps are carried out
	Hospital employees (HRIO, NHIF clerk, In charges, Administrators, Other HCWs)	No	<ul style="list-style-type: none"> - Provide services to the Clients and supporting in their registration
Purchaser of health services	NHIF (National level)	<ul style="list-style-type: none"> - Supporting initial technical design (technical capacity) - Came up with ways of improving coverage (issuing cards and setting up offices in the hospital) 	<ul style="list-style-type: none"> - Overall management of Linda mama - Creating demand and providing awareness / educating the mothers - Registration of the members and providing the services
	NHIF (County offices)	No	<ul style="list-style-type: none"> - Batching of claims form all hospitals in the county
Member of interest groups	The Church (SUPKEM, Council of churches)	<ul style="list-style-type: none"> - Provide support on the implementation strategy and the duality of it. - Provide input from members 	<ul style="list-style-type: none"> - Educating the congregations on FM policy
	The Kenya Private Sector Alliance	<ul style="list-style-type: none"> - Provide support on the implementation strategy and the duality of it. - Provide input from members 	<ul style="list-style-type: none"> - Provide support on the implementation strategy and the duality of it.
	HCWs Unions	<ul style="list-style-type: none"> - Provide support on the implementation strategy and the duality of it. - Provide input from members 	<ul style="list-style-type: none"> - Critiquing the government's implementation process
Donors and development partners	The World Bank	<ul style="list-style-type: none"> - Funding the initial initiative - Supporting initial technical design (technical capacity) - Part of the technical working group discussing the movement 	<ul style="list-style-type: none"> - Participating in the discussions around health reforms in Kenya for which Linda mama is part
	WHO	<ul style="list-style-type: none"> - Supporting initial technical design (technical capacity) 	<ul style="list-style-type: none"> - Evaluate the legal access rights to health care through independent consultants

Category of actors	Role in formulation	Role in implementation
JICA	- Supporting initial technical design (technical capacity)	- Fostering partnerships for UHC
UN agencies (UNFPA)	- Advocating for inclusion of a broad spectrum of services	- Supporting the MoH to develop the policy and plans and documents
AMREF	(+)	- Engaging the extensive network of community health volunteers and beyond zero to register mothers in the program
USAID	- Supporting initial technical design (technical capacity) - Transitioning from the FMS to Linda mama - Supporting the launch of Linda mama through a report	- Directly working with the facilities to enhance the QoC, investing in human resource, investing in supplies and commodities. - Supporting in development of the policies, more so health financing policies - Working with counties to improve their efficiency in utilisation of the available resources and other resource allocation (PFM act) - Advocacy for increasing resources - Supporting the District health Information System, and data quality assurance (DQS) in hospitals
DANIDA		- Providing equitable fund to improve facilities
Marie Stopes International	(+)	- Capacity building of the provider level for both private and public providers on claim process, accreditation, process ff contracting - Demand creation by creating awareness of the policy to the community - Support the government in achieving UHC

	Category of actors	Role in formulation	Role in implementation
	Population Service International	<ul style="list-style-type: none"> - Discussion with the NHIF on the importance of working with the private sector in informal settlements (more so small and middle-level health facilities) 	<ul style="list-style-type: none"> - Through AHME, working with NHIF to package benefit for the informal sector - Capacity building/ professional competency/ continuous medical education of the providers - Monitoring and evaluation/ supervision to ensure quality is adhered. - Demand creation by creating awareness of the policy to the community - Ensuring that the registered facilities are properly licenced by the professional bodies such as NCK, Clinical officers board, KMPDB - Conduct their own quality checks in the facility before empanelling to ensuring hospitals have beds, referral equipment; and safecare program for 6-12 months before empanelling so accreditation is guaranteed
Civil society	Kenya National Commission on Human Rights	<ul style="list-style-type: none"> - A review of implementation of programs including FM policy 	<ul style="list-style-type: none"> - A review of implementation of programs including FM policy
	KELiN	No	<ul style="list-style-type: none"> - Providing legal critique of hinging Linda Mama under NHIF
	Centre for Reproductive Rights	No	<ul style="list-style-type: none"> - Documenting abuse and disrespect in maternal health setting
Beneficiaries	Individual citizens (Men and women)	<ul style="list-style-type: none"> - Involvement of the community in forums and at the launch 	<ul style="list-style-type: none"> - Registering for the service (self-registration or HCW supported) - Benefiting/utilising the services
	Private health facilities	<ul style="list-style-type: none"> - Discussion about reimbursement strategies and rates 	<ul style="list-style-type: none"> - Provision of the service to the beneficiaries - Reporting the outcomes

	Category of actors	Role in formulation	Role in implementation
	Public health facilities	- Providing feedback from the previous FMS	- Provision of the service to the beneficiaries - Reporting the outcomes
Academia and researchers	Kemri Wellcome Trust	No	- Working with ThinkWell and NHIF to conduct process evaluation of Linda mama
	Population Council	No	- Impact evaluation of removal of fee for FM policy on UHC
	Mannion Daniels and Options Consultancy	No	- Evaluating a case study of implementing Linda Mama in Kenya Bungoma County
	ThinkWell	No	- Working with Kemri Wellcome Trust and NHIF to conduct process evaluation of Linda mama
Media	Local and international media	No	- Participate in media coverage of progress and critiquing the government where there is no progress
Other	Beyond Zero	No	- Engaging the county governments and the NHIF to do a mobile clinic campaigns encouraging mothers to register with NHIF and access Linda mama. - Work with like-minded programs and organisation to support maternal care
	Jacaranda Health	No	- Coordinating with the healthcare facilities to conduct health care education and training nurses on the care for patients - Evaluating satisfaction of client on the services provided
	Philips	No	- Develop innovation and digital solutions for Maternal and Child Health such as Digital labour and delivery

	Category of actors	Role in formulation	Role in implementation
			solution (DLDS) and Mobile Obstetric Monitoring (MOM)
	CHS	No	- Employing PMTCT nurse in maternity
	Aphia Plus	No	- Training staff on provision of quality care; providing equipment and supplies for maternal care
KEY:	(+): there is participation, but the interviewees could not reveal; (-): there is participation from document review but not outrightly stated; ?: In depth interviews and document review could not reveal any evidence of the role		

Author, extracted from a review of documents in Table 3.7

Note: *It is plausible that some actors may have been omitted because they were not apparent in the document reviews or the IDIs, KIIs, or EIs.*

4.4.10. Role of other conflicting and complementing programs

4.4.10.1. *Other NHIF schemes causing policy confusion, fragmentation of services, and double payments*

Besides the LM policy, NHIF provides maternal services cover through the ‘national program and schemes which are corporate schemes’ – **(R025NHIFO)**, that are different from the LM policy. As noted by **R010FLMHC**: ‘the NHIF still runs its maternity cover. What has happened is that since Linda Mama the people like civil servants have NHIF cover, company employees have NHIF cover, a lot of other people have NHIF cover.’ However, since the NHIF covers reimburse facilities differently and at a higher price than LM policy as posited by **R011COHC** ‘it’s a fixed amount, whether they stay for a month or two months the hospital will only get that 30,000 if the mother went through the CS or 10,000 if they did a normal delivery,’ it results to fragmentation of services:

‘This fragmentation even at a service provider level if we can also address that, because you can see one queue for Linda Mama and another queue for Supa Cover, those who are going for maternal deliveries, those are, those queues, we should not be having queues, those queues at the service provision level.’ – (R026DAO)

Whereas there is a difference in reimbursement charges, some of the respondents justified the pricing model noting that ‘because you know NHIF patients are paying for themselves, they are claiming the money that they have been contributing, but you see Linda Mama it’s a free service, it’s given by the government, right? So, I think that’s the reason’ – **(R013COHC)**.

While NHIF was meant to provide complementary service for LM services, its presence – because of lack of clarity on the services – was causing a policy confusion among HCWs and mothers. For instance, mothers were made to pay for free services:

‘R1: I went to register for Linda Mama, they told me I cannot register because I have NHIF so I should be using the card. But I didn’t even use the card because of the confusion of being in labour ward, theatre, their things got lost there. But they did not get lost, I stayed for like three days and they found them. Now you see time had run out and I couldn’t register for Linda Mama as well, so I paid cash.

I: Okay so you paid cash, but you have NHIF and you have Linda Mama?

R1: They told me I cannot register for Linda Mama because I have a card.’ – (FGD008HB)

Additionally, some mothers are registered in the two dual schemes under extreme circumstances such as where the mothers stopped contributing to NHIF monthly contribution due to lack of jobs etc. This eventually results to double entry of the same mother in the system incentivising the HCWs to choose which one to claim for based on the condition that the mother is facing:

‘Now actually I have experienced two cases, but for those possessing the NHIF card we actually try to deal with the Linda Mama one because NHIF covers a different policy other than the...because I think basically what Linda Mama tries to cover is mother and child but for the NHIF it’s a universal one, so we try to deal more with the Linda Mama one if it’s something to do with the baby. But if it’s past a year we will then have to deal with the NHIF card because Linda Mama only covers for a year’ – (R006AOHA)

As noted by **R010FLMHC**, ‘having one person on two covers is...it messes up the healthcare financing as a whole when you look at it from the national court. And what it does is to make other services that would have been otherwise be financed with the extra go down to the expense of Linda Mama..... there is no need of giving a family that is capable of paying and is already paying NHIF contribution, there is no need of giving it Linda Mama, that’s double cost and that cost just slips between the fingers in administration and you find people like NHIF with so much money they don’t know what to do with it, while on the healthcare side we are so stuffed we don’t even know how to survive. So, I would quickly swap it, I would give it as a family cover to the people who are at a reproductive age, excluding the people who are already registered with NHIF.’

However, some respondents disagreed with the assertion of double payments and noted that NHIF had worked on the modalities of ensuring that ID numbers were used to identify the mother in a networked system, hence there was no double payments:

‘Because now the Linda Mama and this one the ID has gone, and it has been discovered there and you were contributing the NHIF. But still, nobody pays, there is a way of solving that problem’ – (R014NOHC)

4.4.10.2. Beyond zero project complements LM policy but shifts away resources from it

Beyond zero-project championed by the country's first lady, seeks to help reduce maternal and neonatal deaths and complements the work of the county and the national government in delivering and achieving LM policy objectives. The project, as shown in *Figure 4.1*, has a management office at

the county and national level, and operates like an autonomous clinic, analogous to the other county clinics and health centre to register mothers for NHIF, besides provide ambulance:

'Beyond Zero we largely partner when they are having events, we attend their events and we do, we deploy staff to do sensitization and registration for the targeted women. Because the way Beyond Zero works, they give access through the mobile clinics for delivery etc., noting that we don't recognize the mobile clinics as facilities, but we take advantage of such events that they have, medical safaris to engage the members, to engage potential beneficiaries, have them enrolled, they are taught about their benefits, where they can access services so that has been also complementary.' – **(R027NHIFO)**

However, the Beyond zero-project caravan, despite being mobile, has been *'taken it like an extra facility. You know like the way I can have a dispensary a health centre and what have you, that is another one facility in our county'* – **(R016CSLM)**, which is fully-fledged and independent, it is shifting away resources from the main policy. For instance, as further noted by the same respondent, *'every time it goes out in a sub county.....we are able to get funding to able to pay for lunches for staff who are working there.....the reproductive health coordinator is given a budget of 99,000 [USD 910.7] to be able to pay lunch allowances to the people that are giving services there and at the same time, she even provides a physical lunch.'* Additionally, HCWs are allocated from their main hospital duty to work in the beyond zero caravans while it is moving from one sub-county to the next. Moreover, as an independent county facility despite not meeting the quality and accreditation standards, the county treasury allocates it financial resources every month to cover its 'operation'. As a recognised health facility, *'and just the way it gets funds it's the same way it gets drugs and non-pharms from KEMSA.....but of course any time that they are not able to get, some things because of costs KEMSA cannot supply 100%, we [the county] usually top up with whatever we have.'* In most cases both the pharmaceutical, and non-pharmaceutical supply allocation from KEMSA are meant for other traditional hospital facilities; yet they do not get their regular supply.

4.4.10.3. The free primary healthcare, some NHIF schemes, and other private schemes are complementary to LM policy

Some concurrent government programs such as free primary care particularly in the lower-level facilities offer complementary services to the FM policy posited by one respondent:

'I think there is primary health care. Primary health care ensures that the blood pressure is checked and obviously that the baby is safe.' – **(R017CMLM)**

Given that the facilities were reimbursed fixed LM policy fees for approved services, there are instances where the mother or the baby would develop complications which are not covered by the policy; hence, resorted to using other NHIF covers to avoid incurring OOP costs. Besides, the HCWs preferred to use the Linda mama for any issue related to the baby, and only deal with the NHIF if the cases were beyond the services covered by LM policy; hence, it would be complementary. Moreover, some development partners had developed complementary programs, in addition to the NHIF national scheme (herein super cover), to complement the LM policy:

'I will say that because when I-PUSH [Innovative Partnership for Universal Sustainable Healthcare]⁸ came in, we came in with super cover. Super cover is inclusive, it is very inclusive because it takes care of the woman and all members of a household, regardless of the ages, regardless of the, it does not limit the kind of what...because you know this one, you can only be taken care of, the free maternity, if it is a maternal related or child related, the package of maternal and child health care' – (R035DAO)

4.4.11. SLB mechanisms employed by the HCWs

The HCWs as SLBs, applied several tactics as strategy shapers transforming the FM policy from the perspective of the national stakeholders to public service system users (mothers). The strategies defined in the form of shaping the working practice (defining new identity for the public policy), policymaking (creating unique developments from the policy systems), and professionalism and ethical tact (using both expert and contextual knowledge to enhance the operations) (Virtanen et al., 2018) within the context of the FM policy (Figure 4.2).

⁸ An innovative programme that focuses on health financing by increasing the finance for women of reproductive age (WRA) in Kenya as well as increasing health knowledge on maternal and child health (see, <https://amref.org/enterprises/our-products/i-push/>).



Figure 4.2: SLB strategies (source: Author)

4.4.11.1. Strategies of policy making

Hospitals employ HRIO and clerks to support the LM claim process

All the facilities that participated in the study were employing an addition health records information officer (HRIO) and modifying their roles to support the registration of many mothers to seek LM services, besides educating them on the importance of LM. They were making the HRIO as the most important person in the policy making because, being the first person that interacts with the mothers in the facility, they had the possibility to shape the perception of the mother and influence them taking up services in future. In addition, the facilities are making the HRIOs to work extra hours to capture as many mothers as possible which would then translate to claims, and finally reimbursements to the facility:

‘the most powerful person is the Health Information Officer, because that’s the source. Because if the Health Information Officer as in give a negative reference or give a negative perception towards the Linda Mama then the mothers and the maybe society won’t prefer, they will tend to shy off from getting the insurance. So that is one of the strongest persons in culminating the same. Then it translates to the person claiming, because if she claims wrongly or if she fails to claim a number of claims then that’s a shortfall to the county, so those are the two key players. One it

starts from the Health Information Officer, translate to the person claiming and basically for one for the Nutrition Department as in because that's the source, that's also another avenue where all the mothers have to pass through. Yes.' – **(R006AOHA)**.

'[HRIO] was working in the records office, she is covering during the weekend that one we've changed, we said she has to just concentrate on the Linda Mama policy. And we have also talked to nurses to be telling the mothers about the Linda Mama policy down there at the clinic so that they can even tell the people outside there, the neighbours. And also, in maternity, if it's possible I will always allocate somebody if it's possible that is, so that that person is able to stay there, and you know monitor closely' – **(R007DICHA)**

Additionally, HRIOs and employed clerks to follow up mothers, educate them, and ensure they submit documentation on timely to avoid missed opportunity of reimbursement due to strict guideline put by the NHIF. Hospitals have mothers, who have no resources to meet basic costs such as photocopying IDs and other paperwork as is required, with a hospital photocopier thereby relieving them of the burden:

'We have someone at this hospital who goes around every ward every day telling people, "If you are admitted if you have an NHIF card please submit your photocopies at the NHIF office." We are really trying to eradicate it, but it is a big challenge' – **(R011COHC)**

'So, to bridge in the gap we have tried to, as in from the initial stage when the patients do visit the facility, we have provided a health record officer to be giving them the health information. Immediately after they come so that's one of the things that we are trying to bring on board because that's one of the biggest issues we have been having to try and cut the cost of not claiming' – **(R006AOHA)**

Employment of additional nursing staff as volunteers and locum to meet demand

Since the shortage of staff was noted as a hindrance to LM service delivery, the facilities devised a rota to employ additional nurses from their budgets on both a volunteer and locum basis. The concept has impacted positively on the utilisation and HCWs are even more motivated because of reduced workload:

'Sometimes like now here in [Facility A] we have shortage of the staffs, and so sometimes the administration or the administrator sometimes he can get nurses from outside we call them

volunteer and they come, and they are given those locums. And in fact, they help us a lot, because here sometimes we have very bad shortage’ – (R008NOHA)

However, all the facility in charges interviewed noted that the hospitals were getting into debts meeting the costs of the additional staff because of delayed reimbursements:

‘We tend to get more staff on locum, that becomes a challenge also at the end of it because locum must be paid, money is not as it should. So yeah, we are dealing with a lot. You’ll find most of the times we have locum arrears, like even for three, four months yeah. And even when that money comes sometimes you can’t pay, you can’t clear the arrears because there are things also to cater for’ – (R019FLMHB)

Early discharge of mothers after birth

Some of the facilities were captured to be discharging mothers immediately after birth, even before offering the fully costed LM services, in order to maximise the profits:

‘If I go to [a referral hospital] today to deliver and I am a mother and maybe 80% of us who go there deliver normally, if I deliver normally, they will take care of the mother that day, the following day, by evening they discharge. So, first of all this mother may not have taken that high cost and two they are not holding mothers anymore, like they were holding before waiting for them to pay. There are no waivers and the exemption that you need to do, there are no holding patients in the ward anymore and adding to the cost, you just release. So even one or two that complicates, unless the facility does not want to use the same money to serve this client, there was not really that need to make it a big conflict. It is more of how we look at utilizing the funds because a lot of mothers would come, they are discharged very fast, they don’t even retain. But when a mother comes and requires maybe anti D, maybe they have this problem with the Rhesus factor and maybe the rhesus, maybe vaccine is costing some four thousand, even the facility is complaining.’ – (R024MoHO)

This happened despite LM having provisions of mothers stay. According to **R025NHIFO**, LM ‘as a policy...have a limit of a maximum four days for admissions but in case it extends to that, the hospital has to clarify with NHIF for authorization.’ And some of the reasons she notes could extend the stay of the mothers includes ‘we have premature babies that are covered, who are still in the program because it is very hard now to re exit them from the program. That is handled through notifications from the hospitals and then approvals are done.’ And the cases are handled on a ‘a case to case based,

yes, because we have mothers who also go to ICU and once, we get the notification, the woman is still covered because we cannot exit them from the program.'

Nurses are seeking transfer to lower-level facilities to avoid workload in higher-level ones

One common theme noted by all the sub-county heads, most of who double up as level three facility in-charges was that a majority of the HCWs in the sub-county were reshaping the policy by scheming for deployment to lower-level facilities like dispensaries and community areas to avoid the workload in level fours and fives which are county and sub-county referral centres:

'as sub-county head when the nurses come in, most of the nurses do not want to be deployed to go to the health centre because the workload is too high, yes. So, you will see most of the workers want to go to the level 2s that's the dispensaries and other health centres where the workload is not as much.' – **(R005FLMHA)**

4.4.11.2. Strategies of working practices

Hospitals and HCWs are correcting the referral policy confusion

Given the referral challenge as noted by **R030DAO**, some facilities especially for clients that had been coming to their ANC clinic and developed complications in attempting to deliver, *'were taking matters into their hands, pay for like an ambulance of course which is a taxi, the ones that have ambulances, then they take those cases to the referral centres but that is money that is not reimbursed to them.'* Therefore, the facilities were losing on funds, but their aim was to ensure zero maternal death.

The referring facilities are correcting the policy challenge on referral by making local arrangements with the referred to facility on how they sort reimbursements. The arrangements include making local arrangements on payments. However, this could potentially be a perverse incentive on only working with the like-minded managements that agree on reimbursements:

'I: And when you refer, is it you who gets the money for referral or is it the facility you've referred to?

R: If I refer the patient to for example [hospital C, referred to hospital], because the management from [hospital C] will know that people from [hospital B, the referring hospital] are referring. We are in good terms with that, there are those terms that the facilities will have to have and there is that arrangement that the management will have together with the other management..... I think

from the management level they will know maybe... we owe [hospital C, referred to hospital] like this amount of money.’ – (R002COHB)

Additionally, facilities are working with the county and other partners in a collaborative agreement to bridge and correct the referral confusion; hence, overcoming cost implications:

‘We have an ambulance and even if our ambulance is engaged, we are always supported for by the call centre, they always provide for us an ambulance. Even when the call centre is busy, we have partners like the GSU [General Service Unit], the prison and the GSU they always assist us in case we are in dire need, yeah. But you know, we can help each other.’ – (R020FLMHB)

Clerical officers colour code of files to easily identify the mothers and also divide labour

During the registration of the mother at the registration desks, the clerical officers devised a strategy of colour coding, the files to indicate the type of services that the mothers were seeking to avoid making double claims for both Linda mama and NHIF services. Through the colour codes, it was easy for the clerks to know what kind of claims to make:

‘I: So, you capture the mothers who are the NHIF mothers, those who pay NHIF regularly when they are pregnant, and they come for the clinics?’

R: Yes.

I: How do you identify these mothers?’

R: How do we identify the mothers? Because everyone who is pregnant and they have an NHIF card they usually come for clinics here, they have a special book that they are given at the antenatal clinics, they have that book. So, we normally know this is a pregnant mother and if they need an ultrasound, an ultrasound the card will still cover for whatever test that they need even before they deliver.’ – (R011COHC)

In addition, the records offices have also distributed clerical claims filing work amongst themselves to ensure that only one records officer handle Linda mama claims for efficiency of work and ensuring that all mothers claims are captured:

‘Actually, like in our office, we’ve organized ourselves like every person handles their specific work or specific claims. Like I told you myself I handle all the NHIF maternity and all the theatre claims. Okay, the surgical claims. There is somebody who handles the renal, there is somebody who handles Linda Mama only, and so the work is divided amongst all of us so that everybody has a

role to play. At the end of the day, you have to show what you are bringing to the hospital.’ –
(R011COHC)

Nurses are conducting continuous medical education to educate both mothers and the nurses not trained on LM processes

Some nurses across all the facilities have adopted a strategy that involves those who are trained on the LM policy processes and guidelines, conducting interdepartmental fora and workshops commonly referred to as *continuous medical education* (CMEs) to enlighten the other HCWs who are not well versed in the procedures. Such fora have been perceived to improve the implementation of the policy:

‘Here in the hospital one of us could be he or she had attended a certain seminar in the county or Kiambu and then she comes and tell the rest of the group, those CMEs they also help us a lot in order to be updated’ – (R008NOHA)

In addition, the CMEs and morning health messages are conducted when a majority of the mothers attend clinic by the HCWs, nutritionists, and other specialists. The talks are targeted teaching to the mothers on registering themselves for LM, family planning, and expectations during delivery:

‘Every morning that one is mandatory, we do CMEs. Maternity, they do, maternity they have CMEs twice. They’ll get from the nurse and they also get from the nutritionist. When you come to MCH, the ANC and the FP they also get the CMEs is on there. They’ll get as general population when they are waiting and when they go into specific department, they’ll also get CME in those department.’ – (R020FLMHB)

Facility in charges are investing in the training of the staff of maternal healthcare procedures and LM claims system

In addition to the CMEs, the facility in charges and managers especially in the referral facility (level 5) are investing the hospital finances particularly those obtained from LM policy reimbursements toward equipping the HCWs with adequate knowledge of dealing with complications and referrals if and when they arise:

‘We are trying to like for example make sure that our staff being a referral facility are well trained. We keep on giving them updates so that each person who is working in that maternity knows how to manage these complications that come with, that accompany delivery or that could follow a

delivery. So that when this mother comes from another facility, she's got complications there and comes here, the midwife who is there will be able to handle that.' – **(R015FLMHC)**

Constrained by lack service provision guidelines, HCWs are going above and beyond by resorting to online learning of the LM processes:

'I: And do they give you the documents to show you the guidelines, do you have the documents to show you the guidelines?

R: Actually no, I just rely on online learning' – **(R006AOHA)**

Facility managers are giving maternity mothers and maternity investments a priority

In all the facilities, it was noted that the in charges and the HCWs were prioritising both hospital workload balance and investments in the maternal care from the LM policy reimbursements as averred by **R015FLMHC** 'so that one we give priority to maternity..... when we get any extra staff, we send them to maternity so that we try to boost their numbers.' Besides, sending more HCWs to maternal wings, investments were made out to the wing by squeezing out other departments, since it brought more funds through LM policy reimbursements. In addition, mothers in are given priority compared to other hospital patients to avoid them incurring any costs:

'I would say when it comes to the issues to deal with maternity care, we are forced to give them [patients] priority because we don't have an option of sending the patient or letting the patient bear the cost. So, it would adjust the budgeting lanes, it will give them [maternity wing] priority in limited resources. It would also adjust the supply lines to skew it a little more towards giving the mothers free maternity care. Most of the time most of that money plus extras goes to the maternity and mama issues. We actually plough in back all of it and squeeze other departments to add up' – **(R010FLMHC)**

However, in one hospital, there was equitable distribution of supplies purchased through reimbursements from LM policy across all departments. This showed that LM was efficient in running other hospital departments as well:

'So, when we are allocating the supplies and all that we take care of maternity just as we take care of all the places. Because when now that money from Linda Mama comes the supplies are replenished for everybody. So, we don't as such say that this is specifically for maternity so if they exhaust that we will not take care of them.' – **(R015FLMHC)**

Innovative communication procedures adopted by hospitals to the mothers

In all the facilities, there were innovative communication strategy using posters developed by the facilities targeted at mothers telling them the requirements of registering for LM policy that are strategically located for ease of mothers reading them. However, some of the communication involved the use of dominion power over and the facility provided false threatening information such as such as the threat to charge patients if they did not produce IDs, or passports (Figure 4.3). Some of the communication strategies involved mothers being required to come with some admission requirement that would make them incur costs; yet the policy was free (Figure 4.3). Technically, some of the strategies were promoted to the facilities by the senior managers at the county:

'I remind them to continue registering and to have posters and on the door of every MCH room so that when the mother sits there, they can be able to register. And also, when I go to the facilities for support supervision I go and ensure that they've written that member there and I also sensitize the staff that I find on Linda Mama, because I know how important it is.' – (R016CSLM)

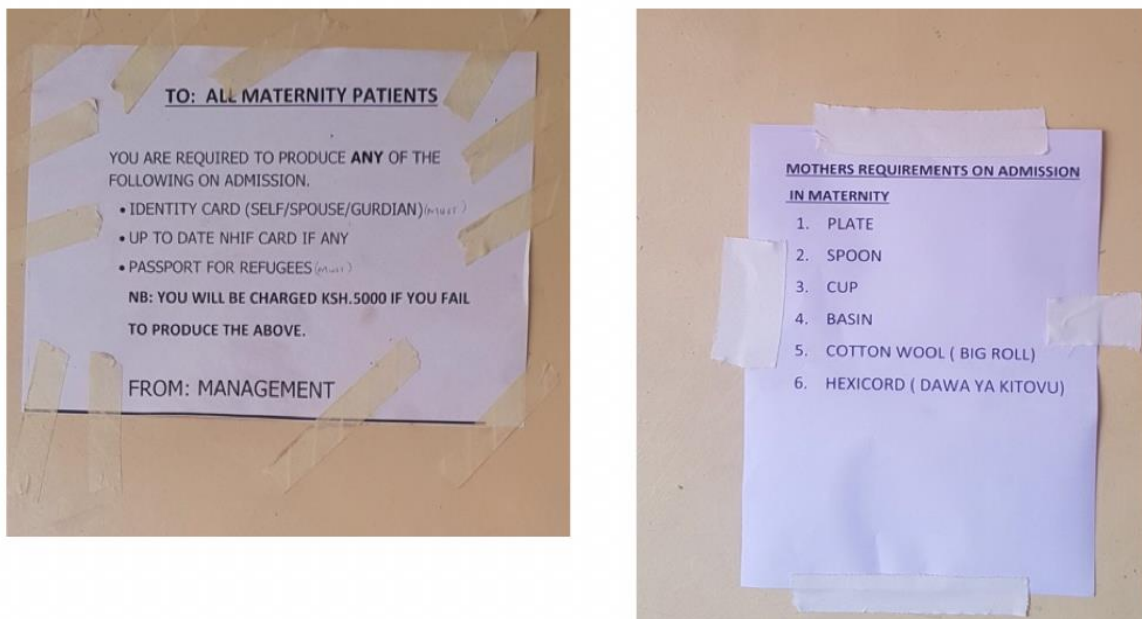


Figure 4.3: Example of innovative communication strategies done by facility B (Source: Author from a review of documents in Table 3.7)

Additionally, document review shows that the NHIF is using innovative strategies of communication and registration of LM beneficiaries such as through working with communication providers - Safaricom - to ease the process of registration by using phones networks rather than paper.

Hospital clerical officers are collaborating with the maternity department and county NHIF teams to ease claims process

In the course of their work, the hospital clerical officers who are working on the LM claims are closely collaborating with a both the NHIF county office and the maternity department to work on the LM claims and ease other processes of maternal work. For instance, one clerical officer from facility B **(R002COHB)** noted that the direct working relationship with the NHIF office was in a way reassuring and informative: *'let me say that our relationship with our NHIF office, they always work on our claims, so there are not many times that we complain that we have not been paid that even if it takes long you will find that it is not us alone, you will also find other hospitals, level 4 hospitals.....Sometimes they call us for a meeting we go and try to chart the way forward, to raise our complaints. They will also try and give us their views so that we can work as a team. So, there is always a way out to work for our claims. And we also have their numbers, their accountant, the whoever process is, sometimes they also give their number in case of anything we complain. We also gave the staffs in case you are not able to know something you are able even to confirm from them...we are always in touch with them. But we can say so far, we are working very well with them and if there is any delay they will also communicate. If we ask them, they will tell us maybe we be patient or tell us...because there is a process. It's not them, they are not final, they will tell us after we take the claims there, they will take them to the headquarter, then the HQ will even take some process to approve. But a lot of work is done in the branch. So, when all the claims go to the headquarter it's now finalizing because nothing that goes there which has not been approved by them.'*

On the other hand, once the NHIF office has reverted to the clerical officers with areas of corrections on the claims, the officers in turn – besides registering the mothers at the maternity – have a good symbiotic working relationship with the maternity wing nurses and employees. The nurses support them with getting the correct information from the mothers' files. Such acts facilitate follow up and correction of claims:

'Okay, what I was saying is you find out that sometimes I'll take some claims and maybe they will say that they have some mistakes. You find out that maybe when the registration was being done maybe there was some errors with the IDs and such.... So, they return the claim but as, okay as long as they return them, I don't take much to process again, I just call the maternity and find out the document on where the mistake was, and I take them back. So, I don't have claims that I keep them that they are not processed. Yeah, so they are supposed to pay the exact amount, but you see now that one I don't know. Now when it comes to that it's the work of accounts.' – **(R013COHC)**

Smaller facilities are collaborating with the bigger facilities in the claim making process

Smaller level facilities are innovatively making the claim processes. Because of the logistical and resource challenges in the claim processes, the smaller level facilities are making claims together with the bigger facilities to ease the process:

‘Yes, they are offering the services, but they are not, either it is one, few staff, they don’t have somebody for logistics and claiming and all that, some of them like in [the county] were innovative, they were trying to bring dispensaries and health centres together, when they deliver, they send their data through a hospital. They claim as if they were maybe a level four, all the data is claimed through the major hospitals because that is where maybe the system has been there. So, I think the funds flow now to these facilities, I don’t think them they have been getting anything and they have that challenge, either they may not have been having an account, because some of them may not be keeping an account, because maybe they are managing from the county level, so you find now they don’t have any way they can get money from NHIF.’ – (R024MoHO)

Having employed a county focal person, the county is ensuring that the person supports the smaller facilities in the county to make claims on their behalf so as not to lose revenue, and in turn, since LM is considered a form of county revenue, the county does not lose funds:

‘NHIF focal person in Kiambu is to make sure that they get their service as quickly and as efficiently as possible. The other issue is to make sure that we’ve claimed on behalf of the facilities because it’s a form of revenue for Kiambu’ – (R017CMLM)

4.4.11.3. Strategies of professionalism and ethics

Nurses are registering the mothers even outside the hospitals

Interestingly, some nurses, arguing that the role of the nurse does not just end at the hospital, choose to register and advice the pregnant mothers on the streets on LM services and the choice of health facilities which seems helpful to the mothers. They use it as an opportunity to teach the mothers about LM:

‘Like yesterday I was I a salon and I saw a pregnant woman and I asked her have you heard of Linda Mama she told me no and I registered her. Everywhere I go be it in Kiambu County or wherever it is I go registering mothers. I remember the other day I registered some at Eastleigh [a subcounty in Nairobi county] and some of them have never heard of Linda Mama. So, I have that

role as the director and also I have my role as a healthcare worker whether I am on duty or not.'
– **(R016CSLM)**

Nurses are supporting the mothers during referrals

The nurses and other HCWs were shown to be working over and above to ensure the pregnant women were referred safely: *'we nurses we usually take that it is our work to refer them especially when the mother comes in active stage we can't refer to go alone we have to escort them'* – **(R008NOHA)**. Equally the nurses further disclosed that besides the referral, they also follow up on the outcomes of the mothers post referral:

'Yeah, like now in [referral facility C], the patients we have referred...they always give us a feedback. Especially when it comes to maternity, antenatal and newborn, those ones they have to give us a feedback.... of how our patients are doing.' – **(R020FLMHB)**

While it may be part of the job description of the nurses to refer the mothers, the nurses are changing and modifying the process of referral. For instance, the nurses are keeping proper records on maternal cases, including those they refer and make sure the referred mothers are getting the required care besides just escorting them at the time of referral. This, they believe, is part of their work even if it is not indicated anywhere:

'Yes, especially keeping proper record in maternity is really very important, even when for example all the mothers who report here in this maternity, we have to keep proper record. Yes, even those we refer, you know here we don't conduct all the deliveries so there are some cases we are supposed to refer. But even before we refer, we have to keep the record, we have to put the record and then those referrals not all of them they go by themselves. We nurse we usually take, that is our work to refer them especially when the mother comes in active stage, we can't refer to go alone we have to escort them. Yes, so those are some of the things we do' – **(R008NOHA)**

Including the nurses in planning and budgeting for the finances obtained from LM policy

Hospital boards are involving the nurses in the planning for the funds, despite the LM funds inadequacy. The maternity nurses are empowered to decide on where they would like the funds to be spent by giving them some sense of authority and freedom in the hospital budgeting process since they are ones that do the work which brings the funds. The boards and hospitals perceive it as being

professional. While the chief officers of the health of the county could suggest areas of spending, the authority to spend the finances remains with the facility who decide to involve the nurses:

‘Because you know we were explained to. So, if they asked the nurses, we participate a lot, to encourage the mothers’ – (R008NOHA)

‘So, I will get to hear different departments with their own views and their recommendations and have to key in some of the recommendation that they might tell me which are quite a priority of which morale is quite one of the priorities because working with a demoralized nation that’s working to zero. So, we have to put as in every meeting we have to put aside a certain portion that we are going to...every month that the same is going to be wired to our account, we have to put aside a morale kit so that we have to keep giving our staff quite a push showing them that they are really doing a good work’ – (R006AOHA)

Regular meetings to enhance working relationships

The facilities conduct regular meetings, either formally or informally, to support the working relationships within the department and also solve internal problems together as a team:

‘Yeah, sometimes you do have the monthly meetings so you will get to hear a certain department problem, unless trying to hear it out and trying to solve it internally, that even creates a good and peaceful environment where people who work as a team. Because if you have a problem and you are not airing it, and I am not solving it, you will always be the disturbed. So as to be able to work efficiently, we convey meetings, we get to know different problems affecting different people and sometimes we do eat lunch together. And actually, another thing, in every department we have...as in there is tea break, in every department we have specified as in different time maybe to go to different departments and that’s quite a morale so that they should continue working.’ – (R006AOHA)

HCWs providing leeway for providing LM care to the vulnerable and bearing the costs

The LM manual provides for the inclusion and exclusion criteria for the beneficiaries and part of it is the exclusion of the foreigners. However, as noted by the respondents in all the facilities, the HCWs are focused on providing care to all mothers who show-up at the facilities rather than focus on the technicalities:

'So irrespective of whether they have the requirement, the required document or not, services will be offered so we talk later. And you will find cases where if worse comes to worst you have to still release the mother without those documentation, they cannot be able to pay' – (R018FLMHB)

However, some facilities because of their location are predisposed to getting a high number of foreigners without identification who prefer to live in the nearby catchment vicinity. Despite the high numbers of foreigners, the FGD with the women confirmed that the facilities provide them with the services for free without asking for payments:

'[Facility A] we have many foreigners from Uganda. So, some come, some they don't even know the importance of clinic. So, they don't attend the ANC clinic they come the last minute' – (R009NOHA)

'They pushed to get Linda Mama and I went there, and the doctor told me they cannot take a Ugandan ID; I need an ID from here. So, I didn't have an ID for here and they told me there's no problem that I should go for scanning. They scanned for free, I didn't pay anything until I reached the day of delivering. I delivered for free, I didn't pay for anything.' – (FGD009HA)

The other vulnerable groups of maternal clients, which the facilities are challenged in providing service for are the street children with no parents, refugees without IDs, or schoolgirls who are underage and pregnant. Despite requiring the IDs before providing the service, the facilities seek ways of bridging the gap. For instance, to claim for the services provided from some of the vulnerable group, they seek to utilise a patient's close relative ID for those who have relatives. In cases where it is not possible to get a relative, the HCWs are resorting to using any random person's ID (who is not necessarily pregnant) to ensure that no mother pays for any service and that the facility also does not lose out on LM claims. For the underage where the ID of the spouse cannot be used because of fear of the underage marriages, the HCWs are utilising guardians' IDs, and where the guardians are not available, they provide the services for free and bear the burden of the cost:

'if a person doesn't have an ID, we ask them to use even their mother's ID or their auntie's ID, just any other lady in their lives' ID. Because at the end of the day we want to make sure that every mother is served, every mother is not forced to pay anything until they get out of the maternity with their babies. – (R011COHC)

'For the underage, there is that allowance for...the underage kids...who deliver....but they are maybe probably in school. We require a letter from the school to show for sure that they are a

student and also the guardian or the parent brings the ID....probably there are some who are married underage, but you cannot use the spouse ID because ideally an underage cannot be married. So, the guardians come in and we use the guardians' or the parents' ID to process the same' – (R018FLMHB)

For the adolescents, the illiterate, and other people with disability, HCWs provide education and adolescent services in addition to waiving the costs. The preferred form of education from the facilities is normally a one-on-one basis between the HCW and the mothers, which seem to be having a better effect:

'Mostly the challenge is education because the people without education they shy away. You ask for the documents, but they shy away from it and I don't know what they think we are doing with the documents...So, it takes a lot of educating for that group.... Normally, it's a one on one. The ones that come and we realize there is a challenge, we sit down with them and we explain exactly why Linda Mama is important, yeah.' – (R019FLMHB)

'So, there is that adolescence aspect which is being addressed through proper communication with the providers and also through the community aspect' – (R029DAO)

Given the service to the vulnerable population, the hospitals are bearing the burden of providing the services by absorbing the costs and using other means to offset them such as through the government social work waiver system

'Yes, we are a government hospital, we don't turn anybody away. Even if they come and they don't have Linda Mama you still take care of them, yeah. But now it is on a waiver system, you waive the cost..... I don't know, we use the little we have. Because there is nowhere you will claim the waiver, there is nobody who caters for the waiver cost yeah. Because the funding is either Linda Mama and NHIF or FIF [Facility Improvement Fund (Cost sharing)]. So, if they can't pay through all those channels, it's waived and the hospital absorbs the costs.' – (R019FLMHB)

'We count it as a loss. Actually, they are not the only category of patient who are waived because they are unable to pay. And you know people still think everything in the government is free.' – (R016CSLM)

In some facilities, because of the rigidity of the claim service, they provide the service and let the mothers go as they are not concerned about the claim system:

'Yeah, but actually if they don't have any Linda Mama and they want to get services from the facility, we don't put them off, so we just attend to them, but we don't claim. Yes, so that's a negative to the facility.' – **(R006AOHA)**

'The patients themselves are not too much interested in which fund you use to fund their care. All they want is care and go home. Now to claim under the insurance cover requires a lot of personal involvement, IDs, filling of forms, declarations and authorizations. So, the patients are not interested.....So the hospital is left right in the middle, you cannot ask for the cover. But have to use the underfunded one' – **(R010FLMHC)**

Facilities withholding delivery packs for the needier mothers

In some instances, facilities receive delivery packs and supply meant for the LM mothers. However, because the number of the mothers are more than the supply, some facilities withhold the supply and only distribute them on the need basis or based on the assessment of who is needier and more deserving:

'Sometimes we do but some other times we don't because we don't have. But sometimes when there isn't, we keep for the very needy. You know there are those who will not strain to come with their basins and everything because in mind it's like they know, "I am going to maternity I will carry a basin..." and the rest and they come but there is always that need case. Sometimes you find nothing, nothing. Yeah' – **(R014NOHC)**

HCWs are focusing on preventative medicine

Besides, the county facilities are adding primary care and preventative medicine to LM maternal care. The goal is to have a ripple effect which is to ensure that fewer mothers are admitted in the medical and surgical wards. Through that way, there will be fewer mothers in preventative medicine, and the HCWs are then relocated to work in the reproductive clinics to meet the needs of the mothers and offer quality services:

'Another thing we've done is that to able to help in making better our maternal health services, we've been able to major on the preventive like having non-communicable disease centres. So that we can have, less patients admitted in the medical and surgical wards, so that the staff who are there can be deployed in reproductive health settings to be able to give quality services' – **(R016CSLM)**

4.4.12. Adoptive strategies by the county

4.4.12.1. Granting permission to the facilities to employ nurses on locums

The counties have also managed to implement strategies that would allay the burden off both the facilities and the county itself caused by LM policy and services. For instance, the county has given the health facilities the autonomy to utilise the LM funds for employing additional workers on their own without requiring additional approval from the county offices:

'The workload is still high because we do not have enough nurses as seen and that is why it was good for the country to allow us to do locums such that we are able to have better coverage, yeah. Because you know there before, there were no locums, so you only wait for people to be employed'
– **(R003NOHA)**

4.4.12.2. Development of bylaws to enhance freedom of flow of the funds and utilisation

As noted by a majority of the respondents, the flow of funds from the county to the facilities and vice versa is determined by article 130 (1a) of the PFM act (2015, pp270-271) stating that *'...transfers to a county government... are deposited only into the County Revenue Fund of a County Government... unless the allocations are withheld or stopped in terms of Article 225 of the Constitution.'* Given the circumstance, some counties according to the national respondents, are working on bylaws that can encourage ease of access of the funds by the facilities that generate them and the freedom to spend the fund without sending the money to the CRF account:

'You know in some counties depending on the bylaws they have passed; they have been given autonomy to access the funds directly. So, in those counties, you will see they are able to do a lot with that money, but in some counties, there is no much change.' – **(R025NHIFO)**

'some... have passed by laws so that funds flowing for health to the counties are flowing into the health accounts unlike what is guided by the PFM act that funds flow to the country treasury, so they are able to quickly access the money and remit it to the facilities and services keep flowing, so that has been one of the challenges in other counties because we are guided by the act so when we pay claims, all money go to the country treasury and they determine what to do.... the counties have gone a step further to ensure that there is no delay in reimbursing the facilities so that services are continuous.' – **(R027NHIFO)**

However, the act to ensure that facilities spend the money appropriately is dependent on the governance at the hospital level:

'I would presume it is dependent on the facility and the leadership that now is a factor of governance and leadership in a certain county because even, before sometimes they receive the monies, there are those hospitals that you would say money is for the whole hospital.' – **(R024MoHO)**

4.4.12.3. Development of complementary programs to support utility of LM services

Some counties, as noted by the national respondents, were developing and implementing complementary programs particularly targeting the poor women that were boosting the uptake of the LM services and there was achievement of significant goals with the uptake:

'some counties.... they are implementing complementary programs for the free maternity, so they give an incentive to particularly targeted poor women in the counties to incentivize them to come for antenatal, come for a skilled birth delivery at the hospital etc, so that really boosts Linda Mama programme because for us we are also pushing for them to have antenatal visits and postnatal visits and delivery at the hospital. So that is one of the examples we know' – **(R027NHIFO)**

In the county of study, they were working in collaboration with some hospitals leveraging on the network of community health volunteers (CHVs) to help track the pregnant women. For instance, some hospitals are seeking the services of the networks of CHVs, who are retired nurses in the facilities, to help them track down the women from the villages when they are due for delivery and make sure they are referred appropriately. While in the interview, it is not clear whether the hospital pays the volunteers, the strategy ensures that the women are taken to the health facilities at the appropriate time. Else ways, the county is working with a team chosen by the community themselves to impart health knowledge to the community. The county trains them. However, the issue that remains is a way to compensate them:

'We have very many midwives who are of course retired but of course, they are not yet tired. Some of these clients may not be able to reach the hospital, so once they do the deliveries in the community but of course they know how to refer in case there is a problem. Maybe they can also be compensated for such.' – **(R016CSLM)**

'Yes, we have county health volunteers on the ground.....These county health volunteers are people who've been chosen on the grounds by the community to ensure for example in terms of

registration and impact of knowledge of health are designated to ensure that this regime or these people ensure that the people in the village get the best service involved. So, we've had five trainings in the twelve sub-counties, we have sixty focal persons, we have no sixty-county health extension workers, and we have twelve strategic focal persons.' – **(R017CMLM)**

In addition, the county of study is attracting development partners (whose roles are noted in *Table 4.11*) to ensure that they supplement the uptake of LM services and envisaging good quality outcomes on different innovative fronts such as registration, training, enrolment, and communication:

'We've also been able to together with partners we have obstetric scans done free of charge at a facility' – **(R016CSLM)**

'the application we are using on the ground to do registration.... We have to make sure that they are tech capable to ensure that they are enrolled to registrations. But you find that this app also deals with primary healthcare like hypertension' – **(R017CMLM)**

However, while some of the partnership work, others are altering the gains in the referral system. For instance, there is one partner who provides lower-level facilities with basic maternal health equipment such as ultrasound and the incentive. Such incentives, contrary to the KQMH, are instituted by the partner in the lower-level facilities (level 2 and 3) while ideally, they should be in the higher-level facilities (level 4 and 5) resulting skewed distribution of the HCWs and reverse referral from higher-level facilities to a lower-level facility. In addition, the county has empowered the facilities with the partners investments to conduct deliveries, yet they lack adequate equipment:

'We have sonographers.... we have empowered the level threes to be able to conduct deliveries. You know long before people would say that if it is your first delivery you don't deliver in a health centre, we've empowered our staff to be able to conduct deliveries in the health centres..... Githurai Langata does around 250 scans per month and it's free of charge. You know that is a level three. Everything in a level three is free of charge.' – **(R016CSLM)**

Other innovative strategies employed by the counties, include provision of transport through vouchers to pregnant women to the facilities which alleviates the burden of the mothers:

'I know quite a number of projects that have also used that as a way of reducing increases in uptake of maternal health services. I know there was what we call in Bungoma, they are using vouchers, and the vouchers also included the riding of those boda-bodas [motorcycle form of transport] and all that.' – **(R026DAO)**

4.5. Chapter summary

This chapter is about the free maternity policy analysis, starting with describing its background, the formulation, and the implementation. At its onset, the KIIs converged with the document reviews and showed that the triggers of the new FM policy included the need to achieve SDGs; the need to eliminate maternal health care access barriers (financial, geographical, and service); and the need to achieve UHC as was outlined in the Jubilee Manifesto. The chapter reveals that the new policy was envisaged as a new lease of life to the previous policy's underlying challenges. Also, the convergence of the KIIs, IDIs and document reviews characterised the actors who participated in the formulation of the policy and their roles and the policy's content and context.

As part of the context, it showed how the envisaged design of the policy was cascaded through the national (micro), county (meso), and facility (micro) levels and how the NHIF was chosen as the ultimate purchaser of maternal health services. It further shows the nexus between different stakeholders at the formulation and the processes involved in moving from the free maternity to LM policy. Some of the processes highlighted include how the committee formulated discussed the formulation agenda, the politics of private sector interest at the formulation, the costing of the policy and perception about the costing approach, the development of manual and the guidelines and the gap in the quality manual and guidelines.

Further, the chapter reviews the FM policy's implementation under the concepts of the benefits package and services, communication of the policy, reimbursements, claims, referral system, accreditation and contracting monitoring and evaluation, and supportive supervision. A majority of the responses from all the KIIs, IDI, FGDs, and documents reviews converged to show intended positive impacts around the framework. However, the IDIs also revealed the unintended positive and some unintended negative impact of the policy. Responses from the mothers' experiences under the FGDs further confirmed the unintended consequences. Interestingly, the IDIs revealed how the HCWs modified the policies as SLBs to help the policy achieve its objective. Better still, the IDIs, with the county and sub-county staff, also showed the adaptive strategies employed by the county to make the policy work better and maximise its objectives. Through it all, the convergence of the data from all the methods shows that policy implementation does not follow a linear process but takes the ebbs and flows fluid process instead of choosing to remain in a fixed static form.

Chapter 5 — Findings: The quality of care of the free maternity policy: perspectives of mothers, HCWs, County officials and National stakeholders

5.1. Introduction

The previous chapter explored the background, the process of formulation, and the implementation of the LM policy. The implementation of the policy was fraught with the challenges and it did not flow as intended. The HCWs and the county modified elements of the policy to fit the mothers' needs.

This chapter presents the findings on the effects of the FM policy on aspects of quality of maternal care by considering the views of key informants at the national level, county officials, HCWs, and mothers. The findings have been triangulated into two process aspect of quality: provision of care and experience of care.

5.2. Provision of care

This section considers the quality of provision of maternal care under LM policy through the lens of access of maternal care services; choice of maternal care services; infrastructure, equipment and commodities; role of HCWs; and referral of emergency cases.

5.2.1. Access of maternal care services under LM policy

Access can either be geographical, financial, or utilisation of services. This subsection presents all levels of maternal access that the policy has influenced.

5.2.1.1. *Linda mama has improved access during pregnancy, delivery and postnatal care*

LM policy has improved access through increase in the utilization and the number of mothers who attend maternal and ANC clinics as **R009NOHA** noted: *'because mothers who could not come now, they are coming. And there is also a change in the number of deliveries we used to have before and now.'* Further, through LM, mothers are no longer delivering at home under unskilled attendants *'now the mothers are more confident, they are not staying at home to deliver at home. "You know if I go, I will be asked for this much money and I don't have", so once you encourage them these home deliveries are becoming fewer and fewer and this is where we are headed as a country and as a hospital in our catchment population.'* – (**R003NOHA**)

In fact, from the EI with the mothers, all mother in hospital A and a majority in hospital B (99.41%), C (98.82%), and overall (99.09%), visited a hospital for maternal health services during their pregnancy (*Table 5.1*). Additionally, public hospitals were the most visited by the mothers during pregnancy (hospitals A (90.48%), B (87.65%), C (94.38%), and overall (92.00%)) either for antenatal clinic or other health checks (*Table 5.1*).

Besides, the respondents noted that LM has also improved geographical access, where both the mothers in the rural and urban areas are able to access the services, and financial access where mothers who were previously not able to pay for the services, now access them

'it is changing lives.... people are not delivering at home.... for me it has been a game changer especially to the rural facilities, but we have also not done much in terms of marketing those facility, in terms of creating awareness, in terms of reaching out to the very poor.' – **(R029DAO)**

Basically, from the EIs, there was a significant difference in the proportion of access characteristics across the three facilities. The potential determinants of access were identified as: type of facilities visited by the mothers during pregnancy ($P<0.001$), perception about the distance to the delivery hospital ($P<0.001$), means of transport to the hospital ($P<0.001$), ideal opening hours of the hospital ($P<0.001$), waiting time at the hospital ($P<0.001$), and proper waiting area at the hospital ($P=0.005$) (*Table 5.1*); which were statistically significant.

In fact, a majority of the respondents across the three facilities had a was a positive perception about time taken to the facility and distance to the hospital. Mothers in the EI who visiting hospitals A (45.24%), B (51.18%), C (46.75%), and overall (48.00%) noted that they took 30 minutes to 1 hour seeking delivery services and they perceived the time to be short. Most of the respondents in hospitals A, B, C, and overall, perceived the distance to the hospital was normal and for a majority the preferred choice of transport to the facility was public transport (*Table 5.1*).

Table 5.1: Maternal healthcare access characteristics

Variable		Total Frequency (%) n=550	Hospital A n (%) n=42	Hospital B n (%) n=170	Hospital C n (%) n=338	p-value
Facility visited during pregnancy	Yes	545 (99.09)	42 (100)	169 (99.41)	334 (98.82)	0.650
	No	5 (0.91)	0	1 (0.59)	4 (1.18)	
Type of facility visited	Public facility	506 (92.00)	38 (90.48)	149 (87.65)	319 (94.38)	P<0.001*
	Private facility	28 (5.09)	1 (2.38)	17 (10.00)	10 (2.96)	
	Faith based organization (Mission)	7 (1.27)	-	3 (1.76)	4 (1.18)	
	Other	9 (1.64)	3 (7.14)	1 (0.59)	5 (1.48)	
Time taken to reach hospital	Below 30 minutes	137 (24.91)	12 (28.57)	45 (26.47)	80 (23.67)	0.309
	30 minutes-1 hour	264 (48.00)	19 (45.24)	87 (51.18)	158 (46.75)	
	1 hour-2 hours	121 (22.00)	7 (16.67)	35 (20.59)	79 (23.37)	
	More than 2 hours	20 (3.64)	4 (9.52)	2 (1.18)	14 (4.14)	
	Don't know	8 (1.45)	-	1(0.59)	7 (1.96)	
Perception of the time take to reach the hospital	Very short	60 (10.91)	6 (14.29)	25 (14.71)	29 (8.58)	0.340
	Short	249 (45.27)	18 (42.86)	73 (42.94)	158 (46.75)	
	Normal	99 (18.00)	12 (28.57)	32 (18.82)	55 (16.27)	
	Long	107 (19.45)	5 (11.90)	29 (17.06)	73 (21.60)	
	Very long	32 (5.82)	1 (2.38)	11 (6.47)	20 (5.92)	
	Don't know	3 (0.54)	-	-	3 (0.89)	

Variable		Total Frequency (%) n=550	Hospital A n (%) n=42	Hospital B n (%) n=170	Hospital C n (%) n=338	p-value
Perception about distance to the facility	Very near	69 (12.55)	16 (38.10)	22 (12.94)	31 (9.17)	P<0.001
	Normal	339 (61.64)	17 (40.48)	107 (62.94)	215 (63.61)	
	Far	110 (20.00)	8 (19.05)	33 (19.41)	69 (20.41)	
	Very far	28 (5.09)	-	8 (4.71)	20 (5.92)	
	Don't know	4 (0.73)	1 (2.38)	-	3 (0.89)	
Means of transport to the facility	Walking	27 (4.91)	7 (16.67)	14 (8.24)	6 (1.78)	P<0.001
	Bi/Motorcycle	60 (10.91)	1 (2.38)	20 (11.76)	39 (11.54)	
	Public transport (matatu/tuk tuk)	224 (40.73)	8 (19.05)	55 (32.35)	161 (47.63)	
	Private car/taxi	211 (38.36)	24 (57.14)	78 (45.88)	109 (32.25)	
	Ambulance	22 (4.00)	-	1 (0.59)	21 (6.21)	
	Combined modes	6 (1.09)	2 (4.76)	2 (1.18)	2 (0.59)	
Does opening hour suit your time?	Yes	431 (78.36)	41 (97.62)	152 (89.41)	238 (70.41)	P<0.001
	No	9 (1.64)	1 (2.38)	1 (0.59)	7 (2.07)	
	Don't know	76 (13.82)	-	15 (8.82)	61 (18.05)	
	N/A	34 (6.18)	-	2 (1.18)	32 (9.47)	
Waiting time at the facility	Very short	80 (14.55)	12 (28.57)	26 (15.29)	42 (12.43)	P<0.001
	Short	237 (43.09)	16 (38.10)	72 (42.35)	149 (44.08)	
	Normal	70 (12.73)	11 (26.19)	28 (16.47)	31 (9.17)	
	Long	80 (14.55)	1 (2.38)	22 (12.94)	57 (16.86)	
	Very long	43 (7.82)	2 (4.76)	22 (12.94)	19 (5.62)	

Variable	Total Frequency (%) n=550	Hospital A n (%) n=42	Hospital B n (%) n=170	Hospital C n (%) n=338	p-value	
	N/A	40 (7.27)	-	-	40 (11.83)	
Hospital have a proper waiting area	Yes	422 (76.73)	40 (95.24)	134 (78.82)	248 (73.37)	0.005
	No	85 (15.45)	1 (2.38)	29 (17.06)	55 (16.27)	
	Don't know	28 (5.09)	1 (2.38)	7 (4.12)	20 (5.92)	
	N/A	15(2.73)	-	-	15 (4.44)	
<p>Note: Chi square test of proportion was used to test difference in overall proportions of maternal health access characteristics. *There is a statistical difference in the type of facilities that the mothers visited (majority visited public facilities). Bold means p-value <0.05</p>						

5.2.1.2. There is mixed perception on the waiting time but generally, there is a longer waiting time for the initial visit and normal waiting time for other visits

Due to the increased number of women, the waiting time was perceived as long according to mothers in the FGDs, but most of the mothers in the EI were happy with the time the facilities were being opened and perceived the waiting time before being attended to as being short (43.09%) (Table 5.1). In fact, the mothers in the EI noted that all the three hospitals had a proper waiting area (Table 5.1).

Across all the sites, particularly during ANC visit mothers had to wait for a long time before being attended. The longer time spent at the facility particularly at the initial ANC visit was due to the enhanced package of the LM policy because of having to conduct initial lab tests and other services which are catered for in the package; yet, the facilities were providing other services as well:

‘R2: I started antenatal clinic here and counselling was good, but the time, pregnant women wait for long before they are attended to by the doctors, that’ where I would like them to change. But coming for the child’s clinic is okay, that service is normally okay.’ – (FGD003HA)

‘So, you will find that somebody will come here at 8:00, maybe at 9:30 or 10:00 she will leave this hospital, she will be out of the facility. But you will find somebody who comes for the first visit you will find her taking a lot of time. Maybe some will report here at 8:00 and most of the mothers get out of this place as late as 3:00..... Because when they come, we have no special attention maybe like this person has special needs because we only have, if it’s lab everybody is there, the people who are coming for outpatient services are queuing there. So, you will find...I think the rebate for the first visit is also trying to cover up a lot the time which is take in between’ – (R002COHB).

In some instances, the HCWs would request the mothers to come early to help manage the waiting time:

‘R3: I am okay because when I started coming for clinic the doctor himself complained that we were late, and he comes early. So, he told us to come a bit early for him to finish early.’ – (FGD003HA)

5.2.1.3. There is improved access for the vulnerable population

Equally, there was a feeling that since there has been enhanced identification strategies for the mothers by different players, the program has seen widening access of services among vulnerable population such as street children, orphans, and adolescents. For instance, the under eighteen are

able to use the guardian's IDs. Additionally, there is a perception that mothers are better accessing the hospitals particularly government hospitals since costs have reduced:

'I think it's working because a lot of people have come out to register and even to attend to the government hospitals because everything is very cheap, yeah' – (R002COHA)

'despite a teenager or an adolescent girl not having an ID because previously NHIF you must produce an ID.... Linda Mama has enabled those young people despite of them not having ID cards they can enrol and be able to receive the services because many of them are poor especially where teenage pregnancy is quite high, adolescent pregnancy is high, majority of them are poor yeah because of the cycle that process and therefore it increases access. As much as it may not be optimum it may help us auditor and improve these things if we look at the data from the ministry of health, we see nearly 40% of those who are accessing are those, the young people' – (R033DAO)

5.2.2. Choice of maternal care

This subsection presents findings on the effects of choice of maternal care that the LM policy has influenced.

5.2.2.1. Challenges in the public sector was pushing mothers to deliver in the private sector

Challenges such as congestion and the of lack of attention on mothers that were being experienced in the public sector was incentivising the mothers to seek care in private facility. Also, some mothers were willing to pay the delivery cost but get quality maternal care and outcome:

'the congestion was so much, the mothers were, there several of them on one bed, sharing a bed you meet three four of them so literally some of them were sitting, labour wards was too full, mothers would deliver on their own or would deliver with the assistance of whoever the helper would accompany them, so they saw this was not possible so they started going to private facilities. Because they believed that the numbers growing, so they would rather pay but get better outcome, what down perception tended to.' – (R033DAO)

5.2.2.2. There is a mixed Perception of having better services in private sector facilities than the public

Equally, the private sector, despite charging some delivery fees, were doing significantly well in terms of meeting the mother's needs. Their reimbursements did not have to go through so many

bureaucratic processes like the public sector, they had good leadership, and commodities were in place:

'Now if you compare a private sector facility and a public facility, private sector looks like they are doing very well because remember they are for profit and they charge. So, they have most of the systems covered and the system is what I have talked about. The money is flowing, the people are there, the commodities are in place, leadership and management are in the right place and so everybody is in harmony and things are happening. The public sector sometimes has challenges in ensuring all these are playing because of resources and because of the vastness of the service.' –

(R031DAO)

Nearly all the mothers who had delivered in the private sector and paid for the delivery costs through LM policy, other NHIF services, or private insurances, noted that the services they had received in the private sector was somewhat superior to the public facilities. For instance, the mothers indicated that nurses in the private sector were very caring and treated them with kindness and even cleaned the baby for them:

'R4: But for me private I was treated very nicely, because I delivered well and my baby was dressed and everything, and I was taken to bed and I was in pain and they brought me my baby nicely, and everything. And in the next morning they came cleaned the baby and dressed it; R5: For me where I delivered in private, I was treated nicely and that's why I am saying private is better than public. I delivered nicely; they cleaned my baby and did everything. Even when the baby attempts to cry, you see the nurse paying attention to that baby.' – **(FGD001HB)**

'R1: Yeah what I think, and I saw how they are caring, they are around you at all times.' – **(FGD002HB)**

The perception of better services in private sector was mainly exacerbated by the experience of other relatives, who by word of mouth, spread the message to the patients and ended up choosing to deliver in the private hospitals:

'R5: I delivered [a private hospital] and I was referred there by a friend. The nurses there are so caring, so gentle. I was a bit afraid to deliver in public I have heard the nurses are so rough and their facilities are not so well cleaned. So, there it was clean, the place is clean, they wash the washrooms. I liked it, I used NHIF.' – **(FGD005HC)**

‘So when you appear like you are doing something good, they will come, they will come. And news spreads, they will come and say, you know this facility has really improved and when you go there, its clean, you can take a shower, they have nice beds, nice sheets, even without doing much, the next time a person has an issue they will run there. So you find if the resources are used for the right purpose, mwananchi [citizen] will flock in.’ – (R031DAO)

Some mothers indicated that in the private facilities they were allocated a nurse who not only supported them in birth but also, provided them with adequate education on breastfeeding:

‘R5: In private after delivery we are given a matron who provide care and showed how to breastfeed and how to hold the baby after breastfeeding to burp them. So private they taught us well’ – (FGD001HB)

However, some women postulated that the private sector HCWs tended to ignore mothers as noted by one respondent leading them to seeking of care in public facility:

‘R3: I also saw it was okay, I delivered but I had gone to private and had even paid but I saw...I saw told to wait but I just left and came here. I came here around four and I was given the baby at five the next day. They treat people well’ – (FGD001HB)

For some mothers though, the choice of a place of deliver in was driven by their own previous birth in experience. There was an indifference in the choice, some preferred public and others preferred private:

‘R6: I also delivered here; I came on Monday morning and by four, I had delivered. I have another one I had delivered in private, but I discovered public is better than private; R4: Initially I had other children and I used to go to public but this time I preferred to go to private because I used to go to [facility C]. But the services there did not impress me and that’s why I decided to go to private. So private is better while delivering than public.’ – (FGD001HB)

One mother reported that she had had a good experience in a private sector hospital because the baby had been born premature and was attended to successfully and with the support they had anticipated:

‘R1: Okay my experience was not bad, and I chose [private hospital] because my baby was premature. So, I had to go there because if the nursery, but the experience was not bad, they assisted me at least the child made it and here he is.’ – (FGD006HC)

The government facilities were perceived as having a fair share of challenges such long queues, and lack of personal touch with the patients:

'The Government facility matter of few staff..... matter of long queues, Government facility might have too many people being served and therefore there is no that personal contact, the nurse or whoever is handling is in a hurry to serve the next and the next and the next..' – (R035DAO)

'They treat them sometimes not that good or the attitude, but from the interpretation, you may not have painted but the health workers are providing good services and the attitude is good, they will flock in.' – (R031DAO)

Table 5.2: Summary of the reasons for choice of delivery place

Place of delivery	Reason for choice of delivery place
Private	<ul style="list-style-type: none"> - Influence from friends and positive word of mouth - There is no congestion - Better attention on mothers, that were being experienced in the public sector - Caring and kind heartedness of the HCWs (through additional support for the babies) - Better support through breast feeding education
Public	<ul style="list-style-type: none"> - Services are free right from ANC through to delivery then to PNC - Because of a shorter distance to places of stay - A positive perception of the services right from ANC to PNC - Availability of theatre, newborn unit (NBU), and additional services that can handle complications such as post-datism - Previous positive experience in a public facility

Source: KIIs, IDIs and document review (**Bold are from KIIs; Italics are from IDIs with the County officials and HCWs**)

5.2.2.3. *There is a preference for higher-level facilities due to mothers' perception of the service provision and choice*

According to the HCWs and county respondents, increased workload in higher-level facilities was caused by the mother's perception that they have specialist health care professional that the lower-level dispensaries or community centres lack. For instance, one mother in the FGD said that the presence of gynaecologist was a good motivator for seeking the care:

'R2: Because I had rhesus negative and I was seeing a gynaecologist for the first time for them to find out if I am rhesus negative. So, I decided to continue with that clinic, and I saw the services were okay.' – (FGD002HB)

'The queue is a bit a long but that is something that we are trying to work on because what we are trying to do is now, we are trying to empower the level threes and twos. These are the facilities that have met the primary threshold within the community but you see the majority of what we've

realized after studies is that a lot of the women come to the major facilities as opposed to the small hospitals, and that's where you'll find MOs are even qualified in the villages.' – **(R017CMLM)**

'So, they come here even sometimes you ask them, "Why have you decided to come here?" "Because here people who will attend to me are qualified." You see that? And again, they are not paying, and they are being attended by qualified people you see. But they say outside there you can be attended by anybody. Some of them they don't even know, and some of them will tell you, "Yes I went for the other delivery in a certain place, but this happened." The rest that, "I came here outcome was okay." Others will tell you, "I always deliver here regardless of the situation." But now others will say, "I see this place has changed, yeah."' – **(R014NOHC)**

Additionally, the other possible cause of preference for seeking LM care in specific health facility was noted by some respondents as the interpersonal skills of the HCWs, and the general environment of the health facility. Consequently, the choice was perceived as driving the workload higher:

'The services we are offering and also the cleanliness and also language. Language also matters especially in maternity. When a mother comes here, you talk to her well, you welcome her, she will go and tell the others. But if you insult her, she will tell the others, "Don't go there."' – **(R008NOHA)**

In hospital A, one HCW noted that the construction a larger hospital building was a key trigger of the perception of the mothers choosing to seek care in that facility despite it being a level 3 and lacking some specialist services:

'I think our services are good. Because they think...also when they started building this level...4, they thought now the hospital is very big. You find even two previous clients coming to this place to deliver then we refer them. They think this is a big hospital.' – **(R009NOHA)**

Equally, the perception by the mothers that higher-level facilities had a higher chance of dealing with complication than the lower level was a key driver to seeking care LM care and services:

'R3: I thought they had everything there, so I could have had complications and being rushed is a problem. So, I decided to go there.' – **(FGD002HB)**

5.2.2.4. Indifference in treatment of mothers based on type of birth (CS vs normal birth) and parity

The mothers perceived that there was a difference in treatment by the HCWs between those who had undergone CS and normal delivery. They acknowledged that the CS mothers were given better treatment. For instance, CS mothers had their clothes washed for them, while those who underwent a normal delivery were given cold water to shower. Basically, the CS mothers received far more assistance in the care of the baby those with normal delivery:

'R2: They do not treat CS and normal patients the same. CS patients are treated properly than normal patients; R1: That is right, they are treated very nicely like you see CS patients can get their clothes washed, you can be cleaned but normal people they even pour cold water at you; R3: And again, you find someone from CS is treated very well they even clean your child very well and dress them with diapers but for normal deliveries you dress your own baby' – (FGD001HB)

And the perception was that the HCWs do so because they fear complication that could arise from not paying attention to the mothers who had undergone CS:

'R2: It's like they fear complication. You know for CS they need; you know.' – (FGD001HB)

Some mothers reported that the HCWs gave priority to primigravida and left the multiparous women for a later time leading to a perception among the multiparous women of unfair treatment:

'R4: I have no problem with Linda Mama, but the only place there is a little delay is where they separate from first deliveries, second and third and so on. Those who are on their third are left and the first-time mothers are registered first and that takes a lot of time and people get late.' – (FGD003HA)

5.2.3. Referral of emergency cases

Referral of emergency cases is essential in preventing complications. This subsection presents the influence of the LM policy on referral.

5.2.3.1. Fewer number of women are being referred but they have better perception about services received during referral

Of the mothers interviewed in the EI, only 59 (10.73%) had been referred from other facilities, a majority of whom were referred from level 3 facilities. As perceived by the mothers, due to the adequate amount of LM services provided by the facilities, there has been a significant reduction in referrals: *'R3: I can say the services are good because nowadays we don't run to [referral hospital] the way we used to. So, this hospital has been good, it has been helpful to us.'* – **(FGD003HA)**. Most mothers had been referred using an ambulance (n=22) or public means (n=15) and were mainly accompanied by their husbands (n=27), relatives (n=23) or health workers (n=21) either as an individual or both at the same time (*Figure 5.1*). Most of the companions during referral had knowledge of emergency management (n=47), were allowed to stay in the hospitals (n=33) and were warmly received at the hospitals (n=19) (*Figure 5.1*).

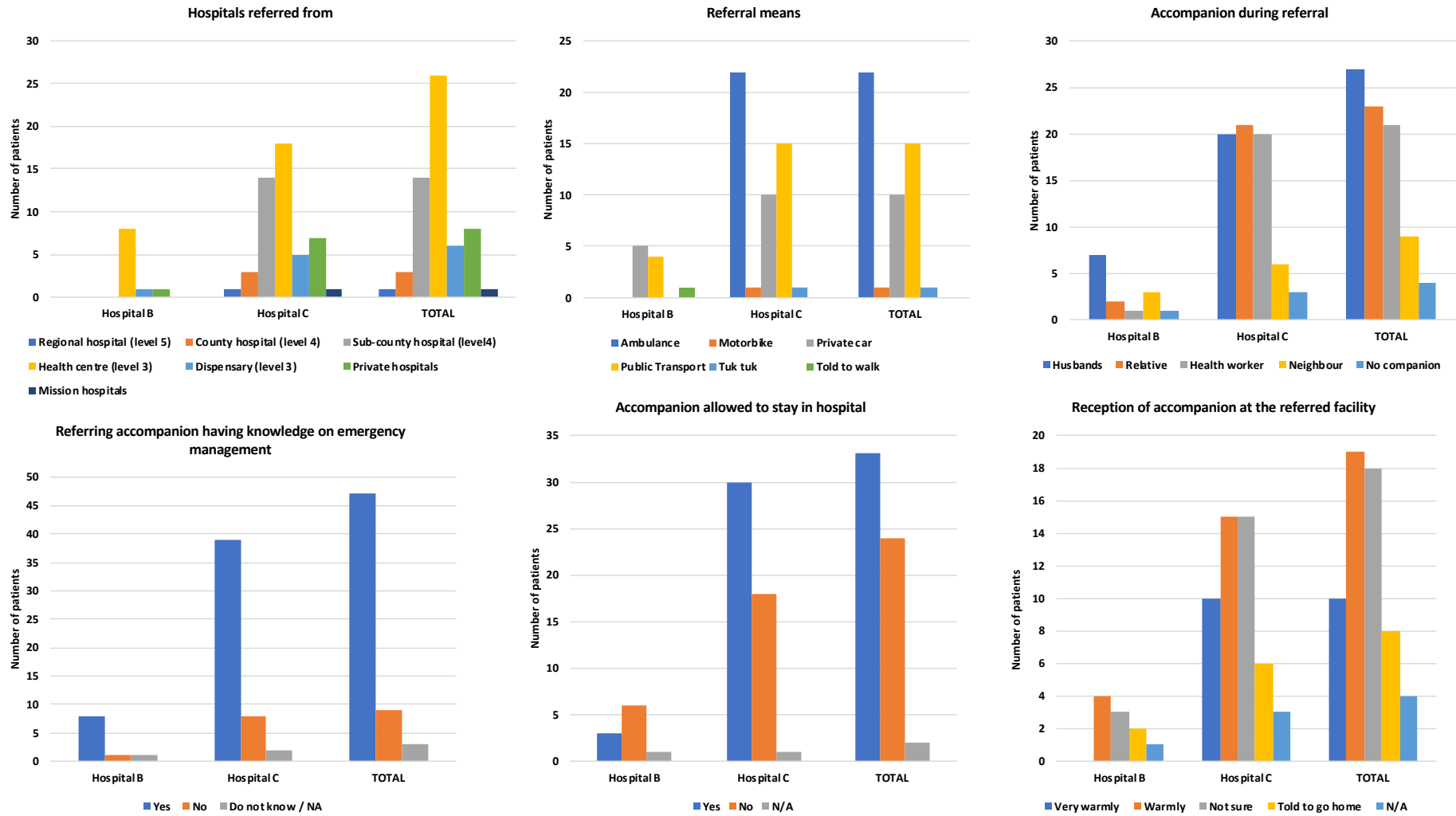


Figure 5.1: Referral characteristics

5.2.3.2. Lack of equipment is the main reason for referral

As noted by R007DICHA, some mothers ‘deliver...and get complications and they.... come when maybe their condition is not good’ which resulted to referral to higher-level facilities. As per the EI, the referred mothers noted that lack of equipment, theatre, NBU and blood (n=16) were the main cause of referral followed by foetal distress (n=7) (Figure 5.2).

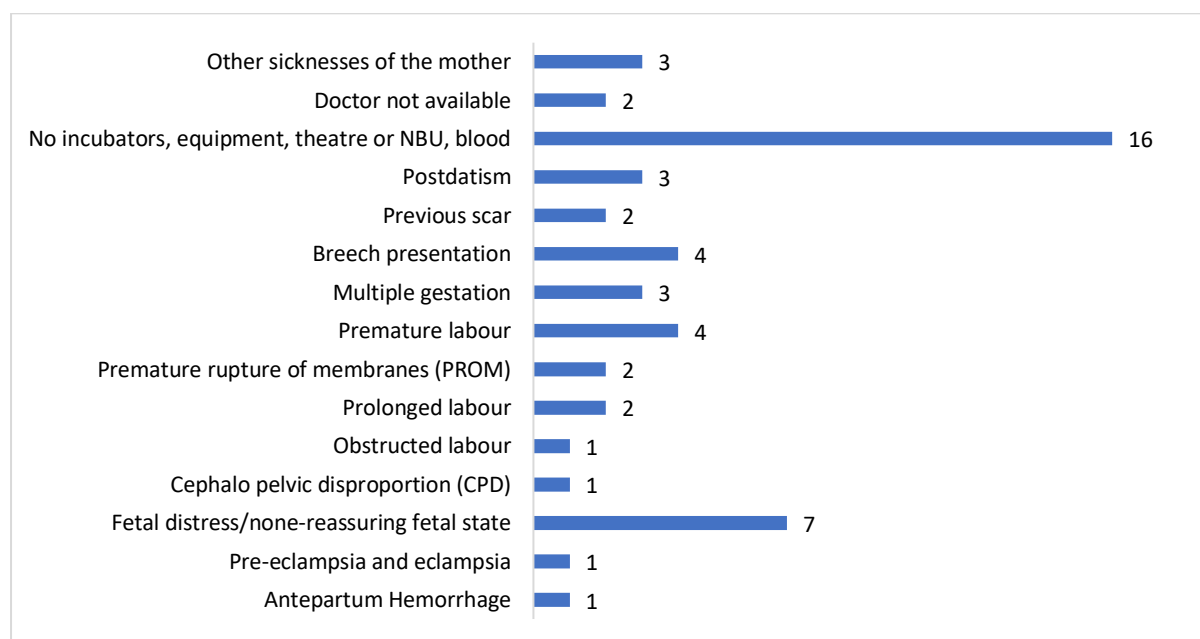


Figure 5.2: Reasons for referral

5.2.3.3. Mothers are looking for their own referral means from the hospital

Whereas HCWs indicated that the county and facilities provide some form of referral transport for mothers (section 4.4.11.2), the referred mothers reported having a different experience with the transport. A majority of them had to seek for their transport means for referral, and some perceived it as dangerous for health and safety, and expensive especially in unplanned emergencies.

R5: Yes, and they told me there's no vehicle, and they are insisting, "Look for a vehicle quickly so she can be referred." Now to do it fast and you don't have money. So, I really suffered....;

R7: I came at night, so all taxis start telling you how much you will give them. Now if you don't talk about the fare, if you don't agree, they refuse. Then if you call another one...so if you could just make a phone call and a vehicle comes for you, it would be better...;

R8: *Okay Linda Mama in terms of transport...if a mother delivers, now if someone is going to [a referral facility] and you know the road there is not good and someone has been stitched up down there [CS]. So, when going there the stitches might be undone...’ – (FGD009HA)*

5.2.4. State of infrastructure, equipment, and supply of commodities

This subsection shows how the LM policy has influenced the state of the infrastructure, equipment, and supply of basic commodities such as drugs.

5.2.4.1. LM has improved the availability of equipment and supplies

With the help of LM reimbursements, all the facilities reported to have had improvements in availability of supplies and medical equipment. In fact, the facilities have kept reordering supplies to keep up with the demand:

‘Let me see, the supplies, we’ve not actually gone out of stock. But you find we have to keep on reordering, because the demand is more. But at least ...let me say, the county has been able to keep on restocking us.’ – (R020FLMHB)

‘Like for example we don’t miss gloves, it’s in plenty.....Cotton, gloves, these cord clumps we don’t miss them.’ – (R009NOHA)

Moreover, besides improving the availability, LM has enhanced the standard of equipment being utilised and facilities are no longer having to utilise substandard care or equipment. For instance, one hospital HCW noted that there is now an availability of delivery packs and they are no longer using ordinary blades as before. In addition, they have now departmentalised the sterilisation process of the equipment rather than using the hospital steriliser:

‘Yeah, like now the equipment we have so many like delivery packs which we used not to have. Sometimes we used to.... use a blade instead of delivery pack or the scissors because things were not there.... There are those people who are employed to cater for washing those things, arranging and then they take to the utility for preparation for the next use, so they are there. Immediately they are used there is somebody to...from the mother to Jik, and then to prepare for the next use, yeah.’ – (R014NOHC)

5.2.4.2. Facilities have improved infrastructure due to LM

Some facilities have been able to use the money from the LM to improve the theatre and ultrasound services:

‘But at least now with the Linda Mama, especially for the operations and the ultrasound you can check them separately. So, it has injected more money into the system which is a good thing.’ – (R019FLMHB)

Additionally, facilities are prioritising reducing congestion and complications among mothers through expansion of building extensions. For instance, facility C have been able to complete a section of an incomplete building and transfer mothers to it from the congested postnatal ward:

‘So, when our mothers are many in this maternity now, so those without complications or those who had delivered yesterday we transfer them to that department, so there is that decongestion. And we have another building there, the reproductive health, it is only that it is not yet over we could have moved that department, but we have hope. But now the patients who are being attended in ward 6 they were transferred to that department and us we got the extension.’ – (R014NOHC)

Interestingly, some other facilities have renovated older buildings that were no longer in use and converted them to maternity clinics to ease congestion. For instance, in facility B, one building that had been constructed five years ago as a mortuary and was only being used as a store of patients’ records, has now been refurbished and is being used as an outpatient clinic. The downside is that the mothers have a negative attitude towards it as they still believe it is a mortuary:

‘this is a house whereby we had to convert it, come in even without curtain and we never changed anything, we only cleaned it. So...but we are offering services anyway. You know that block was a morgue.... So before even we cleared...even that mentality still, you, you don’t work here, and you still call it ‘morgue’. You know there are people who refused to enter that room, that thing is there.... And it is better there other than working outside or in a tent, there is...so there is a lot of things to be done.’ – (R018FLMHB)

Additionally, the LM policy reimbursements is helping facilities to meet their essential services that are critical in easing the burden of work. With the reimbursements, the HCWs noted that the policy pushed them towards providing quality maternal care by providing the commodities, since it was a

way of encouraging mothers to choose the facility. However, despite the incentive to providing quality maternal care, it created increased workload:

'Yes of course because you see sometimes that money will help to fuel the vehicle and also to maintain the ambulance. Yes, the ambulance needs the services.....of course the Linda Mama has also improved because sometimes it can support those staffs to go for seminars and also, they help us to conduct those in-reach. You know we need funds when we are conducting in-reach and also outreach services' – (R008NOHA)

'Linda Mama has pushed us quite away because when it comes to quality, we've gotten to a point that you have to make sure you have the commodities you need for these clients isn't it? Because the only way you are going to benefit from Linda Mama is if clients choose the facility. So, in a way it's a pusher to a more quality service to the client so because you want also to attract more. Because the more the better. But now you see, that also has brought the issue of us bursting through the seams.' – (R019FLMHB)

5.2.4.3. Mothers have a strong positive perception about health facility characteristics as stated by the HCWs

The mothers had a positive perception about the health facility characteristics as also stated by the HCWs. For instance, a majority of the mothers in the EI noted that the facilities had adequate waiting and examination rooms (51.60%); adequate hand washing facilities (91.82%); adequate bathing facilities (67.46%); adequate toilet facilities (71.45%); well suited equipment for detecting women's problems (90.91%); had adequate number of staff (76.37%) who are well suited to treat women (96.55%); and had an overall clean environment (93.45%) (*Figure 5.3*). However, the mothers showed some concern about the adequacy of the facility providing clean drinking water as indicated by 46.18% of mothers (*Figure 5.3*). 67.64% of the mothers noted that the distance from home to the health facility was not very far (*Figure 5.3*).

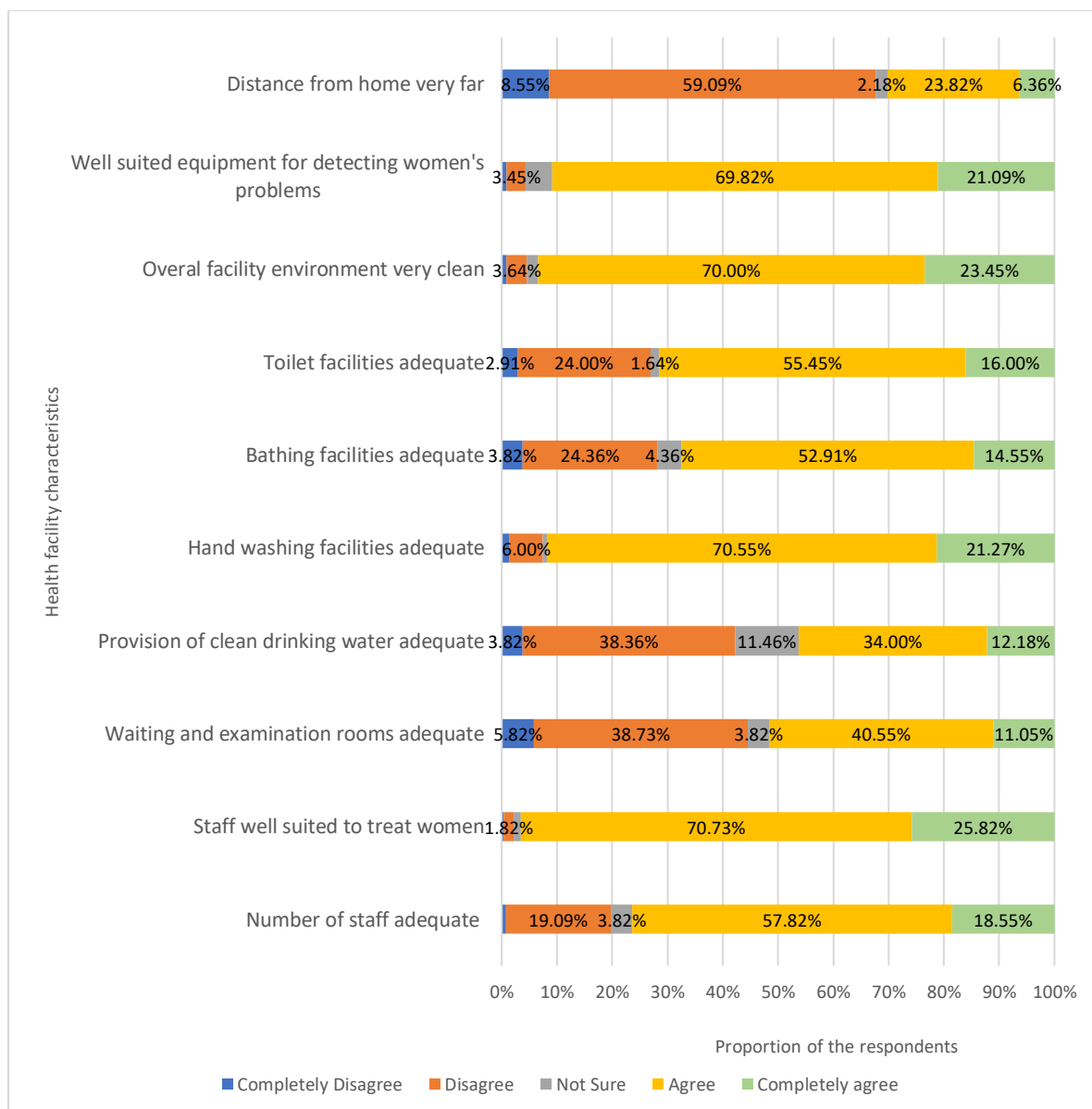


Figure 5.3: Patients perception about health facility characteristics

5.2.4.4. Despite progress, infrastructure and some commodities are still inadequate

Nevertheless, despite the progress in improvement of infrastructure, some respondents noted that some facilities still have inadequate medical equipment, space and supplies:

‘Even in labour ward it’s not an ideal labour ward. We don’t even have an ideal resuscitaire, you know the improvised one? So, you have to be extra cautious not to shake that thing, so the heater falls on the baby. Imagine, you have three mothers delivering, and you deliver as you put there, you deliver as you put there. In the process you can burn those babies as you go to pick the other one you see. So, you have to be extra cautious, you will wish to work in a carefree environment,

every baby with you know, we have even delivery...the ideal one, you've seen mothers there. Even IPC [infection prevention and control] becomes an issue.' – **(R018FLMHB)**

'I think they have also not corresponding investment of commodities, especially targeting RH services that has not happened, most of our facilities, they stock out those RH commodities and that is a major concern and all that' – **(R026DAO)**

Similarly, some of the facilities still lack basic laboratory, which is demotivating the women from utilising the services in the hospital or is preventing HCWs from completely following up the mothers as they would wish to. Other lacking equipment are ultrasounds *'we don't have a very vibrant laboratory, you know. As a clinician I believe you want the patient tested, drugs availed, that patient will not come back to you after two days [said with wry humour]. You can give them a prescription and they tell you they bought half a dose because they didn't have money, now how will you help them? You see, it demotivates..... Yes. Even the ultrasound, the scans, we don't have the scans, so they have to do the scans outside [the facility]'* – **(R018FLMHB)**

5.2.4.5. Supply of certain medication is still a challenge

The noted challenge in terms of the supplies is that the county governments are choosing to focus on improving infrastructure, which are easily seen by the mothers rather than supplies and medication:

'Supplies never improved at once. So many of our county governments invested in infrastructure rather than providing necessary medicines, necessary pharmaceuticals, non-pharmaceuticals to and equipment to support the healthcare workers.' – **(R033DAO)**

Of the supplies, medication posed the biggest headache that has never been resolved:

But there are some issues when we come to drugs, if it is non-pharmaceuticals then we are okay but issues when it comes to drugs, those sometimes we go out of stock. And sometimes you see with Linda Mama, the mother is...knows that I'm supposed to be taken care of even the drugs.... We feel now that is the only gap. But when we come to non-pharmaceuticals and this other thing, you find that those ones we are able to...the only issue we have maybe is drugs. – **(R020FLMHB)**

The other potential cause of the pharmaceutical headache is the drug ordering protocol. The facilities have to wait for a certain number of days before receiving top up for their orders:

'there is a protocol.... usually when we go to that stage where it is very critical that we don't have the drugs. Because like our drugs are ordered through KEMSA for a certain period, by any chance those drugs are not enough...they get finished before that period, we have to wait for the other order. But usually a hospital like us sometimes we are given extra money like miscellaneous where you can purchase emergency. But even when you purchase emergency like drugs, we are able to purchase a start dose or a prophylaxis, for continuity, you find now you have to involve maybe the patient. But sometimes it doesn't take long, it won't take long maybe it is for a short time and then the consignment comes.' – (R020FLMHB)

5.2.5. Role of Healthcare workers and facilities in supporting LM

HCWs play a key role in both provision of service and determining the experience of care that the mother receive. This subsection characterises the roles of the HCWs in LM policy; in addition to others perception about HCWs.

5.2.5.1. Mothers have a strong positive perception about healthcare delivery characteristics by the HCWs and the facility

A majority of the mothers in the EI had a positive perception about the healthcare delivery characteristics. For instance, 95.27% perceived that the staff examined pregnant and postpartum women well; 95.45% noted that the staff were very capable of finding out what is wrong with mothers; 59.64% noted that staff prescribed drugs that are needed and that the drugs supplied by the health facility were good (58.37%) and the mothers could obtain the drugs from health facility easily (67.27%) (Figure 5.4). In addition, 71,27% perceived that they received adequate Information on danger signs of delivery and postpartum (Figure 5.4) Interestingly, 79.82% perceived that the facility provided privacy very much during vaginal examination and delivery and 84.70% believed that the procedure they received during ANC and delivery felt very much necessary (Figure 5.4).

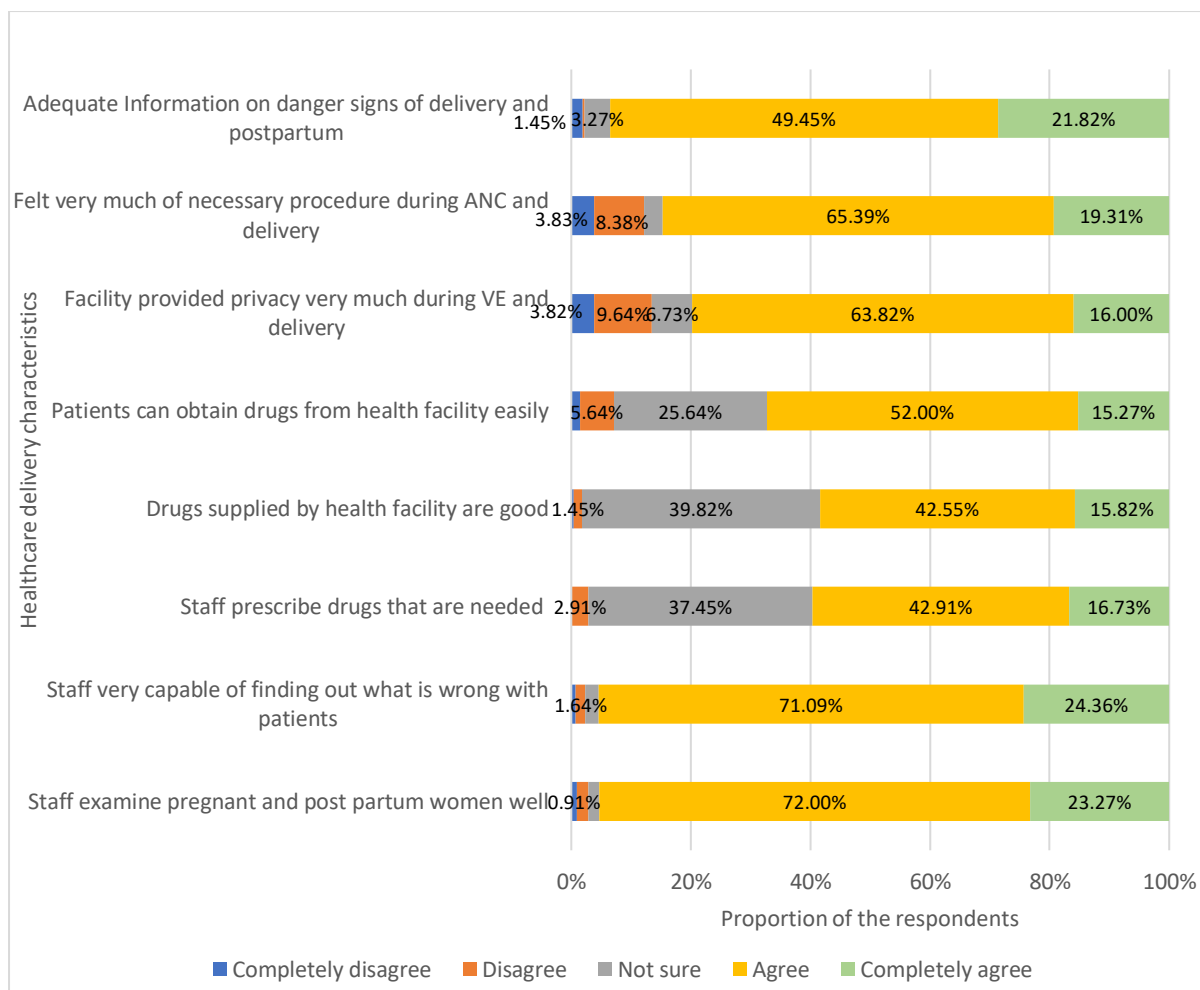


Figure 5.4: Patients perception about healthcare delivery characteristics

5.2.5.2. Nurses are partographing and charting the mothers progress though facing some challenges

The nurses showed awareness of the need for proper documentation procedures as a way of ensuring good QoC:

‘to give quality care.... is following up a patient, [partograph], you are able to do proper documentation.’ – (R003NOHA)

‘Because you cannot be a midwife without the knowledge or a partograph.’ – (R012DICHC)

In that regard, the nurses noted that sometimes there may be some challenges: *‘although once in a while a file maybe there is a problem but they try.....because you know a partograph is very important...I know maybe you have found challenges in those partographs when you were going through.’ – (R007DICHA)*. However, despite the challenges the in-charges were incentivising support-

staff to enlighten the nurses on the procedures of monitoring women through partograph: *'even like now we might even assign either an intern or a student after we give them some presentations to do. So, after the report if it is partograph one person to take us through the partograph'* – **(R012DICHC)**

Equally, the challenge that some HCWs across the facilities were facing, especially referral facilities, was that mothers would come in second phase of labour; hence, HCWs were conflicted on the importance filling the partograph:

'You know a mother who comes when she is in active phase of labour, that mother should have a partograph for monitoring of labour. The only time when you are not able to monitor if this one who finds you in second stage. But any other mother who comes at four centimetre and above should have a partograph. But for the ones who come in second stage those ones we don't have a choice because she has found you there' – **(R012DICHC)**

5.2.5.3. Facilities and HCWs are bearing the brunt of the burden of increased numbers of mothers seeking LM care

As noted by a majority of the respondents, facilities were bearing the brunt of the burden of the increased number of mothers due to LM. As highlighted by **R019FLMHB**, the numbers of mothers are *'crazy... high ...the shortages of space are even more...Because you will find...we have a ward that is meant to cater for 20 mothers, in a day we are admitting about 70 to 80, so we are bursting through the seams.'* As confirmed by mothers in the FGDs, this It has led to inadequate space and increased workload for HCWs:

'I was served well, the only challenge I experienced was that I reached here at 11:00 and I delivered at 4:00 but during that period, there was no one to help me, they were kind of busy. That was the challenge I faced, even when you are pressed with urine you cannot go there's nobody to help you.' – **(FGD008HB)**

R4: *I see it is okay but what I can add is that here in the clinic with pregnant women you might find one nurse and women are many. So, you find it's too much work for her. If there could be two nurses at the clinic it will make work easier and women will not get tired at the clinic. Those who came early have to wait for those who came late, they get annoyed.'* – **(FGD003HA)**

As further noted by **R019FLMHB**, the hospitals are overwhelmed because *'government hospital...don't turn anybody away. Even if they come and they don't have Linda Mama you still take care of them....it*

wouldn't be nice to turn them away because this is a public hospital. And then you see, the people who come here mostly...cannot afford private health care. So, we take care of them...Okay they will raise questions and they will ask questions, of course it's not pleasant but you will explain to them. We have 20 beds, you have 60 mothers, who do I kick out?' The sentiments were supported by the respondents at the national level who equally noted that the increased workload was more particularly caused by the nature of work in the public facilities where the HCWs had no choice but to serve the mothers and meet the required utilisation targets:

'for the public facilities... you are overwhelmed, you do not have time to really, you know all issues that go into client's satisfaction. So, you have no time, you have to deliver, you have to take care of this long queue regardless of what it takes.... they have targets, the public facilities they usually have targets that by the end of the day, the utilization rate should be this or that.' – **(R035DAO)**

However, some lower-level facilities are adapting to the huge workload by 'chasing away' the mothers because they are overworked leading to overburdening higher-level facilities or a gap in delivery:

'Then I'll give you another example of another facility in the sub-county, we have realized nurses are sending away patients, the mothers who are coming to deliver because the work is too much. So I don't know, you don't know where those patients go. Maybe private, maybe they go back home and deliver from home.' – **(R005FLM)**

But interestingly, because of the high numbers of mothers coupled with the shortage of space and staff, the facilities are working way beyond their abilities and to manage the workload. Given the workload, a common theme across the three facilities is that there is a rise in burnout amongst HCWs. In fact, the HCWs are having to work extra hours:

'We work extra hours...you will find each care provider is serving more than they should, so the issue of burnout is also coming up' – **(R019FLMHB)**

'Because you find much as we want to do that work sometimes you end up getting burnout because of that high workload, yeah' – **(R015FLMHB)**

While the HCWs have acknowledged that the policy improved how the facilities were managing complications, both the administration of the hospital and the HCWs are giving their best to ensure complications are well managed:

'Because maybe for example she comes up with a chronic infection, that also means the administration will spend more money buying an expensive drug for her. But you see the moment she comes on time, early enough she knows, "I went to the clinic, I was told I cannot deliver normally." She will come here on time. So, she will be told, "The moment you have reached 40 weeks go to the hospital," she will be here. We do her C-section very safely; very simple she goes home. NBU decongested here, NBU also the chorioamnionitis are no longer there they have failed.'
– **(R012DICHC)**

'I: Okay, and for the complications that I see on the charts as well, how do you manage them and even record and claim for them.....?; R: For the claiming we don't know; us our work is to treat full stop. Even if she comes with complications, we try our best to ensure that mother goes home safely.....Our mothers are happy, we handle them individually. Even if a mother comes here, we don't send her away. You know some of these things don't need money. To improve quality, you don't need money. Even now we have constant clients.' – **(R012DICHC)**

5.2.5.4. Migration from another county causing workload

While workload was a common theme amongst the respondents, the workload in the county of study could have been contributed to by the influx of mothers from other surrounding counties taking advantage of the county boundaries and proximity to the facilities:

'Like I would tell you, here without fear, in Kiambu County half the clients are from Nairobi County and half are from our own. Like the report, I got this morning from [referral hospital], they had sixteen admissions in maternity yesterday, eight were from Nairobi county and eight from Gatundu. And you know how far Gatundu is from Nairobi. Kiambu the same, you get twenty, twenty like that. So as much as we are trying on our own of course with the influx it can never be that quality.' – **(R016CSLM)**

5.2.5.5. HCWs are reducing the time they allocate per mother

Given the workload that the HCWs are faced with, the time that they allocate to providing each mother with care is now reducing and even some lower-level facilities are chasing away mothers for they have burnout:

'Owing to the fact that the patient numbers are higher than the health workers, so the burden on the health worker is more. Meaning the time allocated per patient is less than required' – (R005FLMHA)

'I think because of the burn out also, you know you are really not able to give your best to the clients that come in because again at the same time, – (R035DAO)

5.2.5.6. Nurses are multitasking and handling many roles amidst the challenge of human resource

Nurses are going over and above particularly in health centres when they have to cover both nights and day shifts in addition to handling other hospital consultations at nights, and still refer the mothers. Despite the tasks being their roles, the constrained number of nurses is making the staff rotation allocation challenging and hence they have to multitask amidst the challenge:

'It's only the nurses who are on night duty.....So, from 5:00 it's the nurse who sees patients....So you see now if they are so busy like there was a night we had seven deliveries during the night, and there was a referral, you know if there is a referral one nurse escorts the patient to [referral centre].....You know the other nurse is strained. You are the one to conduct deliveries if there are some mothers delivering and even monitoring. You see now there is a challenge because if they are so many, observing these mothers and also the outpatients. Sometimes they've even complained because if they are in some other delivery maybe it will take some time, the others will wait, they will start complaining.' – (R007DICHA)

Besides, because of the challenges of workload, even the nurses in-charge of both department and hospital administrations are forced to do the actual hands-on nursing practice rather than just stay in the office doing administrative work to ensure that the services are timely provided:

'Because most of the time really like when it is so busy, I usually work this place so that I oversee the other areas. Because when you go there you will not be around this place. And I do feel you are supposed to assist when there is somebody. So there is also the issue of shortage, like today we are so many, at least we have covered all areas. But other times we report like three people, so even like FP, a place...we have to work here and go to that place, so you see now.' – (R007DICHA)

To overcome the challenge of workload in the hospital, the nurses in the maternity wing are also able to call for help from other departments when the work becomes overwhelming:

'we call help from other departments when it's so much.' – **(R001DICHB)**

5.2.5.7. HCWs are adequately motivated to work despite the challenges

Despite the challenge of more workload, the HCWs are motivated to work more because they perceive that the more the efforts that they put in the providing the service, then the more the money and the funds that the facility will make:

'It has, one thing the policy of Linda mama has motivated the staff. At least we know that if you put more effort there will be more funds on the facility, we will get more commodities, we will be compensated for escort [referral] and lunch. So, it will be more comfortable for us, so that is one thing.' – **(R003NOHA)**

Also, the hospital in-charges note that despite the high workload, they feel that the HCWs are motivated because either *'no one has complained'* – **(R012DICHC)**; or that the HCWs present a perfect picture during supervisions:

'even with the influx of patients, you find that...they are motivated. I would think that the motivations come from the outcomes in whatever they...you see the outcomes. Because even when you go to do like a supervision in maternity or maybe it's end month and you are taking the overall report of how many deliveries have been conducted this month, you see even they are proud telling you, "Now we have gone up, we are just about to beat a certain hospital." So, you feel they are not demotivated, they feel even they would like to do more. I feel they are still...they are motivated with Linda Mama.' – **(R020FLMHB)**

In fact, the other cadre of HCWs such as department clerical officers, across the sites noted that amidst the challenges, they are working beyond the stipulated hours either to support provision of LM services or to work on the batching of the claims and ensure that the hospitals are receiving timely reimbursement. However, they face a challenge with the inadequate number of hardware such as computers. HCWs and clerks know how to plan their days and work even amidst other motivation and satisfaction challenges of the salaries:

'A lot of work, a lot of things. I don't want them to pile up, I don't want the claims of this month to jump to January, I have to make sure I have processed everything I have submitted everything.'

Sometimes I work after 5:00, sometimes I leave the office at 7:00 or even 8:00 pm, if I have a lot of work. But really the salary is not motivating it's just...I feel underpaid. And so is many of my colleagues in this hospital' – (R011COHC)

Also, both the HCWs and hospital clerks despite the work being a lot, feel they are adequately motivated. The only challenge is having to deal with inadequate and insufficient infrastructure required to meet the demands, and it is altering the motivation of work as noted by a clerk in facility C:

'By the way I do it, me actually I am happy with my work because maybe some people find it hard because you see like I told you Linda Mama claims they there many than in patients and maternity NHIF, those who are using NHIF but even if they are many, okay it's easier to process them. It's easier. It doesn't matter whether they are many, they are a bunch of it but it's easier. Because they don't need much. As long as, okay what I can say if they are enough equipment like enough machines it's very easy. Because you see the moment I sit down and I say that I am doing my work, I can't even no matter how much they are like it take more than let's say four hours. As long as I am concentrating. But you see when I am doing it and maybe someone else wants to use now, I keep mine, I hold them and wait for them, you see now it becomes difficult' – (R013COHC)

A majority of the HCWs across the three facilities, noted that they are adequately motivated and energised to provide services to an extent of running the wards alone without the support of other nurses, and forfeiting their lunch time (working without food). This was confirmed by the mothers who also indicated that the doctors went above and overboard:

'Let me see, they go overboard...But you would find two nurses on night duty, conducting like 17...15-17 deliveries. So, you find this nurse is conducting around 8, approximately 8 deliveries alone. And finding this nurse has to monitor this mother from admission, delivery and postnatal and also the baby, you find they go overboard. But when we looked at that initially, like our nurses in maternity, they would not even break for lunch. They would wait until now the shift is over, they break.' – (R020FLMHB)

'R7: Where I delivered is here and the doctor, I got was good. In fact, he was in night shift and he was late because of me. I was received well, and I liked their services.' – (FGD003HA)

Some mothers reported that the HCWs served them even when it was not their working shifts which signified dedication to work:

'R4: I came here at 2:00 pm and I got a doctor who was in the morning shift and the other one was changing. So, I told him to serve me, I wanted to deliver. He dressed in a hurry and came to help me.' – **(FGD003HA)**

5.2.5.8. Other additional forms of motivation of HCW

Some of the factors that the HCWs indicated as a source of motivation, rather than monetary values, were the acts of the both the county administration and facility in-charges. For instance, in facility B, the department in charge felt that the administration provided them a listening ear, and acted on their grievances part of which included renovating the theatre and expanding admission area:

'workload is reasonably high, on top of there is cup of tea. And at least we are listened to when we at least raise something, yeah a concern.....at least we get better service operating because of that I mean theatre. So at least it was moved from here the squeezed area to that place and then there wasn't bed, it was brought. Okay that time I wasn't here, yes. And as I stay here yeah there's just such.' – **(R001DICHB)**

The response was further confirmed by a respondent from the county who averred that *'once in a while, we call them, have breakfast meetings with them, listen to their issues, discuss with them'* – **(R016CSLM)**

With the listening ear, the HCWs felt that there was provision for adequate equipment and supplies to the facilities and that without having to improvise the old equipment:

'So, I think with better equipping you know you have the drugs you need, you have everything you need. I think that is more than enough because you are able to do what you are supposed to do, rather than wasting the time trying to improvise everything.' – **(R004NOHA)**

The other source of motivation (discussed in detail under sections 4.4.11 on SLBs) is that workers are happy when their burden of work is eased and department in-charges are doing so by employing additional people on locums, provision for training opportunities, recognition for risking their lives at night during referrals to other facilities:

'Like for example you can say when you refer a patient at least there is a minimal something, just goes the risks and you are out of the station.... These continuous CMEs [Continuous Medical Education], and short courses.' – **(R009NOHA)**

'Because even on nurse trains, actually we pick...for the training we pick a nurse per the department she is working. If it is like breastfeeding, we take the nurse who is usually in the postnatal side. And once this nurse trains in the breastfeeding, she'll go back, we make it as a duty for her to be educating the mother on those...on breastfeeding' – (R020FLBHB)

However, nurses noted that involving the HCWs in decision making is another source of motivation in that the HCWs perceive that if they are involved, it would give them a voice to raise an opinion on how the work needs to be done:

'maybe we would have contributed to this, yes it has been done but if this and this could have been done it could have been better than the way it's being done. So that one I see at least they could have involved us the people on the ground' – (R014NOHC)

5.2.5.9. There is some Inadequate motivation and job satisfaction among the HCWs

Despite the positive motivation among the workers, there are also some evidence of demotivation and dissatisfaction among HCWs. For instance, HCWs noted that, while they are well charged to achieve the objectives of the work, they feel inadequately remunerated:

'We are under paid, yeah let me say that without fear because we do a lot of work. You see like the time you came into the office; I was so buried there. I have been sitting there since 7:30 am' – (R011COHC)

Similarly, the in-charges' of the maternity departments, who are also HCWs noted that they are demotivated when they provide the services and do not get reimbursed for it; hence, putting them in a precarious position of dealing with hospital suppliers. With such untimely delays, the in-charges were having a strained working relationship with the hospital suppliers and even banks:

'you are doing your services and you are claiming but you are not getting the benefit of your work, so it renders even demoralizing the people who are in charge of the wards, the maternity. Because the same they maybe they may work out of their ways but there are no incentives to them, so it might demoralize them and the same might demoralize even the suppliers who do supply us with the goods that are required but we might fail them because lack of funds and lack of Linda Mama wiring the same back to the accounts, it might as in it actually demoralize even the suppliers, some of them do cut off deals with dealing with the facility. Because we do pay them very late and sometimes, they do attract interest in their banks.' – (R006AOHA)

Equally, the HCWs noted that some elements of the workload were demotivating. For instance, they felt that despite having to multitask and handling of referrals at all hours of the night, they still had to come back to the facility after referral to carry out their duties which were waiting for them, and which they felt they were not adequately motivated for:

'We are not motivated because you can refer a patient at 2 am and you come back. You find your patients are still waiting for you and the nurse you left is really overwhelmed by work. So we are not motivated' – (R009NOHA)

5.2.5.10. Facilities are struggling to employ specialist nurses and other HCWs staffing challenge

The facility in-charges noted that they had a challenge of hiring specialist nurses to take care of the growing numbers, which could have been exacerbated by the lack of specialised units:

'Neonataly, we could not manage to set up a neonatal ward but we looked for a neonatal nurse. Because we felt the babies were so...we get so many babies and with that influx we could still get some babies with...who might not score well. So, we needed at least a neonatal nurse who will be able to assess for us these babies even in good time even when we refer, we refer in good time. And that we have gotten a neonatal nurse, even if we don't have a neonatal unit, we have a neonatal nurse.' – (R020FLBHB)

One in-charge noted that, while the facilities had installed an ultrasound machine to meet the needs of the pregnant mothers, there was a gap in trying to identify the person to operate it and sustainably pay the staff. The county promised to intervene:

'Although they gave us an ultrasound machine it's only now the staff. Somebody who can use it and also the infrastructure. But if we get somebody you squeeze because our mothers, we really want them to go for that scan because we send them to Kiambu, some opt to go to better care, you know even travel to Kiambu. And also, they pay, I understand they do pay. So if we have one it will really assist us because sometimes at the clinic you know we are supposed to do it and we really need that.....we were given from the county so we are waiting now for the...or they train, they had said they will train people that is what they had said, two people. Before around April, so we are still waiting, whether they will post somebody, or they train.' – (R007DICHA)

The staffing challenge particularly in the level 3 facilities are hard to deal with because of the rules of staffing where, despite the high number of mothers, staffing cannot go beyond a certain number:

‘But I think it’s not because of the Linda Mama, I think it’s because of how it has been, we have been a level 3, although they said they will add us people. But you see now they cannot exceed the number of staffs in a level 3. If it was a level 4 they would increase.’ – (R007DICHA)

5.3. Experience of care

This section considers the experience of maternal care under LM policy based on the services provided. It categorises the experiences as either good or bad, based on how it made the mothers feel.

5.3.1. Good experience of care

This subsection starts by presenting results from the positive perception of maternal care from LM policy.

5.3.1.1. In overall majority of the mothers are satisfied with the services and would consider future delivery in the same facility

Results from the EI show that in overall, a majority of the mothers (84.2%) are completely satisfied with the services they received. It was established that almost equal proportion of respondents from the three facilities, A (85.1%), B (80.9%) and C (85.2%) were completely satisfied with the services provided. On the other hand, a higher proportion of mothers in hospital C (74.4%) than B (66.7%) and A (74.1%), would consider future delivery in the same health facility (*Figure 5.5*).

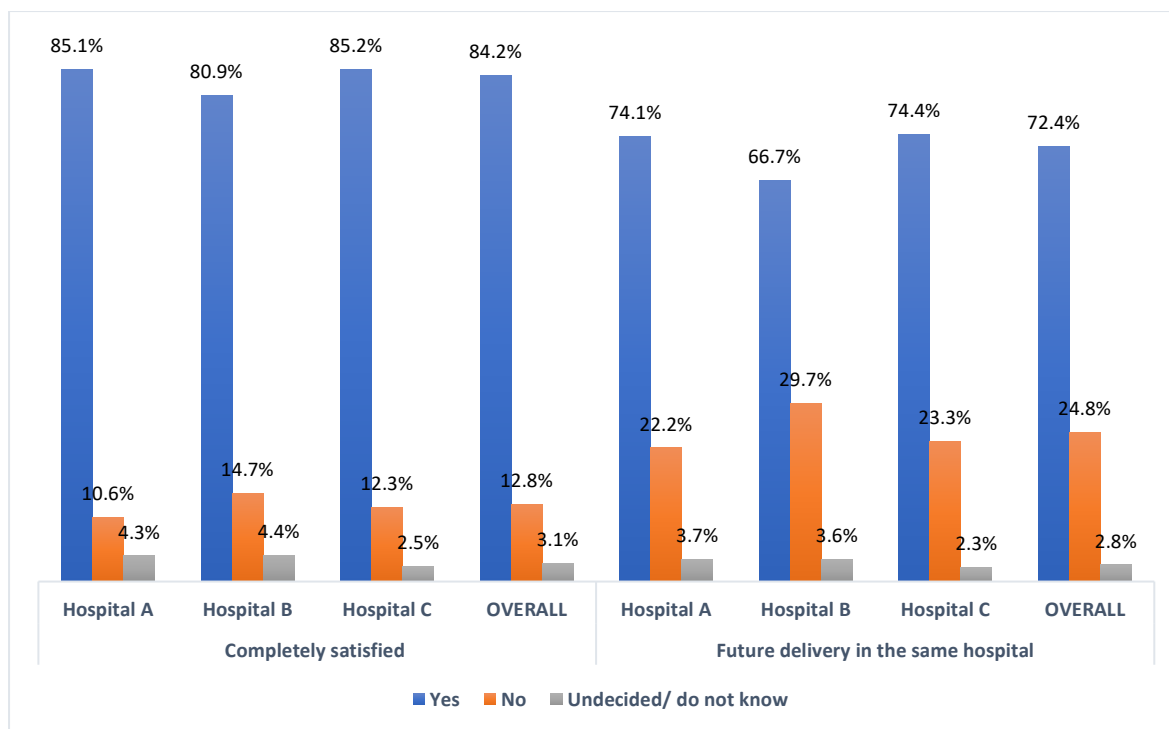


Figure 5.5: Overall satisfaction and future delivery

5.3.1.2. HCWs are perceived to have positive interpersonal qualities by the mothers

A majority of the mothers in the EI had a positive perception (agreeing and completely agreeing) about the HCWs as being very open (94.34%); compassionate (90.58%); respectful (95.46%); devoted adequate time to the mothers (94.18%); and are very honest (92.00%) (Figure 5.6).

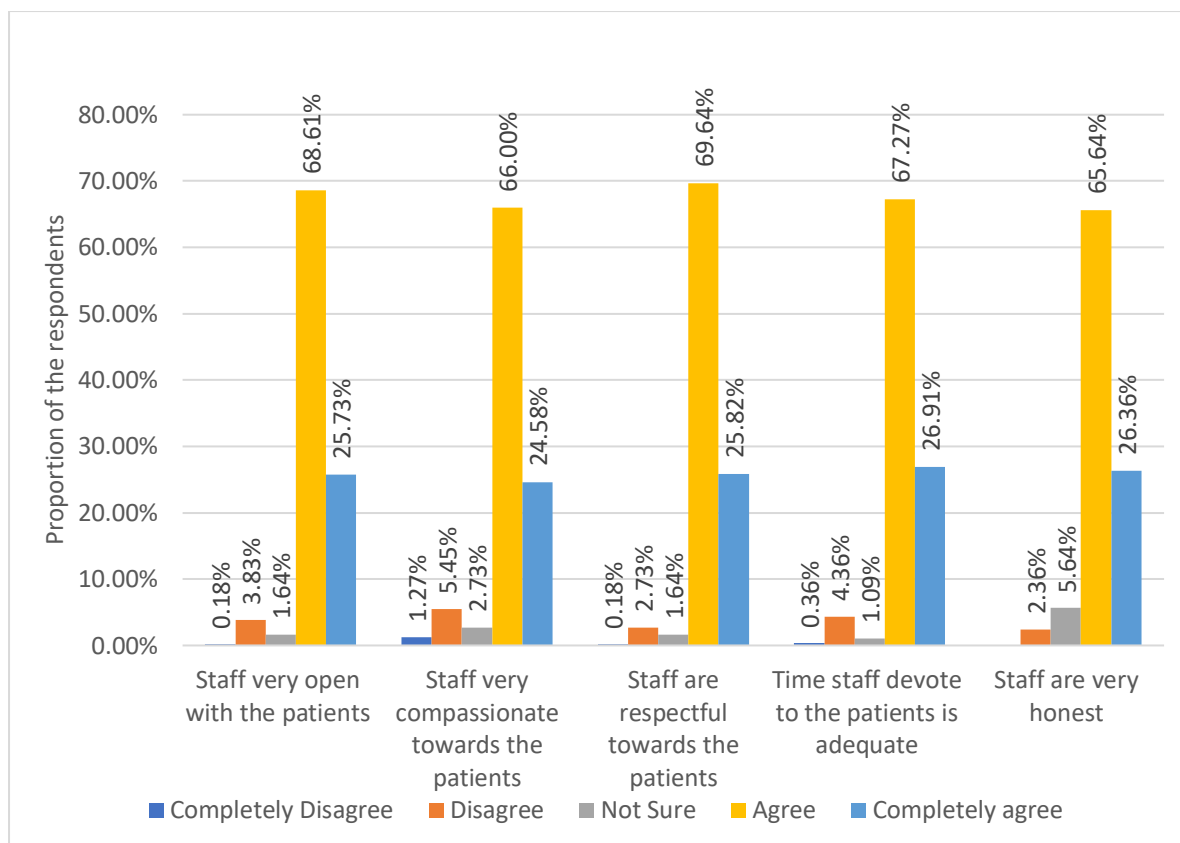


Figure 5.6: Mothers perception about the HCWs interpersonal aspect of the HCWs

In addition, a majority of the women in the FGDs across all the facilities indicated the HCWs were empathetic and friendly. They noted that they had had a good experience and that the HCWs were **'R4: were caring.'** – (FGD002HB) and **'R1: the nurses were okay; they were social and so friendly'** – (FGD006HC). For instance, in hospital B, mothers felt very secure because the HCWs were empathetic and held their hands, and gave them a good treatment:

'R3: Yeah, I came here, and they treated me nicely, I didn't even have strength, the doctor was holding me, yeah I found it to be good.' – (FGD001HB)

The good treatment came in the form of warming the food for the mothers if and when required as postulated by one woman in the FGD:

'R2: Even me when I was here it was nice, I delivered well, the doctors have been good, the services were nice. Because even if someone can't eat at night the doctor sacrifices and goes and warms the food for you. So the experience was good.' – (FGD003HA)

Other doctors called for assistance for the baby and in emergency scenarios when they were not able to handle the mothers at the time:

'R1: What I can say like when I came once I got a certain doctor and I think there was an emergency, and I was forced to wait but I did not take offense because...he called another doctor who came here and I saw they have experience because they just serve you.' – (FGD003HA)

'R3: After delivery, they took the baby and put him where they normally put them and then you are told to leave slowly and go shower, they did not yell at people the way you would hear mothers complaining in the past that they were being yelled at.' – (FGD006HC)

5.3.1.3. Prompt services during emergency

There was a feeling among the mothers that the doctors gave them a priority when dealing with them especially when there were some prompt services to be provided to the mothers during emergencies:

'R1: Let me just say that it was okay because like they served me well because of the problem I had. I was that the doctors I met were very good and they served me fast because they said it was an emergency... The doctor. Yeah. What made me happy is that when I left here the doctor, we went with made sure that I was admitted and because it was an emergency, he made sure that I went to the theatre and it was CS. So, he did not leave me alone, when he left, I had been admitted and everything was okay; R2: By the way, I did not sleep on that day before being assisted. I came on Wednesday at 5am and by 2pm I was already in theatre and brought back to this room' – (FGD004HA)

5.3.1.4. Caring for the baby and making the mothers bed

The HCWs, as perceived by the mothers, showed them some caring especially when it came handing the babies to the mothers who were already tired and exhausted from the experience of birth:

'R1: Because they brought my baby cleaned from the bloodstains, dressed and very clean. So, I cannot say...for me they were very supportive. In fact, they helped me with my baby; R8: Mine was good, I delivered okay and I was given the baby nicely. But in dressing the baby you know it was small and I asked the doctor will I manage this one, after that I was treated well, they even changed my bedsheets, dressed my baby, yeah.' – (FGD001HB)

The mothers also felt very nice when the doctors and nurses were making their beds:

'R2: They are good, if you go with a problem, and you need someone to wash the baby they wash the baby for you, dress them. They make your bed' – (FGD004HA)

5.3.1.5. Mothers were told about the procedure

Some mothers are happy with the fact that the doctors explained the problems that they were facing or that they were preparing to face, and this helped to relieve some anxiety:

'R5: I delivered here, I came on Saturday around two in the morning and I struggled before getting the baby, and they told me I would go to CS but at the time the CS doctor was not there. I waited and they added me water then I delivered here. I saw they were just good, and they serve people well.' – (FGD001HB)

'R2: It was good. The doctor was good, he told me how it would be done, and I was good.' – (FGD004HA)

However, some felt that the hospitals did not quite explain the expectations to the mothers:

'R1: So, some hospitals you are told you are a CS patient and they have not tested you to see if you cannot push a baby out. So some hospitals I do not know the reason.' – (FGD001HB)

5.3.1.6. Mothers appreciate the firmness of the nurses and the experience from older nurses

Some women acknowledged that they had received a firm treatment from the nurses because in their perception they were focused on helping the babies as two mothers indicated:

'R1: They treated me well, you know there are places you see they must be a bit strict because they want to help the baby, no matter the pain you are through, right? So, I cannot complain because there is a nurse that helped me and took my child because he had a problem with breathing, she rushed him and put him on oxygen, and she helped my baby; R4: Yeah I liked them because my baby had the cord entangling his neck and they did CS between two and five.' – (FGD006HC)

The mothers perceived that the older nurses were providing them better care than the younger ones. They acknowledged that they knew how to talk to them:

'R5: The doctors treated me well, and the nurses who are older serviced us well but the young ones where not doing well.... I mean the young nurses; they do not do well but the older ones, because there were older ones. They cared so much.' – (FGD006HC)

5.3.1.7. LM works for breastfeeding and family planning

A common theme across all the FGDs was that the nurses were courteous enough to the patients and supported them during breastfeeding in addition to teaching them how to breastfeed. One mother said that despite the challenges of having to undergo CS, one nurse held the baby for her to breastfeed when she felt that her hands were numb:

'R2: You now like us who went through CS, so by the time I leave the theatre the baby is hungry he has to feed. So, it was such that you are lying on the bed and your body is numb you can't do anything. So, there were nurses who held our babies and we breastfed them, they would show us how you are supposed to breastfeed the baby. Like when you can't sit up, they showed us things like that. So, we were taught well.' – (FGD001HB)

The assertion of training was confirmed by a one facility manager who noted that indeed the hospitals train and empower the nurses with breastfeeding knowledge to ensure that they in turn train the mothers:

'And once this nurse trains in the breastfeeding, she'll go back, we make it as a duty for her to be educating the mother on those...on breastfeeding. We actually even go on one on one. Because we tell them when they are in postnatal, they try to identify, there are mothers who are okay with breastfeeding, they have no problem positioning and what have you.' – (R020FLMHB)

The mothers reported that they received adequate training on procedure and the duration of breast feeding. In addition, they were taught what to do in case the baby was facing some complications which they felt reassuring:

'R4: It was good because we were even told for how long to breastfeed, fifteen minutes, how to hold him, if he throws up what you should do, how to support to swallow the milk, things like that , we were taught just fine.' – (FGD001HB)

One of the hospitals, was even reported to have demonstrated to the mothers through a video on the procedure of breast feeding which they perceived as very useful and helpful:

'R1: Let me say in the morning the doctor came and asked if we had questions and we asked what time the baby should be breastfed, and he told us anytime the baby wants. And then they showed a video that showed how children should be breastfed, how to place the breast to their mouth and things like that. And the family planning we were told if it's after four weeks.' – (FGD004HA)

In addition to breast feeding, in the public hospitals, the mothers were also taught about family planning, how to wash the baby's cord, and even agreed that the service was better compared to another facility:

'R1: Actually, what I can say is you are grouped, and you are taught how you are supposed to breastfeed a baby, yeah

R2: And about family planning, all that.

R3: They wash the cord.

R4: Your place is good, ours had nothing like that.' – (FGD005HC)

5.3.2. Poor experience of care

This subsection presents results from the negative perception of maternal care from LM policy.

5.3.2.1. Inadequate preparation for birth by the HCWs

Some mothers experienced that the HCWs were not well prepared to handle the birth of the baby as they never had the birth equipment readily laid. For instance, one mother indicated that she had been told not to push the baby as some materials were lacking:

'R6: So, I went and delivered but I felt they were slow, they were well prepared. Because you are feeling the baby coming but they are telling you, "Wait." You see? You feel like pushing the baby, but they are telling you, "Wait for us to take this and this." You see? My baby drunk water because they were not well prepared.' – (FGD008HB)

5.3.2.2. Some hospital support staff are perceived as unfriendly

Across the three facilities, the support staff played a key role in shaping the perception of the mothers particularly in maternal care. For instance, in facility C, support staff were perceived as being non friendly and non-empathetic:

'R4: Like the people, who mop, because after the operation, you can't bend, and someone must hold you and you have no one hold and they tell you to wake up and remove your beddings and you can't. In addition, if you are late, they move further away.' – (FGD006HC)

'R5: What I saw, what he did to me, when I was experiencing labour pains, I was told to go to theatre, and I told him I cannot walk. He pushed me like a cart up to the theatre. I told him I cannot walk, he pushed me like a lorry.' – (FGD008HB)

5.3.2.3. The lack of communication of treatment plan after delivery

The mothers felt that there should be a clear communication of the treatment plan immediately after birth and not wait until they were discharged. The plan would help in easing the pressure from the mothers and lessen the potential mistakes of management of the babies:

'R2: can public hospitals offer services like after you deliver your child they wash it for you and wash the cord immediately instead of waiting for two days until you are released for you to know how to wash the cord yourself because I did not know. So, I was asking if they can show you before you go home.' – (FGD002HB)

A clear example of lack of clarity in the communication plan was a story by one mother who indicated that because they did not know how to use the cord cleaning medication, they put it as a nose drop and they ended up in hospital as an emergency case:

'R6: For my child there was a time I put the X-cord on their nose. I did not know; I asked my husband to pass me the medicine at night thinking it was a nose drip. So we thought that was it and we administered to him, we were forced to bring the baby here at night.' – (FGD001HB)

5.3.2.4. Food is inadequate in some hospitals

Some mothers especially in facility A in one FGD interview revealed that despite having a good birth experience in the labour ward and not paying anything for delivery, the food provided particularly by the support staff post-delivery was inadequate and unwholesome. The irony is that while facility A was the least overcrowded for delivery, the food seemed inadequate because the other mothers who delivered in facility B and C noted that they had been fed well. Some mothers in facility A said that appetite for food could sometime last for a whole night post-delivery:

'R2: I also came to learn about it here at the hospital and I didn't pay anything. Though their food is too little for a pregnant woman. It's true, it's too little, a mother has delivered, that food...and then they serve it very early, when it reaches 9pm you are hungry again.

R6: The birthing process of the birth is good, they are very encouraging, but the problem is nutrition, they should look at that. They should know after a mother delivers, the stomach is empty, they should work on that.

R5: I will also say that, nutrition is not good. I was with this one...

R7: There was a day I stayed here without food the whole night. I wasn't given.

I: When did you come?

R7: I had delivered like today and I spent the night. The next day the baby was examined, and he had a fever so I couldn't go home. That night I didn't get food, I had to call home.' – (FGD009HA)

Some mothers also in some private facilities equally experienced the lack of food. For instance, one mother noted:

'R5: I went to the hospital at 10:00 and I was in so much pain, so I went, and they took me and after getting the child, in the hospital there were no services they didn't give me. Food, I took a bath and the baby.' – (FGD003HA)

Therefore, the mothers resorted to having their relatives and family to bring them food which was aggravated by the weakness they perceived after delivery:

'R2: Yes, I had to call home because I felt weak.' – (FGD009HA)

'R2: I cannot say the food is good, they don't look at patients well, the side of maternity let me say like I stayed for three days and never got food.' – (FGD005HC)

However, an informal conversation with the administration post the FGD, revealed that the instance of food inadequacy may have been caused by the support staff who despite the facility planning for adequate food for the whole hospital patients, may have rationed the food further. The sentiments were confirmed by support staff but not indicated the concrete reason for the same.

However, despite the inadequacy of food, there are some mothers from the same hospital who acknowledged that the food was actually good:

'R3: Yeah, it was good, I ate good things, and even the bathroom was clean. The services there are good.' – (FGD003HA)

5.3.2.5. *There is over-crowding and bed sharing leading to lack of privacy (congestion)*

Congestion, as a result of the policy was a common theme across all cadre of respondents. In order to deal with the high numbers of mothers particularly in the level 4 and five facilities which were fairly overcrowded, the mothers shared beds as a way in which the hospital resorted to dealing with the high numbers. While the level three equally faced an increase in number of mothers particularly for ANC and delivery, the mothers did not shared beds:

'We deal with the number, if they are many, they share beds' – (R019FLMHB)

'there is sharing, yeah I would say that but of course because...sometimes there's overstretched.... Of course, we need more of beds ...because of course the mothers share, yes. Although the beds are of course sterilized before ...' – (R001DICHB)

The finding from the HCWs was confirmed by the mothers in the FGD who noted that, the hospitals gave a bed priority to mothers who had had CS over normal delivery. Besides on CS mothers were allowed to sleep on the bed alone in addition to having a special monitoring room. However, the mothers who had given birth normally, were forced to either share beds with other mothers or sleep on the floor with only the babies sleeping on the beds. The problem was particularly in the public sector:

'R3: but the problem I found here is congestion.... And the congestion because I am told CS people, the first three hours...because I slept on a bed alone, after three hours we were two people on the bed. And from there the room we were taken too we would sleep four people with children, six people like that in one bed. So, I would say the thing I would like them to improve are the beds mostly for CS patients. Yeah, because I left there with a back problem because I cannot sleep, you are forced to sit, you sit for the child to sleep. That is what the big problem was; R6: I also said I delivered here but the problem I got here was sleeping. I delivered through CS but after the CS within six hours we were sleeping three people and so it made my legs swell so much.' – (FGD005HC)

The sharing of beds, according to the HCWs, was altering the quality of service provision and even had a potential of introducing nosocomial infection amongst the mothers which was of significant concern:

'Even as much as you want to emphasize on quality of care like infection, you have put three women on one bed. This one doesn't bathe, this one does, this other one is allergic to perfume, this one loves perfume. All those three you will put them on one bed, and they are supposed to

sleep with their babies, what are you doing to those mothers? So, they will end up even bothering you, because they will complain, this one has done this, this one has done that. You see?’ – (R018FLMHB)

Additionally, a majority of the mothers confirmed that the congestion particularly in the government facilities did not make them happy and was forcing them to seek care elsewhere such as private facilities. Such sentiments were also echoed by the national respondents:

‘R3: Then I would like to tell you this hospital is very good, if they could just improve the beds, those are the only things that stress us and the wards for pregnant women who are delivering. That is the only stress here. There is no mother who would come from within [the county] and go to private or go to another county, but we are going because you come for CS and sleep while seated down, your feet swell and you have no peace yourself.’ – (FGD005HC)

‘the congestion was so much... several of them on one bed, sharing a bed you meet three four of them so literally some of them were sitting, labour wards was too full, mothers would deliver on their own or would deliver with the assistance of whoever the helper would accompany them, so they saw this was not possible so they started going to private facilities.’ – (R033DAO)

The experience of sharing the beds is something the mothers noted that that they did not want to remember and if there was a solution to it, then it could make the lives of other mothers beautiful:

‘1: What was your experience with sharing a bed?’

R4: It was very bad. I stayed for one week and I didn’t have a place to sleep. I was just seated; R5: Anything to solve that issue about beds, if they add more beds everything will be okay. Yeah.’ – (FGD008HB)

5.3.2.6. Babies are weighed naked in harsh weather condition

Despite being able to provide LM care, the lack of basic essential equipment and space was also noted be a key driver to poor QoC. For instance, facility managers noted that there were instances when the infants and children were being weighed in an overly populated area which was open during the harsh weather condition:

‘Go to MCH, you’ve gone to MCH and seen how babies are weighed naked outside? In this harsh weather at times, it is at times very cold in the morning but what do we do, we have to weigh

them. So, this issue of survival...but we are glad that we are still able to offer services, we are better than...there are worse counties. But we can do better, yes.' – (R018FLMHB)

5.3.2.7. Mothers are experiencing both physical and verbal abuse

Some mothers noted that they had experienced both physical and verbal abuse from HCWs. The abuse, they said, was exacerbated by the lack of clarity in communication with HCWs and were characteristically similar across the three sites. For instance, one mother in hospital B reported that the nurses had slapped her for being stubborn and uncooperative during birth:

'R6: Yeah, I was slapped here.

I2: You were slapped... with the nurse?

R6: I could not tell whether it was a nurse or a doctor, but she was a female.

I2: For what reasons?

R6: For being stubborn.' – (FGD001HB)

In another instance, one mother mentioned that the nurse had tried to suture her episiotomy without using anaesthesia which was painful:

'R3: you see someone is still in pain, they do not inject you with anaesthesia and they want to stitch you. Things like that are not good, this is also a human being and they still feel pain.' – (FGD001HB)

Besides physical abuse, there was emotional abuse, which was common, especially on occasions that the patients had requested for support from the HCWs. Some HCWs resorted to verbal abuse:

'R5: Someone can even hit you with the mop, I saw someone who had gone through a CS and they told the nurse, they wanted to rise up, you know there is pain while rising up. I have never gone through CS, but I saw her, telling that nurse to help her get up I was the nurse insult her and I did not like that.' – (FGD001HB)

Another mother noted that she was made to wipe the blood from the floor using her own cotton wool despite there being support workers, which she considered unfortunate:

'R2: I delivered in public, and when I was in maternity and after you have delivered the baby, you are in bed, you want to go to the loo, when I wake up sometimes blood falls on the floor. You hear someone comes to clean and say you are making the floor dirty and I don't know what. Like for

me that day when blood fell on the floor, I was told to use my tissue to clean the blood. I was not happy, that thing really disturbed me, and it was public.’ – (FGD001HB)

Equally important was one mother’s testimony showing how she was wheeled to the theatre in a rather uncaring manner that lacked dignity:

‘R5: What I saw, what he did to me, when I was experiencing labour pains, I was told to go to theatre, and I told him I cannot walk. He pushed me like a cart up to the theatre. I told him I cannot walk, he pushed me like a lorry.’ – (FGD008HB)

5.3.2.8. Some HCWs subject mothers to some unhygienic practices

Some mothers noted that they had experienced being subjected to unhygienic practices by some HCWs. For instance, one mother in one FGD noted that she examined in a bed that had not been cleaned after use by another mother, and another one reported having an episiotomy and being left unattended for some time before being treated:

‘R4: Another thing that I didn’t like there, you are examined on a bed that someone else had been examined on and it is damp. It wasn’t good. Like for me I was examined on a bed that had some liquid substance, but they are clean; R9: I delivered at [referral hospital]; I didn’t like their services at all. Because when I delivered, I was cut down there [episiotomy] and the doctor left me for 30 minutes. On coming back he stitched me with all that dirt, so I was not happy at all by their service.’ – (FGD009HA)

Another unhygienic practice and experience were by a support staff who had asked a mother to put their dirty bags on top of the bed which the babies slept:

‘R6: Okay, when I delivered here, I was asleep, when I woke up around 6.30. I found they had opened windows they wanted to clean, if you had put your bag on the floor they ask you to pick it up and put it in bed and that bed is where you place the baby and the ground is dirty.’ – (FGD001HB)

5.3.2.9. Mothers experienced lack of attention/care and negligence

Some mothers also experienced some form of negligence from the HCWs. In one case, the mother reported that the doctor had forgotten to remove cotton wool used in packing blood after delivery

and that they ended – unbeknown to them – going with it home. Similarly, another mother in the same FGD claimed that the students had equally forgotten to remove the cotton wool from them:

'R3: For me there are things that did not please me. Telling students to help them then they make mistakes and also, they should be careful. Like they left me with the thing they had blocked me with; R6: Like in my case they did not remove that thing and then I went home with it.' – **(FGD002HB)**

Additionally, the mothers perceived that the HCWs are not giving them proper attention while attending to them and that they feel ignored:

'R4: What I can say is the doctor should listen to the patient, you see like I can come with my problems you should listen to me and not ignore me' – **(FGD004HA)**

'R1: Now they left me there and that doctor came and asked them, "Why did you leave her alone?" Now he asked them, "What's the problem?" Now they told him the problem and he asked them, "Why have you left her here?" That's when they took me to theatre.' – **(FGD 008HB)**

One respondent from facility B reported that an HCW had neglected a mother who ended up giving birth unattended. In her experience, the baby was left hanging without cutting the cord posed a challenge both to the baby and the mother:

'R1: So that time I came here in the morning but I can say there is something that did not please me at the time because there was a woman delivering there but it was at night you know doctors do not want to be disturbed during that time. So that lady screamed a lot, she was on induced labour and cried to the doctor that the baby is coming, and they would tell her to shut up and go to sleep as in you would feel it wasn't right. So, the child came, and the woman held her with her legs. That is something we did not like but we did not get someone to tell. We were many and we did not like what happened.' – **(FGD001HB)**

Additionally, the mothers also perceived negligence as lack of assurance and proper communication from the HCWs rather than just providing them with the expected support as noted by two respondents:

'R12: I came here, and they examined me and sent me to the ward. When I reached the ward, the pain was too much. When I went to the ward, I didn't feel like climbing the bed, they told me, "Climb the bed, we have examined you and we don't want to disturb you." I went on like that, and

when we reached, they told me, “We have examined you; the baby is not close.” You know sometimes you feel the baby is close, when it’s time to deliver, many doctors and nurses came and told me, “Why are you disturbing us, you are standing on the floor. Climb the bed.” I could not climb. They told me, “We are referring you to [a referral hospital].” Now I said, oh my god what will I do? At that time, they started to insult me and told me, “Come here, you are going to deliver in the ward.”’ – (FGD009HA)

‘R6: When I went to deliver, it was good but there was a doctor I didn’t like there. Because I came and I was in so much pain, we were with him and he told me to go for clothes and I told him the pain had exceeded and he told me, “You must go for your clothes,” and I went. It did not make me happy.’ – (FGD003HA)

Despite undergoing successful CS, mothers who had delivered in private sector developed a negative attitude about the facility because they perceived that the HCWs did not give the baby adequate attention in the NBU as they had anticipated:

‘R6: For me the person who operated on me did well, the baby came out fine. But I saw that the time he was received by the nursed he wasn’t breathing well and then the nurses in [private facility] did not care because when I woke up after six hours I had to go look after my baby, when the oxygen came out I would put it back, I changed everything. So, this time round I did not like them.’ – (FGD006HC)

5.4. Chapter summary

This chapter started by describing the effects of the FM policy on aspects of quality of maternal care. The analysis of results from the mixed methods have converged in the description of the elements of quality on maternal care provision and experience through the lens of access, the role of HCWs, choice of maternal services, and referral of emergency cases. Also, findings from singular data methods (either quantitative or qualitative) have complemented one another especially while exploring the good and poor experience of maternal care experienced from the policy.

Data from all the methods have converged to show that LM policy has improved access, as evidenced by the increase in maternal care utilisation (by all mothers, including the vulnerable). A majority of the women have had skilled delivery because of the LM policy. Also, geographical access, where mothers in rural and urban areas have equal access to maternal care, has improved, and financial access where mothers who may not have previously been able to afford care can now do so without

paying. However, the EIs have shown that transport to facilities, the type/level of facilities, distance to the hospital, hospital opening hours, and the waiting time influences how the mothers access the healthcare facilities. The combined results from all collected data have also shown that the current implementation of LM policy has enhanced the choice of delivery place (either in public or private facilities). However, the results from FGDs and KIIs have complemented the findings from document reviews to show a mixed perception about the choice and preference of place of delivery. The mothers were choosing their place of delivery as influenced by previous birth experiences and opinions from friends and family.

Equally, while the EIs showed fewer mothers were being referred for complications because of LM policy. Those referred revealed in the FGDs that the lack of transport was a main gap in the referral system. Chiefly, the lack of medical equipment and proper infrastructure to deal with the complications resulted in referrals. All the converged results showed that facilities had improved the availability of maternal healthcare supplies and equipment through LM policy. IDIs with the in-charges have further demonstrated that some facilities have even improved their infrastructure to attract more mothers to deliver in the facilities. The mothers revealed that the state of infrastructure, supplies, and equipment influenced their perception about the choice of place of delivery. However, the challenges of implementing the LM policy (as shown in the previous result chapter) are forcing some facilities to supplies, equipment, and infrastructure challenges.

HCWs play a significant role in implementing the LM policy, but the converged results show that they are overwhelmed by the workload. Nonetheless, they are going over and above to provide adequate maternal care to pregnant mothers, who perceive their healthcare delivery and interpersonal skills positively. There is a mixed perception about the HCWs motivation and satisfaction.

Overall, both the FGDs and EIs have shown that mothers have a good care experience, which includes reception of prompt maternal services, good care for the baby after birth, teaching about the birth procedures, breastfeeding, and family planning. However, the mothers' cross-cutting poor experiences are the overcrowding of the healthcare facilities, inadequate food supply, the lack of communication of treatment plans, and experiencing both physical and verbal abuse.

Chapter 6 — Findings: The out-of-pocket payments during childbirth under Linda Mama policy: perspectives of mothers, HCWs, County officials and National stakeholders

6.1. Introduction

The preceding chapter highlighted the quality implication of the current LM policy. This chapter outlines the OOP payments that the mothers make despite the policy being free using the perspectives of the mothers, HCWs, county officials and document reviews. It starts by showing that services under the current policy are freer compared to the previous policy. It then proceeds to show how much OOP the mothers are making and their cost drivers, the perspectives of OOP payments. The chapter concludes by showing the source of funds for the mothers to meet OOP payments.

6.2. Cost implications to the mothers

This section utilises the opinions of the mothers (from the EIs and FGDs) and to those of the HCWs and county officials IDIs to highlight the cost of the policy to the mothers and the facilities.

6.2.1. Services under the current policy are free compared to the previous policy

A majority of the mothers across all the three hospital (and an overall of 78.4%) from the EIs thought that there had been a positive change in the current costs incurred by the mothers under LM as compared the previous FM policy and the era before the policy (*Figure 6.1*). Some HCWs also acknowledged that facilities are able to manage the costs better because they do not have to worry about the cost of treating the mothers like they used to before the policy:

‘It was leading to more complications because you would find a mother who knows that she should actually come for an operation because she had been operated before, so she is told, “You need to deliver in a big facility so that you be operated because you can’t deliver normally.” But they stay out there waiting just to see if they might probably deliver and miss out on the caesarean section. So by the time they realize that they will actually not deliver and they are in danger and they come, you find some of them maybe lose their babies, sometimes you find the uterus has ruptured they get complications so they will end up not ever having a baby and they lose even this baby. So that is something that has been mitigated against by these free services. The mother is confident that if she comes here, she will not incur extra costs. She will just be operated, and she will go home just as she would if she just had a normal delivery.’ – (R015FLMHC)

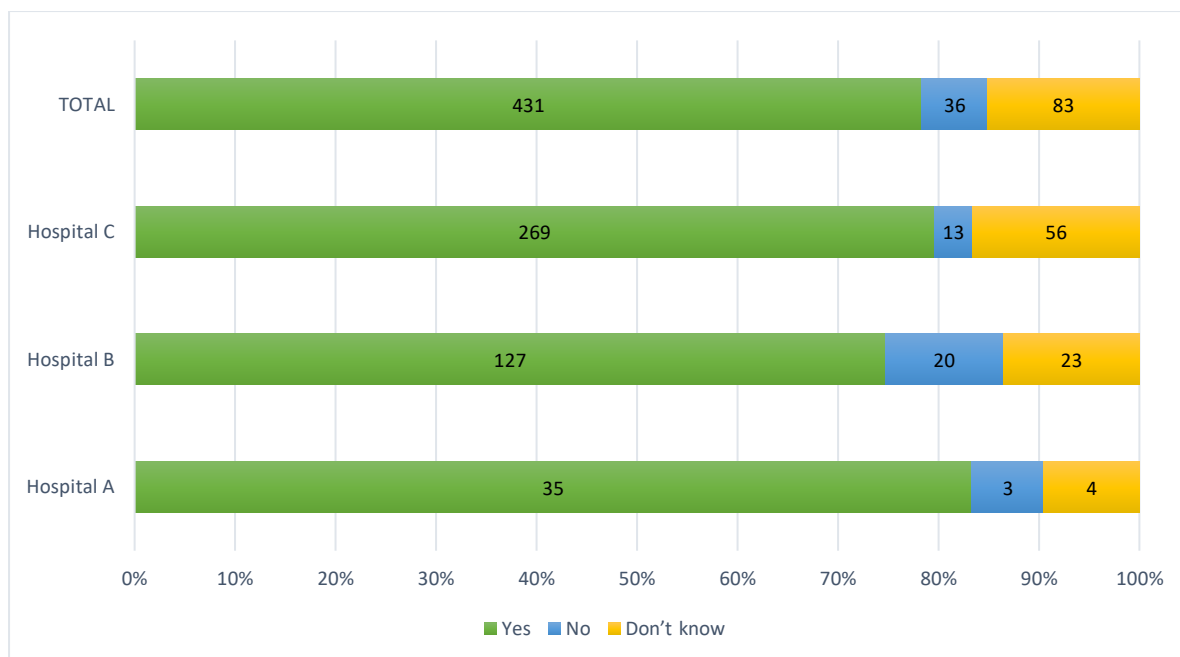


Figure 6.1: Proportion of respondents in the EI thinking there has been a change in the costs of delivery from the era of payments or previous free maternity to Linda mama

The statement was affirmed by a majority of the mothers in the FGDs who acknowledged that the services they received under the current policy were free as compared to the charges before:

‘Before Linda Mama came, I had two children before that, but I was charged a lot of money to deliver a baby. Because the first one was 10,000 [USD 92.8], the second was almost 15,000 [USD 139.3] but the one I delivered with Linda mama was free. Nothing was charged in [a nearby facility], it was free, free, free and it was very good, and I loved that.’ – (FGD005HC)

‘I stayed there for four days and I did not pay anything when I left. I showed them Linda Mama and I left free without paying’ – (FGD004HA)

The assertion was also supported by a majority of the HCWs who indicated that the services at present are free save for requiring the mothers to come with personal effects:

‘I don’t think they are required to make any payments, but they are supposed now to have their personal effects.... Like for example she needs a piece of soap, those small, small things that she needs for her comfort when she is in the ward’ – (R015FLMHC)

‘The services they [mothers] get they are free, unless we don’t have that service that we have to refer to another facility’ – (R020FLMHB)

There was a political angle to the claim that the mothers were not incurring any cost for services of childbirth. HCWs noted that they could not request the mother to pay for the services for fear of the political elites in the county who had the capabilities of shaming the health facilities for seeking charges for free care:

‘No, you can’t charge them. If you charge them they will tell the MCA [member of the county assembly representing the ward where the hospital is based], anyway unless it’s on...I’ve never seen anyone who pays, because if you pay you have to have a receipt for payment.’ – (R004NOHA)

6.2.2. Mothers are making OOP payments for certain direct and indirect costs

Both EIs, FGDs, and IDIs revealed that mothers made some OOPs despite the policy being free. For instance, 98% of all the mothers (n=541), all patients in hospitals A and B from the EIs made some OOP payments, and only 3% in hospital C did not make some OOP (*Figure 6.1*).

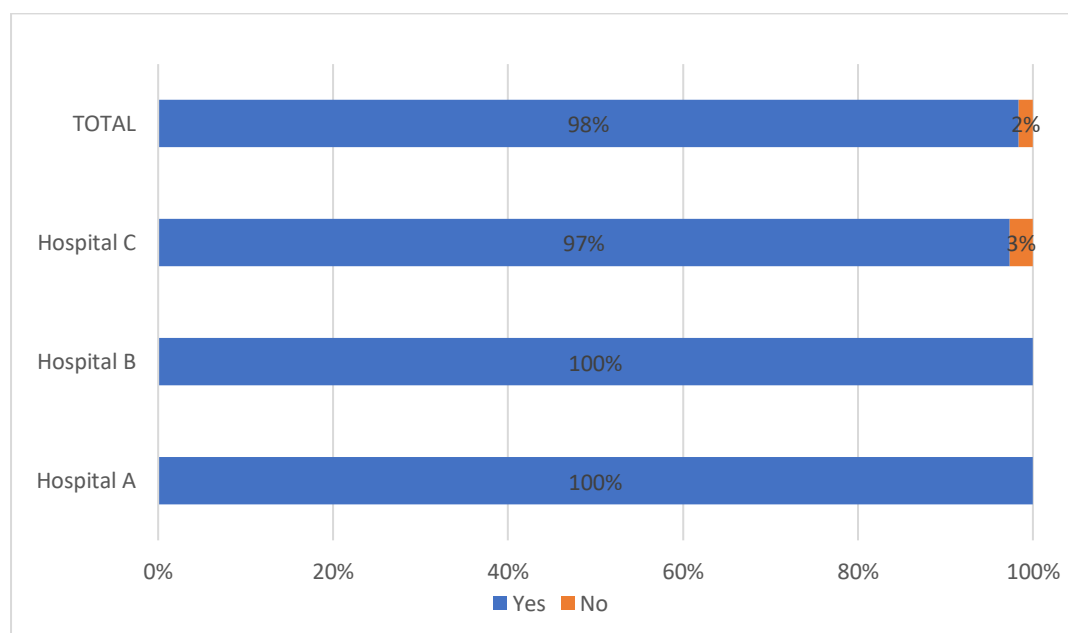


Figure 6.2: Proportion of mothers incurring out-of-pocket expenditure from the EI

Those mothers who made the most OOP payments were aged between 25 – 34 years (USD 10.36); had three and below people in their households (USD 10.29); had a household income of between KES 5,001 – 10,000 (USD 10.52); had other form of employments or were casual labourers (USD 11.36); had an assisted vacuum delivery (USD 16.25). Other characteristics are as shown in (*Table 6.1*). No mothers’ characteristics showed any statistically significant difference in the OOP payments made

(Table 6.1) and the characteristics of the mothers in the sub-group analysis were not predictors of the OOP payments they incurred (Table 6.2).

Table 6.1: The differences in the OOP payment made by the mothers based on the social-demographic characteristics

Variable		n (%) n=541	Mean OOP (USD)	p-value*
Age	24 and below	249 (46.03)	9.29	0.2973
	25-34	239 (44.18)	10.36	
	35 and above	53 (9.80)	8.30	
Number of people in the household	Three and below	195 (36.04)	10.29	0.2703
	More than 3	346 (63.96)	9.30	
Household income per month (KES)	5,000 and below	103 (19.04)	8.76	0.6665
	5,001 – 10,000	148 (27.36)	10.52	
	10,001 – 15,000	88 (16.27)	9.84	
	15,001 – 20,000	93 (17.19)	8.96	
	20,001 and above	109 (20.15)	9.85	
Occupation	Student	19 (3.51)	10.96	0.8204
	Unemployed	266 (49.17)	9.28	
	Self-employed	195 (35.04)	9.70	
	Salaried/formal employment	55 (10.17)	10.80	
	Other (Casual labourer)	6 (1.11)	11.36	
Parity	Primigravida	188 (34.74)	9.73	0.9515
	Para 2-5	347 (64.14)	9.65	
	Parity of above 5+	6 (1.11)	8.40	
Religion	Christian protestant	401 (74.12)	9.68	0.9843
	Christian Catholic	128 (23.66)	9.67	
	Other or no religion	12 (2.22)	9.17	
Marital status	Single	93 (17.19)	8.54	0.2399
	Married	448 (82.81)	9.90	
Number of ANC visits attended	Two or less	85 (15.71)	9.24	0.6810
	Three times or more	456 (84.29)	9.74	
Education	Primary or no education	193 (35.67)	8.74	0.2849
	Secondary	246 (45.47)	10.14	
	Tertiary	102 (18.85)	10.27	

Variable		n (%) n=541	Mean OOP (USD)	p-value*
Means of delivery	(Vaginal (normal delivery)	416 (76.89)	9.34	0.3404
	Caesarian section	124 (22.92)	10.71	
	Assisted vacuum delivery	1 (0.18)	16.25	
Type of hospital	Level 3	42 (7.76)	9.46	0.9587
	Level 4	170 (31.42)	9.85	
	Level 5	329 (60.81)	9.60	

*obtained from *one-way ANOVA test* for categorical value with more than two categories and *chi-square test* for categorical data with two categories. The p-value compared the OOP payment made by the mothers using mothers social demographic characteristics. The analysis only focuses on the mothers who made OOP payments (n=541/ out of the total sample of 551). The 9 mothers who did not make any OOP payments were excluded from the analysis.

Table 6.2: Relationship between key characteristics of mothers and the total direct OOP expenditure

		Coef.	p-value τ	95% confidence interval	
				Lower Bound	Upper Bound
Age	REF (24 and below)				
	25-34	0.075*	0.358	-0.085	0.235
	35-44	-0.039	0.756	-0.287	0.209
Number of people in the household	REF (Three and below)				
	More than 3	-0.115	0.193	-0.288	0.058
Household income per month (KES)	REF (5,000 and below)				
	5,001 – 10,000	0.123	0.196	-0.063	0.308
	10,001 – 15,000	0.099	0.356	-0.112	0.310
	15,001 – 20,000	0.045	0.676	-0.166	0.255
	20,001 and above	0.105	0.332	-0.107	0.316
Occupation	REF(Student)				
	Unemployed	-0.155	0.406	-0.522	0.211
	Self-employed	-0.129	0.499	-0.503	0.245
	Salaried/formal employment	-0.016	0.938	-0.410	0.379
	Other (Casual labourer)	0.024	0.945	-0.666	0.714
Parity	REF (Primigravida)				
	Para 2-5	-0.004	0.967	-0.202	0.194
	Parity of above 5+	0.015	0.962	-0.613	0.644
Religion	REF (Christian protestant)				
	Christian Catholic	-0.004	0.959	-0.150	0.142
	Other or no religion	0.108	0.619	-0.318	0.534
Marital status	REF (Single)				
	Married	0.095	0.304	-0.087	0.277
Number of ANC visits attended	REF (Two or less)				
	Three times or more	-0.019	0.833	-0.193	0.155
Education	REF (Primary or no education)				
	Secondary	0.092	0.213	-0.053	0.236
	Tertiary	0.112	0.271	-0.088	0.311
Means of delivery	REF (Vaginal (normal delivery))				
	Caesarean section	0.099	0.203	-0.054	0.252

		Coef.	p-value	95% confidence interval	
	Assisted vacuum delivery	0.790	0.28	-0.644	2.224
Type of hospital	REF (Level 3)				
	Level 4	0.135	0.297	-0.119	0.388
	Level 5	0.031	0.804	-0.212	0.274
_cons		1.883	0	1.428	2.339
<p>*The OOP payment increases by 7.5% in the 25-34 age group compared to 24 and below age group τ the p-value compared the relationship between the OOP payment made with the mother's social demographic characteristics. The analysis only focuses on the mothers who made OOP payments (n=541/ out of the total sample of 551). The 9 mothers who did not make any OOP payments were excluded from the analysis.</p>					

6.2.3. Estimated / cost drivers of OOP payments in delivery

Both mothers who had a normal delivery and CS incurred some OOP expenditure related to childbirth (Table 6.3 and Table 6.4). A majority of women (98.35%, n=416) who had normal delivery incurred a mean OOP expenditure of USD 9.50 in childbirth, while 98.41% (n=124) of the women who had a CS, incurred a mean OOP of USD 10.88. The mean DMC and DNMC incurred by mothers who had CS were similar at USD 4.70 with the highest cost driver of the services paid for being an ultrasound at USD 15.76; highest cost driver of what mothers were told to buy was the syringe at USD 2.95 whereas the highest DNMC being transport at USD 5.95 (Table 6.4). On the other hand, the mean DMC and DNMC incurred by mothers who had a normal delivery were USD 4.26 and USD 5.69 respectively, with the highest cost driver for service paid for being drugs (particularly, Anti-D) at USD 49.23; highest cost driver of what mothers were told to buy being drugs prescriptions at USD 7.66, and the highest DNMC being transport at USD 5.13 (Table 6.3). The commonest drug the mothers were told to buy was Hexicord used to clean the umbilical cord as it was not available across the hospitals.

Unlike the EIs, key OOPs expenditures identified from the FGDs were failure of the hospital to notify the NHIF offices that they had a NHIF paying client within 24 hours of admission as is required (details in section 4.4.5.1.); unforeseen complication requiring admission of neonates in NBU; and scan during ANC.

'R6: I paid 8,000...I: What were you told it was for? R6: I wasn't told what it was for, because when...we were told we had been given permission [discharged home] the bill was brought, and we went to pay. I: And did they use the NHIF card as well? R6: No, they did not use NHIF.... They told me because...they give 24 hours right, and mine had already elapsed. I: They didn't even try to follow up. R6: I tried following up at NHIF, but they told me because I had not identified anything, they said they cannot help me.' – (FGD008HB)

'R5: NBU [newborn unit], I paid for the child. I paid 4500' - (FGD005HC)

'R2: When I was sent to the lab we paid for the things, we were told which was four hundred and then took then took them to the doctor, nothing else.' – (FGD006HC)

Like EIs, the cost of Hexicord drug and Anti-D were a common theme across all the FGDS and the HCWs IDs. HCWs acknowledged that some of the reasons mothers were incurring costs was due to inadequate or lack of supplies and medication in the hospital:

'Yes. Like when a mother delivers, they are supposed to... use surgical spirit because of care of the cord, which we are asking them to buy the Hexi-cord. And also, if there are no drugs, maybe a mother is sick, has an infection and we do not have that drug in pharmacy they have to buy.' – (R007DICHA)

'Let's say we have a mother who is rhesus negative and we don't have Anti D in the facility, she buys.' – (R009NOHA)

'R3: Like this injection drug now [Anti-D], it's like they normally don't have it so someone told me to buy.....You are injected twice and that is 10,000 [USD 196.94].' – (FGD008HB)

Like from EIs, transport cost, either for referral or for seeking treatment, was a common theme and a hindrance to seeking care, besides predisposing the mothers to risks:

'R6: Especially that transport issue, when someone comes here, they are in pain and they have been referred to [a referral hospital in the county of study]. They are told to look for their own transport... ; R8: I want to say transport is very expensive because let's say someone who has undergone CS from [a referral hospital in the county of study], you cannot board a matatu [public transport] because of the bumps, and if you use a taxi...you see that is an expense' – (FGD009HA)

Lack of clarity of the policy amongst the clerks and accountants handling the LM registration and HCWs was shown as a driver of OOP payments by the mothers. For instance, while the policy states that the infant is cared for under Linda mama for up to a year (Kenya Ministry of Health and National Hospital Insurance Fund, 2016, p4), the clerks and HCWs – because of lack of awareness or clarity of the policy – were making the mothers incur OOP payment despite being free:

'R1: I came here with a sick child one month old, the place where we pay for the card and asked that my baby is one month old if I could use Linda Mama and I was told here they do not use Linda Mama so I paid' – (FGD001HB).

Also, the unclearness of the policy among the HCWs and clerks is making the hospitals to lose the moneys that they are incurring for treating complications. It is not clear in the policy on whether the mothers are supposed to pay the cost:

'We are yet to get feedback from the office because we have had three cases of such. Yes, we tried to claim but it's quite a job, so they had to clear the air on the same issue because on the guideline policy for level 3 facility it's hard.' – (R006AOHA)

Table 6.3: Estimated out-of-pocket payments in normal delivery (number = 423)

OOP expenditure incurred during childbirth		Observations (%)	Mean USD (SD) (from the people who paid)	Median USD (from the people who paid)	Min USD (from the people who paid)	Max USD (from the people who paid)	As a % of total direct cost
Direct medical cost (Services paid for + Told to Buy)		397 (93.85)	4.26 (4.66)	3.45	0.98	56.13	94.23%
Services paid for	Consultation	1 (0.24)	3.94 (0.00)	3.94	3.94	3.94	6.61%
	Lab-tests	5 (1.18)	4.92 (1.87)	4.92	2.46	7.39	12.41%
	Ultrasound	6 (1.42)	14.28 (5.49)	12.8	9.85	24.62	41.33%
	Drugs	1 (0.24)	49.23 (0.00)	49.23	49.23	49.23	82.64%
	Other costs	2 (0.47)	6.31 (0.56)	6.31	5.91	6.7	11.25%
Total services paid for		14 (3.31)	12.58 (12.20)	8.62	3.94	49.23	82.64%
Told to Buy	Cotton wool	390 (92.20)	2.46 (0.88)	2.46	0.49	6.89	11.57%
	Basin	367 (86.76)	1.07 (0.26)	0.98	0.49	2.95	4.95%
	Drugs	18 (4.26)	7.66 (15.14)	2.95	0.59	49.23	82.64%
	Other	89 (21.04)	2.24 (5.48)	0.98	0.20	50.71	85.13%
Total Told to Buy		397 (93.85)	4.26 (4.65)	3.45	0.98	56.13	94.23%
Direct non-medical cost		366 (86.52)	5.69 (6.21)	3.59	0.20	41.36	69.43%
	Transport	355 (83.92)	5.13 (5.85)	2.95	0.20	39.39	66.12%
	Food	28 (6.62)	2.91 (2.81)	1.97	0.20	11.82	19.84%
	Other	90 (21.28)	1.96 (3.56)	0.98	0.20	29.54	49.59%
	Unofficial payments	1 (0.24)	1.97 (0.00)	1.97	1.97	1.97	3.31%
Overall direct expenses		416 (98.35)	9.50 (8.20)	6.89	0.98	59.57	100.00%

Note: Average Exchange rate (September 2018 - March 2019) 1USD=101.555; Overall number of mothers who had normal delivery is 423; People who had normal delivery but did not make any OOP is 7

Table 6.4: Estimated out-of-pocket payments in caesarean section delivery (number = 126)

OOP expenditure incurred during childbirth		Observations (%) (overall n=126)	Mean USD (SD)	Median USD	Min USD	Max USD	As a % of total direct cost
Direct medical cost (Services paid for + Told to Buy)		121 (96.03)	4.70 (4.09)	3.45	1.97	31.51	20.53%
Services paid for	Consultation	1 (0.79)	0.98 (0.00)	0.98	0.98	0.98	0.64%
	Admission	1 (0.79)	0.98 (0.00)	0.98	0.98	0.98	0.64%
	Lab-tests	6 (4.76)	8.86 (6.29)	7.39	3.94	19.69	12.83%
	Ultrasound	2 (1.59)	15.76 (8.35)	15.76	9.85	21.66	14.11%
	Drugs	1 (0.79)	1.97 (0.00)	1.97	1.97	1.97	1.28%
	Other costs	2 (1.59)	12.80 (2.79)	12.80	10.83	14.77	9.62%
Total services paid for		9 (7.14)	12.69 (7.78)	10.83	0.98	26.59	17.32%
Told to Buy	Cotton wool	121 (96.03)	2.37 (0.86)	2.46	0.98	7.88	5.13%
	Basin	117 (92.86)	1.11 (0.37)	0.98	0.59	3.54	2.31%
	Syringe	1 (0.79)	2.95 (0.00)	2.95	2.95	2.25	1.47%
	Drugs	9 (7.14)	2.29 (0.42)	2.46	1.48	2.95	1.92%
	Other	9 (7.14)	1.43 (0.69)	0.98	0.49	2.56	1.67%
Total told to Buy		121 (96.03)	3.75 (1.25)	3.45	1.97	8.86	5.77%
Direct non-medical cost		121 (96.03)	4.70 (4.09)	3.45	1.97	32.52	21.18%
	Transport	110 (87.30)	5.95 (15.03)	1.97	0.20	147.70	96.22%
	Food	4 (3.17)	3.13 (2.31)	3.45	0.69	4.92	3.21%
	Other	42 (33.33)	2.70 (4.14)	0.98	0.30	19.69	12.83%
Overall direct expenses		124 (98.41)	10.88 (15.16)	6.89	0.98	153.51	100.00%
<i>Note: Average Exchange rate (September 2018 - March 2019) 1USD=101.555</i>							

6.2.4. Informal payment

Two mothers from EI (one had normal delivery and the other CS) made informal payment for notification of birth and the for other security and in both cases the payments were demanded. From the FGDs, informal payments were also a common theme. Mothers were being made to pay non-existent fees and cost either due to HCWs taking advantage of the mothers or due to misrepresentation of the policy aggravated by poor knowledge of the policy. For instance, in one of the hospitals, the registration clerk misrepresented the policy to the mothers:

‘When we started clinic [ANC clinic], we were told to take Linda Mama and we were told for you to be fully covered until completion of clinic during pregnancy to pay three hundred. So, we paid three hundred’ – (FGD001HB)

Some mothers were making some informal payments that were inexplicable:

‘I was charged. So, I don’t know, and the baby was not taken anywhere, and I didn’t leave here with any medicine. Even if it is free maternity after that I must go back to my pocket, and you see I am still paying for NHIF and I have never been late, initially I paid in advance by three months.’ – (FGD005HC)

6.2.5. Mixed perception about mothers incurring OOP payments

There was a mixed perception amongst the mothers, HCWs, and county respondents concerning OOP expenditures. A majority of the mothers from the FGDs felt that the OOP payments for basic purchases were pushing mothers in need of financial aid into catastrophic expenditure and they felt that mothers who cannot afford basic items should be adequately supported:

‘R12: Okay I think those cotton wool and things we are told to buy, because we have Linda Mama, it should support the mother in every way and even provide those things. Because not everyone is financially stable. There are people who cannot afford the cotton, or they are over bleeding and they need a lot of cotton. So, it should support us in every way.’ – (FGD009HA)

Table 6.5: Impact of OOP on average monthly household income

Mean OOP payments	% of monthly household income
Total direct medical cost	2.36 %
Total non-medical cost	2.79 %
Overall direct expenses	5.16 %
Overall direct expenses (Hospital A)	6.38 %
Overall direct expenses (Hospital B)	3.78 %
Overall direct expenses (Hospital C)	6.17 %

However, analysis of EIs shows that there is no OOP payments which exceeded the 10% threshold (Table 6.5), hence there was no catastrophic expenditure. The average total DMC and the total non-medical costs were estimated to be 2.36% and 2.79% of the average monthly household income. The overall direct expenses in all the hospitals were estimated to be 5.16% of the average monthly household income. However, hospitals A and C had a higher overall direct expense of 6.36% and 6.17% respectively of the average monthly household income while Hospital B had 3.78% (Table 6.5).

Some mothers in the FGDs thought that the mothers should take some responsibility and prepare for birth as the government cannot take care of everything, an assertion that some HCWs acknowledged and indicated that mothers need to take care of basic things. For instance, one mother in the FGD noted that the government cannot buy mothers babies clothing and that it is common sense to come with baby clothing before birth:

'R6: Yeah, because there is no way they [government] can help...you know a lot of people think public is charity, even if its charity is there a way someone can help even with the baby's clothes? Like there was a certain woman, who came here to deliver, and she didn't even have clothes, so we had to help. Surely how can you come to the hospital without anything, what were you coming to the hospital to do? Some things you should not even be told to bring, you should think for yourself because you are an adult. Or you should even ask if that is your first born. You know many people are as it's my first born, I do not know. But you know even first-borns should wear clothes. They come here and all they have bought the baby is a swimming costume, surely is that baby really going to swim? And they only have one baby shawl, you see the baby gets cold at the time, the baby is cleaned of blood with the same baby shawl and it's what they go with. Some things are not about public, some things are about using your common sense. You should carry cotton wool; you know they cannot provide cotton wool for everyone and you know many people use big cotton wool. So, I think some things people should bring themselves. It's not about public.' – (FGD001HB)

'We have not reached there, that GoK facilities, we will give people basins and slippers and towel and bathing towel, no. Baby wrappers, maybe we will get there.' – (R018FLMHB)

The mothers also noted that during their ANC clinic, in preparation for birth, the HCWs adequately prepared the mothers on what is needed at birth. The perception was that, with the preparation, it was justifiable to purchase some things and come with to deliver:

'R2: We are told all the time, like here I since I delivered, I have come to the clinic three times. I hear them say, like right now we are all here, you hear them being told carry diapers, especially cotton wool is very important. If you know you are almost delivering a baby, as in you see your days are almost, you pack your clothes, and you pack your baby's. Cotton wool; don't ever forget cotton wool and things like that. The rest can be taken care of there, things like razor blades, and other things they are usually there. So, somethings they always tell us here.' – (FGD001HB)

Some mothers acknowledged that it was okay for them to buy the personal effects as they had to use them during their stay and they considered buying them for the feeling that they were 'small things' and inexpensive, because they were not paying for hospital delivery:

'R1: The ones I was using personally I thought of buying myself because when I was admitted on Monday and I delivered on Tuesday night so I had to buy all those because I had to use [and] because I could not stay like that..... We should buy because if we were paying for the hospital, we would not have managed but these small things we can buy on our own' – (FGD004HA)

'R4: It is better to buy for yourself because those are not very expensive things.' – (FGD004HA)

On the other hand, others perceived that because of increased number of mothers seeking birth services, they were happy to incur cost of some services such as ultrasound and lab tests outside the public health facilities to avoid queuing:

'R2: What I did, I saw the line that is usually at the lab and I did my math as a Kenyan. I came with the results from outside the hospital and gave them to the doctor. We did not pay anything to see him. Afterwards it's when we started to come to you. We did not pay anything when we came here for the first time here for clinic. That's when they told us Linda mama.' – (FGD006HC)

Moreover, both mothers and HCWs were convinced that it was okay to purchase the basic elements such as basins as they perceived sharing with other mothers as being unhealthy and a potential source of nosocomial infection:

'R4: Because if they provide for you, you will be using like a single basin like 10 of you, it's not healthy.' – (FGD005HC)

'Let's say there are key things that the mothers need, but I think because of hygiene as well and things like basins, coming with their own basins I think it's essential that I personally would get my own basin as opposed to having sharing. These are personal things where you are guaranteed your own. So, it's more of a preventive thing. So those are things they require before they come in. Yes, but also, we don't expect them to buy a bed or you know, that's a service we offer.' – (R017CMLM)

In addition, among both mothers and HCWs, there was a feeling that items such as basin were things that they would end up using at home and so it okay to purchase them:

'R4: I was thinking, I knew I needed to have a basin, it's for me to shower in and if I shower with it, I'll go back home with it. So, there was nothing I experienced that I told me to buy. R1: You know you must use a basin yourself because if you wait to be given, it won't help you. Yeah. R5: Even for me, the things that we buy are okay because they are yours.' – (FGD008HB)

Some mothers noted that while it was imperative for the mothers to purchase some of their own basic stuff, they felt that the hospitals was in a position to provide the mothers with the same in cases where the mothers were admitted due to emergency before the actual date of delivery. This claim was supported by the HCWs who indicated that they had adequate supply of maternity packs that were given to mothers who were very poor and in need, or those who came in as emergencies. The decision not to give all mothers was for the hospital to be able to maintain the supply:

'R6: Like cotton wool, things like that. I didn't come with anything because I came abruptly because it was night-time. So, I was thinking if they could provide such things because it's night-time there's no way to go and buy, you have come abruptly. So, for emergency cases, they can provide.' – (FGD008HB)

'It has improved because when it comes to the nursing services most of the things we used to tell the mothers to buy but you see now sometimes, yes they will buy but in case of emergency especially from the mothers who come in second stage or the mothers who cannot be able to afford. You know there are those mothers even to buy a cotton wool is an issue. So, we help them with those things, we propose this from the hospital. So, it helps.' – (R008NOHA)

Despite providing free LM services, the mothers felt that private hospitals had some hidden costs: *'Yeah, pay 5000 and after delivery you pay another 5000, if you deliver through Cesarean you pay another five'* – **(FGD005HC)** which in results incentivising the mothers to seek services from the public facilities rather than private as one respondent noted:

'I went for clinic [ANC] at a private hospital. The last two clinics I came here because of that Linda Mama card, because it's free. I was told over there [private hospital] the amount I was to pay was 20,000 to deliver that's why I preferred coming here' – **(FGD008HB)**.

Some of the charges incurred by the mothers, particularly those that had sought some services from the private hospitals, were due to lack of sincerity on the part of the private providers who indicated to them that possession of LM cards excluded them from making any payments but they ended up incurring costs at discharge:

'Initially [during admission]....I had asked them if the card will work and they said yes, that I wouldn't pay for anything. The following day I went back, and they told me to pay 600 for the basin and cotton wool....They gave me [cotton wool and basin] but I had asked them if I could buy one for myself and they said they would be free but when we were leaving they asked us for money.' – **(FGD003HA)**.

'Not in government facilities, like I told you there are some people who are very cheeky go in the FBOs [Faith based facilities], some in the private. And I think there is need for closer supervision from your side because these things should not happen, yeah.' – **(R016CSLM)**

Hospitals are using their network of ambulances and community health volunteers to ensure that the transport cost incurred by the mothers to the facility is reduced. In addition, the facilities are utilising funds set up by the administrators, or personal contributions from HCWs to help meet the transport costs and prevent mothers incurring OOP expenditure:

'We take them, in fact there are those cases that I had said, you use the ambulance or sometimes we even ask and contribute and help that mother. And if there is money in the office the administrator can give the mother something small.... If the mother is not in a position to be able to travel to home, the ambulance is here. And also, there is also another vehicle.' – **(R008NOHA)**

'Although the Community Health Workers [are in] level 1 [community level] they take part...such that if there is someone who has a problem, they have contacts for the hospital, they are able to escort the patients to the hospital.' – **(R003NOHA)**

6.2.6. Sources of funds for meeting OOP payments

The Els show that across the three hospitals, a majority of the mothers are using donations from friends and family and own cash and that from family to meet the OOP expenses (*Figure 6.3*).

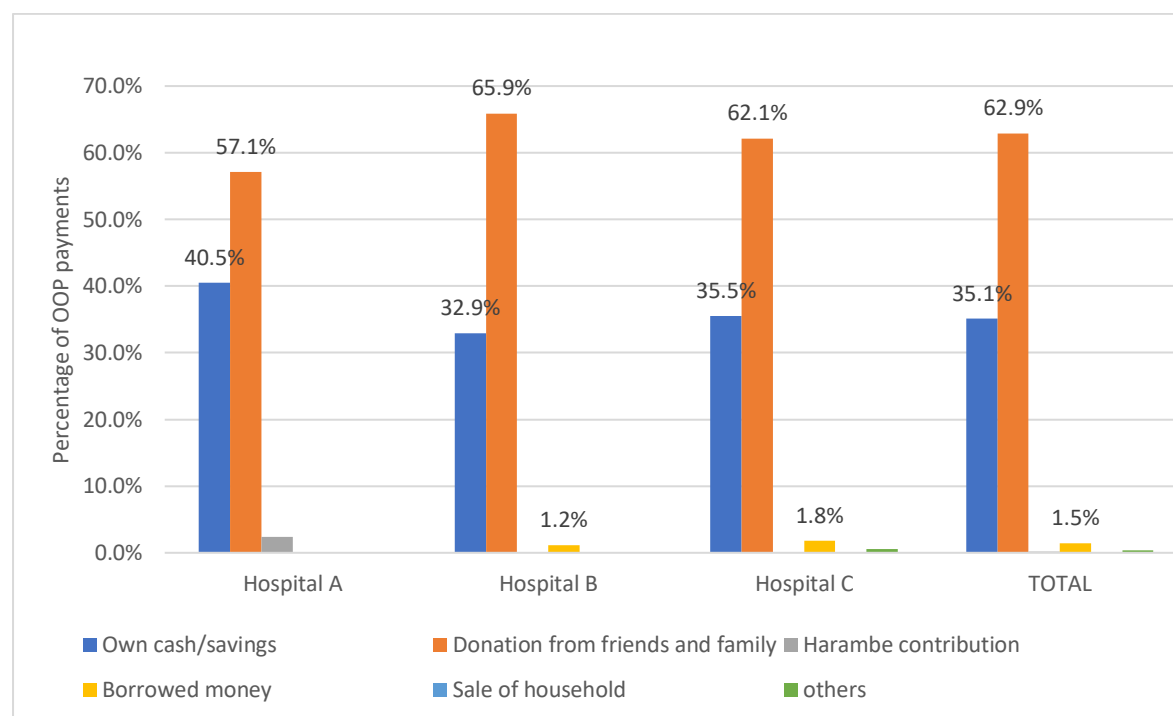


Figure 6.3: Sources of funds for the OOP payments

As shown in *Figure 6.4*, most of the respondents are registered with the NHIF to access LM services across the three hospitals of study, as compared to those who are paying for childbirth services by NHIF card where they pay monthly fees, and a minority that have private health insurance. The mothers in the FGDs acknowledged that NHIF, where the mothers pay monthly fees, catered for the cost of complications that arose after the baby was born and not LM. Those who did not own the NHIF cards, ended up paying OOP in cases of complication:

‘They calculated the bill and returned them to the doctor. I did not pay anything. Since when my baby was born, he did not cry. He was taken to NBU and stayed there for two days of which NHIF paid.’ – (FGD006HC)

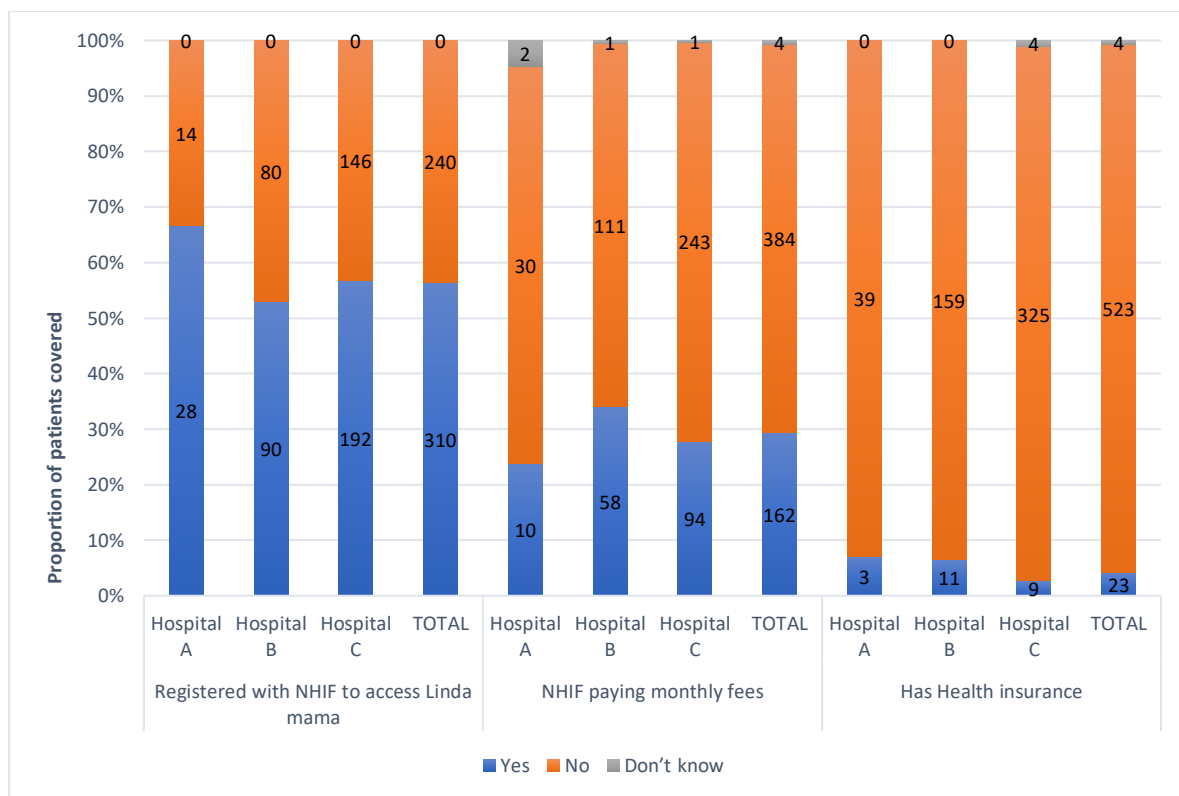


Figure 6.4: Proportion under Linda mama, other NHIF claims, has health insurance (n=550)

Being complementary, NHIF card (where the mother pays monthly fees), gives the mother more choice and relieves childbirth costs. However, late payments of NHIF monthly fees, results to penalty charges; hence, making mothers and their families to choose LM cover to meet the cost despite having NHIF cards for which they pay monthly fees. On the other hand, defaulting to pay the monthly fees may result to non-access to other schemes of childbirth services:

'R2: But you see NHIF is something that you pay for and Linda Mama is something free, you do not pay. So, they should look properly into it because I would have been served using NHIF, but it turned out I had not paid for one month, so it had a penalty and we used Linda Mama because I had both [schemes]. So, I can say that NHIF should also look at the people they serve because like now she [fellow FGD respondent] was charged nine thousand, what was it for? We delivered like on the same day and I wasn't charged, and she was charged; R1: I had NHIF, but I had failed one day without paying so I had a penalty, so they said I won't use NHIF and I filled Linda Mama and it was settled' – (FGD005HC)

'The people [NHIF clients paying monthly fees] who have been there, and they have defaulted they will be excluded if they are not going to pay for reactivation of their cards because the system already has them, and we can't register them again.' – (R010FLMHC)

The other source of funds for childbirth services are private health insurances, mostly for peoples in formal jobs, are giving mothers a good choice of the type of services, and better treatment:

'R4: I used Jubilee card medical cover from work. So, I went there and found their services good, the food was good, they treat mothers who deliver, and they serve you.' – (FGD001HB)

6.3. Chapter summary

This chapter started by describing the OOP payments that the mothers make despite the policy being free. While the policy is free on paper, combined data from all the methods converge to show that mothers are still making OOP payments estimated averagely at USD 9.50 for those with normal delivery and USD 10.88 for those with CS. Els show that the socio-demographic characteristics of the mothers do not determine the amount of OOP incurred. On the contrary, the main cost drivers are DMC of elements such as drugs (mainly Anti D) and DNMC of transport for those undergoing normal delivery; and DMC of components such as lab tests and other costs and DNMC of transportation for those undergoing CS delivery. Also, very few mothers, both from the EI and FGDs, confirmed that they make OOP expenditure either because of misrepresentation of the policy's content from the providers or lack of knowledge. However, while the OOP payments were not considered catastrophic at 10%, the FGDs with the mothers revealed a mixed perception about the OOPs incurred. Some mothers perceived that they had a responsibility to spend on their personal effects (and that they had been prepared for it during ANC visits). On the other hand, others felt that the costs could be avoided in their entirety. The Els showed that the main source of OOP fund were donations from friends and family. Further, the NHIF card (where the mother pays monthly fees) were complementary and give the mother more choice and relieved childbirth costs.

Chapter 7 — Findings: Potential impact of the free maternity policy: methodological approach to evaluating impact.

7.1. Introduction

The preceding chapter highlighted the OOP payments that the mothers make despite the LM policy being free and the cost drivers of the OOP payments. This is the final findings chapter of the thesis. It presents findings of the evaluated overall effect the FM policy (implemented in 2013), captured by both early neonatal and neonatal deaths as quality outcomes and intermediate outcomes described in section 3.4.8.3. The chapter is based on the empirical strategy described in the same section 3.4.8.3. The chapter starts by providing the sample characteristics and the descriptive analysis of the 2014 KDHS data utilised. It then proceeds to show OLS models and fixed effects estimation results followed by further exploration of the models in four different panels and effects of the placebo treatment. It concludes by presenting the estimation of the cost benefit consideration of the policy evaluated.

7.2. Sample characteristics and descriptive analysis

This section presents the 2014 KDHS variable characteristics of the data utilised in this analysis and the descriptive analysis. The variable definition and characteristics are presented in *Table 7.1*. The first column shows the variable; the second describes the categories, the third shows overall mean, and the last the standard errors. Overall, 1.61% and 2.34% of all the births resulted in early neonatal deaths and neonatal deaths. Additionally, 6.75% of all the births were conducted through CS. 72.47% of all births were from mothers who were between 20 – 34 years; 45.26% of the births were from teenage pregnancy (age of the mother 18 years and below); 19.15% happened to mothers who had Less than two years preceding birth intervals; 39.51% from mothers who were grand multiparous; 30.31% from working-class mothers. A third of the births, 34.23% were from children of the mothers in the Poorest quintile; from mothers residing in rural areas 67.40%; and from the former Rift Valley province 32.67%; and had primary level of education 52.72%. Nearly equal proportions of the births were from either gender; a minority 2.12% were LBW, and 29.75% were initiated early on breastfeeding.

Table 7.1: Summary of variables, their definitions, and descriptive statistics (n= 20,927)

Variable	Description	Mean	SE
Dependent variable			
Main outcome variables			
Early neonatal mortality	Dichotomous variable indicating if early neonatal mortality, 0 otherwise	0.0161	0.0009
Neonatal mortality	Dichotomous variable indicating if neonatal mortality, 0 otherwise	0.0234	0.0011
Intermediate outcome variables (ANC care)			
Attended to by skilled assistants in pregnancy (assisted by Doctor /nurse/midwife)	Dichotomous variable indicating if attended to by skilled assistants in pregnancy, 0 otherwise.	0.6646	0.0033
Timing of the first ANC check is less than 16 weeks	Dichotomous variable indicating if the timing of the first ANC check is less than 16 weeks, 0 otherwise	0.2570	0.0030
Four and above ANC visits during pregnancy	Dichotomous variable indicating if four and above ANC visits during pregnancy, 0 otherwise	0.3860	0.0034
Blood pressure measured in pregnancy	Dichotomous variable indicating if blood pressure measured in pregnancy, 0 otherwise	0.3024	0.0032
Urine sample measured in pregnancy	Dichotomous variable indicating if urine sample measured in pregnancy, 0 otherwise	0.2829	0.0031
Blood sample taken in pregnancy	Dichotomous variable indicating if the blood sample was taken in pregnancy, 0 otherwise	0.3086	0.0032
Iron tablets taken in pregnancy	Dichotomous variable indicating if iron tablets were taken in pregnancy, 0 otherwise	0.2303	0.0030
Malaria prophylaxis in pregnancy	Dichotomous variable indicating if Malaria prophylaxis in pregnancy, 0 otherwise	0.2633	0.0030
Weighed in pregnancy	Dichotomous variable indicating if weighed in pregnancy, 0 otherwise	0.3120	0.0032
Height measured in pregnancy	Dichotomous variable indicating if height measured in pregnancy, 0 otherwise	0.1362	0.0024
Told about pregnancy complication	Dichotomous variable indicating if told about pregnancy complication, 0 otherwise	0.1726	0.0026
Took intestinal parasite drugs	Dichotomous variable indicating if took intestinal parasite drugs, 0 otherwise	0.1046	0.0021

Variable	Description	Mean	SE
Intermediate outcome variables (Delivery care)			
Delivery through CS	Dichotomous variable indicating if delivered through CS, 0 otherwise	0.0675	0.0018
Birth in a public hospital	Dichotomous variable indicating if birth in a public hospital, 0 otherwise	0.4293	0.0034
Assistance by skilled assistants at delivery (assisted by Doctor /nurse/midwife)	Dichotomous variable indicating if assistance by skilled assistants at delivery, 0 otherwise	0.5493	0.0034
Intermediate outcome variables (Neonatal care/ factors)			
Low birth weight	Dichotomous variable indicating if the baby is Low birth weight, 0 otherwise	0.0212	0.0010
Early initiation of breastfeeding	Dichotomous variable indicating if early initiation of breastfeeding, 0 otherwise	0.2975	0.0032
Intermediate outcome variables (Postnatal factors)			
Mother checked by a health professional after delivery	Dichotomous variable indicating mother checked by a health professional after delivery, 0 otherwise	0.1990	0.0028
Babies with a postnatal check within 2 months	Dichotomous variable indicating babies with a postnatal check within 2 months, 0 otherwise	0.2162	0.0028
Independent variables			
Maternal characteristics (socio-economic, demographic, biological)			
Age of the mother at the birth of the baby			
Less than 20	1= if the age of the mother at the birth of the baby is less than 20,0 otherwise	0.1485	0.0025
20-34	1= if the age of the mother at the birth of the baby is 20-34,0 otherwise	0.7247	0.0031
35 years and above	1= if the age of the mother at the birth of the baby is 35 years and above,0 otherwise	0.1269	0.0023
Age of the mother at first birth if an adolescent			
18 years and below	1= if the age of the mother at first birth is 18 years and below,0 otherwise	0.4526	0.0034

Variable	Description	Mean	SE
Preceding birth intervals (excluding first-order births)	Dichotomous variable indicating if the preceding birth interval is less than two years		
Less than two years	1= if the preceding birth interval is less than two years,0 otherwise	0.1915	0.0031
Parity	Dichotomous variables indicating grand multipara (parity of 4 and above)		
Grand multipara	1= if parity is four and above, 0 otherwise	0.1545	0.0025
Multiple pregnancy	Dichotomous variable indicating if the multiple pregnancy,0 otherwise	0.0279	0.0011
Ethnicity	Categorical variables indicating the ethnicity of the women		
Kalenjin	1= if ethnicity is Kalenjin, 0 otherwise	0.1528	0.0025
Kamba	1= if ethnicity is Kamba, 0 otherwise	0.0782	0.0019
Kikuyu	1= if ethnicity is Kikuyu, 0 otherwise	0.1130	0.0022
Luhya	1= if ethnicity is Luhya, 0 otherwise	0.1184	0.0022
Luo	1= if ethnicity is Luo, 0 otherwise	0.1045	0.0021
Somali	1= if ethnicity is Somali, 0 otherwise	0.0817	0.0019
Other	1= if ethnicity is Other, 0 otherwise	0.3515	0.0033
Occupation	Dichotomous variable indicating if working,0 otherwise	0.3031	0.0032
Wealth index (quintile)	Categorical variables indicating Wealth index of the women		
Poorest	1= if wealth index is poorest, 0 otherwise	0.3423	0.0033
Poorer	1= if wealth index is poor, 0 otherwise	0.2074	0.0028
Middle	1= if wealth index is middle, 0 otherwise	0.1667	0.0026
Richer	1= if wealth index is richer, 0 otherwise	0.1493	0.0025
Richest	1= if wealth index is richest, 0 otherwise	0.1343	0.0024
Religion	Categorical variables indicating religion of the women		
Roman Catholic	1= if religion is Catholic, 0 otherwise	0.1835	0.0027
Other Christian	1= if religion is Christian, 0 otherwise	0.6180	0.0034
Muslim	1= if religion is Muslim, 0 otherwise	0.1681	0.0026
Other	1= if religion is other, 0 otherwise	0.0286	0.0012
Type of place of residence	Dichotomous variable indicating if the type of residence of the mother		
Urban	1= if the type of residence is urban, 0 otherwise	0.3260	0.0032
Region of residence	Categorical variables indicating the region of residence		
Coast	1= if Coast, 0 otherwise	0.1264	0.0023
North Eastern	1= if North Eastern, 0 otherwise	0.0760	0.0018

Variable	Description	Mean	SE
Eastern	1= if Eastern, 0 otherwise	0.1441	0.0024
Central	1= if Central, 0 otherwise	0.0678	0.0017
Rift Valley	1= if Rift Valley, 0 otherwise	0.3267	0.0032
Western	1= if Western, 0 otherwise	0.0942	0.0020
Nyanza	1= if Nyanza, 0 otherwise	0.1392	0.0024
Nairobi	1= if Nairobi, 0 otherwise	0.0254	0.0011
Highest level of education of the mother	Categorical variables indicating the highest level of education of the women		
Primary	1= if the highest level of education of the mother is primary, 0 otherwise	0.5272	0.0035
Secondary	1= if the highest level of education of the mother is secondary, 0 otherwise	0.1909	0.0027
Higher	1= if the highest level of education of the mother is higher, 0 otherwise	0.0630	0.0017
No education	1= if the highest level of education of the mother is none, 0 otherwise	0.2189	0.0029
Neonatal factors			
Gender of the baby	Dichotomous variable indicating if the male gender of the baby		
Male	1= if the gender of the baby is male, 0 otherwise	0.5073	0.0035
Economic status			
Source of drinking water	Categorical variables indicating the source of drinking water		
Piped	1= if the source of drinking water is piped, 0 otherwise	0.3063	0.0032
Well	1= if the source of drinking water is well, 0 otherwise	0.2497	0.0030
Other	1= if the source of drinking water is other, 0 otherwise	0.4204	0.0034
Toilet facilities available	Dichotomous variable indicating the availability of toilet	0.7416	0.0030
Note: The description of the data is when all outcome variables have equal observations – (n= 20,927).			

Descriptive analysis: None of the mortality outcomes shows any significant difference in the proportions following the implementation of the policy. However, there is a significant increase of 1.25% deliveries through CS after the FM policy implementation. A summary of the difference in the characteristics before and after is shown in *Table 7.2*. The other socio-economic, demographic, maternal biological characteristics and neonatal characteristics that show a significant difference through comparison of before and after the policy are preceding birth intervals of less than two years, a mother being from Kikuyu and other ethnic groups, working mothers, poorest and poorer wealth indices, residing in the Rift valley, having primary and secondary education, and the type of toilet facility. However, these differences are unconditional and need to be considered in the regression framework.

Table 7.2: Difference in the characteristics before and after (n= 20,927)

Dependent variable	Before Free Maternity	After free maternity	Diff (After – Before)	se (mean)
Early neonatal mortality	0.0157	0.0171	0.00142	0.0021
Neonatal mortality	0.0234	0.0235	0.00008	0.0025
Intermediate outcome variables (ANC care)				
Attended to by skilled assistants in pregnancy (Assisted by Doctor /nurse/midwife)	0.8462	0.9101	0.06392***	0.0070
Timing of the first ANC check is less than 16 weeks	0.3341	0.3228	-0.01124	0.0101
4 and above ANC visits during pregnancy	0.4982	0.4915	-0.00669	0.0107
Blood pressure measured in pregnancy	0.3916	0.4100	0.01845*	0.0105
Urine sample measured in pregnancy	0.3646	0.3857	0.02111**	0.0104
Blood sample taken in pregnancy	0.3988	0.4202	0.02138**	0.0106
Iron tablets taken in pregnancy	0.3009	0.3191	0.01821*	0.0099
Malaria prophylaxis in pregnancy	0.3372	0.3261	-0.01106	0.0101
Weighed in pregnancy	0.4031	0.4253	0.02213**	0.0106
Height measured in pregnancy	0.1834	0.1769	-0.00653	0.0083
Told about pregnancy complication	0.2188	0.2316	0.01284	0.0090
Took intestinal parasite drugs	0.1425	0.1342	-0.00823	0.0074
Intermediate outcome variables (Delivery care)				
Delivery through CS	0.0646	0.0772	0.01258**	0.0041
Birth in a public hospital	0.4164	0.4840	0.06762***	0.0107
Assistance by skilled assistants at delivery (Assisted by Doctor /nurse/midwife)	0.5567	0.5980	0.04135***	0.0106
Intermediate outcome variables (Neonatal care/factors)				
Low birth weight	0.0212	0.0210	-0.00019	0.0024
Early initiation of breastfeeding	0.2985	0.2939	-0.00460	0.0075
Intermediate outcome variables (Postnatal factors)				

	Before Free Maternity	After free maternity	Diff (After – Before)	se (mean)
Mother checked by a health professional after delivery	0.2452	0.2639	0.01860**	0.0094
Babies with a postnatal check within 2 months	0.2681	0.2892	0.02113**	0.0096
Independent variables				
<i>Maternal characteristics (socio-economic, demographic, biological)</i>				
Age of the mother at the birth of the baby				
Less than 20	0.1502	0.1427	-0.00755	0.0059
20-34	0.7248	0.7242	-0.00056	0.0071
35 years and above	0.1250	0.1331	0.00812	0.0054
Age of the mother at first birth (adolescent)				
18 years and below	0.4535	0.4497	-0.00377	0.0081
Preceding birth intervals (excluding first-order births)				
Less than 2 years	0.2002	0.1628	-0.03738***	0.0073
Parity				
Grand multipara	0.3975	0.3874	-0.0101	0.0080
Multiple pregnancy	0.0270	0.0308	0.00387	0.0027
Ethnicity				
Kalenjin	0.1515	0.1570	0.00549	0.0059
Kamba	0.0777	0.0800	0.00234	0.0044
Kikuyu	0.1159	0.1037	-0.01217**	0.0052
Luhya	0.1200	0.1131	-0.00689	0.0053
Luo	0.1053	0.1017	-0.00366	0.0050
Somali	0.0824	0.0796	-0.00275	0.0045
Other	0.3473	0.3650	0.01764*	0.0079
Occupation				
Working	0.3143	0.2666	0.04774***	0.0075
Wealth index (quintile)				
Poorest	0.3354	0.3652	0.02983***	0.0077
Poorer	0.2115	0.1941	-0.01738**	0.0066

	Before Free Maternity	After free maternity	Diff (After – Before)	se (mean)
Middle	0.1666	0.1668	0.00012	0.0061
Richer	0.1506	0.1449	-0.00568	0.0058
Richest	0.1359	0.1290	-0.00688	0.0056
Religion				
Roman Catholic	0.1840	0.1819	-0.00212	0.0063
Other Christian	0.6196	0.6126	-0.00703	0.0079
Muslim	0.1670	0.1719	0.00491	0.0061
Other	0.0278	0.0314	0.00367	0.0027
Type of place of residence				
Urban	0.3282	0.3190	-0.00913	0.0077
Region of residence				
Coast	0.1248	0.1319	0.00708	0.0054
North Eastern	0.0766	0.0745	-0.00204	0.0043
Eastern	0.1442	0.1437	-0.00048	0.0057
Central	0.0695	0.0623	-0.00725	0.0041
Rift Valley	0.3216	0.3433	0.02171**	0.0077
Western	0.0961	0.0880	-0.00817	0.0048
Nyanza	0.1418	0.1308	-0.01097	0.0057
Nairobi	0.0254	0.0255	0.00012	0.0026
Highest level of education of the mother				
Primary	0.5319	0.5117	-0.02021**	0.0081
Secondary	0.1878	0.2009	0.01306*	0.0064
Higher	0.0622	0.0657	0.00352	0.0040
No education	0.2181	0.2217	0.00362	0.0068
Neonatal factors				
Gender of the baby				
Male	0.5067	0.5095	0.00282	0.0082
Economic status				
Source of drinking water				
Piped	0.3063	0.3062	-0.00015	0.0075
Well	0.2508	0.2460	-0.00484	0.0071

	Before Free Maternity	After free maternity	Diff (After – Before)	se (mean)
Other	0.4217	0.4162	-0.00549	0.0081
Toilet facilities available	0.7479	0.7208	-0.02718***	0.0071

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$;

7.3. Estimation results

The analysis starts by estimation of the impact of the policy on early neonatal and neonatal mortality using the births in the last five-year data point (*Table 7.3, OLS – model 1*). The measure of the treatment variable is equal to one if the birth happened after the FM policy was instituted. Consequently, the average treatment effect is given by the estimated coefficient; *born after policy* shown in the fourth row of *Table 7.3*. None of the evaluated impacts on outcomes is statistically significant. However, the results are of an extended period (5 years) which masks the true effects as the number of births before the FM policy dominate the number of births significantly after the policy; hence, the effect may be underestimated.

Therefore, in the next regression, I estimated the impact of the policy on the outcomes using one year before and one year after sample data (*Table 7.3, OLS – model 2*) still with the average treatment effect given by the estimated coefficient; *born after policy* for each outcome. Even so, none of the outcomes is statistically significant. Yet, this does not give the true effects of the policy as there could be a selection bias among the women who gave birth during the period. Some women who may not have given birth before the policy may have started giving birth because of the introduction of the policy; hence, the characteristics of the mothers before the policy could be different from those after the policy. To address the concerns of contaminated controls and determine the true impact of the FM policy, I accounted for the mother fixed effects on the births by using a sample with the same mothers who gave birth both before and after. *Table 7.3, FE (without first born)*⁹ shows the estimates of the regression with the mother fixed effects and the coefficients on the outcome variables, early neonatal and neonatal mortality, are statistically significant. The probability of birth resulting in an early neonatal death is significantly reduced by 20.6% after the policy introduction (or by 16.5% when first born are included in the model), while that of neonatal mortality is reduced by 20.0% (or by 19.3% when first born are included in the model). Additionally, in fitting the model, variables age of the mother at the first birth, ethnicity, and religion are omitted from the FE model, as they do not vary across births to the same mother in the analytic sample. Of all the control variables, only the year of birth and multiple pregnancy significantly affect both outcomes.

⁹ This FE is based on the restricted sample with mothers who have at least one birth – specifically second and onwards births (excluding first births) – before the policy and at least one after the policy implementation.

Table 7.3: Estimation of the impact of the policy on early neonatal and neonatal mortality

	Early neonatal death				Neonatal death			
	OLS (Model 1)	OLS (Model 2)	FE (with first born)	FE (without first born)	OLS (Model 1)	OLS (Model 2)	FE (with first born)	FE (without first born)
	<i>n</i> = 16,056	<i>n</i> = 6,653	<i>n</i> = 5,052	<i>n</i> = 1,467	<i>n</i> = 16,056	<i>n</i> = 6,653	<i>n</i> = 5,052	<i>n</i> = 1,467
Born after policy	-0.002	-0.002	-0.165**	-0.206**	0.001	0.002	-0.193***	-0.200**
	(0.004)	(0.004)	(0.068)	(0.081)	(0.005)	(0.005)	(0.073)	(0.082)
Year of birth (Ref: 2014)								
2009	-0.009		-0.194***	-0.238***	-0.008		-0.213***	-0.221**
	(0.007)		(0.072)	(0.089)	(0.008)		(0.076)	(0.091)
2010	-0.007		-0.169**	-0.210**	0.001		-0.185**	-0.180**
	(0.006)		(0.071)	(0.086)	(0.007)		(0.075)	(0.089)
2011	-0.011*		-0.191***	-0.261***	-0.005		-0.219***	-0.258***
	(0.006)		(0.070)	(0.087)	(0.007)		(0.075)	(0.089)
2012	-0.008	-0.007	-0.156**	-0.201**	-0.001	0.003	-0.167**	-0.170**
	(0.006)	(0.006)	(0.069)	(0.084)	(0.007)	(0.007)	(0.074)	(0.086)
2013	-0.007	-0.005	-0.024***	-0.041**	-0.003	-0.000	-0.018*	-0.029
	(0.004)	(0.004)	(0.009)	(0.019)	(0.005)	(0.005)	(0.010)	(0.024)
Age of the mother at the birth of								

the baby (Ref: Less than 20)									
20-34	0.008**	0.012***	0.015	-0.001	0.008*	0.011*	0.025	0.008	
	(0.003)	(0.003)	(0.014)	(0.022)	(0.005)	(0.006)	(0.018)	(0.031)	
35 years and above	0.016***	0.020***	0.009	-0.012	0.016***	0.016*	0.024	0.003	
	(0.005)	(0.007)	(0.021)	(0.032)	(0.006)	(0.009)	(0.026)	(0.043)	
Preceding birth intervals of less than 2 years	0.013***	0.013***	0.008	0.017*	0.020***	0.016***	0.008	0.027**	
	(0.003)	(0.005)	(0.008)	(0.010)	(0.004)	(0.006)	(0.009)	(0.012)	
Grand multipara	0.002	0.004	-0.011	-0.024	0.003	0.005	-0.010	-0.027	
	(0.002)	(0.004)	(0.009)	(0.016)	(0.003)	(0.004)	(0.011)	(0.020)	
Multiple pregnancy	0.061***	0.065***	0.109**	0.159***	0.075***	0.073***	0.128**	0.177***	
	(0.012)	(0.019)	(0.045)	(0.059)	(0.013)	(0.021)	(0.050)	(0.064)	
Male baby	0.004**	0.005	0.004	0.011	0.004*	0.004	0.009	0.025*	
	(0.002)	(0.003)	(0.005)	(0.010)	(0.002)	(0.004)	(0.007)	(0.013)	
_cons	0.008	0.008	0.181**	0.246***	0.007	0.008	0.199**	0.227**	
	(0.007)	(0.008)	(0.072)	(0.091)	(0.009)	(0.011)	(0.078)	(0.097)	
<p>Notes: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$; Clustered robust standard errors in parentheses. OLS: ordinary least squares; FE: fixed effects Model 1: Using the five-year sample (complete data set) Model 2: Using the one year before and one year after the policy sample FE (with first born): is the fixed effects when first born are included in the sample; while FE (without first born): is fixed effects when the sample is restricted only to women who have 2nd or higher order birth before the policy Additional controls: (age of the mother at the first birth, ethnicity, and religion) for the OLS model 1 and 2 are not shown on the table (but were used) since they were dropped from the FE model.</p>									

Using the same procedures for the intermediate variables, the FE models show that all the other intermediate variables cannot be determined using fixed effects because of the limitation of how the questions were asked (focusing on the last birth rather than all births) except delivery through CS, LBW, and skilled birth attendance (SBA). Two of the three – delivery through CS and LBW – are not significant under the FE model as the probability of birth happening through CS reduces by 1.7% after the implementation of the FM policy and the probability of a child being a LBW increases by 3.7% (Table 7.4, FE with first born). On the other hand, skilled delivery and birth in a public facility (hospital) are significant across all the two OLS models and under the FE model. The probability of birth through SBA significantly increases by 17.0% after the policy implementation as is the probability of births in a public facility (hospital) that increases by 5.8% (Table 7.4, FE with first born). Of all the control variables, the multiple pregnancy significantly explains the probabilities of delivery through CS under FE models. However, none of four intermediate outcomes are significant when the sample is restricted only to women who have 2nd or higher order birth before the policy (Table 7.4, FE without first born).

The z score test (described in details under the empirical strategy sub-section of section 3.4.8.3) was conducted¹⁰ and showed that the p values for all the outcomes were greater than 0.05 (early neonatal mortality- 0.35105; neonatal mortality-0.47312; delivery through CS - 0.46088; births in a public facility -0.32622; SBA-0.46934; and LBW-0.50839) hence there was no statistically significant difference in the estimation of the outcomes either by using the samples (with first born sample) or (without first born sample).

Table 7.4: Estimation of the impact of the policy on intermediate outcomes

Born after policy				
	OLS (Model 1)	OLS (Model 2)	FE (with first born)	FE (without first born)
Delivery through CS	<i>n</i> = 16,056	<i>n</i> = 6,646	<i>n</i> = 5,037	<i>n</i> = 1,461
	0.010	0.010	-0.017	-0.021
	(0.008)	(0.008)	(0.022)	(0.030)
Skilled delivery	<i>n</i> = 16,056	<i>n</i> = 6,644	<i>n</i> = 5,024	<i>n</i> = 1,451
	0.041**	0.040**	0.170**	0.160
	(0.017)	(0.017)	(0.085)	(0.099)
Birth in a public facility (hospital)	<i>n</i> = 16,056	<i>n</i> = 6,654	<i>n</i> = 5,053	<i>n</i> = 1,468
	0.058***	0.058***	0.058***	0.145

¹⁰ Using equation (7) and estimates obtained from equation (6) for both the fixed effects (with first born sample) and fixed effects (without first born sample), I first calculated the z scores manually. Then using the *Z score and probability converter* obtained from Calculator.net (see, <https://www.calculator.net/z-score-calculator.html>), I interpreted the results using $p(x > Z)$; where any p value (the probability) that is greater than the critical value (0.05) means that there is no statistical difference in the estimates of the outcomes.

Born after policy				
	(0.017)	(0.017)	(0.019)	(0.091)
Low birth weight	<i>n</i> = 15,982	<i>n</i> = 6,654	<i>n</i> = 5,053	<i>n</i> = 1,468
	-0.006	-0.006	0.037	0.044
	(0.005)	(0.005)	(0.031)	(0.038)

Notes: The specifications are the same as Table 7.3 fixed effects models.
****p* < 0.01, ***p* < 0.05, **p* < 0.1; Clustered robust standard errors in parentheses.
OLS: ordinary least squares; **FE:** fixed effects
Model 1: Using the five-year sample (complete data set)
Model 2: Using the one year before and one year after the policy sample
FE (with first born): is the fixed effects when first born are included in the sample; while **FE (without first born):** is fixed effects when the sample is restricted only to women who have 2nd or higher order birth before the policy

7.4. Exploration of the model

In order to further explore the mechanism for the change, I explored the impact of the policy using five variations of the basic specification of the FE model (without first born in the sample):

Panel A: is a mother fixed effect model exploring the use of skilled delivery as an additional control rather than an outcome. Mixed findings in the literature informed the use of skilled delivery as a control on the role of skilled delivery in neonatal mortality. For instance, one study that utilised KDHS data showed that skilled delivery has birth reduced both neonatal and under-five mortalities (Machio, 2018), while an analysis of pooled DHS data from nine countries in Asia, Africa, and Latina America/Caribbean showed that there was no association of skilled delivery with a reduction of neonatal mortality particularly in Africa and Asia (Singh et al., 2014). Therefore, it was imperative to explore the contribution of skilled delivery in this context.

Panel B: is a mother fixed effect model exploring the use of birth in a public hospital as an additional control. The use of births in the public facilities was added as a control variable because the FM policy as implemented in 2013 was operationalised to cater for deliveries in all public facilities (including hospitals) and not private for-profit or not for profit facilities (Chuma and Maina, 2013) (described in section 1.3.4).

Panel C: is a mother fixed effect model – which in addition to skilled delivery and birth in a public hospital being utilised as a control – is utilising an interaction term of being born after the policy and delivery in a public hospital (*birth after the policy (after=1) *ph*). The interaction term captures the DiD effect which is a valid estimate of the FM policy effect if there is 'baseline uniformity across time' for births in a public hospital (Lee and Kang, 2006, p272). Simply put, other time-varying processes are supposed to have a similar impact both before and after implementation of the FM policy and the

estimate of interaction would capture a variation in the implementation. I expect that there will be no effects of mortality outside of the public hospital.

Panel D: is a mother fixed effect exploring the use of delivery through CS as additional control rather than an outcome. The use of delivery through CS was added as a control, and it was informed by literature such as Signore and Klebanoff's (2008) postulation that potential for death among neonates born through CS is significantly high.

In Panel A, the average treatment effect is given by estimates of the coefficient born after the policy shown in *Table 7.5*. The probability of birth being early neonatal mortality significantly reduces by 18.7% while that of neonatal mortality reduces by 18.4% after the implementation of the policy (*Table 7.5*) compared to 20.6% and 20.0% respectively (*Table 7.3, FE (without first born)*) if skilled delivery is not a control. However, the probability of delivery through CS insignificantly reduces by 2.9% (*Table 7.5*) from 2.1% (*Table 7.4, FE (without first born)*). Therefore, the skilled delivery does not remove the effects of the policy on early neonatal mortality, neonatal mortality, and delivery through CS and is also only a significant determinant of the effects of the policy on delivery through CS. Similarly, in Panel B, the probability of birth being early neonatal mortality significantly reduces by 20.5% while that of neonatal mortality reduces by 20.2% (*Table 7.5*) after the implementation of the policy compared to 20.6% and 20.0% respectively (*Table 7.3, FE (without first born)*) if public facility (hospital) is not a control. However, the probability of delivery through CS insignificantly reduces by 2.8% (*Table 7.5*) from 2.1% (*Table 7.4, FE (without first born)*). Therefore, the public facility (hospital) does not remove the effects of the policy on early neonatal mortality, neonatal mortality, and delivery through CS and is also not a significant determinant of the effects of the policy on the outcomes.

In the Panel C (*Table 7.5*), there are no differential effects on the birth in a public facility (hospital) in early neonatal death, neonatal death, and delivery through CS as a result of the policy. The coefficient of interaction term *birth in a public facility (hospital)* born after policy (DiD estimator)* shows that a reduction in the probability of early neonatal death by 0.5%, an increase in the probability of neonatal death by 0.5%, and a reduction in the probability of delivery through CS by 1.5% closes the policy effect gaps that exist among mothers that gave birth in a public facility and those who did not before the policy was implemented. Similarly, in Panel D, where delivery through CS was used as an additional control instead of intermediate outcome, the probability of birth being early neonatal mortality significantly reduces by 20.7% while that of neonatal mortality reduces by 20.1% (*Table 7.5*) after the implementation of the policy compared to 20.6% and 20.0% respectively (*Table 7.3, FE (without first born)*) if delivery through CS is not a control (nearly similar to if public facility (hospital)).

Table 7.5: Estimates of the exploration of the impact of the FM policy on early neonatal and neonatal mortality, and delivery through CS using mother fixed effects (without first born in the sample)

	Early neonatal death	Neonatal death	Delivery through CS
PANEL A	<i>n</i> =1,450	<i>n</i> =1,450	<i>n</i> =1,444
Born after policy	-0.187** (0.077)	-0.184** (0.078)	-0.029 (0.030)
Skilled delivery	0.006 (0.012)	0.010 (0.019)	0.038** (0.016)
Cons	0.214** (0.086)	0.192** (0.093)	0.029 (0.044)
PANEL B	<i>n</i> =1,467	<i>n</i> =1,467	<i>n</i> =1,461
Born after policy	-0.205** (0.081)	-0.202** (0.082)	-0.028 (0.030)
Birth in a public facility (hospital)	-0.002 (0.013)	0.010 (0.019)	0.050*** (0.017)
Cons	0.247*** (0.091)	0.225** (0.097)	0.026 (0.043)
PANEL C	<i>n</i> =1,450	<i>n</i> =1,450	<i>n</i> =1,444
Born after policy	-0.185** (0.077)	-0.188** (0.079)	-0.024 (0.033)
Birth in a public facility (hospital)	0.004 (0.017)	0.028 (0.030)	0.064 (0.045)
Skilled delivery	0.005 (0.010)	-0.015 (0.026)	-0.010 (0.040)
Birth in a public facility (hospital)* born after policy (DiD estimator)	-0.005 (0.025)	0.005 (0.029)	-0.015 (0.026)
Cons	0.212** (0.087)	0.196** (0.094)	0.027 (0.047)
PANEL D	<i>n</i> =1,460	<i>n</i> =1,460	
Born after policy	-0.207** (0.081)	-0.201** (0.082)	
Delivery through CS	-0.033 (0.088)	-0.037 (0.087)	
Cons	0.248*** (0.091)	0.228** (0.097)	
<p>Panel A: Mother FE, with skilled delivery as an additional control to the model Panel B: Mother FE, with birth in a public facility as an additional control to the model Panel C: Mother FE, with skilled delivery, birth in a public facility (hospital) as controls and interaction of birth in a public facility (hospital) and born after the policy Panel D: Mother FE, with delivery through CS as an additional control to the model The specifications are the same as <i>Table 7.3</i> fixed effects models (plus all additional controls)</p>			

Additionally, I explored the placebo effect accounts for estimating the impact of the policy on other specific timing of other potential events that may have influenced the policy outcomes.

Effects of the placebo treatment: *Table 7.6* presents the estimates of the impact of the FM policy on placebo time effects. As the estimates show, there is no documented statistically significant impact of the placebo treatment (the other assumed random implementation timings of August 2012, November 2012, and March 2013 of the FM policy (placebo) implementation timing of the FM policy) on neonatal outcomes (early neonatal and neonatal mortality), and delivery through CS as intermediate outcomes. However, there is some significance shown with skilled delivery and birth in a public facility (hospital). Potentially, this shows that there is no other potential cause for a reduction on the probability of neonatal mortality other than the policy itself and other time-related activities may have potentially set pace for improving skilled delivery and birth in a public facility (hospital) before the actual policy. This reflects the differential time trends rather than the true effects of the policy.

Table 7.6: Estimates impact of the FM policy on placebo time effect

	Placebo 1	Placebo 2	Placebo 3	Observation (n)
Early neonatal mortality	-0.012	0.027	0.194	922
	(0.042)	(0.036)	(0.243)	
Neonatal mortality	0.031	0.006	0.177	922
	(0.037)	(0.037)	(0.241)	
Delivery through CS	-0.013	-0.024	-0.102	917
	(0.020)	(0.025)	(0.093)	
Skilled delivery	-0.072	-0.209*	0.051	907
	(0.064)	(0.110)	(0.157)	
Birth in a public facility (hospital)	-0.099*	-0.194*	0.083	923
	(0.057)	(0.102)	(0.125)	
Low birth weight	-0.031	-0.003	-0.006	923
	(0.026)	(0.013)	(0.018)	

7.5. Cost-benefit consideration

The average annual per maternity cost of the FM policy was estimated at USD 43.7 million, which is the amount spent on the policy in the financial year 2013/2014 (Mulaki and Muchiri, 2019). Using the average live births between 2013 – 2014 as 912,427 (United Nation, 2020), and the average neonatal deaths in the same period (calculated using the neonatal mortality rate obtained from Kenya National Bureau of Statistics et al. (2014)) as 20,073; and given that the model estimated that the probability

of neonatal mortality reduced by 20.0% as a result of the policy (effectiveness measure from the policy in *Table 7.3, FE (without first born)*), the estimates suggest that the FM policy translated to on average 4,015 fewer neonatal deaths in 2013/2014. Consequently, using Kenya’s VSL of 231,000 (Viscusi and Masterman, 2017), the final results show the benefits of USD 927 million from the policy; hence, surpassing the actual cost of the FM policy. Therefore, the FM cost to benefit ratio is 21.22 (from USD 43.7 million to USD 927 million) taking into account the value of life saved (the probability of reduction of the neonatal mortality as a result of the FM policy) (*Table 7.7*).

Table 7.7: Per Mother and Child Cost Savings Calculation

Indicators	Denotation	Formula	Amount/ Number
Live births 2013	a		870,599
Live births 2014	b		954,254
Number of live births in 2013-2014 (calculated)	c	$=(a+b)$	1,824,853
Average birth of 2013-2014	d	$=c/2$	912,427
Neonatal Mortality Rate from Kenya National Bureau of Statistics et al. (2014)	e		22
Per live births	f		1,000
Average deaths per year (2013-2014)	g	$=(d*e)/f$	20,073
Estimated impact of the policy on Neonatal Death (from <i>Table 7.3, FE (without first born)</i>)	h		-0.200
Number of deaths avoided because of free policy	i	$=(g*h)$	4,015
Value of statistical life from Viscusi and Masterman (2017),	j		231,000
Amount spent on the policy in the financial year 2013/2014 from Mulaki and Muchiri (2019).	k		USD 43,700,000
Annual benefit of the policy	l	$=i*j$	USD 927,390,295
Cost to benefit ratio	m	$=l/k$	21.22

7.6. Chapter summary

This chapter provides a methodological approach to evaluating the FM policy's potential impacts as captured by early neonatal and neonatal deaths and intermediate outcomes (described in detail in section 3.4.8.3). A descriptive analysis of the birth sample shows that 1.61% and 2.34% of all births resulted in early neonatal and neonatal deaths, and 6.75% were conducted through CS. An initial before and after analysis using the unrestricted births dataset has shown that none of the mortality outcomes shows any significant difference in the proportions following the FM policy implementation; however, there is a significant increase of 1.25% deliveries through CS after the implementation.

A before and after estimation of the impact of the policy on early neonatal and neonatal mortality using the births in the last five-year data point shows that none of the evaluated outcomes is statistically significant. However, the results are of an extended period (5 years) which masks the true effects as the number of births before the FM policy dominate the number of births significantly after the policy; hence, the effect may be underestimated. A further estimate of the impact of the policy on the outcomes using one year before and one year after sample data still showed that none of the outcomes is statistically significant. This does not give the policy's true effects as there could have been a selection bias among the women who gave birth during the period. Some women who may not have given birth before the policy may have started giving birth because of the policy's introduction; hence, the mothers' characteristics before the policy could be different from those after the policy. After accounting for the mother's fixed effects on the births (by using a restricted sample with mothers who have at least one birth – specifically second and onwards births (excluding first births) – before the policy and at least one after the policy implementation), the coefficients on the outcome variables, early neonatal and neonatal mortality, are statistically significant. The probability of birth resulting in an early neonatal death is significantly reduced by 20.6% after the policy introduction, while that of neonatal mortality is reduced by 20.0%. Interestingly, all the other intermediate variables cannot be determined using fixed effects because of the limitation of how the questions were asked (focusing on the last birth rather than all births) except delivery through CS, LBW, and skilled birth attendance (SBA). None of four intermediate outcomes are significant when the sample is restricted only to women who have 2nd or higher order birth before the policy.

Further analysis shows that the skilled delivery and birth in a public facility do not remove the policy's effects on early neonatal mortality, neonatal mortality, and delivery through CS and is also not a significant determinant of the policy's effects on the outcomes. The coefficient of interaction term shows that a reduction in the probability of early neonatal death by 0.5%, an increase in the probability of neonatal death by 0.5%, and a reduction in the probability of delivery through CS by 1.5% closes the policy effect gaps that exist among mothers that gave birth in a public facility and those who did not before the FM policy was implemented. The chapter has then gone further to provide the cost-benefit consideration of the policy. The FM cost to benefit ratio is 21.22 (from USD 43.7 million to USD 927 million), taking into account the value of a life saved (the probability of reducing neonatal mortality due to the FM policy). The next chapter will discuss the overall thesis results (chapter 4, 5, 6 and 7) and give the policy and research implication.

Chapter 8 — Discussion of results, research and policy implications, and recommendations and conclusion

8.1. Introduction

At the beginning of the research, this study set out to explore the policy process and its implementation, its effects and potential impact on the quality and cost of maternal care, of the FM policy as implemented in Kenya. This chapter explores the implications of the findings of this study. As such, it is structured in three main subsections based the main areas of interest: an exploration of the FM policy formulation, its implementation, its effects on the quality and cost of maternal care, and the potential impact on neonatal mortality and delivery indices. The section concludes with a reflection of the process.

8.2. Discussion of the results per objectives

8.2.1. Exploration of the policy formulation

This subsection provides a synthesis of the results from section 4.2 and section 4.3 on the background and the policy formulation process.

In the first objective, this study set out to explore the background and the process of formulation of the current LM policy. Chiefly, one observation emerging from the exploration of the background of LM policy is that it appears to be a political initiative that was aimed at attaining both international goals (SDGs) and national agenda (achieving UHC and improving access to SBA). Additionally, it was building on, and bridging the gaps of the previous FM policy. There was a ‘policy window’ through which a confluence of ideas and opportunities timely merged, following into Kindon’s observation (2010). The confluence integrated three things: the political value of agenda-setting on such policy reforms as has also been shown by Gilson et al. (2003); the need for setting the priority of policy agenda to meet national and international goals as shown by Meessen et al. (2011); and the consistency of building on FM policy that was already in the agenda. By choosing to build on the lessons from the previous FM policy, the policy is taking the ebbs and flows fluid process instead of choosing to remain in a fixed static form. This observation of the background of FM policy processes mirrors the practices of other countries. For instance, in Nepal, the converging interests – political and others – predestined the policy as an ideal vehicle for meeting fortunes and objectives of the maternal incentive scheme (Ensor et al., 2009).

Additionally, the process of the formulation of the LM policy can be well captured using Walt et al.'s (2008, p310) statement:

'there are also many other conceptual challenges...capturing and measuring the level of resources, values, beliefs and power of diverse actors is difficult.'

As consistent with the exploration of the FM policy formulation literature elsewhere (Koduah et al., 2018), decision agendas of the LM policy were driven by a complex interplay of factors related to the context, processes and content, actors and their interests, power and roles, in an elaborate manner rather than linear processes; thus, reiterating the enduring relevance and validity of Walt and Gilson's policy triangle (Walt and Gilson, 1994).

The stakeholders of the LM policy had an opportunity to form an interaction committee or platform where the formulation design and agenda was freely discussed and debated. Dye's (2001) assertion that public policies often reflect the interests, preferences and the values of the governing elites was evident in the committee. While the Presidency was not an active participant at the committee, the technocrats had to align the design to fit into his political promise and agenda of achieving the UHC. However, the participation of actors in the policy formulation was not as inclusive. Grindle and Thomas's (1991) observation that despite the characteristics of policy actors such as personal attributes, loyalties, institutional and political commitments, and training, the actors are never completely autonomous. The stakeholders had to work within a meshed context and had to tackle the problems and issues (policy formulation) that they were faced and provide a well thought through solution that was economically, politically, and administratively feasible.

The appointed government officials (often the technocrats in government), the development partners, and the representative of the beneficiaries had a substantial influence in the formulation of the details of the policy. Whereas there were representatives of the beneficiaries, the results showed the beneficiaries interviewed did not know about any form of their participation. While it would be impractical to include all the participants in the formulation, the level of public participation in reforms highlights Grindle and Thomas's (1991) assertion that the participation is a determined categorisation of the reform as a bureaucratic compliance reform, that requires limited or 'invisible' public participation or as requiring political stability and support which need 'visible' participation or a comprehensive public engagement. The finding shows that the beneficiaries' representatives were significant because they were classified in the FM reform as the latter. Only representatives voiced the participants' interests. In facts, in the formulation process of FM policy in Ghana, authors categorised the participants as policy agenda directors, agenda approvers, government and non-

government agenda advisors, and agenda advocates (Koduah et al., 2015). The agenda advocates, which includes the beneficiaries, are active throughout the process of formulation. Generally, there was good coordination of the policy processes at the formulation level; but, if the beneficiaries and the implementers are not well involved at the policy, it would bring into focus the question of how committed they were to implement things that they had little say.

Also, each of these stakeholders were well engaged in the process of the formulation and had to manoeuvre through the interest of other multiple players. While there was an alignment in the interest of formulating the LM policy, some interests particularly that of setting the price for the new entrants in the policy (the private sector) was rather contentious, and the engaged representatives of the private sector had to lay the reason for the request of the higher price of reimbursements. The NGOs representing interests of the private sector in the informal settlements devised methods to bypass the political process at the formulation to engage the sector and engage in shaping the price debate at the grassroots level rather than at the top. Through their network of influence at the grassroots level, they were able to influence the reimbursement price and the implementation. Other similar organisations have used this particular strategy. For instance, In the evaluation of Africa Health Market for Equity (AHME) program, that focuses on social franchising, it was noted that the performance of the providers of the social franchise led to improved performance of LM policy with 79% of the social franchising facilities participating in LM service provision (Appleford, 2019).

8.2.2. Implementation of the policy

This subsection provides a synthesis of the results from section 4.4 on the implementation of the implementation processes of the policy.

At the implementation level is that the knowledge of the LM policy benefit packages, services covered, and reimbursement varied amongst different cadres of HCWs, county officials, and users; despite the concerted effort among partners to adequately communicate the policy. In charges and the facility managers were more aware of the policy because they had the upper hand in access to the policy guidelines and training, which did not reach the policy implementers. The concerted effort to enhance the communication of the policy was better than it was in the previous policy as was revealed in a mixed-method process evaluation (Tama et al., 2018). However, the difference in awareness of the content of the policy among different stakeholders could have resulted to different interpretations of the policy particularly by the frontline implementers leading to implementation infidelity (difference of policy in paper and policy in practice) similar to what was reported in other policy such as Burkina Faso (Ridde et al., 2011). Although the administrative and clerical workers were more aware

of the packages than the service providers and the mothers, they seemed to have exploited the discretionary power (Lipsky, 1980) given that they were concerned with the actual hands-on policy processes that both the patients and other HCWs. However, a rather interesting finding is that although HCWs could not differentiate the operations of the policy, they were content with the adequacy of the services. Potentially, there was a gap in the communication of the policy to the requisite recipients as has been reported in other countries such as Ghana (Witter et al., 2013). However, in the case of Kenya, the communication gaps may have been due to remoteness of the county and social-cultural practices and beliefs which hampered reaching a majority of the users. Equally, a gap in education or language barriers among the beneficiaries may have made it difficult to self-enrol using the phone. These challenges are not unique to this policy. In Burkina Faso, the mothers were not only faced similar awareness challenges, but theirs was exacerbated by gender roles where since the husbands paid the 20% (not included in the government subsidy), the information about the policy was passed to them rather than the users (Ridde et al., 2011).

Also, the reimbursements to the facilities were either delayed or when received, they were inadequate. The causes of the delays in disbursement and receipt of the reimbursements were multifaceted and were either bureaucratic and systemic or created, and they did not only lie within one unit but several departments. Consequently, the delays in the one arm of government resulted in a ripple effect: motivation of the HCWs was hampered and hospitals were forced to adopt SLB tactics (Lipsky, 1980) to sustain the services. Similarly, the disbursement challenges were linked to the claims system and approach in that, because one can only receive what they claim for, the system was fraught with systemic challenges touching on the NHIF, facilities, HCWs and the mothers. Studies have shown that the design of the policy and the claim system challenges leads to technical and allocative efficiency concern, in addition to lowering the QoC (Mbau et al., 2020). These results echo the findings of two case studies of LM policy in Kenya. In Makueni county, NHIF owed facilities in the county approximately USD 5.8 million (Murira, 2020) while in Bungoma county, some facilities were not able to meet their obligation for lack of funds (Appleford and Mbuthia, 2018).

Further, the operations of LM have altered the referral system and created a policy confusion that has consequently led to perverse incentives that have altered the general referral scheme as envisioned by the Kenya Referral Strategy 2014-2018 (Kenya Ministry of Health, 2014b). For instance, the strategy seeks to bridge the implementation gaps such as bypassing lower-level facilities by the mothers due to perception of better services at higher-level hospitals or geographical difficulties; poorly coordinated and networked referral schemes in different levels; inadequate and ineffective monitoring of the referral system in addition to poor transport schemes or lack of follow-up on the

mothers, all which the policy has had a negative influence. The gaps in the referral scheme could hamper the QoC provided and demean the efficiency of the system that should be cascading the patients up the referral ladder (from low to a high-level facility) following the provision of requisite care as shown by other authors (Daniels and Abuosi, 2020, Kruk et al., 2018, Singh et al., 2019). The finding mirrors Lao PDR's free MCH policy that influenced an inappropriate referral to upper-level facilities (The World Bank, 2013). Additionally, as has been the case for Kenya, the reimbursement strategies are contributing to the inappropriate referral, in that some facilities are seeking to maximise their profits at the expense of the patients; or higher-level facilities are burdened by the referrals (especially) of complex complication that requires significant investments which LM policy does not provide. A similar finding has been noted elsewhere in Nigeria (Akande, 2004).

Besides, shifting the management of the FM policy to the NHIF from the MoH created a policy confusion in both the accreditation and the contracting process. Through the process, the NHIF, a purchaser of the services is acting both as an accrediting and a contracting body, which could pose a competing interest. A critical evaluation of the purchasing arrangement under NHIF revealed that the contracting process did not promote efficiency, quality, and equity (Munge et al., 2018) and another showed that it causes fragmentation of services thus compromising the technical efficiency and quality of services (Barasa et al., 2018). Given that accreditation is the 'public recognition' provided by an accreditation body certifying that an organisation or a healthcare facility has attained 'accreditation standards by healthcare organisation' through an independent peer review (Smits et al., 2014, p2), the NHIF acting as an accreditor (a role that is traditionally placed at the MoH) and contractor of facilities, leads to a potential conflict of interest.

The current accreditation and contracting process have been shown to be compromising the QoC particularly in the public facilities because some are given blanket accreditation, despite not meeting the standards, as a trade-off by the government to ensure many public facilities especially in the vast areas (poorly served area by both private and government hospitals) have increased access and the reimbursement incentive. Some authors have argued for the need to link quality assurance and accreditation (Abuya et al., 2018). However, one study in Ghana contradicts the finding as it shows that only the private facilities that were accredited by the National Health Insurance Authority (NHIA) scored lowly in QoC and not the public hospitals (Lamprey et al., 2017). All in all, it still points to the need for enhancing quality across all facilities. Shifting the authority of accreditation process of the facilities from the MoH to the NHIF has also increased the NHIF burden of work, which may potentially mean allocating more administration costs to it; thus, calling to the sustainability and feasibility concerns as also noted by Barasa et al. (2018). Also, the private facilities are undergoing the

accreditation and contracting processes seamlessly (or are familiar the processes) because a majority may have previously participated in similar processes under the social health insurance schemes done by other independent development partners (Suchman, 2018). At the writing of this thesis, the NHIF had undergone the proposed health financing reforms which had separated the role of accreditation and contracting; where MoH was to concentrate on accreditation and NHIF contracting to enhance efficiency (Tanui, 2019).

Moreover, it was shown that there was adequate supportive supervision from the MoH and the county government for the delivery of maternal care services but not from the NHIF on the implementation aspect of the policy. Given the gap, HCWs may have altered work optimism. Besides strengthening the congruous working relationships, supportive supervision has been shown to boost workers morale and provides practical measures to improve performance (Bailey et al., 2016, Roets et al., 2018). Roets et al. (2018) further showed that 88% of all the midwives who participated in the research mentioned supportive supervision as one of the important activity for improving their performance but also an important pillar for improving maternal and neonatal care. Therefore, it is imperative to invest in it. By collaborating with the managers – in this case, NHIF managers – there could be improved delivery of LM policy (Darj, 2003). However, given the progress, the facilities were noted to have put adequate measures to monitor the progress of the policy through charts hung in public places (*Figure 8.1*) as a way of ensuring accountability to the public, and even incentivising more mothers to choose the facility by reading the good numbers. A collaborative effort between the facility in-charges and focal people from the county shows that the county is motivated enough to meet the objectives and goals of the policy.

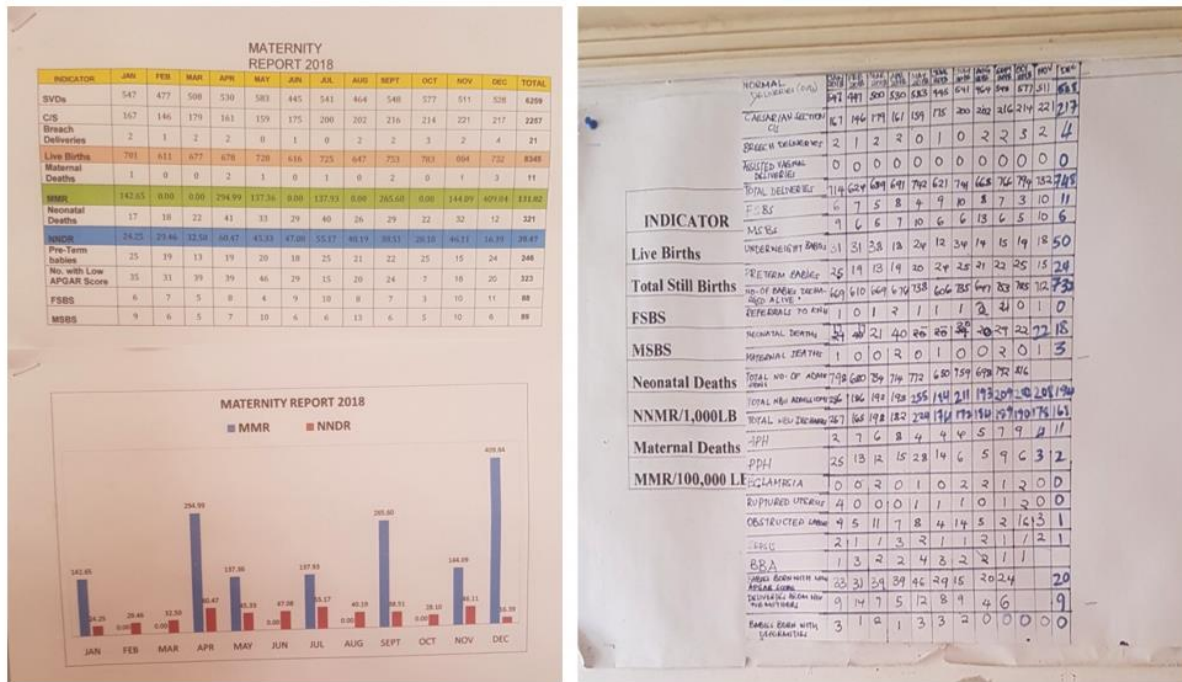


Figure 8.1: Example of charts monitoring progress of maternal health indicators in Hospital C (Source: document reviews, and facility record)

Significantly, there are more actors at the implementation level – both at the national and the county level – that are supporting the achievement of the goals in audit, research, financing and strategic operations. Implementers of the LM policy understood their roles as was formulated; however, the communication at the national level was rather complex and messier since there was a gap in clearly defined roles in the communication network at the MoH. Every department wanted an ‘ear’ of the influential PS health in providing strategic decision. Besides, the dependency of the policy imperatives at the top level was significantly higher as units had to rely on one another often than necessary; hence slowing down the implementation cascade. These findings affirms that the LM policy has achieved three out of the ten proposals the Hogwood and Gunn (1984) postulated for successful implementation. However, there is an interaction and better coordination of roles at the periphery (county and facility level) in that the county has gone further to employ someone to ease communication and coordination with different departments both at the national and the county level.

Another significant reflection is that some programs are running concurrently with the LM policy, which are either complementary or are causing policy confusion, fragmentation and shifting away resources from the policy. The complementary nature of the policy is imperative as it covers aspects such as primary care in addition to meeting complications costs that LM does not cover. However, the

others that cause fragmentation are due to several benefit packages that target different profiles of patients at the NHIF; hence, equity and efficiency concern (Barasa et al., 2018, Mbau et al., 2020) and even shifting away resources from the main policy. The policy confusion at the NHIF level calls for more education of the packages and services. The fragmentation in the form of difference in reimbursement rates is creating incentives amongst hospitals to choose attractive maternal packages as a way of maximising funds. There is a leak in NHIF in that some mothers can register more than once on the different schemes; thus, denying the deserving mothers' access to needed service. Similar findings have been postulated by Tama et al. (2018) concerning the previous FM policy that was implemented by Kenya.

Consequently, the county officials working in tandem with HCWs workers are acting as SLBs and are transforming the FM policy to fortify service delivery through enhancing its flexibility. The SLBs are using three strategies of practice (defining new identity for the public policy), policymaking (creating unique developments from the policy systems), and professionalism and ethical tact (using both expert and contextual knowledge to enhance the operations) (Virtanen et al., 2018) to transform the policy. The SLBs as policy makers, are the prime movers in the construction and fortification of the FM policy since they create unique development to the services under the policy. For instance, the facilities are making policies by employing additional HCWs to ease the workload and maximise registration of LM mothers and to discharging the mothers right after birth to either create space or deal with the higher workload. This shows that HCWs as SLBs were interpreting and adapting the policy in their understanding and meet their outcome obligations, as was the case for South Africa user fee policies (Walker and Gilson, 2004).

SLBs are introducing working practices such as correcting the policy confusions caused by referrals; providing continuous medical education to mothers on LM policy; and undergoing self-directed training on maternal procedures. Perhaps the self-directed training of the HCWs is essential in the implementation of the policy as previous research in Burkina Faso showed that lack of knowledge amongst HCWs had contributed to inequity in free policy implementation (Ridde et al., 2018). Also, by prioritising the utility of reimbursements from the LM policy to improving maternity areas, and to developing strategic collaboration between different hospitals and even departments, SLBs are focusing on attracting more clients; hence, more claims and reimbursements for the hospitals. This is particularly true as it aligns to the scoping review of literature of free schemes which showed that in SA and Ghana, HCWs as SLBs respected free policies as long as they had the needed resources to adequately support them (Allegri et al., 2015).

Bound by the cord of ethics and professionalism, HCWs are going over and above to ensure that the vulnerable under the schemes (foreigners, adolescents, indignant) are able to get the services. Also, the SLBs are also working in tandem with the mothers as users of the policy to holistically cocreate better models of the policy. The above finding reinforces the statement that HCWs as SLB are influenced by their working environment, socio-political context, and personal values and beliefs (Erasmus, 2014). For example, the untimely or inadequate reimbursements and inadequate supplies are pushing the HCWs to prioritise the little supplies for the very deserving mothers. Choosing the mothers who adequately require the services may be a challenge or rather very subjective. Mothers may alter their dressing code to tatters to be identified as poor, which may not be true. Such SLB schemes have led to unintended consequences (Finlay and Sandall, 2009) such as in Senegal where HCWs used their power in the user fee policy scheme to institutionalise discrimination rather than helping the patients (Mladovsky and Ba, 2017). However, for the case of the exempt user fee policy in Burkina Faso, midwives developed criteria (not part of the policy) to help identify indigents and provide them with service (Ridde and Sombie, 2012). Therefore, the concept of professionalism shows that HCWs as SLB makes every day situational choices that require improvisation as guided by tacit knowledge and values, rather than policy rules (Gilson et al., 2017). By being flexible with the policy, the SLB are making it equitable and effective (Virtanen et al., 2018); hence, bridging the gap between policymaking and practice (Hupe and Buffat, 2014).

Additionally, the counties are also shaping the policy to fit the objectives through enhancing bylaws giving hospital freedoms to utilise fund directly. The literature on other funding schemes directed to the facilities showed that, if oversighted properly, can strengthen performance, and improve HCWs motivation (Waweru et al., 2016). Furthermore, the counties are developing complementary programs such as using community health volunteers and strategic development partners. Similar findings were also shown in other Kenyan free policy evaluations (Mulaki and Muchiri, 2019).

8.2.3. Quality of care

This subsection provides a synthesis of the results from chapter 5 on the provision and experience aspects of the quality of maternal care.

The findings show that LM policy has improved the geographical, financial, and maternal service access. As was intended at the policy formulation, more mothers are delivering through SBA; and the number of home deliveries has reduced. However, the finding is not surprising as a systematic review of maternal service (ANC and delivery) under different FM policies showed an increase in ANC services and delivery services after the removal of user fees (Dzakpasu et al., 2014). However, in the same

review, the utilisation patterns were marred with geographical and temporal fluctuation in use which is different from our study. The increase in geographic access could be explained by the fact that Kenya decentralised health system and coupled with the incentives of free services under LM policy; hence, increased geographical access and utilisation.

A study in Kenya suggested that given the challenges of accessing government facilities, then it was imperative to harness private sector clinics to enhance service provisions in deprived setting (Fotso and Mukiira, 2011). Dossou et al. (2018) also showed a systematic increase in CS services after the implementation of the CS policy in Benin because of utilisation incentives. As are the results on improving access to the vulnerable population in LM policy, the implementation of the safe motherhood program in Nigeria (Abiye initiative) with the removal of user fees particularly for the most vulnerable population, enhanced access and utility of service (Ajayi and Akpan, 2020). Mothers, irrespective of the location (both in rural and urban) and even the vulnerable ones, access a standardised form of care. However, in Benin, the CS policy exacerbated the inequalities as the policy reached the predominantly rich limiting social inclusion (Dossou et al., 2018). Besides, there is a positive perception about the policy despite the longer waiting times, particularly in the initial visits where mothers are accessing ANC additional benefit packages that were not in the previous policy. Contrarily though, a mixed-method study in Nigeria showed that mothers were dissatisfied with the waiting time under the free policy, but the authors did not link it to any particular service (Ajayi, 2019)

Further, despite the policy providing a choice of access (for the use of either private or public facilities); each facility is using innovative incentives to attract mothers leading to a difference in perception about the services provided. The finding on factors leading to choose of the delivery place is not new as other authors have highlighted the difference in the preference for private or public facility thus influencing perception (Chirdan et al., 2013, Khan and Noreen, 2016, Okumu and Oyugi, 2018). In fact, in a recent FGD with women in Nairobi's informal settlements in Kenya, exploring their experiences of the quality of maternity care under LM, Oluoch-Aridi et al. (2020) present the facilitators and barriers to choosing either private or public facilities which are all similar to the findings of this study. Interestingly, the choice of place of delivery was influenced by several factors that are not necessarily linked to LM such as personal choice, previous experience or treatment and access as shown by other studies (Amooti-Kaguna and Nuwaha, 2000, Gabrysch and Campbell, 2009) or health system factors (Parkhurst et al., 2005). This highlights a key gap because it begs the question of whether LM has influenced the choice of delivery hospital. Escamilla et al. (2018) showed that need for free services in Kenya had influenced women to bypass nearer facilities for farther private facilities that were offering free care; which is similar to findings from Sierra Leone by Fleming et al (2016).

A rather interesting finding is the preference for the higher-level facilities by the mothers due to perception of better services, and that has also been highlighted as an implementation gap on the referral strategy. However, literature has attributed this preference to factors such as cleanliness, interpersonal skills, and other perceptions of better services (Oyugi et al., 2018); and not the LM policy. A discrete choice experiment in Nigeria showed that the women chose to give birth in places with good condition of the health system, absence of sexual, physical and verbal abuse, and that unclean environment of birth without privacy and unclear user fees policy drove the women away (Umar et al., 2020). The mother's choice of higher-level facilities has led to QoC concerns such as indifference in the treatment based on the type of delivery and parity (partly because of overburdening higher facilities and need for prioritisation). In Kenya, other studies have shown that mothers bypass lower-level facilities due to perception of better quality (Audo et al., 2005, Cohen et al., 2016). Same case has been shown in Sri Lanka (Perera and Weerasinghe, 2015). In this study, there is preferential treatment for CS mothers and primigravidas which is a quality issue concern but could have been caused by the fear of risk/risk aversion. Higher-level facilities are significantly burdened due to LM leading to a ripple effect (where the facilities are left with a gap in resources, as they use more resources in meeting the mothers' specialised needs and managing deliveries that can be done at the periphery). However, it could also be argued that having more mothers in higher-level facilities means more claims and reimbursements.

Interestingly, fewer mothers are being referred from lower to higher facilities relative to before the LM policy. While in the previous policy complications were being referred to higher-level hospitals from lower-level health centres to seek better services (Sidze et al., 2015), it could be argued that, through the LM policy, lower-level facilities are making adequate investments using the LM policy reimbursements thus able to handle complications. That may nevertheless not be true as another finding shows that the fewer referrals that are happening are mainly due to the lack of equipment, theatre, and NBU in the lower-level facilities. Thus, it could be that the policy confusion in the reimbursements of the services is somewhat hampering the positive quality effects of the policy. Other literature from Ghana concurs with this assumption. For instance, Witter et al.'s (2007) exploration of the policy showed that the uncoordinated and unreimbursed referral strategy (particularly at referring hospitals) hampered the positive effect of the policy, while Ganle et al. (2014) showed that the Ghana's referral system was ineffective and the care was substandard because of lack of critical care staff to handle healthcare emergencies.

The mothers that are referred have a positive perception about the referral process. This perception could be because the HCWs are going over and above to provide referral elements such as allowing

the mothers to have companion at referral time and also in the hospital. However, the lack of transport for referral could be hampering the referral gains by either making mother pay or risk their lives for or risk their lives looking for transport systems at the tail end of delivery. For example, Burkina Faso had included transport in their subsidy policy that was meant to enhance referral of the mothers to the health facilities (Ridde et al., 2012b). Through its well organised rapid response to emergency and evacuation, mothers had a positive satisfaction with the referral system under the policy; however, the IDIs with the HCWs revealed that there was no adequate follow up to ensure the evacuated mothers received care as intended (Ridde and Diarra, 2009). Interestingly, Kenyan nurses under the LM policy were shown to be going above and beyond to refer and follow up mothers, which was a compensatory mechanism to improving QoC.

Also, through the LM policy, there has been some improved availability of equipment, supply, and infrastructure. The improvement could be due to the provider and in-charges using SLB tactics (such as renovations), to improve the facility as a way of attracting more mothers who are the source of reimbursement funds (discussed as a final observation in section 8.2.2). However, despite the progress, some commodities, infrastructure, and supplies are still a challenge. The lack of supplies, equipment, and infrastructure contravenes the WHO statement number eight on quality which shows that the positive birth outcomes rely on their availability (World Health Organisation, 2016). A recent review showed the inadequacy as a global phenomenon that compromises the level of quality provided in maternal care (Bohren et al., 2015). Evidently, in all the facilities the mothers revealed that they were satisfied with the characteristics of the facilities such as having adequate rooms, adequate hand washing, bathing, and toilet facilities; in addition to equipment well suited for detecting women's problems. As is in this study, a mixed-methods study in Ghana showed that, despite there being inadequate infrastructure in the facilities and lack of basic supplies, 89% of the mothers who participated in the EI, and those in the FGDs were satisfied with the quality of maternal care during childbirth (Dalinjong et al., 2018) as is in this study. This postulates that mothers are more concerned about the interpersonal care received but also with the basic amenities provided as long as they can have live births and they are also alive. The absence of or inadequacy of equipment and supplies compromises the QoC.

Another significant finding is that facilities are bearing the brunt of the burden of the increase in numbers of mothers utilising services and that HCWs are working beyond their capacity to provide care and experiencing burnout. Several authors have shown that following the implementation of the free policy in Kenya; there was a significant increase in the utilisation of maternal services (Lang'at and Mwanri, 2015, Pyone et al., 2017, Tama et al., 2018), which was attributable to the removal of

cost barriers to women (Njuguna et al., 2017). However, because the increase in the number of mothers seeking SBA services after the implementation of the policy did not follow a subsequent increase in the number of HCWs, then HCWs were bound to be burdened. Previous studies have shown that the issue of perennial lack of human resources has always been a problem in Kenya. For instance, Miseda et al. (2017) reveal that out of the 138,266 HCWs required by to fit the MoH *Norms and Standards Guidelines* for service delivery, and only 31,412 are employed at the public sector, private facilities and faith-based organisations (FBOs).

To ensure continuity of services, HCWs (because they feel they are bound by the code of ethics) are adopting mechanisms of SLBs (discussed as a final observation in section 8.2.2. They are going beyond their strengths to serve the increased number of mothers well and maximise reimbursements but end up having a burnout. Two meta-analysis studies have shown that the HCWs burnout could lead to the provision of poor QoC (Salyers et al., 2017, Tawfik et al., 2019). However, the HCWs are being motivated by what Franco et al. (2002) deriving from Herzberg et al. (1959) refers to as 'hygiene factors' (determining HCWs dissatisfaction) in this case the interpersonal relationship with the county and the administration, and 'motivating factor' (determining HCWs motivation and satisfaction) in this case being listened to given an ear.

Equally interesting is that the good experience of care received by the mothers is based on the level of support provided by the HCWs and the facilities. A good relationship between the patients and the HCWs could help improve the level of trust, diffuse anxieties that patients have, in addition to creating openness in communication (Okoror et al., 2020). A majority of the mothers in both the FGDs and the exit survey attributed the good experience of care to the interpersonal skills exhibited by the HCWs such as empathy, being friendly, kindness, respect, devoting time, and honest. The good experience of care the mothers receive influences their future delivery in the same facility. However, the finding could not show whether such experiences were due to LM policy except for the fact that it incentivised the HCWs to provide FP and breastfeeding education. The finding shows that despite the challenges of the policy, the mothers appreciated and perceived the HCWs and health facility characteristics positively (section 5.2.4.3 and 5.3.1.2). This shows that HCWs have significantly contributed to the quality of provision of care, but this may not lead to the improved outcome if the technical aspects of quality (discussed above) are not met. Similar findings have been reported elsewhere. For instance, in Ghana 77% of the mothers who participated in the EI noted that they were content with the HCWs service provision as they were patient and empathetic (Dalinjong et al., 2018) or in Ethiopia where 79.1% of the mothers interviewed were happy with the overall services provided (Tesfaye et al., 2016).

The poor experience of care by the mothers hampers the technical QoC received. By sharing the beds due to overcrowding, the mothers are exposed to unhygienic practices that could eventually lead to nosocomial infection in the maternity facilities, which hampers QoC. A review of quality elements in facilities in the 14 counties in Kenya linked the introduction of the LM services with poor hygiene and low privacy (Gitobu et al., 2018b). Such findings are expected because investments in hospital infrastructure have not subsequently followed the increase in the number of mothers utilising maternal care. Other literature has shown similar findings in other settings with FM services (Chesumei, 2019, Masaba and Mmusi-Phetoe, 2020, Witter et al., 2009).

The other finding of poor QoC experienced by the mothers such as lack of attention, negligence and physical abuse has been shown in other Kenyan literature. For instance, the beneficiaries of FM services in a study in Kakamega provincial hospital in Kenya noted that the HCWs negligence and use of vulgar language were demeaning to the patients (Asule et al., 2017). Food is an important component in the birth process and for mothers to report that the food they received during delivery is inadequate is as surprising as it is demeaning. Also, as is in this study, the poor communication with the mothers or lack of it thereof may create an ethical dilemma especially in contexts where patients do not consent to or are not explained for procedures (Khumalo and Rwakaikara, 2020). Mothers should play a role in the decisions of the care provided.

8.2.4. Cost of care

Under cost element, nearly all mothers incurred OOP payments despite the policy being free. A similar finding has been reported in other settings (a noted in section 2.2.5.1); however, the proportion of mothers who have made the OOP is very high under Kenya's FM policy. In Tanzania, 73% of the mothers in the EI made OOP payments (Kruk et al., 2008) while in Ghana 69% in the EIs did make OOP payments (Dalinjong et al., 2017). The mean OOP payments made by both mothers who have undergone CS and vaginal delivery was USD 10.88 and USD 9.50, respectively. The cost drivers are mainly the indirect costs from drugs purchased (particularly, Anti-D and Hexicord that are not being stocked by the facilities), transport which is not part of the policy (but that every mother needs), and ultrasound (that is not part of the policy but that facilities are trying to invest in and try capture many mothers to come in and utilise). Similar cost drivers have been reported in other studies as well (a noted in section 2.2.5.1 and 2.2.5.2).

While LM has expanded the benefits package, the lack of stocking of certain medication such as anti-D could be due to the perception by the providers that the reimbursements are significantly low and yet the drugs are costly. For other medication such as Hexicord – for cleaning the cord – it could be

because the demand exceeds the supply hence a significant gap that requires to be filled. Similar finding and explanation have also been shown in other settings such as Burkina Faso (Meda et al., 2019). Some OOP payments are also mainly due to lack of clarity of the policy among the providers resulting in the mothers incurring unnecessary costs. The poor clarity of the policy may have been because of the poor cascade (inadequate or poor communication) from the national to the facility level. The lack of clarity has been reported in other settings (Ridde et al., 2011, Witter et al., 2007, Witter et al., 2016). Some informal payments are reported under LM policy, but they are not as worrying as few mothers reported incurring them. Given these findings, some mothers may be discouraged from seeking SBA due to OOP payments as was shown in a study in Ghana where the women accessing free care revealed that the direct costs related to the policy were entirely free, but ANC and indirect costs were still hampering utilisation (Anafi et al., 2018).

While the results showed that the mothers OOP expenditure was not catastrophic at 10%, this may not be the case since Orangi et al. (2020) (in a submitted paper), have shown that the LM policy has disproportionately benefited the mothers in the higher quintile than the lower ones. Also, Mbau et al. (2020) has posited that the contracting of facilities by the NHIF has created some inequality in access between urban and marginalised areas; hence this results could have underestimated the level of catastrophic expenditure. Ataguba (2020) has also argued that the choice of the poverty line (for calculating the catastrophic expenditure and impoverishment) could affect the true ascertainment of the level of catastrophic expenditure and impoverishment. The OOP may severely affect the poor households pushing them to impoverishment as also revealed by Salari et al. (2019). Evidence that the OOP expenditure may be impoverishing the mothers is demonstrated by the fact that a majority are relying on donations from friends and family and own savings to meet the OOP expenses, thus depleting funds that can be used for other priority areas such as food. A systematic review of the health system and patients costs of managing birth-related complications in SSA showed that patients costs are catastrophic at 10% national per capita income and were impoverishing to households (Mori, 2020, Mori et al., 2020). The OOP payments have continued to be reported in the FM policies despite them being free (Meda et al., 2019); thus, it is not only synonymous with LM policy. The complementarity of LM provided by other NHIF benefit packages was able to cater for costs not taken care of in the benefits package. However, it still has a challenge because those who default in paying the monthly fees are locked out of accessing services or provides incentives for selection of lucrative sector. With 48% active contributors in the NHIF, only 27% in the informal sector had active membership with the high premium rates cited as a barrier to access of services (Mbau et al., 2020); thus, they have a high attrition rate (Barasa et al., 2018).

However, interestingly, there is a collective agreement among both the mothers and the service providers that the FM services under LM policy are freer than during the previous FM policy. Pressure from political elites may be putting a barrier to the incentive by the healthcare providers from charging mothers any informal costs.

8.2.5. Impact of the policy

Exploiting the inimitable opportunity provided by the free maternity services in Kenya, I evaluated the impact of the FM policy on early neonatal mortality, and neonatal mortality in addition to intermediate variables (delivery through CS, skilled delivery, and LBW). By employing program evaluation approaches, I find a pronounced (significant) impact of the FM policy on reduction of early neonatal mortality, and neonatal mortality. This could potentially be explained by a significant increase in the skilled delivery, where mothers who may have previously delivered without skilled assistance were, after the implementation of the policy, exposed to skilled delivery thus able to protect the neonates from a complication (if the birth occurred at home). While there is a dearth of literature that addresses effects of FM policies on neonatal mortality (Hatt et al., 2013), the results of this contradict the findings of recent studies in Kenya that have linked FM policy to increased neonatal mortality (Gitobu et al., 2017a, b, 2018a). One study that compared the causes of neonatal mortality using a quasi-experimental design, before and after the FM policy, using facility data in 77 health facilities in 14 counties showed that neonatal deaths increased in number from 5,442 to 6,981 (Gitobu et al., 2017a). Another study by the same authors using the same data but that applied a time series analysis of the utilisation of delivery services, neonatal and maternal mortality (two years before and after time series analysis), showed a non-significant reduction in neonatal mortality rates from 23.3 to 22.9 per 1,000 live births ($p=0.14$) after implementation of the FM policy (Gitobu et al., 2018a). However, their analysis did not use nationally representative data; thus, this study results fill in the gap. Besides, given the use of comparable births before and after the policy in my study, having removed heterogeneous mother effects, the exploration findings reveal that the probability of early neonatal deaths and neonatal deaths have reduced by 20.5% and 20.2% due to the FM policy (*Table 7.5, Panel B*). The past decade has seen a consistent reduction of under-five mortality in Kenya due to nutrition, wealth, maternal literacy but not user fees related (Keats et al., 2018). Therefore, given the design of this aspect of the study, this finding provides compelling evidence on causality and fills the literature gap on the cause and effect of FM policies on neonatal and early neonatal mortality.

The other finding is that while there has been an increase in the probability of births through CS by 2.1%, it is not attributable to the policy. This confirms the findings by Lang'at et al. (2019), who in their

interrupted time series analysis (2 years before - 2 years after the policy) using maternal health indicators reported monthly and collected in three counties in Kenya, showed that there was no significant change in the CS rates after the policy. The non-significant increase could potentially be explained by the fact that only a few facilities (level 4,5, and 6) act as referral facilities conduct CS as per the *Kenya delivery structure* (Kenya Ministry of Health, 2014a). Also, CS is only conducted by a medical officer, or an obstetrician and gynaecologist, or until recently a clinical officer in reproductive health, who are mostly stationed in the referral facilities (Lang'at et al., 2019). However, in Senegal, the CS significantly increased from 4.2 to 5.6% one year after the implementation of the abolition of CS fees (Witter et al., 2010).

Also, during a similar evaluation period, there was a significant increase in the probability of skilled delivery. One possible explanation is that an increase subsequently followed the FM policy in the facility-based delivery after the policy which has also been shown in other FM policies (McKinnon et al., 2015a, McKinnon et al., 2015b). Potentially many women who were not accessing maternal care before the FM policy could consequently be accessing it as a result as other studies have shown increased utilisation after FM policies (Boudreaux et al., 2014, Manthalu, 2019, Penfold et al., 2007). Calhoun et al. (2018) showed that because of the FM policy in Kenya, poor women were more likely to deliver in healthcare facilities due to the policy and availability of SBAs. Additionally, mothers are more likely to deliver in the public facilities (under which the FM policy was implemented) than private hospitals because of the policy (Calhoun et al., 2018) and it could be attributed to the removal of cost barriers (Njuguna et al., 2017). By removing the cost barriers, the women who were paying for delivery before the FM policy can now use the money to improve their health and focus on having a better pregnancy for the baby. Also, Maina and Kirigia (2015) disclosed an increase of public sector delivery (which is done through the skilled delivery) based on facility surveys from chosen counties, but Tomedi et al. (2015) whose work was based on data from 29 rural facilities in the rural HCs in Machakos County seven months after the introduction of the new policy, did not show an increase in the births in public facilities. The difference could be on the limitation of the data type. Given the robust strategy I used and the nationally representative data, the findings affirm the increase in the probability of skilled delivery following the FM policy. However, notably, other literature has shown that the increase in skilled delivery without a subsequent effort to address the health system challenge/ gaps (shortage of HCWs, increased workload, shortage of drugs, and delayed reimbursements) (also discussed in chapters 4, 5 and 6) may be contributing to neonatal mortality (Gitobu et al., 2017a, Lang'at and Mwanri, 2015, Wamalwa, 2015), without which the impact of the policy on the mortality (in this study) may have been higher.

Another interesting finding is that the FM policy translated to on average 4,015 fewer neonatal deaths in 2013/2014 with the cost to benefit ratio of 21.22 showing that the FM policy is associated with an incredible return to the country. Equally, the findings show that the net benefits are far higher than the costs, and the implication that further investment into the FM policy could potentially avert even more neonatal deaths.

8.3. A concluding weave of the thesis

This thesis adds to the growing body of evidence on the FM policy analyses. Through the utility of a pragmatic approach, the thesis has teased out the complexities relating to the non-linear nature (the dynamics) of the FM policy intervention and the interaction of the different components. The evidence has suggested that the outcome and effects (good and poor experiences, and costs) follow a spectrum of factors in the formulation and implementation of the policy such as policy interpretation, the care delivery styles, and the values held by the hospital and the local communities. For instance, the intricacies in the formulation of the policy relied on the background of the policies: need to meet the national (improved skilled delivery) and international (SDGs 3.1, 3.2, and 3.8) goals, the political value, and building consensus in the FM policy process. The overall frame of the final FM policy agenda for implementation was defined by the actors with different powers and interests and had a concurrence on the content (benefits packages and services) and the setting of the context. During the implementation processes, the policy achieved some intended positive elements of the packages but also unintended negative elements, as shown in *Figure 8.2*. The HCWs and the counties adopted SLB mechanisms to overcome the unintended negative implementation. Through the policy, there were features of a positive provision of care such as improved access, enhance choice of places of delivery, referral system, and better infrastructure and equipment. The users also had good experiences (such as good facility characteristics and services). However, there were some poor experiences (such as mistreatment and overcrowding) that the users faced. The policy did not (completely) eliminate the OOP costs of care experienced by the mothers. All in all, the policy has significantly reduced the probability of early neonatal mortality and neonatal mortality; has improved patterns of SBAs and has a good cost to benefit ratio of 21. *Figure 8.2* shows the overall weave of the thesis.

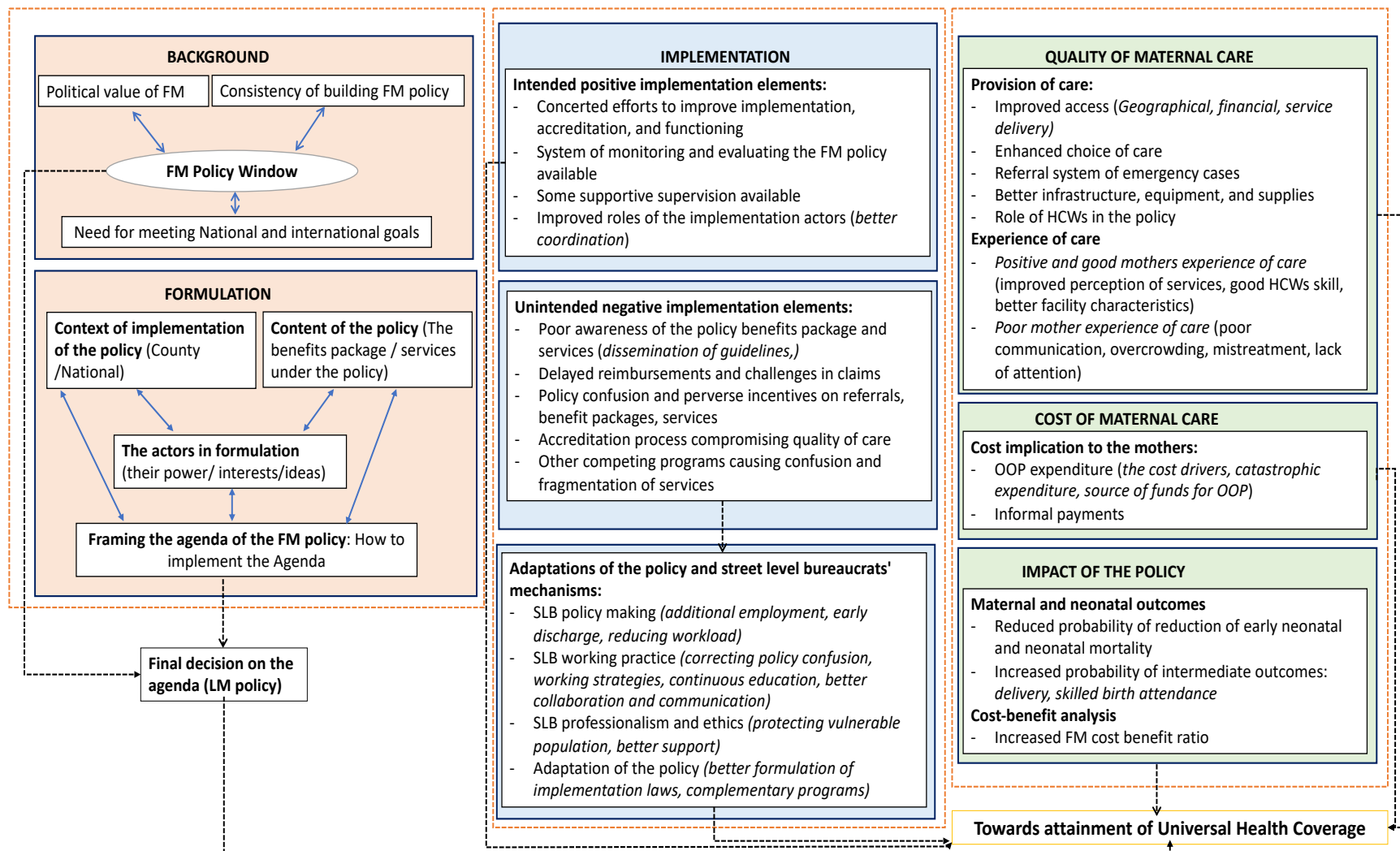


Figure 8.2: A concluding weave of the thesis

8.4. Strengths and limitations of the study

8.4.1. Strengths

Following the study, I weaved the overall thesis drawing into the theoretical and the empirical elements into a potential embryonic framework (*Figure 8.2*) that could form a strategy for future evaluation of such complex policies. My findings have shown that evaluating a policy in its entirety, can be complex, but by interweaving different policy elements, a picture of the policy process emerges. For instance, the background of the policy could define how the confluence of the nitty-gritty of the policy final policy agenda works. Similarly, it shows that the policy processes are not static, but that SLBs work to adapt them to maximise the needs of the users.

The use of a pragmatic approach (mixed methods) was an imperative strength. It permitted for complementarity and triangulation of the qualitative and quantitative data, to deepen the description and analysis of the FM policy. Besides, it attenuated against the weaknesses of the singular methods. For instance, the statistical generalisability of the quantitative techniques strengthened the theoretical generalisability from the qualitative aspects of the research.

The robustness of the econometrics analysis provided a methodological approach to tease out the causality with certainty and was further supported by the qualitative data. By utilising KDHS data that is nationally representative (includes data from all the counties) as part of the quantitative approach, allows for statistical generalisability and shows the impact of the FM policy in the whole country. Additionally, the nationally representative data helps to account for the extent that women in the current women community are using these services. Besides, the integration of results from both approaches has ensured analytical generalisability of the study. Also, through the use of 2014 KDHS, the findings that the FM policy (implemented in 2013) has significantly reduced the probability of early neonatal and neonatal mortality, and increased the SBA shows that the analytical generalisability of the study has not only been assured, but that FM policies have positive impacts on the health outcomes. While the findings may not necessarily apply to the current policy, by using the methodological approach in chapter 7 (when current data becomes available), then it would be imperative to ascertain if LM has the same effects. I have equally proposed this as a potential area of future research (section 8.6).

8.4.2. Limitations

As is with other studies, there were some limitations. To begin with, this study had to deal with concerns of generalisability (both statistical and analytical) and transferability. For instance, the selection of the county of study – as discussed in section 3.4.2 – was purposively done because of its proximity to the county government of Nairobi heeding the cost implication that accompanies data collection. While the results may not be generalisable beyond the study county (area) because of heterogeneity of the counties, I have identified significant contextual factors that may have influenced the patterns of implementation and the findings which are transferable (enhance transferability) to other 47 counties in the counties and can be used to interpret the implications of the results in other settings. Also, by selecting multiple case study facilities within the county that reflect the different level of service delivery, the results allow for the transfer of observed relationships to other service delivery settings.

With the limitation that the secondary data of KDHS did not capture the current period of the policy (for reasons discussed in section 3.5), it may have been imperative to conduct a household survey within the community to determine this extent. However, this was not possible because of the financial implication of implementing such data collection methodology and the time constrain. Additionally, the data limitations particularly for the econometrics aspects limited some aspects of the empirical analysis. For instance, quantitative data does not allow for elucidation of the impact of the policy on perinatal motilities and complications (such as still births, miscarriages, near misses) especially because the KDHS data does not focus on the individual woman pregnancy but rather on the live births. This provides a potential area for the DHS to focus and report on miscarriages and pregnancies as well.

The other potential limitation is on some component of the study design. For instance, given that there was a transition of the FM policy from the one implemented in 2013 to the one in 2017, it would have been appropriate to quantitatively ascertain if there were changes in the quality aspects of maternal care (through a comparison of the two policies). This could have been achieved quantitatively by collecting the tracer indicators of quality (mainly from facility records) and conducting a time series analysis of it. By doing so, it would be possible to evaluate the changes in the trends of the indicators before 2013, during the former FM policy, and after 2017. Even still, given that the respondents particularly in the EIs were interviewed in the institutions they had given birth, and were familiar chances are that the responses were prone to ‘courtesy bias’ where respondents potentially give approving responses (as discussed in section 3.4.4.6). However, the use of FGDs with

the mothers and even IDIs with HCWs and the county officials enhanced the credibility (construct validity) of the study (as discussed in section 3.4.9). The aspects of costs of delivery under the LM policy may have been underestimated given that the EIs were done with the mothers alone and not with the family members/accompanions/husbands who may have incurred other costs related to the birth. However, in this study, this was not possible because of the limitation of the data collection methods and the time constraints, but a considerable design for the future could strengthen this aspect and even consider costing the opportunity costs.

Finally, the guiding concept of analysis was developed from the gaps identified in the integrative review and public policy theories but was not empirically tested in the facilities. Trying it in the facilities would have benefited from the views of the respondents and would have improved its usefulness. I have proposed this as a potential area of future research (section 8.6).

8.5. Policy implications

This section provides the implication of policy for the policymakers who design and implement the FM policy in Kenya. The findings of this thesis have shown the gaps in the formulation, implementation, and effects of the FM policy that could hinder its continued functionality. The following recommendations could be used to improve it:

Enhancing the implementation of the LM policy would require support for *strategic management*. Aspects of strategic management could include instituting a *steering committee and advisory board* that will institutionalise accountability and enhance checks and balances in the operationalisation of the LM policy implementation. The steering committee can develop a consistent structure between NHIF and MOH on how LM disbursements are done, how they get to the facility and provide a working feedback mechanism. Besides, the steering committee could enhance the continued participation of all stakeholders throughout the policy process of implementation and augmenting participatory action research (Boothroyd et al., 2004). Participatory action research is 'concerned with generating knowledge about a social system, while, at the same time, attempting to change it' (Meyer, 2001, p173). Including researchers in the committee would enhance the critical examination and reflection of the experiences and practice of implementation and support the introduction of changes obtained from tacit knowledge. The advisory board, comprising of all key stakeholders – through strategic partnerships, will be useful in deliberating and communicating strategic decisions concerning implementation of the policy.

All stakeholders need to work to *improve communication of the policy* both to the implementers and the beneficiaries for better clarity to avoid policy confusions that are arising from the implementation processes. First, this can be done through continued education of the benefits package and services of the policy to the providers through fora that include the county teams, the providers, and the NHIF officials. The fora targeting the providers could be done through workshops targeting clarification of the packages or by sharing of the implementation manual, or fliers with all the providers rendering LM services. For the beneficiaries, the information on LM policy (as previously done in other programmes such as OBA) can be shared through health talks and leaflets that are translated in the local dialect. Secondly, CHWs can be used as front-line ambassadors of communication, particularly to the beneficiaries since they are on the ground and know villages and households. The CHWs can teach the mothers about the services and benefits of LM policy at the community level and the qualification criteria for using LM services (such as IDs). Also, they can encourage the mothers to access ANC services, do a referral, conduct basic regular health check such as measuring blood pressure, and mapping where pregnant mothers are and directing them to seek health facilities. Purposefully, this could be done through strategic partnerships such as with the community health department at the MOH (who are the custodians of the community health strategy). Through the use of CHWs, it is possible to develop innovative techniques such as village safe havens where mothers will come and stay before they deliver instead of them waiting until the labour pains start when they are at home, yet the health facilities are quite a distance.

The NHIF has undergone reforms in line with the presidential directive to enhance UHC. By *separating the roles of accreditation and contracting*, it is evident that there is a prospect for better quality improvement controls for LM and other programs. The removal of the accreditation authority of the hospitals from the NHIF and give it to MoH enhances quality control and minimises the conflict of interest. The other aspect is on *re-evaluating the design of the claim process*. For an efficient and effective system, there is need to re-evaluate the operations management information system that would allow for enhanced tracking of the claims from the point of services through to the reimbursement and improving the hardware for claim process (such as computers and internet). This should incorporate a review of the claims and rejections by educating the providers on the strategies so that they do not lose reimbursements (which is an essential source of income to the facilities). This could be done by allowing for flexible claim process that would not only reduce errors and fraud, but that would also empower providers on the procedures; thereby supporting timely processing and pay-out of reimbursements. There is a likelihood that efficiency in the claim process could increase the participation of different stakeholders and enhance access to maternal health services.

The agility and the flexibility of the SLBs in the public service, especially the leadership and organisation of the FM policy should be addressed further. For instance, under the SLB tacts, it would be imperative to scrutinise further the changing roles of organisational cultures and learnings in the context of the FM policy systems. Additionally, professional resilience in the FM policy context of planning requires further empirical and theoretical attention. The organisation's resilience of the capacities of the SLBs also requires further research. Also, the role of SLBs and the users of the policy about the flexibility and accountability elements of the policy needs to be more fully encouraged.

There is a need to have a system to continually *support the health providers in enhancing the quality of provision of service*. This can be done through timely availing of reimbursement money, that can then be used to prioritise maternal health investments through the improvement of infrastructure, equipment and supplies. Besides, HCWs could better be supported by having proper supportive supervision on the policy actions from both the national level and the county. Additionally, there is a need to *strengthen the shortfall in human resource*. For instance, the HR shortfall can be addressed by allocating providers as per facility workload. Besides, the HCWs can be motivated by giving them autonomy where they are allowed to budget for their LM funds received through timely reimbursements.

The study showed that the mothers are still bearing the OOP costs from the LM policy despite being free, and the cost drivers are mainly from implementation gaps of the policy. Therefore, it is imperative to ensure *the bridging the implementation gaps such as through the provision of transport* (through strategic partnerships); *enhancing the monitoring of the facilities* by both the counties and NHIF officials that could be introducing avoidable costs and through the *use of citizen response to monitor compliance*.

8.6. Areas for future research

This section provides areas for future research that stems from the limitations of the study. The recommendations are as highlighted below:

1. *Cost implication at the facility level*: An in-depth examination of the cost implication at the provider and facility level following the implementation of the FM policy could shed more light on the potential reasons why mothers still incur OOP despite the free policy. Triangulating such results with the cost implications to the mothers and the cost-benefits analysis will be useful in pointing a complete gap costs and thus provide required recommendations for the changes.

2. *Further impact evaluation:* An application of the methodological approach (chapter 7) that has been used for evaluating the impact of the past FM policy, can be used to confirm the impact of current LM policy once the current KDHS becomes available. The approach will seek to evaluate whether the FM policy as currently implemented also has a positive impact on both the early neonatal and neonatal mortality, in addition to other intermediate outcomes (chapter 7). Also, further research should be done on the areas of perinatal mortality especially still births miscarriages and near misses in relation to the FM policy.
3. *Choice of place of delivery and provision of care:* There appear to be some preference for the place of birth; however, it cannot be ascertained if it is due to the FM policy. Future research needs to explore this gap in relation to the current policy. Equally significant would be to an in-depth evaluation of whether there is a difference in the provision of QoC across the level of service provision and if the FM policy has caused the difference. This would be a useful addition for future planning of such policies.
4. *Relationship between SLB and the perception and experience of women:* This study showed that the adaptation of the policy was made by the HCWs and the counties to benefit the users. However, it would be imperative to ascertain if the mechanisms have influenced the perception and experience of the mothers for future maternal care. Besides, agility and the flexibility of the SLBs in the FM policy should be explored further.
5. *Application of the concluding weaved embryonic framework:* The outcome of this thesis is a concluding embryonic weave of results which can be used as a guiding concept of analysis for such future policies (or for this policy, but at the national level). The embryonic weave has included adjustments of the guiding framework of analysis of this work; therefore, testing its validity in future research would be imperative.

8.7. Conclusion

This is the concluding chapter of this thesis. Overall, this thesis sought to examine the process of the Kenya FM policy formulation and its implementation, effects on quality and costs, and potential impact on quality outcomes (early neonatal and neonatal mortality, and delivery through CS). To my knowledge, this is the first study that has explored the policy formulation and implementation of the current FM policy (in its entirety) as implemented in Kenya. The other was a process evaluation of the previous FM policy (Tama et al., 2018), but even then, it did not critically evaluate the formulation but looked at elements of implementation. Thus, this has gone further by assessing the detailed implementation for each of the policy function. Therefore, given the dearth of literature on formulation and implementation, this work will significantly add to the breadth of knowledge. Besides,

this study has further provided the effects of the policy of the quality of maternal care and mothers' cost. While many studies on FM policies have focused on evaluating the utilisation following the implementation, Hadley (2011) has shown that an increase in utilisation alone does not reveal the success of the free policy. There is a gap in the literature in the in-depth analysis of the effects of the policy on the quality of maternal care; thus, more attention was required (Witter et al., 2009). Therefore, this study has shown a detailed analysis of the FM policy on the quality of maternal care. While several studies have shown the OOP, costs related to FM policies in other counties (Anderson et al., 2017, Dalinjong et al., 2017, Meda et al., 2019, Mohanty and Kastor, 2017), no study has shown the extent of the OOP in the Kenyan FM policy thus this thesis fills the gap. Finally, this thesis has created a methodology to evaluate the impact of the FM policy on early neonatal and neonatal mortality, and delivery through CS which can be applied and used to assess other FM policies in future. The findings of this thesis point to the need for continued expansion of the FM policy in Kenya in pursuit of UHC.

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Appendices

Appendix 1: Example of a search strategy on Embase Classic+Embase Database from 1947 to 2017 December 13 (15 December 2017)

#	Searches	Results
1	user fee*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	1559
2	user charg*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word]	211
3	cost shar*.mp.	2088
4	cost recover*.mp.	477
5	user fee* policy.mp.	26
6	user policy.mp.	6
7	free policy.mp.	400
8	free health.mp.	628
9	free car*.mp.	4447
10	discontin*.mp.	177953
11	abol*.mp.	184496
12	exempt*.mp.	8324
13	waiv*.mp.	5371
14	remov*.mp.	779721
15	end*.mp.	7883075
16	policy chang*.mp.	5515
17	chang*.mp.	3662543
18	implement*.mp.	486126
19	policy implement*.mp.	1610
20	matern*.mp.	378310
21	deliver*.mp.	943079
22	mother car*.mp.	947
23	baby car*.mp.	485
24	infant car*.mp.	2728
25	matern* car*.mp.	21426

26	deliver* car*.mp.	5158
27	giv* birth.mp.	8623
28	labour.mp. or exp labor/	74755
29	mother*.mp.	285469
30	childbirth.mp. or exp childbirth/	68814
31	birth.mp. or exp birth/	421898
32	parturit*.mp.	17888
33	accouch*.mp.	2091
34	quality.mp.	1530797
35	quality car*.mp.	11365
36	quality outcome*.mp.	1790
37	cost*.mp.	910208
38	expenditure.mp.	60967
39	economic*.mp.	607016
40	financ*.mp.	228617
41	effective cover*.mp.	305
42	universal care.mp.	73
43	universal health cover*.mp.	1213
44	universal health.mp.	3064
45	1 or 2 or 3 or 4 or 5 or 6	4204
46	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19	11362694
47	20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33	1695435
48	34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44	2772977
49	45 and 46 and 47 and 48	454

Appendix 2: Characteristics of the studies reviewed and the achieved policy objectives

Part 1: Characteristics of the studies reviewed

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
Ameur et al. (2012)	Burkina Faso (LIC)	To investigate the impact of these interventions on the out-of-pocket expenditures of households for non-complicated institutional births in three rural health districts of Burkina Faso	Case control study	Quantitative analysis using data from women who gave birth in health centres and had no complications	Peer-review	High
Arsenault et al (2013)	Mali (LIC)	To investigate the frequency of catastrophic expenditure for emergency obstetric care, explore its risk factors, and assess the effects on households	Case control study	Quantitative analysis using data on 484 emergencies (First survey utilised Social autopsy interview method while Second survey there was a household survey)	Peer-review	High
Asante et al. (2008)	Central and Volta region, Ghana (LMIC)	To evaluate the economic outcomes of the policy on households in Ghana	Cross sectional household survey	Quantitative analysis using household cost-survey data	Peer-review	Medium
Bennis and De Brouwere: (2012)	Morocco (LMIC)	To estimate the actual cost of caesarean sections from the patients' perspective	Cross-sectional study	Quantitative analysis using data from semi-structured questionnaires with mothers who gave birth in the policy, husbands and accompanying relatives	Peer-review	Low
Bosu et al. (2007)	Central and Volta region, Ghana (LMIC)	To examine the effect of the exemption policy on delivery-related maternal mortality	Before and after intervention study design	Quantitative analysis using data obtained from all registers (Admission and discharge registers in the female wards, Outpatient, Maternity, theatre, emergency room, isolation, ICU and mortuary)	Peer-review	Medium
Boukhalfa et al (2016)	Morocco (LMIC)	To assess the policy effectiveness by analysing household expenditures related to childbirth, by delivery type and quintile	Cross-sectional quantitative study	Quantitative analysis using data from structured questionnaire with 973 women	Peer-review	High
Chama-Chiliba and Koch (2014)	Zambia (LMIC)	To examine regional differences in the effect of user fee removal in rural areas of Zambia on the use of health institutions for delivery	Quasi experimental design	Econometrics analysis using Zambia Demographic and Health Survey (ZDHS); Zambia Health Facility Census (ZHFC); Zambia Ministry of Health's (MoH) Health Management and Information Health System (HMIS)	Working paper (Published)	Medium

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
Chama-Chiliba and Koch (2016)	Zambia (LMIC)	To analyse the effect of user fee removal on the use of public health facilities for childbirth	Interrupted time series (ITS) design	Econometrics analysis using Ministry of Health's (MoH) of Zambia Health Management and Information Health System (HMIS)	Peer-review	Medium
Chankham et al. (2017)	Oudomxay Province, Lao PDR (LMIC)	To ascertain the knowledge level about free policy among Lao women and to determine their level of satisfaction with the maternal service provision	Cross sectional study	Quantitative analysis using data from structured questionnaire with 360 women who delivered their children at the health facilities from July 2014 to June 2015	Peer-review	High
Dalinjong et al. (2017)	Northern Ghana (LMIC)	To estimate OOP payments and the financial impact on women during childbirth in one rural and poor area of Northern Ghana	Descriptive convergent parallel mixed method design	Mixed-methods approach using structured questionnaire for OOP payments; FGD using semi structured interview guide	Peer-review	Medium
Delamou et al (2015)	Guinea (LIC)	To assess the changes in coverage of obstetric care before and after the implementation of free emergency obstetric policy	Descriptive cross-sectional study	Quantitative analysis using retrospective review of routine program data	Peer-review	High
Edu et al. (2017)	Cross River State Government of Nigeria (LMIC)	To evaluate the effect of the free maternal health care program on the health care-seeking behaviours of pregnant women	Observational study	Mixed-methods approach using utilisation data obtained from PROJECT HOPE, CRS Ministry of Health and Nigeria DHS; Focus Group Discussions (FGD) with pregnant and postpartum mothers	Peer-review	Low
Ensor et al. (2017)	Nepal (LMIC)	To examine the impact of these mechanisms on access to safe delivery services	Quasi experimental design	Econometrics analysis using 3 rounds of 2001, 2006, and 2011 National demographic Health survey	Peer-review	High
Ganaba et al. (2016)	Burkina Faso (LIC)	To examine the effects on utilisation, quality of care, equity, cost and sustainability of the subsidy policy in Burkina Faso five years after implementation	Complex evaluation using realist approach (Using case study approach)	Mixed-methods approach using structured questionnaire (1,609 household interviews; 130 health worker surveys); medical record extraction 1,752; key informant interviews	Peer-review	High
Ganle et al. (2014)	Ghana (LMIC)	To explore health system factors that inhibit women's access to and use of skilled maternal and newborn healthcare services in Ghana despite these services being provided free	Qualitative study design	Qualitative analysis using focused group discussion and Key informant interviews	Peer-review	High

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
Khan (2005)	Bangladesh (LMIC)	To investigate the out-of-pocket expenditures by patients for free services in a large public hospital in Bangladesh, factors influencing expenses, and their impact on household income.	Cross sectional survey	Quantitative analysis using semi-structured in-depth interviews with 81 mothers	Peer-review	Low
Koroma et al. (2017)	Bomali District, Sierra Leone (LIC)	To investigate the quality of antenatal and delivery services provided in health facilities implementing the FHCI and to identify solutions to overcome identified barriers that are preventing the FHCI from being delivered effectively within districts	Cross sectional survey design	Quantitative analysis using data from observations and checklist, exit interview, and review of records (obtained using WHO safe motherhood questionnaire; ANC observation checklist by USAID Maternal and Child Health Integrated program)	Peer-review	Medium
Kruk et al. (2008)	United Republic of Tanzania	To identify the main drivers of cost for facility delivery and the financial consequences on households in a population-based sample of women in rural Tanzania	Descriptive cross-sectional study	Quantitative analysis using household survey of women who gave birth within five years	Peer-review	medium
Lange et al. (2016)	Benin (LIC)	To explore how the Caesarean Section policy shaped health workers' and patients' perceptions of and experiences with quality of care	Qualitative ethnographic study	Qualitative analysis using ethnographic research methods observation in maternity ward, daily informal conversations, and semi structured interviews	Peer-review	Medium
Luwei et al (2011)	Ethiopia (LIC)	To examine user fees for maternity services and how they relate to provision, quality, and use of maternity services in Ethiopia	Not Indicated	Quantitative analysis using national assessment of emergency obstetric and newborn care (EmONC) examined user fees for maternity services in 751 health facilities that provided childbirth services	Peer-review	Low
Masiye et al. (2010)	Zambia (LMIC)	To review the performance of free health care in Zambia following 15 months of implementation	Case study (for qualitative part); and before and after design for quantitative approach	Mixed-methods approach using Data from Zambia Health Management and Information Health System (HMIS); Structured questionnaires for care givers; and in-depth interviews with health workers	Peer-review	High
Kenya Ministry of Health (2015)	Kenya (LMIC)	To assess the implementation of free maternity services program and its effects on health service delivery	Monitoring and evaluation using mixed methods	Mixed-methods approach using qualitative interviews; KII, FGDs and exit questionnaires	A comprehensive assessment report	Low

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
Nabyonga-Orem (2008)	Uganda (LIC)	To prospectively study how different aspects of quality-of-care change, as a country changes its health financing options from user charges to free services, in a developing country setting.	Population longitudinal cohort study	Mixed-method approach using Key informant Interviews with health facility officials, FGDs with 12 Participants	Peer-review	medium
Nahar and Costello (1998)	Bangladesh (LMIC)	To examine the actual costs incurred by families, and their affordability during maternity care in four government hospitals in Dhaka	Cross sectional survey	Quantitative analysis using data from structured questionnaire survey and in-depth interviews among 220 post-partum mothers and their husbands, selected from four government maternity facilities (three referral hospitals and one Mother and Child Health hospital) in Dhaka.	Peer-review	Low
Nimpagaritse and Bertone (2011)	Burundi (LIC)	To draw lessons from a case study presented using service utilization from eight health providers in a district and testimonies from insiders.	Descriptive case study	Mixed method approach using direct observation; routine utilisation data and qualitative information	Peer-review	High
Philibert et al (2014)	Burkina Faso (LIC)	To assess whether women's satisfaction with delivery care is maintained with a total fee exemption in Burkina Faso	Quasi experimental design which case control study	Quantitative analysis using data from intervention and control groups obtained from structured questionnaire on postpartum views and opinion	Peer-review	Medium
Ravit et al. (2015)	Kayes Region, Mali (LIC)	To assess any expenses that were associated with a caesarean episode in the context of user fees exemption	Case control approach	Quantitative analysis using data from structured questionnaire with 484 women, who were both maternal deaths and near-misses and experienced a caesarean section in the latter case-control study.	Peer-review	High
Ridde and Diarra (2009)	Niger (LIC)	To analyse the implementation the abolition of payment for all services for children under five years and pregnant women from the specific perspective of the actors, using an anthropological approach.	Process Evaluation	Mixed-methods approach using Individual in-depth interviews; FGDs; Participant observation; and self-administered structured questionnaire	Peer-review	Medium
Ridde et al. (2012)	Multi-country (Benin (LIC), Burkina Faso (LIC), Mali (LIC), Niger (LIC), Togo (LIC),	To present a transversal analysis of the results of a knowledge aggregation process undertaken with street-level bureaucrats regarding user fees exemption policies in six West African countries (Benin, Burkina Faso, Mali, Niger, Togo and Senegal)	Multiple cases studies with embedded level of analysis	Mixed method approach using self-administered questionnaire; group discussions; country team workshops	Peer-review	High

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
	Senegal (LIC)					
Ridde et al. (2012)	Burkina Faso (LIC)	To evaluate the effects of the national maternal healthcare subsidy policy	Cross-sectional household survey	Quantitative analysis using household survey data	Peer-review	Medium
Ridde et al. (2015)	Burkina Faso (LIC)	To estimate changes in OOP spending across socio-economic strata given changes in service utilisation produced by the policy.	Repeated cross-sectional household survey	Quantitative analysis using 6 rounds of repeated household survey conducted in Part of Nouna Health District (NHD)	Peer-review	High
Ridde et.al (2013)	Burkina Faso (LIC)	To test the hypothesis that the amounts paid by women in cases of normal deliveries in primary care maternity units in Burkina Faso were more than the official fee, i.e., their 20% portion of the total cost, and if confirmed, to understand these results by means of a qualitative approach.	Descriptive and analytical implementation evaluation using a mixed method sequential explanatory design	Mixed-method approach using both qualitative and quantitative data Household survey, FGDs with the women	Peer-review	High
Sidze et al. (2016)	Kenya (LMIC)	To investigate the impact of the FMS program on quality of maternity care in public health facilities in Kenya	Not indicated	Mixed-methods approach using Kenyan Demographic and Health Survey (KDHS) (2003, 2008/2009 and 2014); Health Monitoring and Information system (HMIS) secondary data on health facilities' indicators (2011/12; 2012/13, and 2013/14); and Quantitative Survey (Exit interview questionnaire)	Grey literature	Low
Steinhardt et al. (2011)	Afghanistan (LIC)	To synthesize lessons about the effects of user fee removal on quality—both observed facility structural quality and overall perceived quality of care—and utilization.	Outcome Evaluation	Mixed-methods approach using baseline survey; follow up facility assessment; exit interviews; household surveys; HMIS database	Peer-review	High
The World Bank (2013)	Lao PDR (LMIC)	To document the maternal OOP expenditure and service readiness	Cross sectional household survey	Quantitative analysis using household and health centre survey conducted in Lao PDR	Report	Medium
Vallières et al (2016)	Sierra Leone (LIC)	To identify how the free health care initiative (FHCI) policy impacts on health inequities in Sierra Leone and how this translates into	Cross sectional household survey	Quantitative analysis using baseline evaluation data for MCH program implemented in Bonthe District	Peer-review	Low

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
		practice and interventions at the community-level.				
Witter et al (2010)	Senegal (LIC)	To provide evidence of effectiveness of free policy in Senegal and recommend ways to improve its implementation	Policy evaluation	Mixed-methods approach using semi-structured interviews with key informant; forms for extraction of financial information; Unstructured discussion at the community level; Structured questionnaire applied to clinical records	Peer-review	High
Witter et al. (2007)	Ghana (LMIC)	To describes Ghana's innovative scheme that exempt all women from delivery fees	Policy baseline evaluation	Qualitative analysis using key informant and semi structured interviews	Peer-review	High
Witter et al. (2013)	Ghana (LMIC)	To Explore the policy process and the early implementation of the free NHIS coverage for pregnant women	An exploratory process evaluation	Mixed-methods approach using semi-structured interviews with key informant and documents review	Peer-review	High
Witter et al. (2011)	Nepal (LMIC)	To understand the effects of the free policy on health facilities	Monitoring and evaluation using a before and after study design	Mixed-methods approach using reviewed district records; Structured extraction from facility data; and Semi-structured interviews	Peer-review	High
Witter et al. (2012)	Sudan (LMIC)	To document implementation challenges and effectiveness of fee exemption policy in Sudan	Policy implementation evaluation	Mixed-methods approach using semi-structured interviews with key informant; forms for extraction of financial information; Structured questionnaire applied to clinical records	Peer-review	High
Witter et al. (2016)	Multi-country (Benin (LIC), Burkina Faso (LIC), Mali (LIC), Morocco (LMIC))	To document the costs and impacts of obstetric fee removal and reduction policies in a holistic way	Comparative case study design based on realist evaluation	Mixed-methods approach using FEMHealth research tools (observation grid, interview guide with actors, policy documents, Financial flow tracking, Costing interviews, Exit interviews, Health worker survey policy implementation assessment, policy effect mapping study, Realist case study, quantitative instrument on near-miss, CS and quality, Quantitative analysis of secondary data	Peer-review	High
Witter et al. (2017)	Multi-country (Benin (LIC), Burkina Faso (LIC), Mali (LIC),	To evaluate the costs and effectiveness of national obstetric fee exemption policies	Comparative case study design based on realist evaluation	Mixed-methods approach using Document review; Key Informant Interviews; Secondary data; Structured extraction from medical files; Observation of care processes. Questionnaire was developed and tested in Ghana	Peer-review	High

Author (year)	Country (Country category)	Aim	Study Design	Type of Study/ method and approach	Peer review/ Grey literature	Quality of the article
	Morocco (LMIC)					

Part 2: Achieved policy objectives based on the reviewed studies

Author (year)	Country (Country category)	The policy	Initial policy objectives	Objectives the policy met and findings
Steinhardt et al. (2011)	Afghanistan (LIC)	Free services, community health fund and standard user fee schemes	Banned user fees at the primary care level, effective from 17 April 2008, allow the basic package for health services (BPHS) facilities to cease charging any fees to patients.	Objectives met: Yes Findings: The perceived and observed quality increased across facilities but did not differ by fee removal status. The utilisation of services at facilities increased by 400% more after fee removal; visits for curative care increased significantly ($P < 0.001$), but institutional deliveries did not; utilisation of services typically free before the ban (mainly immunisation and antenatal care) increases, but these were not sustained.
Khan (2005) and Nahar and Costello (1998)	Bangladesh (LMIC)	Free maternity services (care)	To provide free delivery right from antenatal care, through delivery, to postnatal care.	Objectives met: Not indicated. Findings: Free maternity services imposed large OOP expenditures on patients, which may have been a major contributor to maternity services' low utilisation, especially among low-income groups.
Lange et al., (2016), Ridde et al., (2012b), Witter et al., (2016), and Witter et al., (2017)	Benin (LIC)	Free caesarean section	To decrease the barriers to skilled facility delivery and the financial burden on women and their families.	Objectives met: Yes (slightly but not fully attributable to policy) Findings: There are positive trends in increasing SBA and CS and narrowing inequalities but not attributable to the policy (improved utilisation but supplier induced demand for CS than normal delivery). Implementation challenges involving HCWs and some burdens on women's access to care have been addressed. Still, deterrents remain to the improved perception of quality of care on women who continue to pay for free care though considered reasonable compared to what the charges were before.
Ameur et al., 2012, Ganaba et al., (2016),	Burkina Faso (LIC)	Subsidy policy	To increase skilled delivery in primary health care centre; to increase access by women to hospital facilities for complicated deliveries; enhance the quality	Objectives met: Yes Findings: Implementation gaps; elimination of fees for facility-based births benefits, especially the poorest households; no

Author (year)	Country (Country category)	The policy	Initial policy objectives	Objectives the policy met and findings
Philibert et al., (2014), Ridde et al., (2015), Ridde et al., (2012a), Ridde et al., (2013), Ridde et al., (2012b), Witter et al., (2016), Witter et al., (2017)			of facility-based delivery services; and reduce the cost of delivery borne by households.	effect of user fee exemption on the perceived quality of delivery care
Nimpagaritse and Bertone (2011)	Burundi (LIC)	Free service for under 5's and women giving birth	To reduce inequities and improve the health of children under five and their mothers.	Objectives met: Yes (Slightly but had implementation issues) Findings: Implementation gaps; elimination of fees for facility-based births benefits, especially the poorest households; no effect of user fee exemption on the perceived quality of delivery care
Luwei et al. (2011)	Ethiopia (LIC)	Standardised list of exempted services	To move towards achieving equity in health access	Objectives met: Yes (Slightly but had implementation issues) Findings: Severe underutilisation of maternal health services (6.6% of the total expected annual births) (possibly due to geographic distance, poor roads, lack of transport, perceptions of poor quality and availability of care, and economic constraints); the waiver system is used to provide free services to the poorest at all levels, including hospital; OOP payments due to costs of transport and food and lodging for accompanying relatives; slightly altered quality of care (for example as reflected by case fatality rates) and patients' perceptions of quality of care (as reflected by utilisation rates).
Asante, (2007), Bosu et al., (2007), Dalinjong et al., (2017), Ganle et al., (2014), Witter et al., (2007), Witter et al., (2013)	Ghana (LMIC)	Free delivery exemption policy	Reduce maternal mortality and promote skilled birth attendance; reduce the financial barrier that is linked with the utilisation of facility services (thus reducing poverty reduction); improve access to and use of maternal and newborn services.	Objectives met: Yes, though not completely as (there are gaps that needed addressing) Findings: In the initial policy, the rich benefited more than the poor; and the delivery-related institutional maternal mortality did not appear to change; NHIS policy did not eliminate financial barriers associated with childbirth, and it impacted the welfare of some women; limited and unequal distribution of skilled maternity care services, poor quality of maternal care; implementation gaps

Author (year)	Country (Country category)	The policy	Initial policy objectives	Objectives the policy met and findings
Delamou et al. (2015)	Guinea (LIC)	Free emergency obstetric care policy	To cover for the cost of the antenatal check, normal delivery and caesarean section.	Objectives met: Yes (still ongoing) Findings: The implementation of the free obstetric care policy led to a significant decrease in unmet obstetric need (particularly between 2008 and 2012 in one district).
Kenya Ministry of Health, (2015), Sidze et al., (2015)	Kenya (LMIC)	Free maternity services	To increase access by women to hospital facilities deliveries (increase skilled delivery), thus reducing the maternal and infant mortality, which are essential in achieving Millennium Development Goals; and to improve inclusiveness in the health sector.	Objectives met: Yes Findings: It has helped to reduce the barriers to maternity services but with operational challenges
Chankham et al., (2017), The World Bank, (2013)	Lao PDR (LMIC)	Free maternity services	To build on the good experience of the piloted health services improvement project (HSIPs) and health equity funds (HEFs) for free maternity for the poor.	Objectives met: Yes (but requires further analysis to ascertain) Findings: Replacing the OOP payments by pregnant women with case-based payment by the government for maternal services and incentives (small cash payments) for transport cost and opportunity cost; the women were highly satisfied with the quality of the services, health care providers, and health facilities; accessibility still an issue.
Arsenault et al., (2013), Ridde et al., (2012b), Witter et al., 2016, Witter et al., (2017)	Mali (LIC)	Free caesarean section	To reduce the financial burden under the emergency obstetric care	Objectives met: Yes (but requires further analysis to ascertain) Findings: As implemented then, the fee exemption for women undergoing a Caesarean was not enough to eliminate the risk of catastrophic expenditure and implementation gaps
Bennis and De Brouwere, (2012), Boukhalfa et al., (2016), Witter et al., (2016), Witter et al., (2017)	Morocco (LMIC)	Free delivery and caesarean policy	To make deliveries free of charge and cater for delivery; obstetric complication around childbirth; hospital stay; transport from peripheral maternity to hospital maternity (for the mother and/or the newborn), and in rural areas transport (to the hospital in case of emergency).	Objectives met: Yes (though not entirely) Findings: The fee exemption policy for CS has probably reduced the total cost for households who did not have a poverty card. However, it has not led to 'truly' free caesarean deliveries.
Ensor et al., (2017), Witter et al., (2011)	Nepal (LMIC)	Universal Free delivery service	To increase maternal skilled facility-based delivery.	Objectives met: Yes Findings: Increased utilisation and implementation gaps; Incentive programme associated with an increase in service delivery; the beneficial impact of maternal financing policies skewed towards areas and households that are geographically more accessible and wealthier

Author (year)	Country (Country category)	The policy	Initial policy objectives	Objectives the policy met and findings
Ridde and Diarra, (2009), Ridde et al., (2012b)	Niger (LIC)	Free caesarean section	To serve the district population by providing free services for referred children and pregnant women (CS, diagnostics, outpatient and inpatient care) and transport cost; and also improve quality and availability of services.	Objectives met: Yes Findings: Implementation gaps
Edu et al. (2017)	Cross River State Government of Nigeria (LMIC)	Cost-removal policy (PROJECT HOPE)	Improve the utilisation of the maternal health service and meet MDG5 by 2015	Objectives met: Yes (but not necessarily linked to the policy) Findings: Implementation gaps
Witter et al. (2010)	Senegal (LIC)	Free Delivery and Caesarian Policy (FDCP)	To reduce the financial barrier of using public maternal services and increase SBA. Maternal and perinatal mortality eventually reduces.	Objectives met: Not indicated. Findings: Implementation gaps
Koroma et al. (2017), Vallières et al (2016)	Sierra Leone (LIC)	Free Healthcare Initiative (FHCI)	Removing financial barriers and incentivising women to use ANC, delivery and postnatal care (provide access to the 1.5 million children, pregnant or lactating mothers to free essential health services: antenatal, delivery, and postnatal care for mothers, and preventative and curative interventions for common childhood illness)	Objectives met: Yes (but has implementation gaps) Findings: Increase in SBA; completed immunisation schedules, and higher rates of being brought to the health centre within 24 h of developing a fever or a suspected acute respiratory infection, but implementation gaps
Witter et al. (2012)	Sudan (LMIC)	Free curative care for under-fives and caesarian	To ameliorate the negative impact of the earlier introduction of user fees for health services and emergency care; to shift the financing burden from the population to state.	Objectives met: Yes (but has implementation gaps) Findings: Increased service utilisation in the short term (need for improved access to basic health care); and financial protection against health care costs in northern Sudan; implementation gaps.
Kruk et al. (2008)	United Republic of Tanzania	Tanzania declared maternal and childbirth services free at the point of use in government facilities.	To reduce maternal mortality	Objectives met: Not confirmed in the study Findings: Not confirmed, but there are higher OOPs
Nabyonga-Orem (2008)	Uganda (LIC)	Primary healthcare user fees exemption (including delivery)	Not to discourage payment for the services (prepayments not abolished) reduce the financial barriers faced by public	Objectives met: Yes (but may not be due to the policy) Findings: levels of the technical quality of care attained in a system with user fees are not necessarily a result of the user fee policy; significant increases in utilisation of services; other implementation challenges

Author (year)	Country (Country category)	The policy	Initial policy objectives	Objectives the policy met and findings
Chama-Chiliba and Koch, (2014), Chama-Chiliba and Koch, (2016), Masiye et al., (2010)	Zambia (LMIC)	user fee removal for primary healthcare	Removing barriers to health services and improving universal access to health service delivery among the indigent group	<p>Objectives met: Yes</p> <p>Findings: Utilisation increased among the rural population aged at least five years by 55% (utilisation increases were pronounced in the districts with the highest levels material deprivation and poverty). Increased utilisation not attributable to policy); fee removal is more effective than having a fragmented effort to target exemptions to certain groups in protecting against the financial consequences of using health services; improved quality; implementation gaps</p>

Appendix 3: Authorization to use KDHS data



Aug 08, 2018

Boniface Oyugi
Centre for Health Services Studies
United Kingdom
Phone: 447459842515
Email: bonnyotieno@gmail.com
Request Date: 08/08/2018

Dear Boniface Oyugi:

This is to confirm that you are approved to use the following Survey Datasets for your registered research paper titled: "Free maternity services in Kenya ":

Kenya

To access the datasets, please login at: https://www.dhsprogram.com/data/dataset_admin/login_main.cfm. The user name is the registered email address, and the password is the one selected during registration.

The IRB-approved procedures for DHS public-use datasets do not in any way allow respondents, households, or sample communities to be identified. There are no names of individuals or household addresses in the data files. The geographic identifiers only go down to the regional level (where regions are typically very large geographical areas encompassing several states/provinces). Each enumeration area (Primary Sampling Unit) has a PSU number in the data file, but the PSU numbers do not have any labels to indicate their names or locations. In surveys that collect GIS coordinates in the field, the coordinates are only for the enumeration area (EA) as a whole, and not for individual households, and the measured coordinates are randomly displaced within a large geographic area so that specific enumeration areas cannot be identified.

The DHS Data may be used only for the purpose of statistical reporting and analysis, and only for your registered research. To use the data for another purpose, a new research project must be registered. All DHS data should be treated as confidential, and no effort should be made to identify any household or individual respondent interviewed in the survey. Please reference the complete terms of use at: <https://dhsprogram.com/Data/terms-of-use.cfm>.

The data must not be passed on to other researchers without the written consent of DHS. Users are required to submit an electronic copy (pdf) of any reports/publications resulting from using the DHS data files to: archive@dhsprogram.com.

Sincerely,

Bridgette Wellington

Bridgette Wellington
Data Archivist
The Demographic and Health Surveys (DHS) Program

Appendix 4: University of Kent ethics review approval letter

5th September 2018

TO WHOM IT MAY CONCERN,

The School of Sociology, Social Policy & Social Research Student Ethics Committee have approved the following Research Ethics Application:

Name of Researcher: Boniface Oyugi


Name of Supervisor: Professor Sally Kendall

Research Title: "Policy Change, Quality of Care and Outcomes, and the Cost of "Free"

Maternal Health Policy: Lessons for Universal Health Coverage using a Kenyan Case Study"

Date Approval Granted: 22nd August 2018

Yours sincerely,



Dr Phil Carney
Chair of the SSPSSR Student Research Ethics Committee



Appendix 5: AMREF ESRC approval letter



Amref Health Africa in Kenya

REF: AMREF – ESRC P537/2018

October 22, 2018

Boniface Oyugi
Centre for Health Services Studies
University of Kent, Canterbury, CT2 7PZ
Tel: +44 1227 827760/+254 720 144327/+44 7459 842515
Email: boo6@kent.ac.uk

Dear Mr. Oyugi,

RESEARCH PROTOCOL: THE POLICY CHANGE, QUALITY OF CARE AND OUTCOMES, AND THE COST OF “FREE” MATERNAL HEALTH POLICY: LESSONS FOR UNIVERSAL HEALTH COVERAGE USING A KENYAN CASE STUDY.

Thank you for submitting your protocol to the Amref Health Africa Ethics and Scientific Review Committee (ESRC).

This is to inform you that the ESRC has approved your protocol. The approval period is from October 22, 2018 to October 21, 2019 and is subject to compliance with the following requirements:

- a) Only approved documents (informed consents, study instruments, advertising materials etc.) will be used.
- b) All changes (amendments, deviations, violations etc.) are submitted for review and approval by Amref ESRC before implementation.
- c) Death and life threatening problems and severe adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the ESRC immediately.
- d) Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to Amref ESRC immediately.
- e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period (attach a comprehensive progress report to support the renewal).
- f) Clearance for export of biological specimen or any form of data must be obtained from Amref ESRC, NACOSTI and Ministry of Health for each batch of shipment/export.
- g) Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/or plagiarism.

Please do not hesitate to contact the ESRC Secretariat (esrc.kenya@amref.org) for any clarification or query.

Yours sincerely,


Prof. Mohamed Karama
Chair, Amref Health Africa ESRC

CC: Samuel Muhula, Monitoring & Evaluation and Research Manager, Amref Health Africa in Kenya

Appendix 6: Kiambu County Clearance to conduct research letter

COUNTY GOVERNMENT OF KIAMBU DEPARTMENT OF HEALTH SERVICES

All correspondence should be addressed to
HEAD HRDU – HEALTH DEPARTMENT
Email address: mdiritu@gmail.com
mkwasa@live.com
Mobile: 0721641516
0721974633



HEALTH RESEARCH AND DEVELOPMENT
UNIT
P. O. BOX 2344 – 00900
KIAMBU

Ref. No: KIAMBU/HRDU/AUTHO/2018/10/31/Oyugi B

Date: 31 Oct 2018

TO WHOM IT MAY CONCERN,

RE: CLEARANCE TO CONDUCT RESEARCH IN KIAMBU COUNTY

Kindly note that we have received a request by **Mr. Boniface Oyugi** of **Centre For Health Services Studies** to carry out research in Kiambu County, the research topic being on ***“The Policy Change, Quality Of Care And Outcomes, And The Cost Of “Free” Maternal Health Policy: Lessons For Universal Health Coverage Using A Kenyan Case Study”***.

We have duly inspected his documents and found that he has been cleared by **AMREF -ESRC** until **21 Oct 2019**. He thus does not need any further clearance with another regulatory body in order to conduct research within the county of Kiambu.

However, it is incumbent upon the facility in which the research is being carried out to ensure that they are conversant with the remit of the study and operate in line with their institutional norms on conducting research. This note also accords him the duty to provide feedback on his research to the county at the conclusion of his research.

A handwritten signature in black ink, appearing to read 'M. Ndiritu Ndirangu'.

DR. M. NDIRITU NDIRANGU
COUNTY HEALTH RESEARCH DEVELOPMENT UNIT
KIAMBU COUNTY

Appendix 7: Thika level 5 approval to carry out research letter

COUNTY GOVERNMENT OF KIAMBU DEPARTMENT OF HEALTH

Tel.Thika 067 21621/2 fax 21778
All correspondence should be addressed to
MED.SUPT.
When replying please quote



THIKA LEVEL 5 HOSPITAL
P.O. BOX 227
THIKA

Ref: NO. MOH/TKA/TRECVOLI(003)

Date: 12th November, 2018

APPROVAL TO CARRY OUT RESEARCH

Principle investigator: Boniface Oyugi

RE: THE POLICY CHANGE, QUALITY OF CARE AND OUTCOMES, AND THE COST OF 'FREE' MATERNAL HEALTH POLICY: LESSONS FOR UNIVERSAL HEALTH COVERAGE USING A KENYAN CASE STUDY.

Following deliberations by Thika Level 5 hospital research committee, your proposal to carry out the above research at this facility has been approved.

Take note that you are required to submit a copy of your research findings upon completion of the study to the hospital. It is also expected that the Ethical consideration and the research subjects confidentiality will be maintained as you have outlined in your proposal.

Any patient confidential information that you may access during your research should not be used without consent.

This letter is valid up to 31st May, 2019.

For any queries feel free to contact the committee chair through the Medical superintendent's office. Thank you and all the best.


DR. JACQUELINE NJOROGE
CHAIR TREC
THIKA LEVEL 5 HOSPITAL



Appendix 8: Information sheets

- A. Ministry of Health officials, National Health Insurance Funds, donors, civil society including representatives of health service providers
- B. County and sub-county officials, facility in-charges, and health-care providers

Study and Lay Title:

“The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”

Investigator and institutional affiliation:

Boniface Oyugi	Centre for Health Services Studies, University of Kent, Canterbury, England
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Who is carrying out this study and what is it about?

This study is being carried out by BONIFACE OYUGI. BONIFACE is a PhD student in Health Economics and Policy at the Centre for Health Services Studies, University of Kent, England.

In this research we want to learn more about the policy process, quality of care and the cost of providing the free maternity policy; herein referred to as *Linda mama Programme*. Specifically, we would want to know your views about how the policy began and was designed, the quality and cost of implementation the policy, and your experiences implementing this policy. In order to accomplish our aim, our researchers will be carrying out in-depth interviews with key actors involved in the *Linda mama programme* at a national level, county level and at a facility level. At a national level, we aim to interview 10 respondents from the Ministry of Health, NHIF, donors, and civil society including representatives of health service providers. At a county level, we anticipate conducting the study in Kiambu County and information will be collected from county and sub county officials from the County Department of health, county treasury and county assembly. Within the county, in-depth interviews will be conducted with approximately 5 officials. We will also be visiting 3 health facilities (a high-volume referral hospital (Level 5 Hospital), a medium volume hospital (Level 4 Hospital), and a low volume hospital (Level 3 Hospital)) in Kiambu County and we are going to interview the facility in-charge and the maternity department in-charges of the three hospitals. Also, 553 mothers who shall have delivered in the three hospitals under *Linda mama Programme* will participate in filling in a patient exit questionnaire. We will also conduct document reviews.

Why do you want to talk to me and what does it involve?

You have been selected to participate in this study due to your role and experience in the *Linda mama Programme* policy process. We believe you are in a good position to help us attain the objectives of our study.

I would like to ask you a number of questions about the issues that I have explained above. If you would like to answer the questions you may say so and the interviewer will start interview. The discussion will take place at your place of work or any other place of your choice and at a time convenient to you. No one else but the interviewer will be present unless you would like someone else there.

We wish to audio record the discussions. The audio recording is voluntary. The audio recording will be used to write up the information that you give but we will remove any information from these written records that could identify you in person. This includes removing your name and any other personal or professional information that may identify you. We may also use your quotations in illustrating certain points in our publications. However, your name or any other aspect that may identify you will not be used.

What are the risks of me taking part?

There are no known risks in participating in this study. The interview will take between 60 minutes to 90 minutes.

You may be uncertain whether you have the correct answers to some of the questions to be asked and this may make you feel uncomfortable. You are free to refuse to answer any questions. However, in order to have good results from the study, it is important that you try to answer all questions correctly.

What are the advantages to me taking part?

There are no individual benefits to taking part. In talking to us, you will contribute to the knowledge on implementation processes of the current Linda Mama policy and make significant contribution to the ongoing discourse on the subject of Free Maternity Services and user fees removal in a developing country context.

Who will have access to the information I give?

All interview documents, audio recordings and transcripts will be securely stored in password-protected computers according to the *University of Kent guidelines* that will only be accessed by the investigators. The knowledge gained from this research will be shared in summary form, without revealing individual identities, with all participating facilities, the Ministry of Health and the wider scientific community for instance through policy briefs and scientific publications.

In future, information collected or generated during this study may be used to support new research by other researchers in Kenya and other countries on health systems research. In this case, we will only share information in ways that do not reveal individual participants' identities. For example, we will remove information that could identify people, such as their names and where they live, where necessary roles and positions, and replace this information with number codes. Any future research using information from this study must first be approved by a local or national committee to make sure that the interests of the participants and their communities are protected.

Who has allowed this research to take place?

This research is a PhD project and has been approved before commencement by the University of Kent Ethics Committee and AMREF Scientific & Ethics Review Unit in Kenya who looked carefully at the planned work. They must agree that the research is important, relevant to Kenya and follows nationally and internationally agreed research guidelines. This includes ensuring that all participants' safety and rights are respected.

What will happen if I refuse to participate?

All participation in research is voluntary. You are free to decide if you want to take part or not. If you agree, you can change your mind at any time without any consequences.

Who is organising and funding this study?

This study is organised by Boniface Oyugi, (Research PhD Student, Centre for Health Services Studies) at the University of Kent. Commonwealth Scholarship Commission is providing funds for this PhD project.

What if I have any questions?

You are free to ask me any question about this research. If you have any further questions about the study, you are free to contact the research team using the contacts below:

Boniface Oyugi, (PhD Student) Study Principal Investigator

Centre for Health Services Studies, CGA 204, George Allen Wing, Cornwallis Building, University of Kent, Canterbury, CT2 7PZ

Telephone: [+44 1227 827760] | Mobile: [+254 720 144327 OR +44 7459 842515]

Email: boo6@kent.ac.uk

OR

Professor Sally Kendall, Research Supervisor

Centre for Health Services Studies, CGA 208, George Allen Wing, Cornwallis Building, University of Kent, Canterbury, CT2 7PZ

Telephone: [+44 1227 816432] | Mobile: [+44 7740 795446]

Email: S.Kendall-608@kent.ac.uk

If you want to ask someone independent anything about this research please contact:

The Head, AMREF Kenya, Wilson Airport, Lang'ata Road.

Office Telephone: [+254 20 6994000]; Fax: [+254 20 606340];

P.O Box 30125-00100, Nairobi, Kenya.

Email address: ESRC.Kenya@amref.org

C. Fomu ya maelezo na idhini ya wagonjwa

Kichwa cha utafiti: Mabadiliko ya Sera, ubora wa utunzaji na matokeo, na gharama za “Bure” za Sera ya Afya ya Mzazi: Somo kwa ajili ya Chanjo ya afya nzima kutumia utafiti wa Uchunguzi Kenya

Jina na taasisi ya watafiti

Boniface Oyugi	Kitengo cha Health Service studies, Chuo cha Kent, Canterbury, Uingereza
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Nani anafanya utafiti huu na unahusu nini?

Utafiti huu unafanywa na BONIFACE OYUGI. BONIFACE ni mwanafunzi wa Uchumi wa Afya na Sera katika kitengo cha Health Service studies, Chuo cha Kent, Uingereza. Huu ni utafiti wangu wa PhD yenye madhumuni ya kuthamini ubora wa huduma na matokeona gharama ya seraya Linda mama.

Dhumuni: Taarifa zilizo kusanywa zitatumika kueleza kiwango cha kuridhika ambazo wamama wame husisha na huduma hii, na hivyo kutoa taarifa katika maeneo ambayo yana hitaji kuboreshwa huduma kwa ufanisi na utekelezaji wa sera ya Linda mama.

Mbona wataka kuzumgumza na mimi na inahusisha nini?

Umechaguliwa kushiriki katika utafiti huu kwajili ya uhusiana wako na huduma ya sera ya Linda mama.

Ningependa kukuuliza maswali kadhaa kuhusu uzoefu wako wa utekelezaji wa huduma ya bure ya afya ya uzazi. Ikiwa hutaki kujibu swali lolote katika hayo, unaweza kusema hivyo na anayehoji ataendelea na swali linalofuatilia. Majadiliano yatafanyika hapa kwa hospitali hii. Hakuna mtu mwengine kando na anayehoji atakayekuwepo isipokuwa kama kuna mtu ungependa awepo.

Mahojiano yote yatarekodiwa. Kurekodiwa ni kwa hihari na yatatumiwa kuandika majadiliano. Ingawa, katika kuandika majadiliano, jina lako na nambari yako hayatatumiwa kukutambulisha. Majadiliano ama sehemu za majadiliano yanaweza tumiwa katika uchapishaji wa risach na matina yako ama chochote kinachoweza kukutambulisha yatawekwa siri.

Je kuna madhara au usumbufu wowote kwangu kwa kushiriki?

Kushiriki katika utafiti huu hauna madhara yoyote. Majadiliano yatachukua takriban dakika sitini hadi tisaini.

Unapoulizwa maswali, unaweza kukosa uhakika kama majibu yako ni sahihi na hii inaweza kukufanya kupata wasiwasi. Ukona uhuru kukataa kujibu swali lolote. Lakini, ndiposa tupate matokeo yanayofaa kutokana na utafiti huu, ni muhimu kujaribu kujibu maswali yote kwa uhakika.

Je kuna manufaa yoyote kwangu kwa kushiriki?

Hakuna manufaa ya kibinafsi kwa kushiriki. Kwa kuzungumza nasi, utachangia katika ufahamu wa kujua ubora wa sera ya Linda mama. Majibu ya utafiti huu utasaidia watu wengine hapa Kenya na kwengineko siku za usoni, kwa mfano kwa kubuni na kurekebisha mifumo mipya ya afya.

Ni nani atakayeweza kufikia habari ninazopeana?

Stakabadhi zetu zote zitahifadhiwa salama kwenye kabati zilizofungwa na komputa zinazohitaji neno maalum kufunguliwa kulinagana na **miongozo ya chou kikuu cha KENT** yanayoweza fikiwa tu na wahusika maalum wenye utafiti huu.

Hapo usoni, habari zitakazokusanywa katika utafiti huu zitatumika kusaidia tafiti mpya zitakazofanywa na watafiti wengine nchi ya Kenya na nchi tofauti kuhusu mifumo ya afya. Katika hali hii, tutasambaza tu habari katika njia ambayo haidhihirishi vitambulisho binafsi vya washiriki. Kwa mfano, tutaondoa habari ambazo zinaweza kutambulisha watu, kama vile majina yao na kule wanakoishi, na tubadilishe na nambari maalum Tafiti zozote za siku zijazo zitakazotumia habari kutoka kwa utafiti huu lazima kwanza ziidhinishwe na kamati za wataalam za kitaifa ili kuhakikisha kwamba maslahi ya washirikina jamii zao yanalindwa.

Ni nani ameidhinisha utafiti huu?

Huu ni utafiti wa somo la uzamifu ambalo ni lazima iidhinishwe na kamati za uhidhinishaji wa utafiti za chou kikuu cha KENT and AMREF ambazo zinazoangalia kwa makini mpango wa kazi. Ni lazima wakubali kwamba utafiti ni muhimu na wafaa Kenya na unafuata muongozo unaokubalika kitaifa na kimataifa. Hii ni pamoja na kuhakikisha kwamba usalama na haki za washiriki wote zimeheshimiwa.

Nini litafanyika nikikataa kushiriki

Kushiriki kote katika utafiti ni hiari. Uko huru kuamua ikiwa ungependa kushiriki au la. Ukikubali unaweza kubadilisha nia wakati wowote bila ya madhara yoyote.

Je nani ameandaa na kufadhili utafiti huu?

Utafiti huu umeandaliwa na BONIFACE OYUGI, (mwanafunzi wa Uchumi wa Afya na Sera katika kitengo cha Health Service studies, Chuo cha Kent, Uingereza). Shirika la Commonwealth Scholarship Commission umefadhili utafiti huu.

Je nikiwa na maswali yoyote?

Uko huru kuniuliza swali lolote kuhusu utafiti huu. Ukiwa na maswali yoyote zaidi kuhusu utafiti huu, uko huru kuwasiliana na kundi la utafiti ukitumia anwani ifuatayo:

Boniface Oyugi, (Mwanafunzi wa somo la Uzamifu) mkuu wa utafiti

katika kitengo cha Health Service studies, CGA 204, Mrengo wa George Allen, Jengo la Cornwallis, Chuo kikuu cha Kent, Canterbury, CT2 7PZ

Simu: [+44 1227 827760] | Simu ya rununu: [+254 720 144327 OR +44 7459 842515]

Barua pepe: boo6@kent.ac.uk

OR

Professor Sally Kendall, Msimamizi wa utafiti

katika kitengo cha Health Service studies, CGA 208, Mrengo wa George Allen, Jengo la Cornwallis, Chuo kikuu cha Kent, Canterbury, CT2 7PZ

simu: [+44 1227 816432] | Simu ya rununu: [+44 7740 795446]

Barua pepe: S.Kendall-608@kent.ac.uk

Ukitaka kumuuliza mtu huru kuhusu utafiti huu tafadhali wasiliana na:

Kiongozi, AMREF Kenya, Uwanja wa ndege wa Wilson, Barabara ya Lang'ata.

Nambari ya simu: [+254 20 6994000]; Faksi: [+254 20 606340];

Sanduku la posta 30125-00100, Nairobi, Kenya.

Barua pepe: ESRC.Kenya@amref.org

Appendix 9: Consent forms

A. Ministry of Health officials, National Health Insurance Funds, donors, civil society including representatives of health service providers

B. County and sub-county officials, facility in-charges, and health-care providers

Title of project: *“The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”*

Name of investigator: *Boniface Oyugi*

Participant Identification Number for this project:

1. I confirm I have read and understand the information sheet dated..... for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. I understand that my responses will be anonymised before analysis. I give permission for members of the research team to have access to my anonymised responses. *I understand that for publication purposes, information that could identify people, such as their names and where they live, where necessary roles and positions, will be replaced with number codes.*

4. I understand and agree to take part in the above research project.

5. I understand and agree to have my interview audio-recorded.

Name of participant	Date	Signature
Name of person taking consent <i>(if different from lead researcher)</i> <i>To be signed and dated in presence of the participant</i>	Date	Signature
Lead researcher	Date	Signature

C. Patients

Kichwa cha Utafiti: *Mabadiliko ya Sera, ubora wa utunzaji na matokeo, na gharama za "Bure" za Sera ya Afya ya Mzazi: Somo kwa ajili ya Chanjo ya afya nzima kutumia utafiti wa Uchunguzi Kenya*

Jina la mtafiti: *Boniface Oyugi*

Nambari ya utambulisho ya mshiriki kwenye mradi huu:

6. Nina thibitisha nimesoma na kuelewa karatasi ya habari ya.....kwa ajili ya utafiti huu. Nime kuwa na nafasi ya kuzingatia habari, kuuliza maswali na nime ridhishwa na majibu
7. Nina elewa kuwa ushiriki wangu ni wa hiari na kwamba mimi nipo huru kujiondoa wakati wowote bils kutoa sababu yoyote.
8. Nina elewa kuwa majibu yangu hayato julikana kabla ya uchambuzi. Nina wapa ruhusa kwa wajumbe wa timu ya utafiti kupata majibu yangu. Nina elewa kwa ajili ya madhumuni ya kuchapisha, maelezo ambayo yanaweza kutambua watu, kama vile majina yao na wapi wanapo ishi, majukumu na vyeo vyao zitabadilishwa ziwe namba.
9. Nime elewa na kukubali kushiriki kwenye utafiti huu
10. Nina elewa na kukubali kwamba nita rekodiwa na mshine ya kurekodi

_____	_____	_____
Jina la Mshiriki	Tarehe	Sahihi
_____	_____	_____
Jina la mtu anaye chukua idhini (kama ni tofauti na anaye ongoza utafiti) Kusainiwa na kuthibitishwa mbele ya mshiriki	Tarehe	Sahihi
_____	_____	_____
Kiongozi wa utafiti	Tarehe	Sahihi

Appendix 10: Semi-structured interview guide with Ministry of Health officials, National Health Insurance Funds officials, donors, civil society including representatives of health service providers

Draft Tools v1.7 of 18 April 2019

Linda Mama Process evaluation - Data Collection Tools

Tool 1: Semi-structured interview guide: in - depth interviews with national (MOH and NHIF officials), other health financing stakeholders (e.g. KHF, Private hospital associations, CHAK, Development partners)

Formal title: A process evaluation of the implementation of Linda Mama Free Maternity Program in selected counties in Kenya.

Lay Title: Assessing the implementation of the Linda Mama Program in selected counties in Kenya.

Interviewee profile

1. Could you introduce yourself, your organization and your organization mandate.
2. Could you tell us a little bit about your role in this organization and how long you have been in this role.

Emergence of the Linda Mama program

1. Could you explain to us what problems/challenges were identified with the previous free maternity services?
2. What were the proposed solutions at the time?
3. What were the debates surrounding potential solutions to the challenges experienced by the previous free maternity services?
4. Why was the Linda Mama program the preferred choice among other possible options?
5. Who were the stakeholders actively involved in the formulation of the Linda mama program?
6. What was the role of these stakeholders in the formulation process?
7. Could you describe the status of stakeholder support for the transition from the previous free maternity services to Linda Mama? Who were in support and why? Who were in opposition and why?

Experience and Fidelity of the Linda mama implementation

8. Is there a policy document that outlines the Linda Mama program?
9. Could you describe the organizational arrangement of the Linda Mama program (who does what?)

Funding flows

10. What are the sources of funds for the Linda Mama Program?
11. Are the funds allocated for the Linda Mama program considered sufficient? Why?
12. According to the Linda mama policy, how should these funds flow from the source to healthcare facilities?
13. Is this how the funds flow in practice? Why?
14. What is your experience in terms of challenges and strengths of the funds flow arrangements?

Benefit Package and Access

15. What services are Linda Mama program beneficiaries formally entitled to?
16. Do Linda Mama beneficiaries receive all these benefits in practice? Why?
17. Who are the intended beneficiaries of the Linda Mama program benefits?
18. Who accesses the Linda Mama program benefits in practice?

19. Who has challenges accessing Linda Mama services? Are there any initiatives to ensure that there is extended reach to them?
20. What are the potential challenges for the poor, adolescents, and those lacking education in accessing Linda Mama services?
21. How does Linda Mama influence access to services?
22. How does Linda Mama influence quality of care?
23. What are the potential barriers that inhibit beneficiaries from accessing their entitlements under the Linda mama program?
24. What are the potential facilitators that enhance beneficiaries' access to their entitlements under the Linda mama program?

Strategic Purchasing

25. In what healthcare facilities can Linda Mama program beneficiaries access Linda Mama services? (probe for different facility levels and ownership)
26. How are these healthcare facilities selected to provide healthcare services under the Linda Mama program in practice?
27. Do Linda Mama beneficiaries access Linda Mama services from all these facility options in practice? Why? (probe for different facility levels and ownership)
28. According to Linda Mama policy, how and on what basis should healthcare providers be paid for providing services for Linda Mama beneficiaries?
29. Is this how healthcare providers are paid in practice? Why?
30. What are the challenges and strengths of the provider payment arrangements under the Linda Mama program in relation to the facility functioning and provider behavior?
31. What is the formal claims procedure for healthcare facilities under the Linda Mama program?
32. Is this how the claims process is done in practice? Why?
33. In practice, who reviews the claims from the health facilities? How are the claims verified? What happens if the claims are not approved?
34. What are the challenges and strengths of the claims procedures under the program?
35. What are the payment disbursement arrangements to healthcare facilities under the Program? (probe frequency)
36. What are the challenges and strengths of the payment disbursement arrangements? Why? (probe delays, unpredictability in timing and amount)
37. Do healthcare facilities have the freedom to spend funds from the program according to their priorities? Why?
38. How does this (freedom or lack of it) affect service delivery under the program?
39. What reporting requirements exist between the NHIF and the ministry of health for the Linda Mama program?
40. How well do these reporting requirements work in practice? Why?
41. How does the state of the reporting requirement affect the implementation of the Linda Mama Program?
42. What mechanisms are in place for the NHIF to ensure that healthcare facilities offer services that are of good quality under the Linda Mama Program?
43. How well do these quality assurance mechanisms work? Why?

Future of the program

- 44. How might the Linda Mama Program, and how it currently functions, inform the development and implementation of the UHC pilots?
- 45. What improvements to Linda Mama should be made or prioritized to increase access to care, improve quality of care and improve the functioning of the program?

Conclusion: Thank him/her for their participation and conclude the discussion.

Interviewee profile

- 1. Could you introduce yourself, your organization and your organization mandate?
- 2. Could you tell us a little about your role in the organization and how long you have been in this role?

Emergence of the Linda Mama program

- 1. Could you explain to us what problems/challenges were identified with the previous free maternity services?
- 2. What were the proposed solutions at the time?
- 3. What were the obstacles surrounding potential solutions to the challenges experienced by the previous free maternity services?
- 4. Why was the Linda Mama program the preferred choice among other possible options?
- 5. Who were the stakeholders actively involved in the formulation of the Linda Mama program?
- 6. What was the role of these stakeholders in the formulation process?
- 7. Could you describe the nature of stakeholder support for the transition from the previous free maternity services to Linda Mama? Who were in support and why? Who were in opposition and why?

Experience and Fidelity of the Linda mama implementation

- 8. Is there a policy document that outlines the Linda Mama program?
- 9. Could you describe the organizational arrangement of the Linda Mama program (who does what)?

Funding flows

- 10. What are the sources of funds for the Linda Mama Program?
- 11. Are the funds allocated for the Linda Mama program considered sufficient? Why?
- 12. According to the Linda mama policy, how should these funds flow from the source to healthcare facilities?
- 13. Is this how the funds flow in practice? Why?
- 14. What is your experience in terms of challenges and strengths of the funds flow arrangements?

Benefit package and Access

- 15. What services are Linda Mama program beneficiaries formally entitled to?
- 16. Do Linda Mama beneficiaries receive all these benefits in practice? Why?
- 17. Who are the intended beneficiaries of the Linda Mama program benefits?
- 18. Who accesses the Linda Mama program benefits in practice?

Appendix 11: Semi-structured interview guide with County and sub-county officials

Research title: “The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”

Data of discussion:	Interviewer:
Venue:	Note taker:
Start time:	Stop time:
Interviewee’s code:	
Interview completed:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason for incomplete interview	
Interviewers’ remarks about the interview (debrief)	
<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 	

Questions
<p>Introduction and background</p> <p>Key informant profile</p> <ol style="list-style-type: none"> 1. Could you introduce yourself and your organization 2. Could you tell us a little bit about your role and how long you have performed it
<p>Policy streams: Goals and the objectives of the policy (content)</p> <ol style="list-style-type: none"> 3. In your opinion, what was the goal and the objective of the Linda mama policy? Has it achieved that objective? 4. Were you involved in the design? Probe: how did you get to hear about the policy? 5. What are some of the services covered in the policy? 6. What are some of the quality, cost, and coverage guidelines that were put in place at the design? How are they adhered to? Are there policy documents to detail the guidelines? <p>Context</p> <p>Situational factors</p> <ol style="list-style-type: none"> 7. In your opinion, was there any particular situation or activity or research that brought about changes in how linda mama policy is implemented in this county? Probe: what situation or activity or research was it? How did it influence formulation of the policy? <p>Socio-political factors</p> <ol style="list-style-type: none"> 8. Were there county government political events or influencers of or against the Linda Mama programme as a policy change? Probe: which ones and how did they influence? 9. Are there other similar programs that are limiting the achievement of the policy or supporting it? How do you manage the two?
<p>process stream: Causal issues and technical aspects</p> <ol style="list-style-type: none"> 10. Are you receiving payments under the Linda mama policy? How does the process take place? 11. What are some of the services that are free? Is every pregnant mother exempted? If not, why?

12. What is the payment tariff for the services rendered? E.g. ANC? Normal deliveries? CS? Assisted delivery? PNC? Other? Complications? **Probe:** whether the tariffs are fixed or whether they vary by case?
13. Is Linda mama policy working effectively now as it was communicated to you? (If not, why not?)
14. Are the funds you are receiving adequate? How do they calculate the amount? Is there any limit on numbers of delivery patients that you can get reimburse for?
15. How are the funds allocated to the hospitals?
16. What are the mechanisms for paying the funds? How well do they operate? **Probe:** the funds of the implementation of the policy arrived at the county level? Do you think it is sustainable?
17. Do mothers make payments for anything (supplies, materials, etc.)? How much do they contribute if at all they do?
18. In your opinion do you think the policy has affected the quality of services? **Probe:** some of the quality issues that have been affected? Have they been affected positively or negatively?
19. How do you monitor the achievement of the policy?

Resource stream: Human resource (Actors)- (power, staff time, ownership and reputation)

20. In your opinions who are the key players at a county level involved in the implementation of the policy? **Probe:** how do they that ensure the policy is implemented as planned? What are their roles?
21. What is the relationship between the actors you have mentioned?
22. In your opinion what is the influence of the actors? Who makes the decisions and how do they influence the implementation of the policy?
23. Are there changes in the number of staff since the policy began? **Probe:** is it a positive change or a negative change?
24. In your opinion, what is the difference in the amount of work done by the staff and are they motivated to conduct the work? Why yes/no?
25. In your opinion, how do you perceive the quality outcomes of the policy
26. Has the policy changed the level of quality in your facility? What elements of quality? Have they changed for the better or for the worse?
27. What are some of the changes that you have put in place as a result of the new policy? **Probe:** Investments in structure of the facility, motivation of staff etc.
28. Do you charge the patients something additional other than what is stipulated in the policy? How do you deal with the very poor patients who are not able to afford transport to the facility?

financial resources

29. How do the reimbursed moneys reach the facilities and in what areas do you spend it? Before spending, what are the processes involved?
30. In your opinion, is the cost of reimbursement of the services adequate?

Other opinions

31. What are some of the challenges you have experienced with the Linda mama policy in your facility?
32. Are you happy with the way it is being handled? Why yes/no?
33. How can we improve the operations of the policy?

Appendix 12: Semi-structured interview guide with facility in-charges and health-care providers

Research title: “The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”

Data of discussion:	Interviewer:
Venue:	Note taker:
Start time:	Stop time:
Interviewee’s code:	
Interview completed:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason for incomplete interview	
Interviewers’ remarks about the interview (debrief)	
<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 	

Questions
<p>Introduction and background</p> <p>Key informant profile</p> <ol style="list-style-type: none"> 1. Could you introduce yourself and your organization 2. Could you tell us a little bit about your role and how long you have performed it
<p>Policy streams</p> <p>Goals and the objectives of the policy</p> <ol style="list-style-type: none"> 3. In your opinion, what was the goal and the objective of the Linda mama policy? Has it achieved that objective? 4. What are some of the services covered in the policy? 5. What are some of the quality guidelines that were put in place at the design? How are they adhered to? Are there policy documents to detail the quality guidelines? <p>Quality</p> <ol style="list-style-type: none"> 6. In your opinion, was there any particular situation or activity or research that brought about changes in how Linda mama policy is implemented in this county? Probe: what situation or activity or research was it? How did it influence formulation of the policy? <p>Socio-political factors</p> <ol style="list-style-type: none"> 7. Were there county government political events or influencers of or against the Linda Mama programme as a policy change? Probe: which ones and how did they influence? 8. Are there other similar programs that are limiting the achievement of the policy or supporting it? How do you manage the two? <p>Cost</p> <ol style="list-style-type: none"> 9.
<p>Process stream: Causal issues and technical aspects</p> <ol style="list-style-type: none"> 10. Are you receiving payments under the Linda mama policy? How does the process take place?

11. What are some of the services that are free? Is every pregnant mothers exempted? If not, why?
12. What is the payment tariff for the services rendered? E.g. ANC? Normal deliveries? CS? Assisted delivery? PNC? Other? Complications? **Probe:** whether the tariffs are fixed or whether they vary by case
13. Is Linda mama policy working effectively now at it was communicated to you? (If not, why not?)
14. Are the funds you are receiving adequate? How do they calculate the amount? Is there any limit on numbers of delivery patients that you can get reimburse for?
15. How are the funds allocated to the hospitals?
16. What are the mechanisms for paying the funds? How well do they operate? **Probe:** the funds of the implementation of the policy arrived at the county level
17. Do mothers make payments for anything (supplies, materials, etc.)? How much do they contribute if at all they do?
18. In your opinion do you think the policy has affected the quality of services? **Probe:** some of the quality issues that have been affected? Have they been affected positively or negatively?
19. How do you monitor the achievement of the policy?

Resource stream: Human resource (Actors)- (power, staff time, ownership and reputation)

20. In your opinions who are the key players at a county level involved in the implementation of the policy? **Probe:** how do they that ensure the policy is implemented as planned? What is their roles?
21. What is the relationship between the actors you have mentioned?
22. In your opinion what is the influence of the actors? Who makes the decisions and how do they influence the implementation of the policy?
23. Are there changes in the number of staff since the policy began? Probe: is it a positive change or a negative change?
24. In your opinion, what is the difference in the amount of work done by the staff and are they motivated to conduct the work? Why yes/no?
25. In your opinion, how do you perceive the quality outcomes of the policy
26. Has the policy changed the level of quality in your facility? What elements of quality? Have they changed for the better or for the worse?
27. In your opinion, is the cost of reimbursement of the services adequate?
28. What are some of the changes that you have put in place as a result of the new policy? **Probe:** Investments in structure of the facility, motivation of staff etc.
29. Do you charge the patients something additional other than what is stipulated in the policy? How do you deal with the very poor patients who are not able to afford transport to the facility?
30. How do the reimbursed moneys reach the facilities and in what areas do you spend it? Before spending, what are the processes involved?

Other opinions

31. What are some of the challenges you have experienced with the Linda mama policy in your facility?
32. Are you happy with the way it is being handled? Why yes/no?
33. How can we improve the operations of the policy?

Appendix 13: FGD guide with patients

Research title: “The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”

Date of FGD:	Interviewer:
Venue:	Note taker:
Start time:	Stop time:
Interviewee’s code:	
Interview completed:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason for incomplete interview	
Interviewers’ remarks about the interview (debrief) 1. 2. 3. 4. 5.	

FGD guide (English)

1. Where did you deliver? Why did you decide to deliver there?
2. Do you know about the Linda mama policy? How did you hear about it?
3. Describe your experience with the policy right from the day you started coming to the health facility all the way to the delivery and after birth
4. How did you experience the policy when you were giving birth? Were the health workers supportive and how did they treat you?
5. Did you pay for anything? If yes, what did you pay for? What did the health workers say about it?
6. Anything that can be done to make the policy work better?

Mwongozo wa FGD (Swahili)

1. Je, una weza kuniambia kuhusu mara mwisho ulipo jifungua? Uli jifungua Hospitalini? Je, ni sababu gani zilli kufanya ujifungue hospitalini (au hapana)?
2. Nina hamu ya kujua zaidi kuhusu tukio lako la kujifungua, je, una weza kuni fahamisha zaidi?
3. Je, wahudumu wa afya walikupa ushirikiano na huduma yao ili kuwaje?
4. Je, uli pata msaada gani kwa ajili ya kunyonyesha na huduma kwa ajili mwanao mchanga?
5. Je, una jua kuhusu sera ya Linda mama? Uli ujulia kutoka wapi?
6. Je, una fikiria madhumuni ya Linda mama na yapi? Unadhani yana saidia au yana manufaa?
7. Tafadhali elezea matukio yote tokea ulipo anza kwenda kwenye kituo cha afya, ulipo jifungua na baada ya kujifungua mtoto.
8. Je, uli lipa chochote? Kama jibu ni ndio uli lipia nini? Wahudumu wa afya wali sema nini kuhusiana na malipo?
9. Je, una dhani nini kina weza boresha Linda mama ifanye kazi vizuri zaidi?

Appendix 14: Exit interview tool

Research title: “The Kenyan “Free” Maternal Health Policy: Lessons for Universal Health Coverage on Cost and Quality of Care – A Case Study Approach”

Adopted from: Kenya Ministry of Health, AN ASSESSMENT OF THE FREE MATERNITY SERVICES (FMS) PROGRAMME FACILITY EVALUATION TOOL (2015); and

DALINJONG, P. A., WANG, A. Y. & HOMER, C. S. E. 2017. The operations of the free maternal care policy and out-of-pocket payments during childbirth in rural Northern Ghana. *Health economics review*, 7.

(Interviewer to fill in this information before proceeding with interview)

Date of interview	DAY [][] MONTH [][] YEAR [][][][]
Interviewer code	[][]
Name of facility	_____
Facility Code	[][]
Type of Health Facility	<input type="checkbox"/> Referral Hospital (level 6) [] <input type="checkbox"/> Regional Hospital (level 5) [] <input type="checkbox"/> County hospital (level 4) [] <input type="checkbox"/> Sub- County Hospital (level 4) [] <input type="checkbox"/> Health Centre (level 3) []

INTRODUCTIONS

My name is BONIFACE OYUGI. I am a PhD student in Health Economics and Policy at the Centre for Health Services Studies, University of Kent, England. I am here today working on my PhD research project that will be assessing the quality of care and outcomes and the cost of the Linda mama policy.

Purpose: The information collected will be used to describe the level of satisfaction that mothers have related to this service and thus inform on areas that require service improvement for effective and efficient Linda mama implementation.

Data Source:

Inclusion Criteria:

- Postpartum women who have delivered in a public health care facility. (Anytime between day 0-42). May be recruited from the post-natal ward or post-natal/child welfare clinic.

Exclusion criteria:

- Women who delivered at home.
- Women who delivered on the way to a facility.
- Women who had stillbirths.
- Women with early neonatal deaths.

Informed Consent (Written):

Are you willing to participate in a short interview with me of about 30-40 minutes, in which I will ask you about the maternity services you received? The questions asked will be about your thoughts and opinions on these issues. There are no right or wrong answers. Your responses will remain anonymous. Your participation is completely voluntary. You may choose to stop answering at any point. Your participation, and the answers you provide, will not impact on your care at this hospital in any way.

<p>Is it okay that we proceed with the interview?</p> <p><input type="checkbox"/> YES</p> <p><input type="checkbox"/> NO</p>
--

<p>CONSENT: I certify that I have explained this study to the interviewee and that s/he understands the nature and purpose of the study and consents to participate. S/he has been given an opportunity to ask questions which have been answered satisfactorily.</p>	YES	[]
	NO	[]
Time Interview Started.	HOUR [][]	MINUTE [][]
Time Interview Ended	HOUR [][]	MINUTE [][]

1.0. SOCIO-DEMOGRAPHIC INFORMATION

Aspects: Characteristics of the mothers	
1.1. Age of the respondent (in years): _____	1.2. Number of people in the households: _____
1.3. Income of the household per month (wife and the husband): _____	1.4. Number of ANC visits attended: _____
1.5. Education level (Tick one): <input type="checkbox"/> No Education <input type="checkbox"/> Primary Level <input type="checkbox"/> Secondary Level <input type="checkbox"/> Tertiary Level	1.6. Marital status <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Separated/ Divorced <input type="checkbox"/> Other
1.7. Religion <input type="checkbox"/> Christian protestant <input type="checkbox"/> Christian catholic <input type="checkbox"/> Muslim <input type="checkbox"/> No religion <input type="checkbox"/> Other specify: _____	1.8. Occupation <input type="checkbox"/> Student <input type="checkbox"/> Unemployed <input type="checkbox"/> Self-employed <input type="checkbox"/> Salaried/formal employment <input type="checkbox"/> Other specify: _____
1.9. Parity <input type="checkbox"/> Primigravida <input type="checkbox"/> Para 2–5 <input type="checkbox"/> Parity of above 5+	

2. ACCESS TO MATERNAL HEALTH SERVICES DURING PREGNANCY

Aspects: Visiting health facility	
<p>2.1. Did you visit any facility for maternal health services (such ANC or any other) during your pregnancy?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p>	<p>2.2. What type of facility did you visit?</p> <p><input type="checkbox"/> Public facility</p> <p><input type="checkbox"/> Private facility</p> <p><input type="checkbox"/> Faith based organisation (Mission)</p> <p><input type="checkbox"/> Non-governmental organisation (NGO)</p> <p><input type="checkbox"/> Other specify: _____</p>
<p>2.3. How much time did it take to reach this facility?</p> <p><input type="checkbox"/> Below 30 minutes</p> <p><input type="checkbox"/> 30 minutes - 1 hour</p> <p><input type="checkbox"/> 1 hour – 2 hours</p> <p><input type="checkbox"/> More than 2 hours</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p>	<p>2.4. What do you think of the time it took to reach this facility?</p> <p><input type="checkbox"/> Very short</p> <p><input type="checkbox"/> Short</p> <p><input type="checkbox"/> Normal</p> <p><input type="checkbox"/> Long</p> <p><input type="checkbox"/> Very long</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p>
<p>2.5. What do you think of the distance it takes to reach the facility</p> <p><input type="checkbox"/> Very near</p> <p><input type="checkbox"/> Normal</p> <p><input type="checkbox"/> Far</p> <p><input type="checkbox"/> Very far</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p>	<p>2.6. What means of transport did you use to reach the facility?</p> <p><input type="checkbox"/> Walking</p> <p><input type="checkbox"/> Bicycle</p> <p><input type="checkbox"/> Motorbike (boda boda)</p> <p><input type="checkbox"/> Public transport (matatu)</p> <p><input type="checkbox"/> Private car</p> <p><input type="checkbox"/> Other specify: _____</p>
<p>2.7. Do the opening hours of the facility suit your time?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p> <p>If No specify: _____</p>	<p>2.8. What do you think about the waiting time at the facility?</p> <p><input type="checkbox"/> Very short</p> <p><input type="checkbox"/> Short</p> <p><input type="checkbox"/> Normal</p> <p><input type="checkbox"/> Long</p> <p><input type="checkbox"/> Very long</p> <p><input type="checkbox"/> N/A</p>
<p>1.9. Does the facility have a proper waiting area?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p> <p><input type="checkbox"/> N/A</p>	
Aspect: Referral	
<p>1.10. What was your means of delivery (How did you deliver)?</p> <p><input type="checkbox"/> Vaginal (normal delivery)</p> <p><input type="checkbox"/> Caesarean section</p> <p><input type="checkbox"/> Assisted vacuum delivery</p> <p><input type="checkbox"/> Other specify: _____</p>	<p>1.11. Were you referred to this facility?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No (Skip to 3.1)</p> <p><input type="checkbox"/> Don't know (Skip to 3.1)</p> <p><input type="checkbox"/> N/A (Skip to 3.1)</p>

<p>1.12. From what facility were you referred?</p> <p><input type="checkbox"/> Referral Hospital (level 6) []</p> <p><input type="checkbox"/> Regional Hospital (level 5) []</p> <p><input type="checkbox"/> County hospital (level 4) []</p> <p><input type="checkbox"/> Sub- County Hospital (level 4) []</p> <p><input type="checkbox"/> Health Centre (level 3) []</p> <p><input type="checkbox"/> Dispensary (level 3) []</p> <p><input type="checkbox"/> Community Health Units ((level 3) []</p> <p><input type="checkbox"/> Traditional birth attendant []</p> <p><input type="checkbox"/> Private hospital []</p> <p><input type="checkbox"/> Mission hospital []</p> <p><input type="checkbox"/> Other specify: _____</p>	<p>1.13. What means of transport were you referred with?</p> <p><input type="checkbox"/> Told to walk</p> <p><input type="checkbox"/> Bicycle</p> <p><input type="checkbox"/> Motorbike</p> <p><input type="checkbox"/> Public transport (matatu)</p> <p><input type="checkbox"/> Private car</p> <p><input type="checkbox"/> Other specify: _____</p>
<p>1.14. Who accompanied you during referral?</p> <p><input type="checkbox"/> Traditional birth attendant</p> <p><input type="checkbox"/> Husband</p> <p><input type="checkbox"/> Relative</p> <p><input type="checkbox"/> Healthcare worker</p> <p><input type="checkbox"/> Neighbour</p> <p><input type="checkbox"/> Other specify: _____</p>	<p>1.15. Did the person who referred you have knowledge on emergency management?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don't know</p>
<p>1.16. How were you received to the referred facility?</p> <p><input type="checkbox"/> Very warmly</p> <p><input type="checkbox"/> Warmly</p> <p><input type="checkbox"/> Not sure</p> <p><input type="checkbox"/> Badly</p> <p><input type="checkbox"/> Very badly</p>	<p>1.17. Were you allowed an accompanying companion (person/support)?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>1.18. How was the accompanying companion treated?</p> <p><input type="checkbox"/> Very warmly</p> <p><input type="checkbox"/> Warmly</p> <p><input type="checkbox"/> Not sure</p> <p><input type="checkbox"/> Badly</p> <p><input type="checkbox"/> Very badly</p> <p><input type="checkbox"/> Told to go home</p>	<p>1.19. Were you given any information concerning the reasons for referral?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>1.20. What were some of the reasons for referral?</p> <p>1)</p> <p>2)</p> <p>3)</p> <p>4)</p> <p>5)</p>	

3. PERCEIVED QUALITIES OF LINDA MAMA PROGRAMME

Respondents will express their opinion or experience on a five-point Likert scale (1 - 5), where Completely Disagree (1), Disagree (2), Not sure (3), Agree (4), and Completely Agree (5).

For each aspect/question please tick in the appropriate box provided on the right.

Aspects	Completely Disagree (1)	Disagree (2)	Not sure (3)	Agree (4)	Completely Agree (5)
Q3 Part A: Health Facility					
3.1. In your opinion, the number of health staff in the health facility is adequate .					
3.2. In your opinion, the health staff in the health facility are well suited to treat women's health problems.					
3.3. In your opinion, the waiting rooms, examination rooms and other rooms of the health facility are adequate for women's health problems.					
3.4. In your opinion, the provision of clean drinking water for women in the facility is adequate .					
3.5. Hand washing facilities for women in the facility are adequate .					
3.6. Bathing facilities for women in the facility are adequate .					
3.7. Toilets for women in the facility are adequate .					
3.8. In your opinion, the overall environment of the health facility is very clean .					
3.9. In your opinion, the equipment in the health facility is well suited for detecting women's health problems.					
3.10. The distance from your home to the health facility is very far .					
Aspects	Completely Disagree (1)	Disagree (2)	Not sure (3)	Agree (4)	Completely Agree (5)
Q3 Part B: Health Care Delivery					
3.11. In your opinion, the health staff in the health facility examines pregnant and postpartum women well .					
3.12. In your opinion, the health staff in the health facility is very capable of finding out what is wrong with the patients.					
3.13. In your opinion, the health staff in the health facility prescribe the drugs that are needed .					
3.14. In your opinion, the drugs supplied by this health facility are good .					

3.15. In your opinion, patients can obtain drugs from this health facility easily .					
3.16. The health facility provided privacy very much during vaginal examination and delivery.					
3.17. You felt very much of unnecessary and humiliating procedures during antenatal and delivery care.					
3.18. In your opinion, the information of danger signs of delivery and postpartum provided by health staff is adequate .					
Aspects	Completely Disagree (1)	Disagree (2)	Not sure (3)	Agree (4)	Completely Agree (5)
Q3 Part C: Interpersonal Aspects					
3.19. In your opinion, the health staff in the health centre are very open with the patients.					
3.20. In your opinion, the health staff in the health facility are very compassionate towards the patients.					
3.21. In your opinion, the health staff are respectful towards the patients					
3.22. In your opinion, the time that the health staff devote to their patients is adequate .					
3.23. In your opinion, the health staff in the health facility are very honest .					
Aspects	yes	No	Undecided/do not know		
Q3 Part C: Overall					
3.24. You were completely satisfied with the services provided to you					
3.25. In the case of your future delivery or next baby, will you again use this the health care facility?					

4.0. COST

Respondents will be asked about the medical and non-medical cost that they incurred during the birth process.

Aspect: Medical costs	Response		If Yes, Amount
	YES	NO	
4.1. Have you paid any money for the services you have received?			
What did you pay for?			
4.1.1. Registration fees			
4.1.2. Hospital card?			
4.1.3. Consultation			
4.1.4. Admission			
4.1.5. Laboratory test			
4.1.6. Ultra sound			
4.1.7. Surgery (Caesarian section or any theatre fees)			
4.1.8. Blood			
4.1.9. Drugs (What drugs?)			
4.1.10. Other (Specify) a) b) c) d) e)			
4.2. Were you told to buy any other items			
If yes which ones?			
4.2.1. Cotton wool			
4.2.2. Basin			
4.2.3. Bandages/ gauze rolls			
4.2.4. Syringe			
4.2.5. Drugs (Specify)			
4.2.6. Other (Specify) a) b)			
Aspect: Non-medical costs	Response		If Yes, Amount
	YES	NO	
4.3. Did you pay for any other non-medical costs? (Explain non-medical costs)			

If yes, how much did you pay for the following? 4.3.1. Transport for yourself and companion			
4.3.2. Food for yourself and companion			
4.3.3. Accommodation for yourself and companion			
4.3.4. Other (Specify) a) b)			
4.4. Did you pay any unofficial fee (bribe) for maternal health services during your pregnancy?			
4.5. What was the unofficial fee (bribe) paid for?	<input type="checkbox"/> Extra service <input type="checkbox"/> Extra drugs <input type="checkbox"/> Better treatment <input type="checkbox"/> Other specify: _____		
4.6. Was it demanded, or did you pay for it on your own?	<input type="checkbox"/> Demanded <input type="checkbox"/> Paid on my own <input type="checkbox"/> Don't know		
Aspect: Source of funds for meeting the cost	Response		
4.7. How did you raise the money to pay the above costs?	<input type="checkbox"/> Own cash/savings <input type="checkbox"/> Donations from friends/family members/relatives <input type="checkbox"/> Harambee contributions <input type="checkbox"/> Borrowed money <input type="checkbox"/> Sale of household assets <input type="checkbox"/> Other specify: _____		
4.8. Are you registered with NHIF to access Linda mama services?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		
4.9. Are you a member of NHIF (For other services where you pay a monthly fee)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		
4.10. Do you have health insurance scheme?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		
4.11. Overall, in your opinion, do you think there has been a change in the cost of care that mothers had to bear in this facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		

THE END

Thank you very much for your participation in this interview. Do have any questions?

Appendix 15: (Kiambatisho 15): Mahojiano na mgonjwa ya kutoka

Kichwa cha Utafiti: Mabadiliko ya Sera, ubora wa utunzaji na matokeo, na gharama za “Bure” za Sera ya Afya ya Mzazi: Somo kwa ajili ya Chanjo ya afya nzima kutumia utafiti wa Uchunguzi Kenya

Ime kubalika na: Wizara ya Afya, TATHMINI YA WA UTOAJI BURE WA HUDUMA YA UZAZI (FMS) AN ASSESSMENT OF THE FREE MATERNITY SERVICES (FMS) UTANGULIZI WA KUFANYA UFUNZO WA PROGRAMU(2015); **na**

DALINJONG, P. A., WANG, A. Y. & HOMER, C. S. E. 2017. Uendeshaji wa huduma Bure ya Sera ya Uzazi na huduma na malipo kutoka mtu binafsi wakati wa kujifungua vijini kaskazini mwa Ghana. *Health economics review*, 7.

(Mhojiwaji kujaza habari hii kabla ya kuendelea na mahojiano)

Tarehe ya mahojiano	SIKU [][] MWEZI [][] MWAKA [][][][]
Namba ya mhojiwa	[][]
Jina la kituo cha afya	_____
Namba ya Kituo	[][]
Aina ya Kituo cha afya	<input type="checkbox"/> Hospitali ya rufaa (level 6) [] <input type="checkbox"/> Hospitali ya kanda (ngazi ya 5) [] <input type="checkbox"/> Hospitali ya Kata (ngazi ya 4) [] <input type="checkbox"/> Hospitali ndogo ya kata (ngazi ya 4) [] <input type="checkbox"/> Kituo cha Afya (ngazi ya 3) []

DIBAJI

Jina langu ni BONIFACE OYUGI. Mimi ni mwanafunzi wa Uchumi wa Afya na Sera katika kitengo cha Health Service studies, Chuo cha Kent, Uingereza. Nipo hapa leo kwaajili ya utafiti wangu wa PhD yenye madhumuni ya kuthamini ubora wa huduma na matokeona gharama ya seraya Linda mama.

Dhumuni: Taarifa zilizo kusanywa zitatumika kueleza kiwango cha kuridhika ambazo wamama wame husisha na huduma hii, na hivyo kutoa taarifa katika maeneo ambayo yana hitaji kuboreshwa huduma kwa ufanisi na utekelezaji wa sera ya Linda mama.

Chanzo cha data:

Kigezo cha kuingizwa kwenye Utafiti:

- Wamama ambao wametoka kujifungua kwenye vituo vya afy vya ummaa. (mda wowote kati ya siku 0-42). Wana weza kuteuliwa kutoka kliniki ya uzazi baada ya kujifungua au kliniki ya ustawi wa watoto/baada ya kujifungua.

Kigezo cha kuto ingizwa kwenye Utafiti:

- Wamama walio jifungua nyumbani.
- Wamama walio jifungua njiani wakiwa wana elekea kwenyer kituo cha afya.
- Wamama walio jifungua kichanga kilicho fariki tayari
- Wamama ambao wame jifungua kichanga ambao wakafariki baada ya muda mfupi.

Kibali (cha maandishi):

Je, uko tayari kushiriki katika mahojiano na mimi kwa dakika 30-40, ambapo nita kuuliza maswali juu ya Huduma ya uzazi ulizo pokea? Maswali yata uliza mawazo na maoni yako juu ya huduma hii. Hamna jibu sahihi au ambalo sio sahihi. Majibu yako hayato julikana kama yame toka kwako.

Kushiriki kwako ni kwa hiari yako. Una ruhusiwa kuacha kujibu maswali mda wowote. Ushiriki wako, na majibu yako hayato athiri utoaji wa huduma kwenye kituo hiki cha afya.

Una kubali kuendelea na mahojiano? <input type="checkbox"/> NDIO <input type="checkbox"/> HAPANA
--

IDHINI: Nina thibitisha kwamba nime muelezaa mshiriki kwa ufanisi juu ya kazi hii, na ame ielewa vizuri asili na sababu ya kazi hii na idhini ya kushirik. Mshiriki ame pewa nafasi kuuliza maswali na yame jibiwa kwa kuridhisha	NDIO [] HAPANA.....[]
Muda wa mahojiano kuanza	SAA [][] DAKIKA[][]
Muda wa mahojiano kuisha	SAA [][] DAKIKA[][]

1.0. TAARIFA ZA MTU BINAFSI

Vipengele: Tabia ya mama	
1.1. Umri wa mhojiwa (miaka): _____	1.2. Idadi ya watu kwenye kaya: _____
1.3. Kipato cha kaya (mke na mme): _____	1.4. Idadi ya mahudhurio kwenye kliniki wa wamama wajawzito: _____
1.5. Kiwango cha Elimu (Jibu moja): <input type="checkbox"/> Sija hudhuria shule <input type="checkbox"/> Shule ya msingi <input type="checkbox"/> Shule ya sekondari <input type="checkbox"/> Elimu ya juu	1.6. Hali ya Ndoa <input type="checkbox"/> Nipo peke yangu <input type="checkbox"/> Nime olewa <input type="checkbox"/> Nime achika <input type="checkbox"/> Nyengine
1.7. Dini <input type="checkbox"/> Mkristo Mluteri <input type="checkbox"/> Mkristo Mkatoliki <input type="checkbox"/> Muislamu <input type="checkbox"/> Sina dini <input type="checkbox"/> Nyengine: _____	1.8. Kazi <input type="checkbox"/> Mwanafunzi <input type="checkbox"/> Sina ajira <input type="checkbox"/> Nime jiajiri <input type="checkbox"/> Nime ajiriwa nna lipwa mshahara <input type="checkbox"/> Nyengine: _____
1.9. Uzao <input type="checkbox"/> Mimba ya kwanza <input type="checkbox"/> Mimba 2-5 <input type="checkbox"/> Mimba zaidi ya 5+	

2.0. ACCESS TO MATERNAL HEALTH SERVICES DURING PREGNANCY

Kipengele: Kutembelea huduma ya afya	
<p>2.1. Je, uli tembelea kituo cha afya wakati wa ujauzito wako wa mwisho</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>	<p>2.2. Uli udhuria kituo gani cha afya?</p> <p><input type="checkbox"/> Kituo cha umma</p> <p><input type="checkbox"/> Kituo binafsi</p> <p><input type="checkbox"/> Kituo cha kidini (Mission)</p> <p><input type="checkbox"/> Kituo ambacho sio cha shirika la kiserekali (NGO)</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>
<p>2.3. Je, uli tumia mda gani hadi kufika kwenye kiyuo cha afya?</p> <p><input type="checkbox"/> Chini ya dakika 30</p> <p><input type="checkbox"/> Dakika 30 – lisaa1</p> <p><input type="checkbox"/> Lisaa moja – masaa 2</p> <p><input type="checkbox"/> Zaidi ya masaa 2</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>	<p>2.4. Je, una maoni gani juu ya mda ulio tumia kufika kwenye kituo cha afya?</p> <p><input type="checkbox"/> Muda mfupi sana</p> <p><input type="checkbox"/> Muda mfupi</p> <p><input type="checkbox"/> Kawaida</p> <p><input type="checkbox"/> Mda mrefu</p> <p><input type="checkbox"/> Mda mrefu sana</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>
<p>2.5. Je, una dhani kuna umbali gani hadi kufika kwenye kituo cha afya?</p> <p><input type="checkbox"/> Karibu sana</p> <p><input type="checkbox"/> Kawaida</p> <p><input type="checkbox"/> Mbali</p> <p><input type="checkbox"/> Mbali sana</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>	<p>2.6. Je, uli tumia aina gani ya usafiri kwenda kwenye kituo cha afya?</p> <p><input type="checkbox"/> Kutembea</p> <p><input type="checkbox"/> Baiskeli</p> <p><input type="checkbox"/> Pikipiki (bodaboda)</p> <p><input type="checkbox"/> Matatu</p> <p><input type="checkbox"/> Usafiri binafsi</p> <p><input type="checkbox"/> Nyengine: _____</p>
<p>2.7. Je, mda wa utoaji wa huduma kwenye kituo cha afya una kufaa?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>	<p>2.8. Je una maoni gani juu ya muda wa kusubiria huduma kwenye kituo cha afya?</p> <p><input type="checkbox"/> Ni muda mfupi sana</p> <p><input type="checkbox"/> Ni muda mfupi</p> <p><input type="checkbox"/> Muda kawaida</p> <p><input type="checkbox"/> Muda mrefu</p> <p><input type="checkbox"/> Muda mrefu sana</p> <p><input type="checkbox"/> Si husika</p>
<p>2.9. Je, kituo cha afya kina sehemu sahihi ya kusubiria huduma?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p> <p><input type="checkbox"/> Sijui</p> <p><input type="checkbox"/> Si husika</p>	
Kipengele: Rufaa	
<p>2.10. Je, uli jifungua kwa njia gani?</p> <p><input type="checkbox"/> Jia sawa</p> <p><input type="checkbox"/> operesheni</p> <p><input type="checkbox"/> Kusaidiwa kujifungua</p> <p><input type="checkbox"/> Nyengine: _____</p>	<p>2.11. Je, uli pewa rufaa ya kuja kwenye kituo hiki cha afya?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana (endelea na 3.1)</p> <p><input type="checkbox"/> Sijui (endelea na 3.1)</p> <p><input type="checkbox"/> Si husika (endelea na 3.1)</p>

<p>2.12. Je, uli pewa rufaa kutoka kituo gani cha afya?</p> <p><input type="checkbox"/> Hospitali ya rufaa (ngazi 6) []</p> <p><input type="checkbox"/> Hospitali ya kanda (ngazi 5) []</p> <p><input type="checkbox"/> Hospitali ya kata (ngazi 4) []</p> <p><input type="checkbox"/> Hospitali ya kata ndogo (ngazi4) []</p> <p><input type="checkbox"/> Kituo cha afya (ngazi 3) []</p> <p><input type="checkbox"/> Dispensari (ngazi 3) []</p> <p><input type="checkbox"/> Kitengo cha jumuiya ya afya (ngazi 3) []</p> <p><input type="checkbox"/> Mumishi wa jadi []</p> <p><input type="checkbox"/> Hospitaliu ya binafsi []</p> <p><input type="checkbox"/> Hospitali ya jadi []</p> <p><input type="checkbox"/> Nyengine: _____</p>	<p>2.13. Je, uli tumia aina gani ya usafiri baada ya kupewa rufaa?</p> <p><input type="checkbox"/> Nili ambiwa nitembee</p> <p><input type="checkbox"/> Baiskeli</p> <p><input type="checkbox"/> Bodaboda</p> <p><input type="checkbox"/> Matatu</p> <p><input type="checkbox"/> Usafiri binafsi</p> <p><input type="checkbox"/> Nyengine: _____</p>
<p>2.14. Nani ali kusindikiza wakati wa rufaa?</p> <p><input type="checkbox"/> Mkunga</p> <p><input type="checkbox"/> Mme</p> <p><input type="checkbox"/> Ndugu</p> <p><input type="checkbox"/> Mfanyakazi wa afya</p> <p><input type="checkbox"/> Jirani</p> <p><input type="checkbox"/> Mwingine taja: _____</p>	<p>2.15. Je, Je mtu aliye kupa ruffa alikuwa na ujuzi wa kutosha juu ya usimamizi wa dharura?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p> <p><input type="checkbox"/> Sijui</p>
<p>2.16. Je, ulipokelewaje kwenye kituo cha rufaa?</p> <p><input type="checkbox"/> Kwa upendo sana</p> <p><input type="checkbox"/> Kwa Upendo</p> <p><input type="checkbox"/> Sina Uhakika</p> <p><input type="checkbox"/> Vibaya</p> <p><input type="checkbox"/> Vibaya sana</p>	<p>2.17. Uli ruhusiwa kuwa na mtu wa karibu pembeni yako?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p>
<p>2.18. Je msindikizaji wako alipewa upokezi mzuri</p> <p><input type="checkbox"/> Kwa upendo sana</p> <p><input type="checkbox"/> Kwa upendo</p> <p><input type="checkbox"/> Sina uhakika</p> <p><input type="checkbox"/> Vibaya</p> <p><input type="checkbox"/> Vibaya sana</p> <p><input type="checkbox"/> Ali ambiwa arudi nyumbani</p>	<p>2.19. Je, uli ambiwa kwanini una pewa rufaa?</p> <p><input type="checkbox"/> Ndio</p> <p><input type="checkbox"/> Hapana</p>
<p>2.20. Je, baadhi za sabbabu za rufaa zilikuwa nini?</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>5.</p>	

3.0. MAONI JUU YA SIFA NA UBORA WA PROGRAMU YA LINDA MAMA

Washiriki wata eleza maoni yao au uzeofu wao kwenye Likert skeli (1-5) ya pointi , watao kataliana kabisa (1), Kataa (2), Sina uhakika (3), Nakubali,(4), Nakubaliana sana (5).

Kwa kila kipengele/swali tafadhali weka tiki kwenye boksi husika upande wa kulia

Kipengele	Sikubaliani kabisa (1)	Sikubali (2)	Sina uhakika (3)	Nakubali (4)	Nakubaliana sana (5)
Q3 Kipengele A: Kituo cha afya					
3.1. Ni maoni yako kwamba idadi ya wafanyazi wa afya ina jitosheleza .					
3.2. Ni maoni yako kwamba wafanyakazi wa afya kwenye kituo cha afya wana faa kutibu magonjwa ya akina mama.					
3.3. Ni maoni yako kwamba, kitengo cha kusubiri kwa ajili ya wagonjwa, kitengo cha ukaguzi wa mgonjwa na vyumba vyengine kwenye kituo cha afya vina hadhi kwa ajili ya kutolea huduma kwa akina mama.					
3.4. Ni maoni yako, utoaji wa maji safi ya kunywa kwa ajili ya akina mama yana tosheleza					
3.5. Ni maoni yako huduma ya kuosha mikono kwenye kituo vya afya ina jitosheleza					
3.6. Huduma ya kuoga kwa akina mama kwenye kituo cha afya ina jitosheleza					
3.7. Vyo kwa ajili ya akina mama kwenye kituo cha afya ina jitosheleza					
3.8. Kwa ujumla mazingira ya kituo cha afya ni masafi sana .					
3.9. Vifaa vilivyopo kwenye kituo cha afya vina faa sana kwa ajili ya kutambua matatizo ya afya ya akina mama					
3.10. Umbali kutoka nyumbani mpaka kituo cha afya ni mbali sana .					
Kipengele	Sikubali kabisa(1)	Sikubali(2)	Sina uhakika (3)	Nakubali (4)	Nakubali sana (5)
Q3 Kipengele B: Utoaji wa huduma wa afya					
3.11. Ni maoni yako, wafanyakazi wa afya kwenye kituo cha afya wana wachunguza vizuri wamama walio toka kujifungua.					
3.12. Ni maoni yako, wafanyakazi wa afya kwenye kituo cha afya wana ujuzi wa kutosha wa kugundua tatizo la mgonjwa					
3.13. Ni maoni yako, wafanyakazi wa afya kwenye kituo cha afya wana andika kwa usahihi dawa zinazo hitajika .					

3.14. Ni maoni yako, dawa zinazo tolewa na kituo cha afya zina ubora .					
3.15. Ni maoni yako, wagonjwa wana pata dawa kwa urahisi kwenye kituo hiki cha afya.					
3.16. Kituo cha afya ina sehemu ya faragha ya kutosha wakati wa uchunguzi wa uke na wakati wa kujifungua.					
3.17. Je, uli hisi kufanyiwa uchunguzi ambao si walazima na waku dhalilisha kipindi cha uja-uzito na kipindi cha kujifungua?					
3.18. Ni maoni yako kwamba, taarifa za dalili hatari wakati wa kuji fungua na baada ya kujifungua zilikuwa za kujitosheleza .					
Kipengele	Sikubali kabisa (1)	Sikubali (2)	Sina uhakika (3)	Nakubali (4)	Nakubali sana (5)
Q3 Kipengele C: Mahusiano					
3.19. Ni maoni yako kwamba, wafanyakazi wa afya kwenye vituo vya afya ni wawazi na wagonjwa.					
3.20. Ni maoni yako kwamba, wafanyakazi wa afya wana huruma na upendo kwa wagonjwa					
3.21. Ni maoni yako kwamba, wafanyakazi wa afya wana wahudumia wagonjwa kwa heshima .					
3.22. Ni maoni yako kwamba, mda wafanyakazi wa afya wanao mpa mgonjwa una jishoteleza .					
3.23. Ni maoni yako kwamba wafanyakazi wa afya ni wa kweli .					
Kipengele	Ndio	Hapana	Sina uhakika		
Q3 Kipengele C: Ujumla					
3.24. Uliridhika sana na huduma uliyo pewa					
3.25. Katika siku za usoni uki jifungua tena, uta tumia tena huduma za vituo vya afya					

4.0. GHARAMA

Washiriki wata ulizwa juu ya gharama za matibabu na ambazo sio za matibabu zinazo jitokeleza kipindi cha kujifungua.

Kipengele: Gharama za Matibabu	Majibu		Kama ndio, Idadi
	NDIO	HAPANA	
4.1. Je, uli lipa pesa kwa ajili ya huduma uliyo pokea			
Uli lipia nini?			
4.1.1. Gharama ya kuji sajili			
4.1.2. Kadi ya hospitali?			
4.1.3. Gharama ya kuonana na daktari			
4.1.4. Kulazwa			
4.1.5. Vipimo vya maabara			
4.1.6. Ultra sound			
4.1.7. Upasuaji (Caesarean section au chumba cha upasuaji)			
4.1.8. Damu			
4.1.9. Dawa (Dawa gani?)			
4.1.10. Nyengine (taja) a) b) c) d) e)			
4.2. Je, una nunulia wapi mahitaji mengine			
If yes which ones?			
4.2.1. Pamba			
4.2.2. Beseni			
4.2.3. Bandeji/ gozi			
4.2.4. Sindano			
4.2.5. Dawa (Taja aina)			
4.2.6. Nyengine (Taja) a. b.			
Kipengele: Gharama ambazo si za matibabu	Majibu		Kama ndio, Idadi
	NDIO	HAPANA	
4.3. Je, uli lipia vitu vyengine ambavyo havi husiani na matibabu			

Kama ndio, ni kiasi gani uli lipia kwa ajili ya vitu vifwatavyo?			
4.3.1. Usafiri kwa ajili yako na msindikizaji			
4.3.2. Chakula kwa ajili yako na msindikizaji			
4.3.3. Malazi kwa ajili yako na msindikizaji			
4.3.4. Nyengine (Taja) a. b.			
4.4. Je, uli lipia malipo mengine ambayo sio rasmi (rushwa) kwa ajili ya huduma ya mateniti kipindi cha ujauzito?			
4.5. Malipo yasiyo kuwa ya rasmi (rushwa) yali kuwa kwa ajili?	<input type="checkbox"/>	Huduma ya ziada	
	<input type="checkbox"/>	Dawa za ziada	
	<input type="checkbox"/>	Huduma bora	
	<input type="checkbox"/>	Nyengine taja: _____	
4.6. Ilikuwa ina hitajika, au uli amua kulipa mwenyewe?	<input type="checkbox"/>	Ilihitajika	
	<input type="checkbox"/>	Nili lipa mwenyewe	
	<input type="checkbox"/>	Sijui	
Kipengele: Chanzo cha fedha kwa ajili ya matibabu	Majibu		
4.7. Je, ulipataje fedha kwa ajili ya malipo ya vitu hapo juu?	<input type="checkbox"/>	Pesa zangu mwenyewe/akiba	
	<input type="checkbox"/>	Michango kutoka marafiki/familia/ndugu	
	<input type="checkbox"/>	Harambee	
	<input type="checkbox"/>	Nime kopa	
	<input type="checkbox"/>	Nime uza vifaa vya nyumbani	
	<input type="checkbox"/>	Nyengine taja	
4.8. Je, Ume sajiliwa na NHIF ili kupokea huduma za Linda mama?	<input type="checkbox"/>	Ndio	
	<input type="checkbox"/>	Hapana	
	<input type="checkbox"/>	Sijui	
4.9. Je, wewe ni mwanachama wa NHIF (kwa ajili ya huduma nyengine ambapo una changia kila mwezi?	<input type="checkbox"/>	Ndio	
	<input type="checkbox"/>	Hapana	
	<input type="checkbox"/>	Sijui	
4.10. Je, una mpango wowote wa bima ya afya?	<input type="checkbox"/>	Ndio	
	<input type="checkbox"/>	Hapana	
	<input type="checkbox"/>	Sijui	
4.11. Kwa ujumla na kwa maoni yako unadhani kuna mabadiliko kwenye gharama ya huduma ambayo wamama walikuwa wana gharamia kwenye vituo vya afya?	<input type="checkbox"/>	Ndio	
	<input type="checkbox"/>	Hapana	
	<input type="checkbox"/>	Sijui	

MWISHO

Asante sana kwa ushirikiano wako kwenye haya mahojiano? Je, una maswali?

Appendix 16: Example of a diary entry

2019 YEAR JANUARY 1
 28 Monday
 Field notes / observations
 Hospital A 12/12/2018 (A public holiday in Kenya)

During my visit for exit interview survey with the mothers who had just delivered and were awaiting discharge in hospital A, I encountered an interesting event. A cleaner (initially referred to as clinical worker) in our setting was tasked with providing food for the mothers, warm bathing water (usually transported to the maternity wing through long pipes of a tube by a basin) and also cleaning the labor, ANC and postnatal room.

- The clinical worker asked the women who had just given birth why they had not showered yet she had brought for them warm water from the kitchen. - The women were reluctant to respond, but said they had not showered because they did not have a basin - she then asked them why they did not have a basin.
- ~~the woman~~ she told the women that they must always have a basin and slippers while going to give birth or else they go home without showering. she instructed that since they were prepared to bath bathing water for the women, they provide the women with bathing water once in the morning hours to help reduce their workload.
- she then asked the patients if they were going to eat.

Hospital A

- Communication of Linda mama not working correctly. we asked that most mothers know about it (the policy) when they visit the clinic for ANC care.
- Do health workers provide information? yes they provide information on bathing by mothers breast feeding for 6 months.
- Some mothers are told to buy Hexard (drug for cleaning the umbilical

2019 YEAR JANUARY 1
 29 Tuesday
 (Linda) and tetanus/diph. However some mothers are given by the hospital especially if the supply is adequate.

- About DCT, some mothers did to come in the course of the week so it was a weekend. The fridge not always opened during the weekend. We observed a single long queue during the week for B.C.G.
- Most mothers had different opinion about Thursdays and Mondays because it is a market day & they tend to be busy/majority.
- In other instances they were told not to wait for 1 week.

Hospital C 05/03/2019 8:30am

- Nurses (both nurses and students) arrived early and were educating the mothers in CMC on danger signs of pregnancy at ANC, and those with children, they were also told to refer sickle babies.
- Student nurse were booked in a separate section and told to go help answer questions.
- Mothers were taught about tetanus toxoid (doses of TT and when to be given), they were also taught about the side effect of IPAS and FP. About FP, they were told that they should start FP at 12 weeks after a live birth because the body returns normal A's.
- The mothers seemed to have known some FP methods because they were even correcting the nurse who was teaching wrongly when she mentioned something that was not accurate during the training.
- Mothers were allowed to ask questions and were given to go with their TB for registration.
- Mothers were also told about ANC profile for free and registration at the NHTF clinic with an ID card and named out not paying anything.

Appendix 17: Thematic network analysis framework (codes to global themes)

	Basic themes Identified	Organising themes	Global themes	Category
Actors involved in the policy and their roles	Role of stakeholders	Formulation and implementation of the policy	Actors	County and HCWs
Actors involved (roles and responsibility)	Role of stakeholders	Formulation and implementation of the policy	Actors	National Stakeholders
Changing from Free maternity to Linda mama Policy	Background of the policy	Formulation of the policy	Content	County and HCWs
Has policy achieved objectives	Background of the policy	Formulation of the policy	Content	County and HCWs
Triggers of the new Linda mama policy	Background of the policy	Formulation of the policy	Content	County and HCWs
Quality and costing guidelines at design phase	Design of the policy	Formulation of the policy	Content	County and HCWs
Quality guidelines in practice	Design of the policy	Formulation of the policy	Content	County and HCWs
Goals and objective of the policy	Objective of the policy	Formulation of the policy	Content	County and HCWs
Role of NHIF vs Linda mama	Objective of the policy	Formulation of the policy	Content	County and HCWs
Payment tariffs for services under Linda mama policy	Benefit package	Implementation of the policy	Content	County and HCWs
Services under Linda mama policy	Benefit package	Implementation of the policy	Content	County and HCWs
Choice of healthcare facilities	Contract between government and health facilities	Implementation of the policy	Content	County and HCWs
Infrastructure and supplies	Contract between government and health facilities	Implementation of the policy	Content	County and HCWs
Role of private facilities and faith based	Contract between government and health facilities	Implementation of the policy	Content	County and HCWs
Services provided	Benefit package	Implementation of the policy	Content	National Stakeholders
Access to care	Contract between government and health facilities	Implementation of the policy	Content	National Stakeholders
Intended beneficiaries, poor, and the vulnerable	Contract between government and health facilities	Implementation of the policy	Content	National Stakeholders

	Basic themes Identified	Organising themes	Global themes	Category
Mothers given choice	Contract between government and health facilities	Implementation of the policy	Content	National Stakeholders
Organisation arrangement	Contract between government and health facilities	Implementation of the policy	Content	National Stakeholders
Private vs public facilities	Contract between government and health facilities	Implementation of the policy	Content	National Stakeholders
Services under Linda mama policy	Benefit package	Implementation of the policy	Content	Patients
Timings of Linda mama uptake	Benefit package	Implementation of the policy	Content	Patients
Uniformity of policy across the country	Contract between government and health facilities	Implementation of the policy	Content	Patients
Use of cards even in private hospitals	Contract between government and health facilities	Implementation of the policy	Content	Patients
Challenges of free maternity service and Linda mama	Background of the policy	Implementation of the policy	Content	National Stakeholders
Emergence of Linda mama and roles (causative challenges and solutions)	Background of the policy	Formulation of the policy	Content	National Stakeholders
Linda mama to, vs free maternity	Background of the policy	Formulation of the policy	Content	National Stakeholders
Design documents, policy articles	Design of the policy	Formulation of the policy	Content	National Stakeholders
Quality and costing guidelines or processes	Design of the policy	Formulation of the policy	Content	National Stakeholders
NHIF	Objective of the policy	Formulation of the policy	Content	National Stakeholders
Why Linda mama (objectives)	Objective of the policy	Formulation of the policy	Content	National Stakeholders
Appreciation of the policy	Objective of the policy	Formulation of the policy	Content	Patients
Content of the policy	Objective of the policy	Formulation of the policy	Content	Patients
Role of the policy	Objective of the policy	Formulation of the policy	Content	Patients
Contribution of Linda mama to UHC	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Focusing on life beyond the policy	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Policy has brought dignity	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs

	Basic themes Identified	Organising themes	Global themes	Category
Similar or conflicting projects	Role of other programs	Implementation of the policy	Context	County and HCWs
Conflicting and supporting projects	Role of other programs	Implementation of the policy	Context	National Stakeholders
Linking Linda mama to UHC	Effects and impact of the policy	Effects and impact of the policy	Context	National Stakeholders
Challenges experienced under the policy	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Effects and outcome of the policy	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Hospitals bearing burden and costs	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Opinions on mothers incurring costs	Effects and impact of the policy	Effects and impact of the policy	Impact	County and HCWs
Outcomes of the policy (achieved its objective)	Effects and impact of the policy	Effects and impact of the policy	Impact	National Stakeholders
Experiences of mothers on the policy	Effects and impact of the policy	Effects and impact of the policy	Impact	Patients
Inadequate Linda mama cards	Effects and impact of the policy	Effects and impact of the policy	Impact	Patients
Involving HCWs in design	Design of the policy	Formulation of the policy	Process	County and HCWs
Management of the reimbursements	Budgeting with the money	Implementation of the policy	Process	County and HCWs
Meeting to plan use of money with staff	Budgeting with the money	Implementation of the policy	Process	County and HCWs
Prioritising Linda mama funds for maternal issues	Budgeting with the money	Implementation of the policy	Process	County and HCWs
Communicating the policy to the mothers	Communication strategies	Implementation of the policy	Process	County and HCWs
Communication of the policy to hospitals (NHIF-Hosp-Workers)	Communication strategies	Implementation of the policy	Process	County and HCWs
Knowledge about the policy processes	Communication strategies	Implementation of the policy	Process	County and HCWs
Telling patients about health education on Linda mama	Communication strategies	Implementation of the policy	Process	County and HCWs
Telling patients to come with IDs	Communication strategies	Implementation of the policy	Process	County and HCWs
dealing with foreigners and the vulnerable	Empathy around policy implementation	Implementation of the policy	Process	County and HCWs

	Basic themes Identified	Organising themes	Global themes	Category
Adequacy and length of time with the funds	Funding	Implementation of the policy	Process	County and HCWs
Claiming Process	Funding	Implementation of the policy	Process	County and HCWs
Complications and NBU costs	Funding	Implementation of the policy	Process	County and HCWs
Process of receiving funds for the policy	Funding	Implementation of the policy	Process	County and HCWs
creative ideas to implement the policy	Innovative strategies employed by the hospital	Implementation of the policy	Process	County and HCWs
Employing additional accountant to only deal with Linda mama	Innovative strategies employed by the hospital	Implementation of the policy	Process	County and HCWs
Hospital account and county accounts	Innovative strategies employed by the hospital	Implementation of the policy	Process	County and HCWs
Hospitals adopting a change in the claiming process	Innovative strategies employed by the hospital	Implementation of the policy	Process	County and HCWs
Monitoring the achievement of the policy	Monitoring and evaluation of the policy	Implementation of the policy	Process	County and HCWs
Supportive supervision and support improvements	Monitoring and evaluation of the policy	Implementation of the policy	Process	County and HCWs
mothers and families should take responsibility	Ownership of the policy	Implementation of the policy	Process	County and HCWs
Process of the policy	Policy activities	Implementation of the policy	Process	County and HCWs
Dealing with referrals	Practice of referral	Implementation of the policy	Process	County and HCWs
Staff as street level bureaucrats	Role of the HCWs	Implementation of the policy	Process	County and HCWs
Recommendation about improving the policy	Strategies that could be adopted	Implementation of the policy	Process	County and HCWs
Freedom to spend the funds	Budgeting with the money	Implementation of the policy	Process	National Stakeholders
Communication of the policy	Communication strategies	implementation of the policy	Process	National Stakeholders
Claim process	Funding	Implementation of the policy	Process	National Stakeholders
Dealing with complications	Funding	Implementation of the policy	Process	National Stakeholders

	Basic themes Identified	Organising themes	Global themes	Category
facilities bearing the burden	Funding	Implementation of the policy	Process	National Stakeholders
Funding (Source and sufficiency)	Funding	Implementation of the policy	Process	National Stakeholders
Process of flow of funds and reimbursement	Funding	Implementation of the policy	Process	National Stakeholders
Facilitators and barriers of Linda mama quality, cost and access	Innovative strategies employed by the hospital	Implementation of the policy	Process	National Stakeholders
Good practice	Innovative strategies employed by the hospital	Implementation of the policy	Process	National Stakeholders
Innovative ideas	Innovative strategies employed by the hospital	Implementation of the policy	Process	National Stakeholders
Monitoring progress	Monitoring and evaluation of the policy	Implementation of the policy	Process	National Stakeholders
Registration process	Policy activities	Implementation of the policy	Process	National Stakeholders
Referral	Practice of referral	Implementation of the policy	Process	National Stakeholders
Role of HCWs	Role of the HCWs	Implementation of the policy	Process	National Stakeholders
Recommendation	Strategies that could be adopted	Implementation of the policy	Process	National Stakeholders
Communication from the hospitals to mothers	Communication strategies	Implementation of the policy	Process	Patients
Communication of Linda mama services to the public	Communication strategies	Implementation of the policy	Process	Patients
Mothers knowledge about the policy	Communication strategies	Implementation of the policy	Process	Patients
Supporting even foreigners	Empathy around policy implementation	Implementation of the policy	Process	Patients
Policy confusion	Lack of clarity of the policy	Implementation of the policy	Process	Patients
Women ignoring call to take and use Linda mama	Lack of clarity of the policy	Implementation of the policy	Process	Patients