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EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE (EHP) IN MALAWI: A PERSPECTIVE ON UPTAKE OF MATERNAL HEALTH SERVICES

By

Isabel Kazanga

A Dissertation Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy (PhD) in Global Health

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Psychology

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DECLARATION

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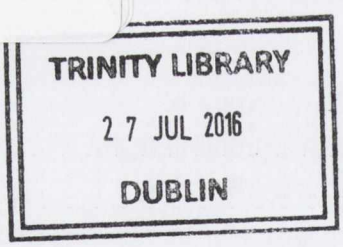

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EXECUTIVE SUMMARY

Introduction: Equity of access to health care services is a central policy goal for health systems in most countries including Malawi. In 2002, Ministry of Health in Malawi adopted the Essential Health Package (EHP). One of its objectives is to improve equity of access to health services. The EHP refers to a prioritized set of basic health services that focus on major causes of morbidity and mortality, particularly those affecting vulnerable populations such as women, children and the poor. In Malawi, EHP includes maternal health services. This research assessed equity of access to EHP services in Malawi, particularly focusing on uptake of maternal health services i.e. antenatal (ANC), delivery and postnatal care.

Objectives: The specific objectives of this study were to: i) assess equity of access to EHP services, focusing on uptake of maternal health services; ii) examine factors that influence utilization of maternal health services; iii) investigate factors that influence delivery of maternal health services; and iv) explore key informants' perspectives on EHP implementation in Malawi.

Methods: This was a mixed methods research utilizing both quantitative and qualitative approaches. Data for quantitative study was obtained from the 2010 Malawi Demographic and Health Survey. It had a sample size of 1126 women aged 15-49 from Lilongwe district in Malawi. The qualitative study employed 30 in-depth interviews and 8 Focus Group Discussions (n=76) with women "users" and "non-users" of maternal health services. The study was conducted in Kawale, Area 25, Chadza, Matapila and Mbwatalika health centers, as well at Nayere TBA facility. Fifteen Key Informant Interviews were also conducted with Ministry of Health Headquarters and District officials and health service providers at health centre level. Thus in total the whole qualitative sample constituted 121 participants.

Statistical Analysis: Quantitative data was analyzed using SPSS and STATA. Multivariate logistic regression was conducted to determine predictors of maternal health utilization, while a Gini-Coefficient analysis was done to measure the degree of inequalities in use of maternal health services. Qualitative data was analyzed using thematic content analysis approach.

Key Findings: Results indicate that use of ANC services is very high (91%) in Lilongwe, Malawi. However, utilization of maternal health care drops off during childbirth and postnatal period (76% and 49%, respectively). Although ANC coverage is high, half of the women (50%) do not make the recommended four ANC visits. Most women (89%) have their first ANC visit late, after first trimester of pregnancy. Government banned TBAs from conducting deliveries. However the study found that 16% of the women delivered with TBA assistance. Multivariate logistic regression identified women's residence ($p<0.05$), education ($p<0.01$) and wealth ($p<0.05$) as independent predictors of skilled maternal health services. Rural women were less likely to receive maternal health services from a skilled health attendant compared to urban women (OR: 0.48, 95% CI, 0.28-0.81). Similarly, uneducated women with (OR: 0.32, 95% CI,

0.16-0.64) and poor women (OR 0.50, 95% CI, 0.26-0.98) were less likely to receive maternal health services from a skilled attendant. The degree of pro-rich inequality was highest for use of skilled ANC services (gini index: 0.35) and was lowest for use of skilled postnatal care services (gini index 0.17). The highest level of urban-rural inequality was detected in use of skilled delivery services (gini index: 0.13). The level of inequality between educated and uneducated women was highest for use of skilled ANC (Gini index: 0.31 and 0.17, respectively) and lowest for use of skilled postnatal care.

Qualitative results show that several demand side factors prevent women from using maternal health services. These included lack of knowledge about maternal health services, long distance to health facility, lack of transport to access health facilities, poor road infrastructure, perceived poor quality of services, fear of compulsory HIV testing during ANC, poor attitude of health workers, lack of women's autonomy and decision-making power, poverty, cultural beliefs and practices and religion. Various supply-side barriers to maternal health care access were also identified and these included inadequacy of health facilities, shortage of skilled health workers, inadequate funding, lack of essential drugs and equipment, insufficient emergency transport and, the lack of communication and collaboration with partners.

Most of the key informants perceived EHP implementation as having positive impacts such as improving health care coverage, access and population health, as well as contributing towards health systems strengthening. Various factors negatively affect implementation of the EHP in Malawi including lack of awareness on EHP among key stakeholders, shortage of essential drugs and equipment, inadequate funding, shortage of health workers, insufficient infrastructure, lack of EHP policy enforcement mechanism and effective monitoring systems.

Conclusion: The study has detected disparities in use of maternal health services among women of different socio-economic groups, thereby indicating inequalities in use of EHP services. Women in the lowest strata of education, income and residential setting in Malawi are less likely to use skilled maternal health services. Measures to address inequalities in use of maternal health services should therefore not only focus on increasing coverage of services, but should also be aimed at improving access for the poor, rural and uneducated women in Malawi. Despite efforts to increase coverage of EHP services and provision of free health services to all Malawians, various barriers exist within both the demand and supply sides of the health system which prevent access to the services. This confirms that increasing high coverage of essential services and provision of free health services does not in itself guarantee equitable access to essential health services. More effort should therefore be directed towards addressing different barriers at both sides of the health system in order to promote universal access to the EHP. Targeted strategies such as promoting heath education and community awareness, improving distance to health facilities, district health performance improvement, health systems strengthening and application of a multi-sectoral approach to address socio-economic determinants of health would help to promote equitable access to EHP services.

DEDICATION

First and foremost, I dedicate my dissertation to God who has made this work possible and for His never ending love and overflowing blessings upon my life. I also dedicate this work to my loving parents, Isaac and Patricia Kazanga, for their unwavering support and confidence in me which kept me going. To my Dad, I thank you for instilling in me the desire to pursue PhD studies and for imparting in me a spirit of determination and hard work

This dissertation is also dedicated to my brothers Ian, Kenneth, Donald and my sister Betty for their encouragement and moral support. A special feeling of gratitude to many friends for their inspiration, patience, love and understanding.

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LIST OF ACRONYMS

ADB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Treatment
AU	African Union
BLM	Banja La Mtsogolo
BPHS	Basic Package of Health Services
CBDA	Community Based Distributing Agents
CHAM	Christian Health Association in Malawi
CIDA	Canadian International Development Agency
CMED	Central Monitoring and Evaluation Division
COM	College of Medicine
COMREC	College of Medicine Research Ethics Committee
DC	District Commissioner
DIP	District Implementation Plan
DFID	Department for International Development
DHMT	District Health Management Team
DHO	District Health Office
DHIS	District Health Information Software
DHS	Demographic Health Survey
EAs	Enumeration Areas
EHP	Essential Health Package
EHRP	Emergency Human Resources Programme
EmOC	Emergency Obstetric Care
EU	European Union
FANC	Focused Antenatal Care
FAO	Food and Agriculture Organisation of the United Nations
FCTC	Framework Convention on Tobacco Control
FGD	Focus Group Discussion
FPAM	Family Planning Association of Malawi
GDP	Gross Domestic Product
GoM	Government of Malawi
GTZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GVH	Group Village Headman
HBM	Health Belief Model
HMIS	Health Management Information System
HSA	Health Surveillance Assistant
HSSP	Health Sector Strategic Plan

HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
ICPD	International Conference on Population and Development
IDIs	In-depth Interviews
IMCI	Integrated Management of Childhood Illnesses
IPTp	Intermittent Preventive Treatment of malaria in pregnancy
ITNs	Insecticide Treated Nets
ISEqH	International Society for Equity in Health
JICA	Japan International Cooperation
KCH	Kamuzu Central Hospital
KCN	Kamuzu College of Nursing
KIIs	Key Informant Interviews
LG	Local Government
MASM	Medical Aid Society of Malawi
MHI	Micro Health Insurance
MICS	Multiple Indicator Cluster Survey
MDG	Millennium Development Goal
MDHS	Malawi Demographic and Health Survey
MGDS	Malawi Growth Development Strategy
MHCP	Minimum Health Care Package
MNHP	Malawi National Health Policy
MoH	Ministry of Health
NCDs	Non-Communicable Diseases
NGOs	Non-Governmental Organizations
NHA	National Health Accounts
NHP	National Health Plan
NSO	National Statistical Office
OECD	Organisation for Economic Co-operation and Development
PHC	Primary Health Care
PMPB	Pharmacy, Medicine and Poisons Board
PMTCT	Prevention of Mother-to-Child Transmission
PoW	Program of Work
QECH	Queen Elizabeth Central Hospital
RHU	Reproductive Health Unit
RMNCH	Reproductive, Maternal, Neonatal and Child Health
RN	Registered Nurse
SDGs	Sustainable Development Goals
SLA	Service Level Agreement
SPSS	Statistical Package for Social Sciences
SRHR	Sexual and Reproductive Health and Rights
SWAp	Sector Wide Approach

SWOT	Strengths, Weaknesses, Opportunities and Threats
TAs	Traditional Authorities
TBA	Traditional Birth Attendant
TWG	Technical Working Group
UHC	Universal Health Coverage
UNC	University of North Carolina
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
USA	United States of America
VDC	Village Development Committee
VHC	Village Health Committee
VIF	Variance Inflation Factor
WB	World Bank
WFP	World Food Program
WHO	World Health Organization
WTO	World Trade Organization

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

Equity of access to health care is a central public policy issue for many health systems (Goddard and Smith, 2001), yet it remains a challenge for several health systems globally, particularly in developing countries such as Malawi. The need to pursue equitable access in health care gained a significant recognition in the Alma-Ata Declaration in 1978 (WHO, 1978). It was the first international declaration to acknowledge the importance of Primary Health Care (PHC), and it identified PHC as the key to achieving the goal of health for all the people in 21st century. Since 2000, the World Health Organisation (WHO) has promoted equity of access to basic health care services in developing countries through the concept of Essential Health care Package (EHP) services (WHO, 2001). Ever since that time, several countries including Malawi, have espoused the EHP services policy and have put it into practice (Bennet et al., 2008).

In Malawi, the concept of EHP originated in the late 1990's, when the government developed the Vision 2020, which was launched in 2000. The Vision 2020 recognises the importance of achieving fair and equitable distribution of wealth and health as crucial to the achievement of development (Government of Malawi, 2000). The Ministry of Health (MoH) adopted the EHP policy in 2002. The EHP refers to a prioritized set of basic health services that focus on major causes of morbidity and mortality, particularly those affecting vulnerable populations such as women, children and the poor (MoH, 2004). It aims at ensuring universal health care coverage. Its objectives include improving equity of access to health services.

The recent EHP for Malawi has the following thirteen components: (a) HIV/AIDS; (b) Acute Respiratory Infections; (c) Malaria; (d) Diarrhoeal diseases; (e) Perinatal conditions; (f) Non Communicable Diseases (NCDs) including trauma; (g) Tuberculosis; (h) Malnutrition; (i) Cancers; (j) Vaccine preventable diseases; (k) Mental illness including epilepsy; (l) Neglected Tropical Diseases ; and (m) Eye, ear and skin infections (MoH, 2011). This was developed based on the burden of disease study, the STEPS survey which found that NCDs were significantly contributing to the high disease burden in Malawi (WHO and MoH, 2010). Initially NCDs were not included in the EHP, but now they are there because their burden has increased. This study however focused only on one component of the EHP that is maternal health care (antenatal, delivery and postnatal) under perinatal conditions in order to assess equity of access to EHP services within the public health system in Malawi. This component was selected to reduce complexity of the study focus as EHP is very broad. In addition, selection was also based on the fact that Malawi has high maternal mortality rate, currently estimated at 675 deaths per 100,000 live births and hence the need for more research and improvements, since improved maternal health is crucial for determining the health for the next generation and development of the nation.

In 2004, the MoH and its collaborating partners developed a Programme of Work (PoW) for the Sector Wide Approach (SWAp) as a strategic means to deliver EHP services (MoH, 2004). The SWAp is essentially a framework for the public health sector planning and management. The PoW covered the period 2004-2010. It had 11 EHP components and was mainly focused on communicable diseases and conditions. The Health Sector Strategic Plan (HSSP) (2011-2016) replaced the PoW. The changes in the new EHP involved the inclusion of mental health, cancer and other NCDs. These changes are based on the current epidemiological transition in Malawi in which there is a shift in the disease burden pattern and high prevalence of both communicable diseases and NCDs (Bowie, 2006; WHO and MoH, 2010). According to WHO, (2011) the burden of NCDs for developing countries is expected to rise by more than 60% by 2020.

The EHP is delivered free of charge to all Malawians by the public health sector. The Christian Health Association in Malawi (CHAM) also delivers selected EHP services for free to women and under-five children. CHAM is a major partner to MoH. It is the second largest provider of health services in the national health sector and oversees approximately 35% of all health centers in Malawi (MoH, 2011) CHAM charges user fees for its services. However, the government has encouraged District Health Offices (DHOs) to sign service level agreements (SLAs) for the removal of user fees in CHAM facilities serving the most vulnerable populations. SLAs aim at achieving universal coverage and equitable access to health care service. Further details on SLAs between the government and CHAM will be provided in the subsequent chapter.

Evidence shows that post the introduction of EHP services in Malawi, inequalities in health care access still exist (Zere et al., 2007; NSO and ICF Macro, 2011). For example, women in rural areas (70%) are less likely to deliver in a health facility as compared to their counterparts in urban areas (84%) (NSO and ICF Macro, 2011). In addition, children in the rural areas (82%) are more likely to be fully immunised by the age of one year than children in the urban areas (76%) (NSO and ICF Macro, 2011). The EHP strategy aims to reduce inequalities in the access of health care services in Malawi. In order to promote the intended outcome of the EHP, it is important to assess equity of access to EHP services extensively, in order to develop a framework for achieving a more equitable health care delivery system.

1.2 Background of the Study

1.2.1Geographic and Demographic Profile for Malawi

Malawi is a land locked country in South of Sub-Saharan Africa. It is bordered by Tanzania in the north and north east, Zambia in the west and Mozambique in the south, east and south west. It has a total land area of 118,480 sq km, almost same size as the State of Pennsylvania in U.S. The country has a population of 14,844,822 people and an annual population growth rate of 2.8% (MoH, 2011). Malawi's population is composed of a slightly higher percentage of females (51%) than males (49%), and the vast majority of the population (85%) reside in the rural areas (NSO,

2008). There are five main ethnic groups: Chewa, Tumbuka, Yao, Ngoni and Lomwe. The official language is English, but Chichewa is the local language which is widely spoken. Majority of Malawians are Christians (83%) (NSO, 2008)

1.2.2 Administrative System in Malawi

Malawi has 28 districts and is divided into three regions: Northern, Central and Southern regions. Administratively, the districts are subdivided into Traditional Authorities (TAs), presided over by chiefs. The TAs are composed of villages, which are the smallest administrative units and are presided over by village headmen. Some villages have Village Health Committees (VHCs) which work with Health Surveillance Assistants (HSAs) on health issues at community level (MoH, 2011). HSAs are the lowest cadre of health workers employed by the MoH. They work in the community and are attached to health facilities. Their work is mainly preventive and promotive health even though recently they are more involved in case management of malaria, pneumonia and diarrhoea at community level. A group of villages is headed by the Group Village Headman (GVH). At each GVH level there is a Village Development Committee (VDC) which is responsible for development activities. Politically, each district is further divided into constituencies which are represented by members of parliament (MoH, 2011).

1.2.3 Politics and Economy in Malawi

Malawi gained its independence from Britain in 1964. Soon after independence, the country became a one party state under the authoritarian rule of Dr Hastings Banda. Since gaining independence, Malawi has experienced political stability and slow economic development. In 1993, through a referendum, Malawi changed its political system from one party state to multiparty. The Gross Domestic Product (GDP) for Malawi is $3.7 billion (World Bank, 2013). This is extremely low when compared to the GDP of other countries, for example, Zambia ($22.4 billion), Tanzania ($33.2 billion), South Africa ($350.6 billion), Bangladesh ($129.9 billion), Ireland ($217.8 billion) and USA ($16,80 trillion).

Malawi's economy is based on agriculture which accounts for approximately one third of GDP and about 90% of the country's export revenues (Central Intelligence, 2014). The main cash crop is tobacco and it accounts for 70% of the country's export earnings and 15% of Gross National Product (Central Intelligence, 2014). Malawi is therefore largely dependent on the flow of income from tobacco for both its national revenue and its development programmes. Unfortunately, the WHO Framework Convention on Tobacco Control (FCTC), which is a 172-member country international anti-smoking group, signed a treaty, on 19 November 2010, in Punta del Este, Uruguay that seeks to lobby for the elimination of tobacco dependence by member countries (WHO, 2010). With regard to this development, Malawi's economy, through its over dependence on tobacco, is viewed as an economy that is on a "life serving machine" and that the implementation of the FCTC actions by banning tobacco production will have far

reaching economic consequences including loss of valuable financial sources to the vulnerable rural peasantry.

Malawi's economy also depends on substantial donor aid from both bilateral and multilateral donors (Ministry of Finance, 2009). Likewise, funding for the SWAp and EHP is largely dependent on donor funding. This situation raises a very important question and concern on sustainability of SWAp and EHP programs. However, the current donor aid inflow has drastically been reduced due to the withholding of donor funds following concerns on governance and economic issues. This has contributed to the scarcity of forex and Malawi's inability to import essential products such as drugs and fuel.

1.2.4 Socio-economic and Health Indicators for Malawi

Malawi is one of the poorest countries in Africa as well as globally. Its GDP per capita is so low at $900 in 2013 (Central Intelligence, 2014). About 39% of the population is living below poverty line i.e. less than $1 per day (NSO, 2012). The poor people in Malawi lack the most basic food requirements, housing, social security and other basic daily needs. This situation impacts negatively on their health and well-being. The poor experience higher levels of morbidity and mortality, especially children and women (NSO and ICF Macro, 2011). For example, more under five children from the lowest wealth quintile suffer from diseases such Malaria and diarrhea, compared to those in the highest wealth quintile (NSO and ICF Macro, 2011). They also experience more limited access to health care services. As a result, they suffer poor health and die younger. The government is however committed to reducing poverty as outlined in the Malawi Growth and Development Strategy (MGDS). The MDGS strategy aims at reducing poverty through sustainable economic growth and empowerment of the poor, as well as addressing health issues (Government of Malawi, 2011).

The literacy rate for adults in Malawi is estimated at 70%, and it is higher among men than women, 79% as compared to 60% (NSO, 2012). Furthermore, the literacy rate is higher among urban residents than rural residents, 90% as compared to 66%. The literacy level of young women aged 15-19 is estimated at 81% (NSO and ICF Macro, 2011). Additionally, the youth literacy rate of 15-24 year olds is currently on the increase, from 68.1% in 2000 to about 84% in 2009 (Government of Malawi, 2010). This increase in level of literacy among the general population in Malawi is a good development, because literacy positively impacts on health knowledge, health status and access to health services. However, the difference in literacy levels between men and women needs to be addressed, as it influences gender inequalities in socioeconomic and health statuses, as well as in utilization of health services.

The health indicators in Malawi are among the worst globally. Life expectancy at birth is estimated at 50 years for men and 52 years for women (NSO, 2008). This is too low as compared

to the average life expectancies in other countries, for example; Ghana (65 years), Bangladesh (69 years), USA (78 years) and Ireland (80 years). The HIV pandemic has significantly contributed to the low life expectancy. A low average life expectancy has a devastating impact on the economy and development of the population and its country. The average fertility rate for women in Malawi is 5.7, with 6.1 higher rate for women in rural areas, than 4.0 lower rate for women in urban areas (NSO and ICF Macro, 2011). This rate is considered high and undesirable. High fertility reduces household well-being and contributes to the vicious cycle of poverty and poor health. It is also usually associated with slow economic growth and development by exerting stress on government resources. It also puts the population at a high risk for morbidity and mortality, thereby causing low life expectancy.

The maternal mortality ratio in Malawi still remains high at 675 deaths per 100,000 live births (NSO and ICF Macro, 2011). Under- five mortality rate in Malawi is 112 deaths per 1,000 births, whilst infant mortality rate is 66 deaths per 1,000 live births (NSO and ICF Macro, 2011). More information on the country's maternal health state is presented in chapter 2. Under-five mortality rate is higher in rural areas (130 deaths per 1,000 live births) as compared to urban areas (113 deaths per 1,000 live births) (NSO and ICF Macro, 2011). Malawi's under-five mortality rate is almost twice higher than the rate in Ghana (69 deaths per 1,000 births), a country also within the Sub- Saharan African region. Worse still, a child born in Malawi is about 15 or 30 times likely to die than a child born in the USA or Ireland, respectively (Faijer et al., 2010). The most common causes of child illness and deaths in Sub- Saharan African countries including Malawi are malaria, diarrhoea, pneumonia, malnutrition and neonatal conditions (Faijer et al., 2010).The poor health of mothers also impacts negatively on the health of children in Malawi.

Fortunately, research and experience show that illness and death of many children by these causes can be prevented through use of low-tech, evidence based, cost effective and nutrition interventions such as; oral dehydration, vaccines, insecticide treated nets (ITNs), antibiotics and exclusive breastfeeding (UNICEF, 2011). Nevertheless, the delivery and access to these interventions is limited in Malawi, due to many obstacles such as; severe shortage of skilled health care personnel and inadequate supplies. However, other determinant factors for child health occur beyond the confines of the health care system e.g. poverty, poor housing, lack of safe water and sanitation, and harmful cultural practices (Faijer et al., 2010). The MoH is however committed to reducing child mortality and child health inequalities. This commitment is shown through the introduction and implementation of different EHP services such as, integrated management of childhood illnesses (IMCI), safe motherhood, baby friendly initiative, vitamin A vaccination, distribution of ITNs and other initiatives.

Malawi has one of the highest HIV prevalence in both African region and globally. About 11% of Malawians aged 15-49 years are living with HIV/AIDS (NSO and ICF Macro, 2011). This rate represents a slight decrease from 12% in 2004. The HIV prevalence is highest among women (13%) than men (8%) (NSO and ICF Macro, 2011). In addition, the rate is also higher in

urban areas (17%) than in rural areas (9%), with people from urban areas being more likely to be infected than rural people (9%). The high HIV prevalence in Malawi places exceptional demand on the available scarce health resources. It also has negative effects on the wellbeing and health of the people and development of the nation. HIV/AIDS deepens poverty. Households become poorer as a result of the illness and death of its members. The Government spends more money in health services and programs aimed at preventing and managing HIV/AIDS, instead of making investments in activities and projects that can help to reduce poverty, promote development and improve delivery of the health system.

Communicable diseases such as HIV/AIDS, Tuberculosis, Malaria, lower respiratory infections and diarrheal diseases are the leading cause of disease burden in Malawi (MoH, 2011). Furthermore, there is also a huge burden of disease attributable to psychiatric diseases and other NCDs. This is one of the main reasons why the MoH decided to include NCDs in the current EHP policy, as defined in the HSSP. Table 1.1 below presents a selected list of the socio-economic and health indicators for Malawi.

Table 1.1: Socio-economic and Health Indicators for Malawi

Selected Socio-economic and Health Indicators	Estimate
Total population	14,844,822
Annual population growth rate (%)	2.8
Life expectancy at birth (yrs)	50
Population below poverty line i.e. earning less than $1/day (%)	39
Adult literacy rate (%)	70
Total fertility rate (per woman)	5.7
Maternal mortality ratio per 100,000 live births	675
Antenatal care coverage (%)	97
Attendance at birth by trained personnel (%)	78
Delivered in a health facility (%)	77
Contraceptive prevalence rate (%)	46
Under five mortality rate per 1,000 live births	112
Infant Mortality rate per 1,000 live births	66
Children fully immunized by age of 1 year (%)	72

Source: 2010 Malawi DHS (NSO and ICF Macro, 2011); 2008 Population and Housing Census (NSO, 2008)

1.3 Problem Statement

The EHP is often promoted as an effective and efficient way for strengthening performance of the health systems (Waddington, 2013; WHO, 2008). EHPs took center-stage in the debate when

the 1993 the World Development Report of the World Bank posed the following practical question – how should governments in low-income countries spend their limited health budgets? (World Bank, 1993; Waddington, 2013). The report argued that in order to make the best use of limited resources, governments should incorporate cost-effective and high-impact interventions in their health care plans and budgets. Subsequently, the WHO Commission on Macroeconomics and Health recommended that low-income countries, in partnership with high-income countries should scale up access to EHP services, including a focus on specific interventions which provide the best value for money (WHO, 2001). The global interest in EHP also came into light with the resolution adopted on Universal Health Coverage (UHC) by the 58th World Health Assembly in 2005, which defined UHC to mean that "everyone in the population has access to appropriate promotive, preventive, curative and rehabilitative health care when they need it and at an affordable cost" (Gupta et al., 2014). In the current discourse on health coverage, EHP is considered as central to achieving the goal of UHC to increase health service delivery and, in particular, improve equity of access to health services in low-income and resource-constrained settings (Gupta et al., 2014). EHPs are often justified by their potential contribution to high-level goals such as improved efficiency, poverty reduction, enhanced equity, more effective care and health improvement (Waddington, 2013; WHO, 2008).

Since 2000, the World Health Organisation (WHO) has promoted equity of access to basic health care services in developing countries through the concept of EHP services (WHO, 2001). However, since the introduction of EHP services in Malawi and most countries, no significant studies have been conducted to assess its effectiveness in improving equity of access to health services. As Bennet et al., (2008, pg. 128) affirm; "many countries have espoused the essential health package services policy, and several have put the policy into practice, but there is remarkably little evidence about its effectiveness, and in particular whether it improves access to health services for poor people". Malawi is also a case in point in this statement, thus the need for this study.

Malawi continues to experience higher levels of maternal mortality and will likely not meet the MDG 5 target of reducing maternal mortality rate by three quarters by 2015 (Government of Malawi, 2010). A significant proportion (14%) of pregnant women in Malawi continues to seek care at the TBA's for delivery (NSO and ICF Macro, 2011). High rates of maternal mortality do not only indicate serious inefficiencies in a health system, but they also impact negatively on societal well-being, economic growth and development. The poor health of mothers affects the health and well-being of their babies. Even though maternal health services are delivered free of charge through the EHP by the public health sector and some CHAM facilities in Malawi, access to these services still remains limited, more especially to women in rural areas. This situation raises a serious concern about equity of access to the EHP services in Malawi. Gupta et al., (2014) noted that the issue of access to essential health services becomes critical for policy makers not only to achieve universal coverage of health care but also to ensure social justice.

Different studies conducted in Malawi have documented inequalities in health status and access to health services among different population groups. For instance, the Malawi Demographic and Health Survey (MDHS) report higher levels of morbidity and mortality amongst the poor, rural residents, women and children (NSO and ICF Macro, 2011). In addition, a study conducted by Mangham in 2006, revealed that women, children and the rich people consume more public health services than men and the poor (Mangham, 2006). The study findings further revealed that more urban population (38%) than rural population (29%) utilise public health facilities.

The objectives for this study are different from the above cited studies (Mueller et al., 2011; NSO and ICF Macro, 2011; Mangham, 2006). For instance, the MDHS is aimed at providing national estimates for basic demographic and health indicators, whilst a study by Mangham, (2006) was aimed at assessing who benefits from public spending in health care in Malawi. This study was aimed at assessing equity of access to EHP services in Malawi, particularly focusing on maternal health care, as a case study. Data from the MDHS was however useful in this study to examine determinants of maternal health care utilisation and measure inequalities in use of such services, in reference to EHP services delivery in Malawi. Additionally, it is worth noting that, whilst a study conducted by Mueller et al., (2011) was focused on health systems constraints to delivering EHP services, at facility level this study will focus on exploring the health systems constraints to accessing EHP services, particularly maternal health care, at both 'demand side' and 'supply side'. Additionally, published studies on equity and access to health services in Malawi are scanty and inadequate. Moreover, the available studies in this area have little or no focus on the context of the EHP.

Waddington (2013), argues that the availability of a well-functioning health infrastructure and resources to effectively deliver an EHP is key to achieving universal coverage. He emphasised that that effective implementation of the EHP has implications for support systems such as human resources and essential drug supplies. For example he cited that in Sierra Leone, the essential health package document included details of the diagnostic services, drugs and equipment required to support the package, whilst in Swaziland, the national referral system document, the National Standard Treatment Guidelines and the Essential Medicines List were all launched at the same times as the EHP.

The EHP in Malawi is designed to provide basic essential health services free of charge to all Malawians. However, evidence shows that delivery of the EHP is constrained by various challenges currently confronting the public health sector in Malawi. Prominent among the challenges is the shortage of health workers, inadequate funding for the sector, lack of essential drugs, equipment and medical supplies (Mueller et al., 2011). The existence of high disease burden in Malawi also places exceptional demand on the available scarce resources for effective delivery of the EHP. Mueller et al., (2011) recommended that greater attention needs to be given to the health system constraints to delivering health care in Malawi. They emphasized that removal of these constraints should receive much priority. Therefore, in regard to this

recommendation, this study was undertaken to explore further the supply-side factors that affect delivery of maternal health services (EHP), as well as to determine ways on how to promote the delivery of such services.

Studies done in developing countries have shown that demand-side factors such as poor geographical accessibility, poverty, illiteracy, socio-cultural and religious factors, and provider-client interaction factors, constrain access to EHP services such as maternal health care (Ensor and Cooper, 2004; Ensor et al., 2014; Gabrysch and Campbell, 2009; Ntambue et al., 2012; Tey and Lai, 2013; Fotso et al., 2009). A few studies have been undertaken to identify demand-side factors affecting use of maternal health services in Malawi (Katenga-Kaunda, 2010; Kumbani et al., 2013). Travis et al., (2004: 900–906) argues that "effective interventions exist for many priority health problems in low income countries; prices are falling, and funds are increasing. However, progress towards agreed health goals remains slow. There is increasing consensus that stronger health systems are key to achieving improved health outcomes. There is much less agreement on quite how to strengthen them. Part of the challenge is to get existing and emerging knowledge about more (and less) effective strategies into practice. The evidence base also remains remarkably weak, partly because health-systems research has an image problem." This study therefore sought to contribute to knowledge and research in health systems. The study also sought to provide recommendations for improvement and policy implications for promoting equitable access to EHP services and health systems strengthening.

1.4 Purpose of the Study

The purpose of this study is to assess equity of access to EHP services in Malawi, particularly focusing on uptake of maternal health services, in order to contribute knowledge and suggestions towards the development of a framework for achieving a more equitable health delivery system.

1.5 Research Objectives

1.5.1 Broad objective

To assess equity of access to maternal health services and explore determinants of inequities of such services, in reference to EHP services delivery in Malawi.

1.5.2 Specific Objective

i) To examine utilization of maternal health services in relation to age, marital status, residence, educational status, work status, household wealth, ethnicity and religion, in order to identify the determinants of utilisation of such services.
ii) To measure the extent/magnitude of inequalities in utilization of maternal health services by residence, education and wealth status.

iii) To document factors that influence women's utilisation of maternal health services
iv) To document factors that influence delivery of maternal health services in order to determine access to EHP services.
v) To understand key informants' perspectives on EHP implementation in Malawi.

1.6 Research Questions

i) What factors are significantly associated with use of maternal health services?
ii) How do the various factors influence inequalities in use of maternal health services?
iii) What factors do women perceive as determinants to use of maternal health services? And how do these factors influence their health seeking behavior?
iv) What factors do health workers perceive as determinants to delivery of maternal health services?
v) What are the key informants' perceptions on EHP implementation in Malawi? (e.g in relation to policy awareness, availability of resources, coordination among stakeholders, successes and failures, ways for improvement etc).

1.7 Significance of the Study

Results of this study will provide the Ministry of Health in Malawi with valuable information that will help to improve the delivery and use of EHP and promote equitable access to health services. The study results will also serve as a basis for policy decision making, for health care managers besides providing information for learning experiences to other developing countries on use of EHP to promote equitable access to health services. The concept of health equity is an ethical value that is inherently normative, grounded in the ethical principle of distributive social justice or fairness and core human rights principles (Braveman and Gruskin, 2003). It is therefore deemed worthy of special attention. Pursuing health equity strategies entails promoting access to health services by vulnerable populations, thereby improving the general health status of the population. It also contributes to the global health pursuits, such as those for attaining the MDGs. Results of this study will therefore help the Malawi government to track progress and develop interventions towards the achievement of the MDG goals. The subsequent chapter reviews literature relating to the subject matter under study.

1.8 Summary of the Chapter

In summary, this chapter has presented the introduction and background of this study. What has transpired in this chapter is that equity of access to health care is a central public policy issue for many health systems including in Malawi. The WHO recommends delivery of the EHP as one of the key strategies to promoting universal access to essential health services in developing countries. The Government of Malawi together with development partners is implementing the EHP and other strategies aimed at improving efficiency and equity in the delivery of health care.

The Malawi EHP has thirteen components and it focuses on the major causes of morbidity and mortality, particularly those affecting vulnerable populations. The health indicators in Malawi are among the worst globally. For instance maternal mortality ratio is very high at 675 deaths per 100,000 live births, whilst under- five mortality is 112 deaths per 1,000 births. The EHP in Malawi is also aimed at reducing the high disease burden in Malawi. It is delivered free of charge to all Malawians by the public health sector. In order to expand coverage and improve efficiency in delivery of EHP services, the MoH in Malawi has subsidized some CHAM facilities to deliver selected EHP services (especially maternal and child health care) at no fee to the most vulnerable and underserved populations through SLAs. CHAM facilities tend to be located in the remote areas and thus their fees policy represents a financial barrier to access to those living in their catchment areas. SLAs therefore help to remove user fees in CHAM.

A review of the literature shows that delivery of and access to the EHP is constrained by various challenges including shortage of health workers, inadequate funding for the sector, lack of essential drugs and equipment, poor geographical accessibility, among other factors. The existence of high disease burden in Malawi also places exceptional demand on the available scarce resources for effective delivery of the EHP. Malawi's economy depends on substantial donor aid. Likewise, funding for the EHP is largely dependent on donor funding. The situation in Malawi raises very important questions on sustainability of the EHP program and its effectiveness in promoting equity of access to essential health services.

CHAPTER 2

HEALTH POLICY CONTEXT AND SYSTEM IN MALAWI

2.1 Introduction

This chapter describes the health policy context and system in Malawi as a background in which to view this study. Specifically the chapter describes some of the key national, regional and international policies to improve health and equity. The chapter also provides an overview of Malawi's health system and its general organisational structure using the World Health Organisation (WHO) Health Systems framework so as to provide a holistic view of the health system within which maternal health services and the entire EHP services are delivered. A SWOT analysis of Malawi's health system based is also presented in this chapter.

2.2 Health Policy Context

2.2.1 National Health Policy Context

The Malawi Government has continuously focused its policies on promoting health and well-being of its population. In doing so, the government recognises the importance of investing in health as key to improving quality of life, achieving poverty reduction and economic development. The constitution of Malawi recognizes the right to health under section 13(c) and it affirms that the state shall "provide adequate health care, commensurate with the health needs of Malawian society and international standards of health care" (Government of Malawi, 2006). The goal of the Ministry of Health in Malawi is to improve the quality of life of all Malawians by reducing the risk of ill health and occurrence of premature deaths thereby contributing to the social and economic development of the country (MoH, 2011). The National Health Policy presents a framework that articulates issues central to the development and functioning of health systems in Malawi (MoH, 2015). The policy aims at achieving universal access to EHP services. It forms the basis for decision-making at all levels of health sector and it places emphasis on involvement of all key stakeholders in promoting health. Despite the availability of these policies, there are still challenges of providing accessible and quality health care services to all the people who need the services and at the time they need them (MoH, 2015).

Malawi launched the vision 2020 policy framework in 2000, which sets out a long-term development perspective for Malawi and outlines the broad policy direction for the health sector. The policy states that "by the year 2020, Malawi nation will be secure, democratically mature, environmentally sustainable, self-reliant with equal opportunities for and active participation by all, having social services, vibrant cultural and religious values and being a technologically driven middle-income country" (Government of Malawi, 2000). It also recognizes the importance of achieving fair and equitable distribution of income, wealth and health, as crucial to

the achievement of the vision. A brief analytical view on the Vision 2020 suggests that it represents one of the overarching policies that are rich in content of aspiration but for which little implementation and tracking has been undertaken. Arguably, about 15 years have elapsed and progress on the majority of areas suggests that the Vision is likely unattainable. Moreover, despite reference to Vision 2020 for Malawi in some strategic documents, there has been limited explicit coherence on how the strategic documents developed after 2000 were meant to contribute to Vision 2020. In essence, the prominence of Vision 2020 as a development agenda for Malawi has hardly been active for the past decade.

The Malawi Growth and Development Strategy (MGDS) is an overarching development plan for Malawi and it aims to reduce poverty through sustained economic growth and development (Government of Malawi, 2011). The MGDS recognises that a healthy, educated and wealthy population is crucial for the achievement of the country's sustainable economic growth. The policy is also focused on protecting and empowering vulnerable populations. The current MGDS II is functional from 2011 to 2016. All sectoral policies including the Health Sector Strategic Plan (HSSP) are designed to provide sector contribution to the aspirations of the MGDS. Thus the HSSP, through its goal of promoting population health, is designed to develop human capital to attain sustainable economic development based on the widely acknowledged notion that healthy people are good for development. Precisely, the HSSP operationalises the MGDS.

The Ministry of Health developed the HSSP (2011-2016) which succeeded the Program of Work for implementing the Health Sector Wide Approach which covered the period of 2004-2010. It is a 5 years plan whose overall goal is to improve the quality of life of all the people of Malawi (MoH, 2011). The HSSP provides a framework to guide the Ministry of Health and stakeholders' effort in contributing towards the attainment of the MGDS and MDGs. To achieve this, the HSSP emphasizes on increasing coverage of high quality EHP services, improving equity pf access to health services and efficiency in the delivery of EHP services, among other objectives (MoH, 2011). The HSSP defines and outlines the EHP services policy and priority diseases and conditions that the health sector will address in the next 5 years.

The EHP services delivery policy is designed to deliver a prioritized package of basic cost effective health care interventions that address thirteen diseases and conditions that constitute major causes of morbidity and mortality, especially those affecting the poor people in Malawi (MoH, 2011). It is intended to achieve universal health care coverage. In global health discourse, universal health coverage policy entails providing all people with access to needed health services of sufficient quality to be effective, and without financial hardships when paying for them (Sachs, 2012; Savedoff et al., 2012). A key policy strategy for promoting universal access to EHP services in Malawi is the provision of free health services at point of delivery in public health facilities. The fact that about a third (60%) of out-of-pocket expenditure is made at public health facilities (MoH, 2012), within the context of a policy of free health services delivery and

high poverty levels is obviously a worrisome situation with potential to undermine efforts to achieve universal health coverage.

To ensure effective execution of the EHP, the Ministry of health and its partners adopted the Sector Wide Approach (SWAp), a strategy which is intended to help the Ministry to effectively manage funds from donors and to promote equity in delivery of health services (MoH, 2004). The SWAp was endorsed by the Paris Declaration on Aid Effectiveness Action in 2005, which calls for harmonization and alignment of aid in a sector (OECD, 2008). It is an approach that brings together governments, donors and other stakeholders within any sector. It provides a programmatic and financial tool for the health sector whereby all donor agencies contribute to one single budget pool so that technical efficiencies can be achieved. The advantages of SWAp include that the government takes the lead, united financing from all sources; resource allocation based on policy priorities and increased transparency and accountability (Walford, 2007). Its major challenge is the sustainability of funding from donors and convincing them to fund programs outside their areas of interest.

The Malawi Government has also demonstrated commitment to promoting maternal health through various policies and initiatives, yet distressingly high incidences of maternal mortality seems to remain an accepted part of life in the country. In 2002 the Ministry of Health through the Reproductive Health Unit developed the National Sexual and Reproductive Health and Rights (SRHR) policy which provides a framework for implementation of comprehensive and integrated sexual and reproductive health programs and services in the country. The SRHR policy was revised in 2009 and aims at promoting safer reproductive health practices including use of quality and accessible reproductive health services (MoH, 2009).

In an effort to reduce maternal and neonatal mortality the Government of Malawi in 2005 developed the National Road Map for accelerating the reduction of maternal and newborn mortality towards the achievements of the MDGs (MoH, 2005). The main objectives for the Road map include increasing the availability, accessibility, utilization and quality of skilled obstetric care during pregnancy, childbirth and postnatal period at all levels of the health care delivery system. Both the SRHR and the Road Map incorporate various emerging issues in the components of sexual and reproductive health in line with both national and international recommendations and policy guidelines. However despite these policies and strategies maternal mortality still remains high in the country. Various factors at the supply and demand side of the health system are affecting implementation of these policies and contributing to the high maternal mortality rate in Malawi. Strengthening of the health systems is required at both the supply and demand level to reach the MDG 5.

In 2002, the Government through the Ministry responsible for Women and Child Development launched the Gender Policy. The main goal of the policy is to mainstream gender in the national development process to enhance equal participation of men and women for the attainment of

sustainable, social and economic development (Government of Malawi, 2008). It also aims to raise awareness of gender issues, legal rights of women and economic empowerment of women. An important aspect of the National Gender Policy is the promotion of better access to reproductive health services for women, which involves making family planning and other health facilities available to women in all parts of the country.

The MGDS which is the overarching strategy for the country also recognizes gender to be very important in national development and one of its long-term goals is to mainstream gender in all national policies and programs. The National Health policy, HSSP and Sexual and Reproductive Health policy also addresses issues of gender, human rights and equity. However, despite such commitments, gender equality and equity issues still remain a challenge in Malawi. It has been observed that the National Gender Machinery is facing structural and ideological problems Mbilizi, 2013). The contributing factors include the reluctance by government decision makers to invest adequate resources and create relevant structures and systems for implementing gender-related policies and programs (Mbilizi, 2013). In other words, there is generally a lack of political will to fund gender-related programs in Malawi. It is not surprising that the country will not achieve MGD 3 which seeks to promote gender equality and empower women (NSO, 2014).

Gender mainstreaming in health policies and maternal health programs is very important to promoting maternal health (Kululanga et al., 2013). A critical analysis of the key health policies in Malawi shows that most of the policies that the country has put in place to improve maternal health have to a greater extent addressed issues of gender bias, gender discrimination, gender insensitivity, but have failed to address issues of gender gap in improving maternal health in Malawi. For instance there is very little or no male involvement in supporting women to access maternal health care. As a result, this has contributed to the high maternal mortality in Malawi. A systematic review and meta- analysis on male involvement and maternal health outcomes by Yargawa and Leonardi-Bee (2015) found that male involvement is associated with improved maternal health outcomes. All stakeholders in health sector must therefore work together and collaborate closely to ensure that all cross-cutting issues of gender and empowerment of women are integrated into health policies and initiatives.

2.2.2 International and Regional Health Policies

In 2000, at the United Nations Millennium Summit, world leaders developed eight international Millennium Development Goals (MDGs) to be achieved by 2015. The MDGs were established as a road map for the implementation of the Millennium Declaration and they serve as a global framework for collective action to reduce poverty and improve the lives of poor people (United Nations, 2000). The eight MDGs include eradication of extreme poverty, providing universal primary education, improvements in health and gender equality among others. Each goal has specific time bound targets and indicators for measuring progress. The Millennium Summit identified maternal health as an urgent priority in the fight against poverty. Four of the eight

MDGs (goal 3, 4, 5, and 6) have direct bearing on maternal health. MDG 3 calls for promotion of gender equality and empowerment of women; MDG 4 calls for reduction in child mortality, MDG 5 calls for reduction of maternal deaths, and MDG 6 urges nations to prevent the spread of HIV/AIDS, control and prevent malaria and other infectious conditions. Ratification of the MDGs is certainly one of the most significant global initiatives that the international community took towards joint global development agenda.

Evidence shows that MDGs have helped to improve lives of many people and that significant progress has been made across all eight goals globally, yet much more effort is required in many areas to meet the set targets (United Nations, 2015; WHO, 2014). Performance on the MDGs has varied by country and region whereby some regions are closer to meeting the targets, while others such as Africa have lagged behind despite the increase in aid (United Nations, 2014). It is noteworthy that "continued progress towards the MDGs in the remaining time is essential in order to provide a solid foundation for the post-2015 development agenda" (United Nations, 2015). The Sustainable Development Goals (SDGs) are to replace the MDGs, which reach their deadline in 2015. SDGs are expected to shape the global agenda on economic, social and environmental development for the next 15 years.

Malawi is a signatory to the United Nations Millennium Declaration, and has adopted the eight MDGs. The Government is committed to pursuing and achieving the global targets on MDGs and has developed policies and strategies (e.g. MGDS and HSSP) to accelerate progress towards achieving the MDG targets by 2015 (MoH, 2011). Malawi recently carried the MDG Endline Survey in 2013-14 and the report indicates that while the country still faces many challenges, significant progress has been made on some of the MDGs, in particular: Goal 4 to reduce child mortality and Goal 2 to achieve universal primary education (NSO, 2014). Malawi is also a signatory to the 2008 Ouagadougou Declaration on Primary Health Care (PHC) and Health Systems, in which African countries reaffirmed their commitment to promoting PHC as a strategy for delivering health services, and as an approach to accelerate the achievement of MDGs (MoH, 2011). Other important international declarations to which Malawi is a signatory include the Abuja Declaration which calls on African Governments to increase their budgetary allocation to health to at least 15% and the Paris Declaration on Aid Effectiveness, the Accra Agenda for Action and the Busan Partnership for Effective Development Cooperation which call for harmonization and alignment of aid in all sectors (MoH, 2011). However, despite the Government's commitment to these international declarations challenges still remain. For example, the country has not yet achieved the target of 15% budgetary allocation for the health sector as detailed in the Abuja Declaration.

Global efforts to address maternal mortality started with the Safe Motherhood Initiative which was launched in Nairobi in 1987. The conference brought to the world's attention the scope and magnitude problem of pregnancy-related deaths and disability and called for the reduction of global, regional and national maternal mortality ratios by half by 2000. In response to that, the

same year Malawi, established their national safe motherhood initiative just like many other developing countries (MoH, 2005). This was followed by the International Conference on Population and Development (ICPD) held in Cairo, Egypt in 1994, which developed the reproductive health concept and called for action to reduce maternal mortality ratio by 50% between 1990 and 2000 (United Nations, 1994). The ICPD programme action was reaffirmed by the Fourth World Conference on Women and called for further action to reduce maternal mortality by 50% between 2000 and 2015 (United Nations, 1995).

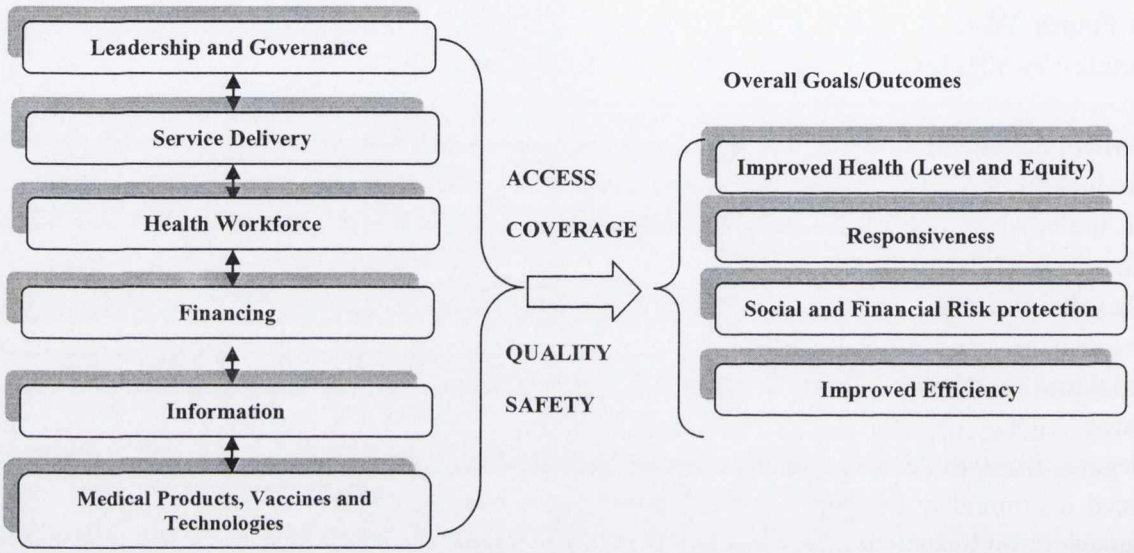
International attention to the problem of maternal mortality has increased significantly since the introduction of MDGs in 2000, when the reduction of global maternal mortality by 75% by 2015 was included as one of the goals (United Nations, 2015; WHO, 2014). The African Union Commission (2006) in collaboration with its development partners developed the Continental Policy Framework on Sexual and Reproductive Health and Rights as a response to the call for the reduction of maternal and infant mortality in the African continent, and the mainstreaming of sexual and reproductive health and rights in primary health care as a means to achieve health-related MDGs (African Union Commission, 2006). In addition, Ministers of Health and delegates from 48 African countries met in Maputo, Mozambique in the same year where they agreed unanimously to adopt a plan of action for operationalization of the Continental Policy Framework on Sexual and Reproductive Health and Rights in order to ensure universal access to comprehensive sexual and reproductive health services on the continent (African Union Commission, 2006). The problem of persistent high maternal mortality was further highlighted during the Women Deliver conferences held in 2010 and 2013. In response to these initiatives, effort to reduce maternal mortality has increased at national, regional and international levels (Hogan et al., 2010). According to WHO (2014) significant progress has been made in reducing maternal mortality globally and in Africa, however despite these achievements meeting MDG 5 remains unlikely especially in most Sub-Sahara African countries such as Malawi.

2.3 Overview of Malawi's Health System

Health system is a complex set of structured and interconnected elements which function together to improve population health. It includes organizations, resources, people, and activities whose primary objective is to promote, restore and sustain health (WHO, 2007). The elements of a health system interact with each other through different processes and actions intended to improve health. The main goals for a health system include improving health and health equity in ways that are responsive, financially fair, and efficient use of available resources (WHO, 2007b). This section provides an overview of Malawi's health system and its general organisational structure, as a context in which to view this study. The WHO six building block health systems framework will be used in order to present a systematic and holistic view of the country's health system (please refer figure 2.1 below). The framework conceptualizes that the health system has six building blocks namely; leadership and governance, health workforce, service delivery,

health financing, information, and medical products, vaccines and technology, which function interdependently to achieve the ultimate goal of improving the health status of a population.

Health Systems Building Blocks



Source: WHO, 2007

Figure 2.1: The WHO Health System Framework

2.3.1 Leadership and Governance

Leadership and governance (also known as stewardship) is a very important component of any health system. It is about oversight and guidance of the whole system. It concerns the role of the government in taking responsibility for population health, and guiding the entire health system, private as well as public, in order to protect the public interest (WHO, 2007b). "Both political and technical expertise is required to address competing demands for limited resources, but there is no blueprint or single, fixed approach for effective health leadership and governance. Key components include; policy guidance, information and oversight, collaboration and coalition building, regulation, system design, and accountability" (WHO, 2007).

Malawi's health system is headed by the government through the Ministry to Health. Within the SWAp strategy, Government has committed to ensuring good leadership and adequate governance structures— both of which are important factors for efficient and effective delivery of health services (MoH, 2015). The Ministry has established Technical Working Groups (TWGs) comprised of public and private sector members drawn from within and outside the health sector. These TWGs are responsible for providing leadership and guidance on specific technical health issues. However, the effectiveness of the TWGs is affected by a lack of clear,

cross-cutting, sector-wide legislation or regulations on collaboration and participation as well as by lack of institutional capacity to promote effective leadership and governance (MoH, 2015).

The Reproductive Health Unit (RHU), a public health office in the Ministry of Health is responsible for providing governance and leadership on matters critical to sexual and reproductive health. The RHU works to improve quality, availability and accessibility of sexual and reproductive health services in order to reduce the high maternal and newborn mortality. The 2009 National SRHR Policy provides a framework for implementation of sexual and reproductive health programs, whereas the National Road Map for accelerating the reduction of maternal and neonatal mortality serves as a guide for stakeholders to align with the government's efforts towards the promotion of maternal and child health (MoH, 2009; MoH, 2007).

Malawi has a decentralized system and policy for the public health sector. The Local Government Act of 1998 is the legal framework within which the decentralization policy operates. The decentralization policy seeks to delegate authority, functions and funds from central government ministries including the MoH to District Assemblies (Hussein, 2003). This entails that the District Assemblies are mandated to guide the decision-making process in the public health sector, including planning, budgeting, spending and procurement; and to ensure efficiency, effectiveness and equity in the delivery of health services including the general provision of the EHP. This also entails that the provision of health services has been decentralized and the responsibility for service delivery has been transferred from MoH headquarters to the local government (MoH, 2011). Thus, district authorities have been given greater responsibility for managing health services at district and community levels. Although the health sector in Malawi has been decentralized, the central government has not fully devolved its power to levels below it. The challenges affecting health services decentralization in Malawi include shortage of human, financial and material resources; corruption and lack of administrative/management skills by staff, among other things (Hussein, 2003).

The public health sector administration has two structural levels: central and districts levels. The Ministry of Health has a Minister, Deputy Minister, Secretary for Health and various Heads of Departments (refer annex 1 for the organisational structure at MoH central level). The functions of the central level include policy making; setting standards for service delivery; planning and mobilizing health resources for the health sector; providing technical support; supervision; coordinating research; monitoring and evaluation, among others (MoH, 2011). There are five zonal offices namely North, Central West, Central East, South East and South within the central level. Their role is to provide technical support to District Health Management Teams (DHMTs) in planning, delivery, supervision and monitoring of health services at district level (MoH, 2011). The district level constitutes the local government authorities and district hospitals. The MoH has 28 district hospitals. Each district hospital has a District Health Officer (DHO) and a DHMT. The DHO is the overall in charge of the district hospital and peripheral units, such as,

health centres, dispensaries, community hospitals and health posts; and reports to the District Commissioner (DC) who is the overall administrator of public institutions at district level.

The existence of various inefficiencies affect leadership and governance in the health sector in Malawi (Mueller et al., 2011; Carlson et al., 2008; Ministry of Health, 2011). The inefficiencies include lack of leadership skills, corruption, poor coordination, lack of knowledge and information in health management. For instance, only 33% of managers for health centers know about existence of the EHP (Mueller et al., 2011). The coordination and cohesion for guiding the implementation of the EHP is weak (Carlson et al., 2008). Balabanova et al., (2010) argued that failure of stewardship in a health system reflects wider failures of governance in the whole country. In addition, Thorsen et al., (2014) pointed out that high maternal mortality in a country such as Malawi reflects leadership problems, health care delivery system failures or malfunctions that warrant urgent remedial action. With better leadership and good governance in health, increased political will and commitment, the health system in Malawi can greatly be improved and strengthened. Good governance and leadership at all levels of the health system can also help to ensure better health outcomes including maternal health reduction through promotion of accountability and transparency in the management and delivery of quality health services.

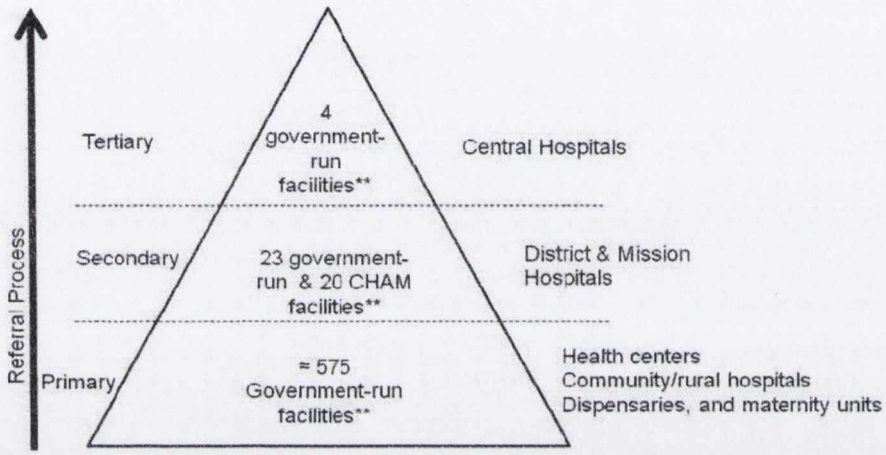
2.3.2 Service Delivery

Service delivery is another important component of the health system. Thorsen et al., (2014) argue that although the health system has several building blocks and functions, the main function of a health care system is service delivery which can be termed as health care delivery system. According to WHO (2007, pg. 3), "good health services are those which deliver effective, safe and quality health interventions to those that need them, when and where needed". The Ministry of Health in Malawi is committed to ensuring delivery of effective, safe and high quality EHP services including maternal health care to the people of Malawi (MoH, 2011). Moreover the Health Sector Strategic Plan has placed more emphasis on "increasing coverage of high quality EHP services; strengthening performance of the health system to support delivery of EHP services; and improving equity and efficiency in the delivery of free of charge, quality EHP services in Malawi thereby contributing to poverty reduction and the socio-economic development of the nation" (MoH, 2011, pg. xi).

Health care services in Malawi are provided by three main agencies; the public sector, Christian Health Association of Malawi (CHAM) and the private sector. Within a decentralized context, MoH is responsible for health services delivery only in central hospitals, whilst the Ministry of local government oversees the delivery of health services at district and lower levels. The Government of Malawi's (MoH and Ministry of Local Government) is the major provider of health services, contributing up to 55% of health facilities with CHAM contributing 14% of the health facilities, the private for profit sector operates 20% of the health facilities, NGOs provide 6% and the rest are being operated by statutory corporations which are autonomous public

owned corporations (GOM, 2007). Refer to annex 2 showing ownership and type of health facilities in Malawi.

There are three different levels of health care in Malawi namely primary, secondary and tertiary. These are interlinked or interconnected to one another through a comprehensive and well-defined referral system as illustrated in figure 2.2 below.



Source: Thorsen et al., (2014)

Figure 2.2: Levels of health care and referral system in Malawi

Levels of Health Care

Primary Health Care: This is the lowest level of care and it provides basic care services. This is usually the entry point to the health system and it includes; health centers, health posts, dispensaries, community and rural hospitals, maternity facilities and outreach clinics. At this level, maternal health care services are provided by nurse midwives. They normally conduct normal deliveries, with the exception of a few facilities that conduct vacuum extraction. At community level, health services are provided by community-based cadres such as HSAs, community-based distributing agents (CBDAs), Village Health Committees (VHCs) and volunteers (MoH, 2011). Services at this level are delivered through door-to-door visits, village clinics and mobile clinics. Community health nurses/ midwives and other health workers also provide health services through outreach activities such as health education, antenatal and postnatal care. Health centers provide both curative and preventive EHP services. Community and rural hospitals provide both primary and secondary care, and each has an admission capacity of 200 to 250 beds (MoH, 2011).

***Secondary Health Care*:** This level provides intermediary level of care, including surgical services, particularly those dealing with obstetric emergencies, and general medical conditions. It comprises district hospitals and provides referral facilities for both health centers and rural

hospitals. District hospitals normally have an admission capacity of 200 to 300 beds (MoH, 2011). They offer both in-patient and out-patient services. CHAM hospitals also provide secondary level health care. District hospitals provide in-service training for health personnel and support community-based health programs in the provision of EHP (MoH, 2011). Most CHAM facilities and district hospitals provide emergency obstetric care (EmOC) which includes administration of oxytocic drugs, assisted vaginal delivery, cesarean sections, manual removal of the placenta, the removal of retained products and blood transfusions (Thorsen et al., 2014).

Tertiary Health Care: This level covers central hospitals and private owned health facilities offering a higher level of specialized and referral health care services. There are five central hospitals in Malawi: Kamuzu Central Hospital (KCH), Queen Elizabeth Central Hospital (QECH), Mzuzu Central Hospital, Zomba Central Hospital and Zomba Mental Hospital. Tertiary hospitals provide medical and surgical care of the most complex maternal medical conditions, obstetric complication and fetal conditions. They are also responsible for professional training and conducting research (MoH, 2011). In spite of a clearly defined referral system, it is important to recognize that even tertiary health facilities have provided primary level health care. This phenomenon creates congestion at tertiary level facilities and subsequently compromises the quality of care. Insufficient resources, proximity to central level facilities, limited health infrastructure are attributed to this phenomenon. Discussions are currently underway to introduce bypass user fees (patients/clients who seek services at tertiary facilities without being referred from lower level facilities to pay user-fees for bypassing the primary facility) to discourage use of tertiary facilities as primary ones.

Traditional Health Sector/Informal Structure

The government of Malawi recognizes the role that the traditional health sector play in delivery of health care (MoH, 2011). While not part of the formal referral chain, it is important to note that an informal health system exists at community level constituting of providers such as traditional healers and TBAs. The Ministry of Health oversees the activities of traditional providers of health care and interacts with them at times to monitor and offer assistance in their health practices. The traditional healers do not have a policy or legal frame work governing them as such they perform their functions following the government policies. For instance, some years ago a traditional healer claimed to have found the treatment of AIDS using traditional medicine and requested the government to acknowledge the treatment. However, due to lack of traditional medicine policy, legal and regulatory framework coupled with disorganization of traditional healers the drug was not accepted. The traditional healers though, do have their own association that regulates their practice. In the context of this study, TBAs are particularly an important informal provider of maternal health care especially delivery. While MOH policy is exclusively in support of skilled attendance at delivery and effectively discouraging TBA practice during labour and delivery, the reality is that a significant proportion of women still deliver at TBAs (16%) (NSO and ICF Macro, 2011).

Integrated and Comprehensive Reproductive Health Services

The Malawi Government has over the years provided integrated sexual and reproductive health services including maternal services to its people at all the levels of health care. With the support from various partners the Government has implemented several programs and interventions aimed at reducing maternal mortality. The programs and interventions include Safe Motherhood, Emergency Obstetric (EmOC), Prevention of Mother-to-Child Transmission of HIV (PMTCT), Intermittent Preventive Treatment of malaria in pregnancy (IPTp), Focused Antenatal Care (FANC), Family Planning services, Post-Abortal Care services and many more others (more details on these is provided in chapter). Despite all these efforts and the public health sector providing free access to health services there is still relatively low uptake of modern maternal health care services by expectant women and maternal mortality has continued to rise.

Malawi adopted the Safe Motherhood initiative in 1987 with the aim of reducing maternal mortality. The initiative also became the central component focusing on women's health and rights at all levels such that improvement of women's status gradually became major issues in the socio-economic and political agenda. Safe Motherhood has four pillars namely; (i) family planning services and counselling; (ii) safe delivery under the supervision of a trained person, (iii) readily available emergency obstetric services at referral centres; (iv) the provision of basic but professional ante-natal care. The adoption of the initiative was a strategic move for Malawi to address maternal mortality; yet more than two decades have now passed and high maternal mortality still remains persistent.

Several factors related to maternal health services delivery have been identified as contributing to the high maternal mortality in the country. These include limited availability and utilisation of maternal health care services, shortage of skilled birth attendants, low quality maternal health care services, lack of basic equipment and essential drugs, inadequate infrastructure, and weak referral systems (MoH, 2005; Mlotha, 2014). The public health infrastructure in Malawi is considered inadequate to meet the ever-increasing health demands and maternal health care needs of the population. The report on EmOC assessment (MoH, 2005) revealed that only 42% of health facilities in Malawi were offering comprehensive emergency obstetric services and 2% were offering services at the primary level. This situation consequently affects access and use of maternal health care.

It is noteworthy that delivery of integrated and comprehensive reproductive health services is the key to reducing maternal mortality. A comprehensive, integrated approach to health service delivery helps to ensure that women have access to quality maternal health services. An integrated approach also helps to promote efficiency and synergies in the delivery of health services and ensures efficient use of the available human, material and financial resources (Commission on the Status of Women, 2011). It is thus crucial for achieving all health-related MDGs (4, 5 and 6), which are closely related and impact each other.

Health Infrastructure

The availability of adequate and good infrastructure is critical for ensuring delivery of quality health services and safety of patients. The Ministry of Health policy is that in order to promote geographical access to health services, every Malawian should reside within an 8km radius of a health facility. Data shows that on average 81% of Malawi's population is residing within a radius of 8 kilometers from a public health facility (MoH, 2011). This indicates that there is still a significant part of the population that is not reached and is underserved (equity) especially those residing in the rural and hard to reach areas. The Government should therefore focus on promoting coverage of essential health services such as maternal health care and reaching the unreached. Furthermore, in Malawi, most of the health facilities have inadequate space for patients' load and are not in very good shape (MoH, 2011), and therefore require further improvement to effectively deliver maternal and other EHP services.

It is reported that in some rural places, the health infrastructure is absent or dysfunctional (MoH, 2011). Besides that some health facilities lack basic utilities such as electricity, piped water, communication and transportation. The EmOC assessment survey (MoH, 2005) revealed that 25% of health facilities in the country had no source of electricity and only 28% of the facilities had ESCOM (national power grid) with back-up generator. Furthermore, the survey revealed that 40% of public health centres and 31% of CHAM health centers do not have piped water and therefore they use boreholes. In addition, the assessment report show that about 2% of CHAM health centres use a river as their primary source of water. The report also show that only 44% of the health facilities had a functioning motor vehicle ambulance, 23% had a functioning motor vehicle and 14% had of a functioning motor cycle ambulance. A well-functioning communication and transport system is essential for referral and it helps to ensure timely access to health care services.

The Service Level Agreement

The Ministry of Health in Malawi has increasingly promoted the formation of Service Level Agreements (SLAs) with private partners, such as CHAM in order to promote universal health coverage thereby ensuring that EHP services are accessed by every Malawian (MoH, 2011). SLAs are also intended to improve quality of health services and to strengthen performance of the health system. Normally CHAM institutions charge a small amount of user fees. Despite their user fees being lower than that charged by private for profit health facilities, many people still cannot afford to pay the fees, as a result this acts as a barrier to health care access (Kachara, 2011). A systematic review by Palmer et al., (2004) confirms that user-fees deter health utilisation. Conversely, evidence on user fee exemption in some settings, such as Thailand resulted in an increase in health care utilisation (Coronini-Cronberg et al., 2007).

In the SLA arrangement, selected health services at CHAM health facilities (especially maternal and child health services) are provided free at the point of use and District Health Offices reimburse CHAM the cost of service delivery based on agreed upon intervention costs. Essentially, SLAs are intended to overcome financial barrier by removing user fees for selected services. Since this removal of user fees in CHAM facilities, there has been an increase in the number of people seeking health care in these facilities (MoH, 2011). Whilst evidence shows that SLAs in Malawi have positive results in promoting access to EHP services such as maternal health care, various factors affect the performance of SLAs. These factors include lack of clear guidelines, late payment of bills, poor communication, inadequate human and material resources and lack of systems to monitor performance of SLAs (Chirwa et al., 2013; Kachara, 2011).

It should be noted that whilst promoting universal coverage for essential services is important for any health service delivery system it is critical to ensure adequate availability of good quality care and effective access to such services. Several barriers to service delivery, access and use of maternal health care services exist in Malawi. Continued effort to reduce these barriers is needed to narrow the gap maternal health and health care equity in the country. The Road Map acknowledges the importance of improving the availability of, access to, and utilisation of quality maternal and neonatal health care services in order to reduce the high maternal and newborn mortality (MoH, 2005). Good maternal health services are therefore crucial to improve maternal and newborn health. Improved maternal health services can also help to strengthen the entire health system (Thorsen et al., 2014, MoH, 2007; Mlotha, 2014). As such, the Government should continue to place more emphasis and effort on improving maternal health care service delivery in the country.

2.3.3 Health Workforce

A well performing health workforce is one that has sufficient, well trained and fairly distributed health staff; who are competent, responsive and productive (WHO, 2007b). Nurses and midwives play a very crucial role in saving the lives of mothers and children in Malawi. They comprise the largest group of health professionals and with few physicians available they provide the majority of basic essential services to promote maternal health at both district and health center levels. Nevertheless, the health sector in Malawi is currently experiencing severe shortage of nurses, midwives and other health professionals and this is affecting the ability of the health care system in Malawi to effectively deliver maternal services and other essential health services (MoH, 2011). This shortage is acute and one of the biggest challenges for the government (Mangham, 2007; McAuliffe et al., 2009; Palmer, 2006).

The country has one of the world's lowest doctor to population ratios of about 1:50,000, as compared to that recommended by WHO, that is 1 doctor per 5000 people (McAuliffe et al., 2009). In 2009, Malawi had a total number of 200 doctors per 13 million population (Palmer, 2006). The nurse-population ratio is also very low, with the majority of nursing staff being lowly

skilled workers (Mangham, 2007; Dovlo, 2004). In general, the current level of health care staffing in Malawi is low by African standards, as shown in table below, and is inadequate to maintain a minimum level of health care (Palmer, 2006). Table 2.1 below shows ratio of physicians and Nurse per 100,000 population in selected African countries.

Table 2.1: Physicians and Nurses per 100,000 Population in selected African Countries

Cadre	South Africa	Botswana	Ghana	Zambia	Tanzania	Malawi 2004	Malawi 2009
Physicians	69.2	28.7	9	6.9	2.0	1.1	2.0
Nurses	388	241	64	113	35.0	25.5	36.8

Source: DFID, (2010)

In 2004, the government declared the situation for human resources in the public health sector as a crisis (WHO, 2008). This led to the development of a six year Emergency Human Resources Programme (EHRP) funded by the Ministry of Finance, DFID and the Global Fund. The main goal of the EHRP was to address the staff shortage and to build a large pool of human resources for the health sector (WHO, 2008). The programme was located within the joint PoW plan for 2004-2010. Its main objectives were to prevent migration of health workers and to increase the internal supply of trained health personnel. Interventions for the EHRP included provision of 52% salary top-ups, expanded pre-service education and the use of international volunteers etc (DFID, 2010). Since the implementation of a six-year EHRP the staffing levels for health workers and their commitment improved significantly. The number of health workers increased by 53% within this period and the nurse-population ratio improved from 37 nurses (including midwives) per 100,000 population compared with 29 per 100,000 population in 2004 (O'Neil et al., 2010). However, it should be noted that there is still a high vacancy rate for the priority cadres that are crucial to the delivery of EHP services in the public health sector in Malawi (DFID, 2010), refer annex 3.

Shortage of health workers is more severe in rural than urban health facilities. For instance, the average number of nurses in health centres is about 1.9, meaning that most of the health centres are run with one nurse or none at all (Manafa et al., 2009). The distribution pattern of health staff favors urban areas at the expense of rural areas, where majority of the population reside. Most of the health workers are not willing to work in the rural areas due to many factors including unattractive working conditions and lack of basic amenities such as electricity, piped water, good housing, transportation and no much entertainment (Mlotha, 2014; Manafa et al., 2009). Besides that, it is reported that newly qualified female nurses who are ready for marriage complain that it is difficult to find a suitable husband in the rural areas (Mlotha, 2014). In order to attract health workers to serve in the rural health facilities to deliver the EHP, special initiatives need to be adopted. In Mali, initiatives such as, the provision of monetary incentives, accommodation and

transport were introduced to attract health workers to work in rural areas (WHO, 2006b). By 2004, 80 out of 529 doctors had joined the scheme and were working in the rural areas. Malawi's strategies to attract health workers to work in the rural health facilities include maintenance of 52% salary top-ups and professional development (MoH, 2011).

The shortage of health workers in Malawi impacts negatively on accessibility and quality of health services in the country. In most rural health facilities, health workers work day and night. Moreover, in some health facilities health workers "work continuously without break on a system which they call "petroda" equating it to a petro filling station that opens for 24 hours without closing" (Mlotha, 2014, pg.28). As a result, such health workers do not have time to rest and they experience burnout and stress (Manafa et al., 2009). Consequently, the health workers project their frustrations to patients through rough and abusive actions (Mlotha, 2014). As a result the poor attitude of health workers acts as a barrier for patients to use health care services.

Increased supply of skilled health professionals is necessary for the well-functioning and sustainability of any health system (Bucagu et al., 2010), as well as for effective delivery of maternal and other EHP services. However, the supply of newly qualified health workers entering the health system in Malawi is low and insufficient to meet the human resource requirements for health. For instance, there is only one medical school in Malawi, College of Medicine (COM), which was opened in 1991. Since the opening of COM, a total of 254 students had graduated from the school by the year of 2006 (Zijlstra & Broadhead, 2007). It is reported that during the implementation of a six-year EHRP the capacity of health training institutions increased across a range of programs (MoH, 2011). For instance, from 2004 to 2009, the number of graduate doctors at COM had increased by 72%, from 18 to 31 graduates (DFID, 2010). Kamuzu College of Nursing also increased the number of trained nurses and midwives within the same period. Despite the increase in number of trained health professionals, attraction and retention of skilled health professionals in the public health sector continues to be problematic. Low salary, poor working conditions, lack of professional development opportunities and lack of job satisfaction are often cited as contributing factors to poor attraction and retention of health workers in the public health sector (Mangham, 2007; Manafa et al., 2009; Mlotha, 2014).

In 2005, the Ministry of Health increased salaries for health workers by 52%. This increase is still considered as low and inadequate to meet the daily needs of the health workers and their families (Manafa et al., 2009). The WHO recommends that "health workers must be paid reasonably for the work they do. They need to receive a living wage; they also need to believe that the wage is commensurate with their responsibilities and that it is fair when compared with others in the same or equivalent jobs" (WHO, 2006). Low levels of wage have a demotivating effect on existing staff and negatively impacts on their performance and productivity (Mangham, 2007). In Botswana, nurses are offered car loans and medical aid in order to attract them to seek employment in the public health sector, whilst in Jamaica nurses are offered health insurance and transport (WHO, 2006). It should however be noted that if Malawi chooses to address the

shortage of health workers by training more health personnel, the impact can only be seen after several years, as the education cycles are rather long. The country should therefore also strive to eliminate factors influencing poor retention rather than concentrating on training more health workers alone.

Another key factor that has contributed to shortage of health workers in Malawi is the issue of migration. Malawi has experienced one of the worst "brain drain" of its health professionals as many of them have migrated to private sectors and wealthier countries in search of jobs that offer better remuneration, good working conditions, possible job satisfaction, and prospects for further education (Muula, 2005). Most of skilled health professionals in Malawi are trained using public financial resources. In some cases the Government of Malawi has funded training of health professionals abroad, unfortunately many of them have not come back to serve this country (Mlotha, 2014). The expertise of those migrating outside this country is benefiting wealthier countries. As a result, Malawi is not deriving maximum benefits from its investment in training of health personnel. Nursing is one of the cadres that has been affected most by the issue of migration. Refer annex 4 for statistics of Malawian Registered Nurses who sought validation of their qualification from the Nurses and Midwives Council in 2002 to 2005. The HIV/AIDS epidemic has also significantly contributed to the human resource crisis in Malawi, and has impacted negatively on delivery of maternal services and other EHP services. The high proportion of illness and deaths amongst health workers in Malawi is mostly related to HIV/AIDS. It is estimated that 9.8% of deaths in the MoH between 1995 and 2000 were likely caused by HIV/AIDS (UNDP, 2002). This has affected productivity of the health workforce and has contributed to loss of many health personnel.

It is generally clear from this discussion that Malawi's health system is experiencing severe shortage of health workforce and at the center of this health human resource crisis is a failure of the health system. It is also clear that the current training outputs and health staffing levels in Malawi are too low to ensure effective delivery of maternal and other EHP services. A further problem lies in attraction and retention of health workers in rural areas and the fact that many highly trained health professionals have migrated to the private sector and western countries. Evidently, it will take many years to reach the sufficient health staffing levels needed to provide minimum standards of service delivery (MoH, 2011). Nevertheless, it is noteworthy that the Malawi Government is committed to addressing the shortage of health workers through different strategies and interventions. However, it is important to recognize that there is no set of easy answers to this problem. Planning the human resources for health is a complex process (UNDP, 2002) and effectiveness of the interventions to address the human resources gap for health will depend on a combination of different strategies- "a bundle of strategies".

2.3.4 Health Financing

Health financing involves how health care funds are generated, allocated and used in a health system (WHO, 2010). It is very crucial to the functioning of a health system because it determines the existence of health services, and whether people can access them. A well-functioning health financing system achieves two critical elements: it generates adequate funds to make available requisite resources to afford access to essential health services by all people in need, and it protects households from catastrophic expenditure on health (when expenditure on health leads to impoverishment) (WHO, 2007). Health financing involves collection of revenues, pooling of resources, and purchase of interventions (Schieber et al., 2006). The goal of health financing is to ensure adequate spending on health in an effective, efficient and equitable manner. A good health-financing system promotes the attainment of high levels of health and good value for money, even in areas where health resources are limited.

Sources of Health Funding

The public health sector in Malawi is financed through government, private and donor sources. The Malawi government through, Ministry of Finance obtain public funds from taxes or revenue, donor grants, loans and fees. The private sources of funding include international and local organizations and agencies, medical insurance, companies (private and parastatals) and households (MoH, 2012). External donors are the major source of health funding contributing about 66% of the government health budget (MoH, 2012). "This situation makes the Malawi health system one of the most donor dependent health systems in the world, signifying that it is highly unsustainable in the event of a sudden withdrawal of or unpredicted shift in donor funding" (MoH, 2012). These donors are ADB, WB, EU,UNDP, JICA, GTZ, CIDA, NORWAY, DFID (Zere et al., 2010) including UNICEF, FAO, WHO, USAID,WFP and UNFPA who are direct financers (Mwase, 2009) (please refer to list of acronyms on page xvi for meanings of all abbreviations). The Government remains the second in line as a major source of health finance in Malawi averaging 18%. The NHA report shows that in 2006/07 through 2008/09 Government expenditure as percentage of total government expenditure averaged only 5 percent, representing a significant shortfall from the Abuja target of allocating 15 percent of government expenditures to health (MoH, 2012).

Furthermore, the NHA 2009 report, shows that Government contribution to the total health expenditure was higher prior to SWAp than present which is below average of the recommended 45.3% for the WHO Africa Region (Zere et al., 2010). During the PoW period in 2004 to 2010, donors contributed an average of 54.4% of the total health spending, far more than the WHO African region average health spending of 6.9% in 2007 (MoH, 2011). The private sources-households and companies make up the third major source of health spending contributing an average 1/5 of the total health spending (Mangham, 2006). Out-of-pocket spending as a percentage of the total health spending accounted for 4.3% in 2008/2009 (MoH, 2012). As

mentioned earlier, the country depends highly on donor funds which are not consistent and reliable. Due to untimely disbursement of funds by donors, the government fails to execute some of its health plans, and is sometimes forced to borrow money from other sources. Donor funding therefore raises serious concerns about the effectiveness and sustainability of Malawi's health system. Dambisa Moyo an international economist and the author of "Dead Aid", explains that foreign aid has failed to solve problems in African countries (Moyo, 2009). She argues in her book that aid has trapped poor countries like Malawi in a vicious circle of aid dependency, corruption, poor governance and poverty. Moyo strongly believes that financial development is better than foreign aid.

Health Expenditure in Malawi

Malawi's expenditure on health is very low. The country spends 9.7% of the GDP on public health (MoH, 2011). During the PoW period, the government spent an average of 8.7% of the GDP. Over five years of implementing the POW, budgetary allocation to Ministry of Health has as a proportion of the national budget ranged from 8% to 12%.This is below the Abuja declaration target agreed by Heads of States of African Union member states of allocating 15% or more of the national budget to health (Organization of African Unity, 2001). Many other African countries are also lagging behind towards meeting this target. A recent report by WHO noted with concern that African governments sometimes give health a low priority when allocating their budgets and that only a few countries who signed the declaration have managed to reach the target, for example Tanzania and Liberia allocate 18.4% and 16.6% to health, respectively (WHO, 2010).

Evidence shows that Malawi is experiencing financial constraints to support the delivery of EHP services including maternal health care. Throughout the PoW implementation period, the EHP was under-funded covering only an average of 57% of the required total costs (Bowie and Mwase, 2011). At the adoption of the EHP the MOH estimated that to effectively delivery the EHP, US$ 17.53 would be required per capita per annum (GOM, 2004, GOM, 2004). This estimate was revised to a requirement of US$ 28.58 per capita per annum. Combined Government of Malawi and development partners contributions only raised US$ 11.1 per capita per annum allocation (GOM, 2007) hence the resource envelope had a shortfall of US$ 17.47. This is far much below the recommended cost of US$34 per capita per annum required to be spent on EHP in low-income countries, compared with the average per capita health spending of more than $2,000 per year in high-income countries (WHO, 2001). Additionally, the fact that both EHP and non-EHP services are financed inseparably despite having a clear definition of EHP interventions and its costing, further creates the financial gap. With limited funds, it is perceptibly challenging for the public health sector to effectively deliver the EHP.

The recent National Health Accounts (NHA) report indicates that the total reproductive health expenditure in Malawi rose from MK3.9 billion (US$30.2 million) in 2006/07, to MK5.6 billion

(US$39.8 million) in 2007/08, to MK6.7 billion (US$47.4 million) in 2008/09 (MoH, 2010). However, the report reveals that most donors largely finance public health programs including reproductive health preventive services and that they provide very little funding to curative health services such as maternal health care and delivery (MoH, 2010). The report further reveals that the government through its funding to the MoH and CHAM provides most of the financial support to inpatient and outpatient reproductive health services. For instance the report shows that in 2006/2007 prevention and public health services consumed the largest amount of reproductive health expenditures – an average of 46%. During the same period, inpatient curative care represented 34% of the total health expenditure on reproductive health, decreasing to 33% and 30% percent in 2007/08 and 2008/09, respectively (MoH, 2010).

Evidence shows that health expenditures have a positive association with health outcomes. A systematic review of research studies by Betran et al., (2005) found that increased health expenditure is significantly associated with maternal mortality reduction. Inadequate health expenditure in Malawi does not only undermine the government's effort to promote universal health coverage of EHP services such as maternal health care, but it also prevents the achievement of an efficient and equitable health system. In order to collect sufficient funds in order to increase health expenditure, the public health sector in Malawi must improve its efficiency of revenue collection; increase health budget allocation, and introduce innovative ways to raise more funds (WHO, 2007). For example in Ghana, Kenya and Nigeria they have national health insurance schemes, whilst Gabon launched a levy on mobile phone use, and India collects health funds from currency transaction taxes (WHO, 2010). Health care financial constraints are not only due to limited funding, but also due to wastage of financial resources. It is estimated that about 20–40% of resources spent on health are wasted. Measures to reduce wastage will help to promote optimal use of limited resources in Malawi, as well as other low-income countries (WHO, 2010).

Out-of-pocket Payment and Health Insurance

The most recent NHA report (MoH, 2012), shows that out-of-pocket expenditure in Malawi has increased over the years from 56% to about 60% between 2006 and 2009. In spite of the public health services offering free of charge, household out-of-pocket payments have increased drastically (MoH 2011). This indicates serious challenges as far as quality and equity of EHP services offered in the free public health delivery system is concerned. Worth noting is that out-of-pocket expenditure on health, as the percentage of total health expenditure is too high at 60% and above the threshold for the incidence of catastrophic expenditure which occurs when expenditure of disposable income exceeds 40% post subsistence allowance deductions (MoH, 2012) and is set at 15% (WHO, 2007). Household out-of-pocket payment has increased in Malawi despite public health services being provided free of charge because in many cases, facilities which provide public health services are unable to provide some services or medication due to different problems, such as shortage of health workers and lack of essential drugs. As a

result, patients or clients are often referred to private hospitals for access to health services or to private pharmacies to buy medicines using their own money. This becomes a major problem more especially to the poor people who cannot afford to pay the cost of private health care services or medicines. As a result, out-of-pocket payments act as a barrier to access EHP services (such as maternal health care) especially for the poor people.

Currently, there is no social health insurance in Malawi. However, the private insurance is operational, to a rather small degree mainly because of the free health care and the state financing of health services. The private insurance schemes available such as the Medical Aid Society of Malawi (MASM), UNIMED and Momentum Health mainly allows employees of a certain institution and provides full or partial insurance cover (Mangham, 2006). Unfortunately, only a few people in Malawi are covered by private health insurance to provide them with financial protection in times of need. The private health insurance schemes in Malawi mostly covers the rich and middle class people and totally exclude the poorest people as they cannot afford to pay the high cost of the insurance. This calls for the need to introduce alternative insurance schemes to provide Micro Health Insurance (MHI) such as community based health insurance, in order to provide low cost health insurance affordable to the poor people.

A systematic review by Bucagu et al., (2010) found that higher utilisation rates of health services can be achieved if more people are enrolled in community-based health insurance. They also found that financial access to health care can greatly be improved with community-based health insurance, allowing women particularly in rural areas to gain access to maternal health care services and medicines, including emergency obstetric services. MHIs are popular in many places globally, especially in Asia and Africa (Schieber et al., 2006). Examples of countries with MHI schemes include Bangladesh, India, Nepal, Ghana and Tanzania. Despite that MHI ensures provision of financial protection to the poor against expenses associated with ill health and promotes accessibility to health services when financial barriers exist, it may exclude the poorest people who fail to contribute to the insurance scheme.

In order to promote delivery of quality maternal health services, it is therefore important for the Government to ensure collection and allocation of substantial financial resources to enable the Ministry of Health implement comprehensive maternal health care and other EHP services. The Ministry also has the responsibility to ensure efficient and effective use of the available limited financial resources for health.

2.3.5 Health Information

The Health information system plays a major role in improving access and quality of health care services. "A well-functioning health information system is one that ensures the production, analysis, dissemination, and use of reliable and timely information on health determinants, health-systems performance, and health status" (WHO, 2007). In Malawi, the government,

through MoH, is responsible for planning, financing and implementing health information services. In 2003, Malawi developed a policy on health information to promote availability, accessibility, use and management of health information (MoH, 2003).

The MoH has a Health Management Information System (HMIS) which was launched in 2002 (MoH, 2011). The Central Monitoring and Evaluation Division (CMED) within the department of Planning and Policy Development is responsible for management and integration of data from all the health facilities in the country. The HMIS office gathers data for several different health interventions/ indicators (including maternal health care) from all health facilities at all levels. This information is entered in the DHIS (District Health Information Software). The DHIS is basically a software platform for reporting, analysis and dissemination of data for all health programs. The DHIS captures data for maternal health services at different delivery platforms (facility, community and outreach) across the continuum of care (i.e. antenatal, delivery and postnatal). The HMIS office is also responsible for aggregating district and national data, analyzing data and disseminating health information and ensuring sufficient use of information for clinical, management and policy decision making at all levels of health services. At district level, data is needed for the development and monitoring of District Implementation Plan (DIP).

The HMIS in Malawi is currently facing a lot of challenges that are affecting its performance. These include insufficient funding, inadequate technologies (such as computers and internet), shortage of technical staff, lack of knowledge and skills of health workers and other supporting staff in health information and technology (MoH, 2011). For example, in health centers and some of the district hospitals, data is collected and managed manually. Other challenges include poor quality of data usually due to incomplete, late and low reporting. These problems obviously affect the effectiveness and reliability of data and consequently impact negatively on delivery and access of maternal health services and other EHP services.

The health information system in Malawi is still underdeveloped and is behind most of the countries in Sub-Saharan Africa. Unfortunately, this is happening in a country whose health system is being faced with a lot of challenges requiring quality and evidenced based health information for effective planning and monitoring of improvement and progress. However, other countries in Africa are making incredible progress in health information and are using advanced technologies (Commonwealth Secretariat, 2008). For example, Zambia has an initiative called "Smart Care" – an electronic patient record held on a secure "credit card appearing device" integrating points of service with a national HIMS. In Sierra Leone they have integrated health data management system for diverse users in the whole country. The report also shows that in Botswana electronic patients records are linked to some hospitals and clinics, whilst in Uganda medical personnel are trained in ITC skills (Commonwealth Secretariat, 2008). Improvements in health information will promote effective delivery and utilisation of maternal health care and other EHP services in Malawi.

2.3.6 Medical Products and Technologies

According to WHO health systems should ensure equitable access to essential medical products, vaccines and technologies of assured quality, safety, efficacy and cost effectiveness (WHO, 2007). The health system in Malawi is currently experiencing shortage of essential medical products and technologies to address the most pressing health needs of the population including those that relate to maternal health. This situation is due to many factors including inadequate funding, high purchasing prices, weak drug supply systems, lack of drug storage spaces, unreliable information systems, wastefulness and corruption (Ministry of Health, 2011; Mueller et al., 2011; WHO, 2007). The high disease burden in Malawi also places exceptional demand on the already available scarce medical products and health technology resources. This problem of inadequate medical products and technologies certainly impacts negatively on access and utilisation of the EHP including maternal health services.

Evidence shows that in 2011 about 60% of the health facilities in Malawi had insufficient supply of essential drugs for the EHP, whilst 13% of the facilities were completely out of stock during that year (Mueller et al., 2011). In addition, the availability of antibiotics was very scanty, for example, cotrimoxazole was only available in 27% of health centers. The situation on availability of essential medicines and technologies is more critical in rural than urban areas where health care access is limited. For instance, women in rural areas (45%) have lesser access to contraceptives than women in urban areas (54%) (NSO and ICF Macro, 2011). These disparities may indicate deficiencies in the entire health system.

Various factors including high purchasing prices often prevent the public health system in developing countries such as Malawi from obtaining adequate essential medicines and technologies. Poor nations, such as Malawi, face prices at 270% of the international reference price, and on average have access to only 42% of essential medicines (Bozik, 2011). In addition, high prices force poor countries to allocate most of their resources to buying medicines, instead of also investing in better health technology and advanced treatment options. High drug prices in poor countries can be reduced through differential pricing which means "the adaptation of prices charged by the seller to the purchasing power in different countries" (WHO and WTO Secretariate, 2001). Differential pricing is already being practiced though limited, by some drug manufacturers who offer huge discounts and donations for selected drugs to certain poor countries (WHO & WTO Secretariate, 2001).

The costs of medical products and technologies are generally unaffordable in low-income countries. In Malawi, a one month combination treatment for coronary heart disease cost 18.4 days' wages for the lowest paid government worker, whilst intermediate-acting insulin cost 19.6 days' wages (Cameron et al., 2009). High costs of drugs and technology limit access to treatment, especially in cases where individuals are prompted to seek care at private health facilities and have to pay medical expenses directly with their own out-of-pocket money. In most

cases, the private sector charges much more than the international reference price for essential medicines (Bozik, 2011).

The Pharmacy, Medicine and Poisons Board (PMPB) is responsible for the registration, regulation and control of the quality of medicines in Malawi. The country has a national drug policy and an official 'essential drug list' which was developed first developed in 1991 and was revised in 2009. The essential drug list is used for procurement of medicines for the public sector. The Central Medical Stores, an autonomous Public Trust, is responsible for procurement of drugs in the public sector. The country receives a significant supply of donated drugs. However, in some cases, these products are inappropriate for the country, and there seems to be little quality control test done to assess their safety and efficacy (MoH, 2011). There is though a laboratory unit within the pharmacy administration responsible for testing and inspection of donated and purchased medical products. There is also currently a high vacancy rate (81%) for pharmacy technician posts and some facilities are still using a paper based system to manage drug stocks inventory (MoH, 2011). These problems perceptibly affect access to and utilisation of the EHP including maternal health care services

2.4 SWOT analysis for Malawi's Health System

This section presents a SWOT (strengths, weaknesses, opportunities and threats) analysis of Malawi's health system, based on review of the literature. Please refer to table 2.2 below.

Table 2.2: SWOT Analysis for Malawi's Health System

STRENGTHS	WEAKNESSES
- Political will and commitment - Free EHP and health services delivery - Alignment of HSSP targets with MGDS and MDGs - Dissemination of health information - Stakeholder involvement - Budgetary donor support - Decentralised health delivery system - Commitment to increasing human resource	- Shortage of health workers - Inadequate health funding - Inadequate essential medicines and equipment -Inequitable distribution of resources - Lack of leadership and management skills - Inconsistent donor fund inflow - Inadequate health service coverage - Weak referral system
OPPORTUNITIES	**THREATS**
- Advocacy - Donor support - Political stability - Government commitment - Technological developments - Public-private partnerships in health service delivery	- Poverty - Corruption - High disease burden - Shortage of human resources - Irrational drug use - Cultural beliefs and practices - Donor dependency - High illiteracy in rural areas - High rate of population growth

Sources: MoH, (2011); Mueller et al., (2011)

2.5 Summary of the Chapter

This chapter has presented a description of the policy environment and health system in Malawi as a context of this study. In general what has transpired in this chapter is that the Government of Malawi has demonstrated its commitment to promoting health, equity, human rights and gender through the development and implementation of various national policies, and as affirmed in a number of international and regional declarations to which Malawi is signatory. It has been demonstrated that the Government is also committed to promoting maternal health through various policies and initiatives; although maternal mortality rate still remains high in the country. It is unlikely that Malawi will meet the MDG target by 2015. The chapter has also demonstrated that the Government of Malawi has over the years promoted gender mainstreaming in health policies and programs in order to enhance gender equality and women empowerment thereby contributing towards promotion of maternal and child health. However, despite such efforts, promotion of gender equality still remains a challenge in the country due to various challenges including lack of political will to fund gender-related programs and cultural factors

Using the WHO health systems framework this chapter has presented a well detailed, comprehensive and holistic overview of the country's health system and its challenges. It is clear through this presentation that the health system in Malawi is facing several challenges which impact negatively on the delivery and access of maternal health care and other EHP services. Among others, the factors include shortage of health workers, inadequate funding and lack of essential drugs and equipment. These challenges need to be addressed to promote effective delivery and equity of access to EHP services. In order to strengthen health systems performance, it is very important to not only stress the importance of each health system building block, but to also focus attention on improving and gaining the support of all the building blocks of the health system.

CHAPTER 3

MATERNAL HEALTH STATE, DETERMINANTS OF MATERNAL HEALTH CARE UTILISATION, EQUITY OF ACCESS TO HEALTH CARE AND THE EHP

3.1 Introduction

This chapter reviews literature pertaining to four distinct, but related themes of this study. The first part pertains to the aspect of maternal health, specifically highlighting the state of maternal health at the global, regional and national levels; key maternal health indicators; the common causes and factors contributing to high maternal mortality; and the strategies aimed at accelerating the reduction of maternal mortality. The second part reviews literature on factors that determine maternal health care utilization. The third part reviews literature on equity of access to health care particularly highlighting some conceptual issues and definitions of key concepts. It also includes the framework by Peters et al., (2008) which outlines the dimensions of assessing access to health services and potential barriers to accessing health care. Also included in this chapter is literature on EHP concept and experiences in other countries.

3.2 Literature Search Strategy

The literature search for this study involved review of papers from peer reviewed journal articles, books, chapters in books, government reports and policy documents, searching websites of major international organisations working in maternal health such as WHO, UNICEF, UNFPA, World Bank and the United Nations. Specifically literature search was performed in the following databases: PubMed, MEDLINE, Science Direct, POPLINE, JSTOR, SCOPUS, Cochrane Library and Web of Knowledge. Grey literature such as policy documents, government reports and official documents were also included in the literature review. Google Scholar search engine was used to find scholarly literature relevant to this study.

The literature search strategy included the following; key words search including use of MeSH terms in other databases and screening for relevant literature from references of other articles. Key terms used to search relevant articles related to utilisation of maternal health care included: "maternal health" "maternal health care" "maternal health services" "antenatal care" "prenatal care" "obstetric care" "delivery care" "institutional delivery" "skilled delivery" "skilled birth attendance" "traditional birth attendant" "postnatal care" "health care seeking" "health service utilisation". Key terms used to search for determinants of maternal health care utilisation included: "determinants of maternal health care use" "barriers to maternal health care" "mother's age" "marital status" "educational attainment" "income status" "household wealth" "work status" "residence" "ethnicity" "religion" "socio-cultural factors" "health system factors". Key phrases for searching literature on equity of access to health care included: "equity of access" "equitable access" "universal access" 'inequalities" "essential health package". Other key search

words included "health systems" "health policy" "Malawi", "Africa", "Sub-Saharan Africa" "developing countries" "less developed countries" "low- income countries".

To narrow the search, combination of key words stated above was used. For example, "maternal health" AND "health care seeking" OR "equity of access" AND "maternal health care services". To achieve a comprehensive search in databases such as PUBMED, MeSH terms were used. For example [("maternal health services*" [MeSH] OR "antenatal care" [MeSH] OR "prenatal care" OR "delivery care" OR "postnatal care" OR "institutional delivery" OR "skilled delivery*") AND ("utilisation of health services*" OR "determinants of*" OR "predictors of*") AND ("factors affecting*" OR "factors influencing*" OR "factors associated with*" OR "barriers to*") AND ("equity of access*" OR "inequalities")]. An example of the search output from PubMed using key search words and combinations above is presented in table 3.1 below

Table 3.1: PubMed search results using some key search words

Key words searched	Results
Maternal health services	46912
Health service utilization	4069
Health care seeking behavior	179893
Antenatal care	40376
Delivery care	148007
Skilled birth attendance	307
Postnatal care	9936
Determinants of maternal health care use	1547
Antenatal care AND utilisation of services	152
Delivery care AND skilled birth attendance	184
Maternal health services AND equity of access	141

An eligibility criteria was applied to identify articles to be used for this study. The inclusion criteria for articles included: 1) relevance to study topic and objectives; 2) research setting (urban and/or rural) in a developing country context; 3) determinants/predictors of interest (maternal age, residence, marital status, education attainment, employment status, household wealth, religion, and ethnicity); 4) The search strategy was limited to publications in English language. Narratives, opinion pieces and commentaries were excluded.

Articles and abstracts identified through the search method mentioned above were first screened to assess if they were relevant and compliant with the selection criteria. Relevant articles were selected and eventually used for the literature review in this study.

3.3 Maternal Health State

3.3.1 Global Overview of Maternal Health State

Maternal health is among the top priorities for global health. Reduction of maternal mortality has been a key concern of the Global Strategy for Women's and Children's Health launched by the UN Secretary-General in September, 2010 (Say et al., 2014). Despite numerous global efforts to improve women's health, maternal mortality still remains unacceptably high especially in developing countries. The World Health Organisation (2010) defines maternal mortality as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes". The maternal mortality rate is also referred to as maternal mortality ratio. It is defined as the number of maternal deaths per 100,000 live births (WHO, 2010). This figure is compared internationally and used as an indicator of development and quality of health care (Hunt, 2007). High rates of maternal mortality have a devastating and far-reaching impact on society as a whole. As the World Health Organisation (1999) affirms, " a society that is deprived of the contribution made by women is one that will see its social and economic life decline, its culture impoverished and its potential for development severely limited".

It is estimated that every 90 seconds, a woman dies from complications of pregnancy or childbirth around the world, yet the vast majority of maternal deaths globally are preventable (Hunt, 2007; WHO 2014). It is further estimated that more than half a million women die every year worldwide from complications related to pregnancy and childbirth, and millions more suffer from illnesses, disabilities, infections and injuries related to these complications (UNICEF, 2009). This means that millions of children are left motherless and risk premature death. A systematic review by Betran et al., (2005) found that an increase in infant mortality is associated with an increase in maternal mortality.

Maternal mortality is a social justice and human rights issue (United Nations, 1995). Preventable maternal deaths are associated with violation of a number of human rights, including the right to life, the right to freedom from discrimination, the right to the highest attainable standard of health and the right to quality health care (Amnesty International, 2011; United Nations, 1948). According to Mahmoud Fathalla (2006), a former president of the International Federation of Obstetricians and Gynecologists, "Women are not dying because of untreatable diseases. They are dying because societies have yet to make the decision that their lives are worth saving." Maternal health promotion therefore reflects societal values of respect for women's lives and their fundamental human rights.

Globally, there were an estimated 289 000 maternal deaths in 2013, a decline of 45% from 1990 (WHO, 2013). Developing countries accounted for 99% (286, 000) of the global maternal deaths.

The sub-Saharan Africa region alone accounted for 62% (179, 000) of global burden of maternal deaths followed by Southern Asia at 24% (69 000). At the country level, the two countries that accounted for one third of all global maternal deaths are India at 17% (50, 000) and Nigeria at 14% (40, 000) (WHO, 2013). According to Munthalika (2011), these alarming figures point to one thing – "Failure of the global community to protect women when they are performing the noble task of giving life for continuity of the human race". Studies further show that, Sub-Saharan Africa is the most dangerous place in the world to give birth (WHO, 2013; Hunt, 2007). This is because health service provision in most parts of the sub-Saharan Africa still remains poor hence increasing maternal mortality rate. It is reported that many women in Sub-Saharan Africa do not have access to maternal health services and that the use of such maternal health services is low in this region (Wang et al., 2011; Mekonnen and Mekonnen, 2002; Mpembeni et al., 2007).

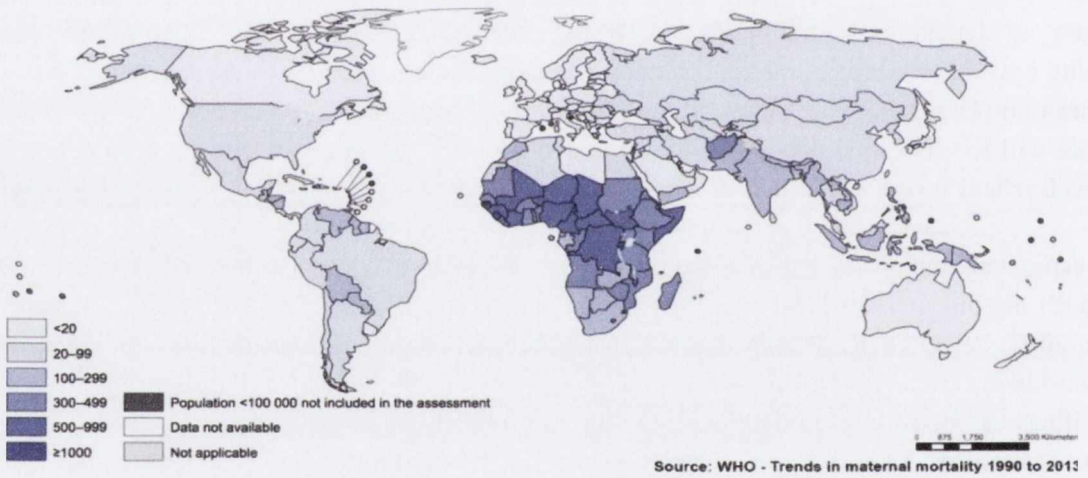


Figure 3.1: Map with countries by category according to their maternal mortality ratio (MMR, death per 100 000 live births), 2013

The WHO map above shows that of the forty countries with the highest maternal mortality ratio in 2013, Sierra Leone is estimated to have the highest maternal mortality at 1100. The estimated lifetime risk of dying from pregnancy-related causes in high-income countries is 1 in 3400 in comparison to low-income countries where the risk is 1 in 52 (WHO, 2013). Sub-Saharan Africa had the highest adult lifetime risk of maternal mortality in women at 1 in 38, in contrast to 1 in 3700 among women in developed countries. According to a most recent report by WHO (2014), there has been significant progress in reducing maternal mortality in Africa. The maternal mortality ratio in Africa has reduced from 870 deaths per 100,000 live births in 1990 to 460 in 2013 (47% reduction) and 2.7 percent average annual percentage change within the same period. However, despite these achievements maternal mortality remain unacceptably high in sub-

Saharan Africa. It is very likely that most of the sub-Saharan African countries will not meet MGD 5 target by 2015.

Most maternal deaths occur between the third trimester and the third week after the end of pregnancy. There are both direct and indirect causes of maternal mortality and severe complications. "Direct maternal deaths are those resulting from obstetric complications of the pregnant state (i.e. pregnancy, delivery and postpartum), interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above, while indirect maternal deaths are those resulting from previously existing diseases, or from diseases that developed during pregnancy and that were not due to direct obstetric causes" (WHO, 2014, pg. 4). Direct causes include: sepsis, obstructed labour, ruptured uterus, hemorrhage, eclampsia and unsafe abortion, whilst indirect causes include conditions such as malaria, anaemia, HIV and hypertensive disorders and other medical conditions. A systematic review on causes of maternal mortality by WHO, identified haemorrhage and hypertensive disorders as major contributors to maternal deaths in developing countries (Khan et al., 2006). Sadly the main causes of maternal deaths in developing countries are well known, highly preventable and treatable. Evidence shows that the majority of maternal deaths and complications can be addressed through various interventions such as by promoting access to quality maternal health services and ensuring skilled attendance at delivery, among others (Babalola and Fatusi, 2009). A systematic review by Betran et al., (2005) confirms that increases in skilled birth attendance is significantly associated with decreased maternal mortality.

Globally, higher maternal mortality is attributed to many factors including limited access to comprehensive maternal health services, shortage of skilled birth attendants, lack of resources, poor nutrition, teenage pregnancies and unsafe abortion (WHO, 2014; Amnesty International, 2011; Mlotha, 2014). The risk of maternal death is also associated with several socio-economic factors including income levels, maternal age, education, race/ethnicity, culture, religion and among other factors (Amnesty International, 2011; Hogan et al., 2014; WHO, 2014). A critical analysis of countries that have made progress towards achievement of MDG 5 targets, showed common overarching elements of success including: leadership and partnership, evidence and innovation, development and implementation of dual short term and long-term strategies, and adaptation to change for sustained progress (WHO, 2013).

Evidence from middle and high income countries suggest that a 75% decline in maternal mortality can be achieved. For instance, Malaysia and Sri Lanka have seen declines in maternal mortality ratio of more than 50% in 40 years, and Thailand succeeded to significantly reduce maternal mortality ratio from 400 deaths per 100,000 live births, to 50 per 100,000 live births in a period of 24 years (Liljestrand and Pathmanathan, 2004). These substantial achievements are attributed to a number of factors including: free health services delivery, long-term investment in midwifery training and referral hospitals, strengthening of supportive system and supervision of the medical and midwifery professional and practice, among other factors (Liljestrand and

Pathmanathan, 2004). According to the Commission on the Status of Women (2011) effective prevention of maternal mortality is linked to the availability of well-functioning and sustainable health systems; yet such systems are often missing in developing countries such as Malawi. This entails that improving maternal health requires strengthening of health systems and performance improvement. Emphasis should be placed on improving the availability, accessibility and quality of maternal health services, building the skills of health providers and reaching the unreached.

3.3.2 Maternal Health State in Malawi

Maternal health remains an essential development and gender priority in Malawi (Government of Malawi, 2008). This is because maternal mortality continues to be very high in this country. The 2014 Malawi MDG Endline survey indicates a maternal mortality ratio of 574 deaths per 100 000 live births (NSO and ICF Macro, 2015). This represents a significant reduction from 675 in 2011, 807 in 2006 and 1194 in 2000. The maternal mortality ratio for Malawi is five times higher than the global MDG target of 155 deaths per 100,000 live births and it is highly unlikely that Malawi will meet this target. In one of her presidential statements, in the Presidential Initiative on Maternal Health and Safe Motherhood, Strategic Plan 2012 – 2016, the former president of the Republic of Malawi, Mrs Joyce Banda emphasized that, "pregnancy and child delivery are not diseases or afflictions. These are normal and natural processes and should remain such. No woman should die while pregnant or when giving birth to life" (Banda, 2013). Although giving birth is always expected to be time of joy, in Malawi this is the time of pain and death. Mlotha (2014, pg. 7) gives his account of the maternal situation in Malawi as follow: "pregnancy to a Malawian woman comes with mixed feelings that of happiness and sadness. A woman who has conceived feels happy because she has proved her fecundity to the community and her in-laws. At the same time she feels sad and is psychologically affected during the whole period of her pregnancy because the outcome of the pregnancy is uncertain and she may die at any time from pregnancy related complications".

3.3.2.1 Factors Contributing to High Maternal Mortality in Malawi

There are so many challenges and impediments that are putting pregnant women at risk to survive when giving life. The factors associated with high maternal mortality in Malawi include issues such as limited availability and utilisation of maternal health services, shortage of skilled birth attendants, lack of essential drugs/supplies and medical equipment, teenage pregnancy, unsafe abortion, socio-economic factors, cultural beliefs and practices among others (MoH, 2011; MoH 2005; NSO and ICF Macro, 2011, Government of Malawi, 2010; Mlotha, 2014).

Limited availability and accessibility to maternal health services

There is evidence showing that when comprehensive maternal health services and interventions (such as basic emergency obstetric care, family planning services, antenatal care, skilled delivery

and postnatal care) are made available and accessible to pregnant women will result in significant reduction in maternal mortality (Fournier et al., 2009; Bucagu et al., 2010). For instance antenatal check-ups can help to prevent complications during pregnancy and labour, whilst surgical interventions (such as caesarean section, vacuum extraction and episiotomy), can help in difficult and assisted deliveries. It is estimated that 74% of maternal deaths could be prevented if all pregnant women had access to such services which would then help to prevent and treat complications associated with pregnancy and birth (Amnesty International 2009). It is therefore clear that access to and use of these services is a key determinant of maternal health and mortality (Amnesty International 2009). The provision of comprehensive maternal health services alongside with high impact interventions has always been a priority of the national health strategic plans since the beginning of the year 2000. Implementation of these services and interventions is indeed producing the desired results but at a very slow rate to achieve MDG 5. This is because the availability and accessibility to these services still remains very limited especially in rural areas where most of the population in Malawi resides.

As mentioned earlier, there is a lack of health facilities in Malawi, with the available facilities being clustered in urban areas. This situation therefore acts as a barrier for those women living in rural communities to access maternal health services. Lunan et al., (2012), reported that there are more maternal deaths occurring in rural areas compared to urban areas. The geographical location of services has a direct impact on attendance for several reasons. Due to the long distance required to travel, availability of affordable transport and the condition of the roads, women can either be discouraged or encouraged to use maternal health services. In other words the further a pregnant woman lives from a health facility, the less likely she is to use maternal health services for safe pregnancy, delivery and post-partum care.

The 2010 national DHS report low utilisation of maternal health care services (NSO and ICF Macro, 2011). For instance the report shows that most women in Malawi do not make the recommended four antenatal visits and more women have their first antenatal visit late. only 49% of women had four antenatal care visits and only 12% of women had their first antenatal visit in the first trimester of pregnancy (NSO and ICF Macro, 2011). Only 30% of antenatal women were informed about the signs of complications during pregnancy and 16% of women did not have their blood pressure checked, whilst only 28% of the women had their blood samples taken for lab examination (NSO and ICF Macro, 2011). In addition, up to 14.4% of pregnant women in Malawi continue to deliver at TBAs (NSO and ICF Macro, 2011). In the context of the Malawi Government policy that every pregnant woman should deliver at a health facility, this represents a high proportion missed.

Equity of access to health services is an area of focus for the government of Malawi (MoH, 2015; MoH, 2011). Evidence shows that, the poor and marginalized segments of society have more needs for health care than their rich counterparts (Lindsay Mangham, 2006). In Malawi access to health care still follows the '*inverse care law*' which explains that the availability of

good quality health care seems to be related to the need for it (Gwatkin et al., 2004). The inequalities in Malawi are more pronounced in the rural population due to inadequate, poor and lack of infrastructure, long distance to health facilities coupled with poor road networks and poor or no transportation system, inadequate staffing, poverty, low literacy level, traditional beliefs and practices, health workers are not motivated to work in rural areas (Mueller et al., 2011; Mlotha, 2014). However, numerous initiatives, are taking place in Malawi in order to try and reverse this situation, yet women in rural areas continue to experience limited access to maternal health services and higher levels of maternal mortality.

Shortage of Skilled Birth Attendants

Studies suggest that shortage of skilled birth attendants is contributing to the persistent high maternal mortality rate in Malawi (Mlotha, 2014; Lunan et al., 2012). The MDG 5 target specifies that by 2015, 90% of all births will be attended by skilled health attendants (United Nations, 1999). This is considered as very ambitious and vague, for there is little consensus on how to define a "skilled birth attendant" (WHO, 2007). Many women still have limited access to skilled birth attendants and as a result they give birth either at a TBA or with assistance of a relative or neighbor and in some cases women deliver on their own. The issue remains cahllenging especially in rural areas.

Shortage of skilled birth attendants does not only negatively affect accessibility and quality of maternal health services, but it also compromises client/patient safety. It is reported that in some rural health facilities in Malawi there is only one midwife to provide antenatal care, monitor the process of labour and conduct deliveries (Mlotha, 2014). As mentioned earlier, due to shortage of staff, some health workers develop bad attitude towards patients and result in poor quality of health care services, especially in public health facilities. Due to this reason, some women opt to be delivered by TBAs. This explains why 16% of births in Malawi are assisted by TBAs (NSO and ICF Macro, 2011). Even though TBAs have very limited clinical skills, women still prefer them because they live locally and are known and trusted within their communities (Lunnan et el., 2012). In addition, it is reported that TBAs treat clients with respect and dignity (Mlotha, 2014; (Kavinya, 2012).

In 2007, the Government of Malawi banned TBAs from practicing, arguing that TBAs were unable to identify obstetric emergency cases early enough and therefore were contributing to the high maternal mortality rate in the country. Costello et al., (2004) argue that there is lack of evidence to suggest that TBAs are to blame for the ongoing high maternal mortality figures in various parts of the world. They further argued that since TBAs are usually located within communities and are often sought by people for advice, they are therefore in a key position to run community training/outreach programs to promote maternal health services and delay avoidance in seeking health care. They strongly advocated for community-based interventions, suggesting a collaborative approach to work with TBAs. They explained that as a country

develops, the number of skilled birth attendants usually increases and the need for TBAs is significantly reduced. However, they said that this is a gradual process which takes time and requires significant resources. Using China as a case study (where the maternal mortality ratio was reduced significantly from 1,500 per 100, 000 live births to 120 per 100,000 live births, in part, through the use of TBAs), Costello et al., (2004) argued that until this tipping point in development is reached, TBAs will remain an important tool in reducing maternal mortality.

Lack of Essential Drugs and Basic Equipment

Some studies suggest that the main reasons for high maternal mortality rate in Malawi include lack of essential drugs/supplies and medical equipment (Lunan et al., 2012; MoH 2005). A report on EmOC assessment revealed that most health centres did not have many of the essential drugs and equipment needed to function as basic EmOC facilities (MoH, 2005). For instance, the report shows that 28% of hospitals and 39% of health centres had sporadic stock out of oxytocin in the last 12 months, while 42% of hospitals and 36% of health centres had stock outs of ergometrine. According to this report "parenteral oxytocin is the recommended first line drug for prevention and treatment of postpartum hemorrhage and should ideally be available all the time (MoH, 2005, pg xxi). Furthermore, the EmOC survey found that only 33% of health centres had vacuum extractors and yet vacuum extractors are instruments of first choice for assisted vaginal delivery and in any case it is recommended that this procedure should be performed at the health centre level. The lack of essential medicines and basic equipment compromises both the quality of maternal health care and client/ patient safety, thereby contributing to high maternal mortality.

Teenage Pregnancy and Unsafe Abortion

Teenage pregnancy and unsafe abortion are some of the major contributing factors to high maternal mortality in Malawi. The rate of teenage pregnancies in Malawi is high. According to the 2010 national DHS report, one in every four teenagers (26%) age 15-19 had begun child bearing, while 20% had a live birth and 6% were pregnant with their first child. Furthermore the report indicated that a higher proportion of teenagers in rural areas (27%) had begun childbearing compared with teenagers in urban areas (21%). The percentage of teenagers who had started childbearing decreased with increasing level of education and high income status. Teenage pregnancy often has adverse socio-economic consequences, particularly regarding educational attainment and income generation, because women who become mothers in their teens are more likely to curtail their education and usually have problems to get employed.

Mlotha (2014) cited poverty and peer pressure as some of the key factors influencing teenage pregnancy in Malawi. He reported that due to poverty most of the parents have no resources to look after themselves and their unmarried daughters; as a result they marry off their daughters before they have reached the right age. In addition he stated that due to peer pressure, some teenage girls want to lead high quality life (like having lots of money, high fashioned clothes and

riding expensive cars) when they don't have the means of getting resources. As such they are engage in sexual relations with elder men, locally known as "sugar daddies", in exchange for cash and gifts. As a consequence the sugar daddies end up impregnating the teenage girls. Teenage pregnancy is usually associated with unwanted pregnancy and unsafe abortion because teenagers have limited access to family planning information and services (Mlotha, 2014). And in most cases these young women are less likely to discuss family planning with health personnel because of cultural factors, shame and potential rejection by husbands, families and communities. This calls for the need to promote delivery of youth friendly and cultural sensitive reproductive health services.

Many women continue to die from unsafe abortion worldwide (Khan et al., 2006). Every year about 19–20 million unsafe abortions are done globally (Grimes et al., 2006). Nearly all unsafe abortions (97%) are in developing countries. In Malawi, 70,000 women are having abortion every year and 30, 000 women are treated for complications of unsafe abortion annually. Furthermore 17% of maternal deaths in Malawi are contributed by unsafe abortion. In Malawi abortion is illegal and it is only permitted when the pregnancy threatens a woman's life. Women in Malawi seek unsafe abortion for a variety of reasons including poverty, unplanned pregnancy, fear of rejection and being forced out of school, shame and desperation (Mlotha, 2014).

The major barriers for women to access safe abortion services in Malawi include restrictive abortion law, inaccessibility of safe abortion services, lack of family planning, lack of youth friendly and post abortion care services (Khunga and Lupick, 2011). Hadda and Nour (2009), observes that, the primary methods for preventing unsafe abortion—less restrictive abortion laws and greater contraceptive use—face social, religious, and political obstacles, particularly in developing nations such as Malawi, where most unsafe abortions (97%) occur. Yet despite the restrictive abortion law in Malawi many women still seek unsafe abortion. Grimes et al., (2009) argued that ending the silent pandemic of unsafe abortion is an urgent public-health and human-rights imperative. They also argued that access to safe abortion improves women's health and therefore legalisation of safe abortion is necessary. Furthermore, they said that the availability of modern contraception can reduce maternal mortality but can never eliminate the need for abortion. They pointed out that the cost of treating abortion complications constrains the already limited health care resources. They also emphasised that access to safe, legal abortion is a fundamental right of women, irrespective of where they live. They concluded by saying that "the underlying causes of morbidity and mortality from unsafe abortion today are not blood loss and infection but, rather, apathy and disdain toward women" (Grimes et al., 2009).

Socio-economic Factors

A review of the literature also suggests that socio-economic factors contribute to the high maternal mortality rate in Malawi and other developing countries (Mlotha, 2014; WHO, 2014). Malawi is classified as one of the least developed countries in the world. The incidence of

poverty is higher in Malawi especially in the rural areas. About 39% of the population is living below poverty line i.e. less than $1 per day (NSO, 2012). Due to poverty most women in Malawi lack the most basic food requirements, housing, social security, education and other basic daily needs resulting in poor health and high maternal mortality. Evidence shows that women living in middle- and high-poverty areas face between 60% and 100% greater risk of maternal mortality, respectively, than women living in low-poverty areas (Singh, 2006). The Malawi MDG Endline Survey 2013-14 indicates that the country is still facing challenges to achieve goals on eradication of extreme poverty and hunger, achievement of universal primary education, promotion of gender and women empowerment among others (NSO, 2014). Mlotha (2014) explained that the country faces a number of challenges in eradicating extreme poverty including lack of finances to support poverty reduction programs and high levels of illiteracy. In Malawi education remains a privilege of the few, not a basic right of many. Over 90% of Malawians are not receiving a secondary school education at all (NSO and ICF Macro, 2011).

Several studies indicate that poverty and illiteracy are major barriers to accessing maternal health services in developing countries such as Malawi and including setting where the services are being delivered free of charge (Agha and Carton, 2011; Anyait et al., 2012; Babalola and Adesegun, 2009; Mpembeni et al., 2007; Ochako et al., 2011; Mekonnen and Mekonnen, 2002; Ye et al., 2010; Tey and Lai, 2013). This entails that free maternal health care services does not guarantee access to the services. This is because although maternal services can be delivered for free, there are costs associated with access and use of the services (including transportation and drug costs) which may act as barriers for women to access the services (Muchabaiwa et al., 2012; Kalin et al., 2011). As a result, when looking to address the issues pertaining to maternal mortality, many areas need to be considered. Lunan et al., (2011) argues that health, social, and economic interventions are most efficient when implemented concurrently.

Cultural Beliefs and Practices

The Malawi Road Map for accelerating the reduction of high maternal and neonatal mortality indicates harmful cultural beliefs and practices as one of the major contributing factors to high maternal mortality rate in Malawi (MoH, 2005). In Malawi, there are some harmful cultural beliefs and practices associated with pregnancy and child delivery (Mlotha, 2014). These have negative impact on women's decision making, maternal health seeking behaviour and maternal health outcomes. The "three delays" model proposes that pregnancy-related mortality is due to delays in: (1) deciding to seek appropriate medical help for an obstetric emergency; (2) reaching an appropriate obstetric facility; and (3) receiving adequate care when a facility is reached (Barnes et al., 1998). The first delay is dependent on who is the principal decision-maker is among other factors. In Malawi there are traditional practices oppressive to women and have given more power to the husband, the uncle or the mother in-laws to make the final decision on when women should seek maternal care; consequently, a pregnant woman would not go to the antenatal clinic or rush to the hospital when in labour until such time that the power holder has

given an approval; even if the pregnant women had sufficient knowledge on the importance of seeking care in a timely manner (Munthalika, 2011). This potentially causes complications, permanent disability and maternal deaths by further delaying the timely provision of care needed (Thorsen et al., 2014). Munthalika (2011) also states that in order to address this problem, there is a need for a supportive and caring culture to ensure that husbands and the entire society do not treat women as minors who cannot make decisions over their own health. It should be emphasized here that women's ability to make critical decisions that affect their health and well-being is essential for their empowerment and serves as an important factor in national development. Societies should therefore be encouraged to promote women's empowerment and critical decision making skills to ensure timely access of women to maternal health services. Health care providers must compliment efforts of societies in promoting access and use of maternal health services through integration of gender and cultural issues in maternal health care. This will significantly contribute to the reduction of maternal deaths in Malawi.

In Malawi it has also been observed that the delay in seeking care during pregnancy and child birth is attributed to some cultural beliefs and practices that prohibit women from announcing pregnancy status and the commencement of labour for fear attracting evil spirits or being bewitched (Munthalika, 2011). These beliefs and restriction affect the time at which women enroll for antenatal care or present themselves to the labour ward for assisted delivery. This is a big challenge in Malawi especially because only 11% of women start antenatal care visit within the first trimester and 27% of women deliver outside health care institutions (NSO and ICF Macro, 2011). It is also reported that some cultural practices also affect the way women express and manage their feelings of pain during labour. Some societies forbid women from expressing feelings of pain when in labor as such these women tend suffer in silence instead of informing appropriate people that can provide help (Munthalika, 2011). In such cases it is difficult to monitor progress of labour and to detect complications quickly when they occur. As a result it compromises quality and safety care.

Munthalika (2011) further argues that culture, has also a role in addressing the second delay which is associated with accessing health facilities in a timely manner. She said that societies have an important role to play to assist pregnant women access health facilities in a timely manner. She pointed out that the solution in women's delay to accessing health facilities lies within our belief system on birth preparedness. This she said is related to the fact that a number of societies discourage families from preparing for child birth because of the uncertainties surrounding pregnancy outcomes. She shares her observation that due to high incidences of neonatal deaths and still births as a result of poor quality maternal and neonatal health services, families tend to prepare for child birth once they have been assured by the birth of a live baby. She made an appeal to the society that they should always prepare in advance on how to transport pregnant women to health facilities in times of labor or any complications to ensure timely care.

Thorsen et al., (2014) confirms that delays in deciding to seek care and in reaching health facilities contribute to the maternal deaths by further delaying the timely provision of care needed. However, some scholars have argued that "blaming the patient for seeking care late obscures the fact that the health care system often fails the patient" (Thaddeus and Maine, 1994). For instance, in Malawi, there have been cases where pregnant women and those looking after them would do all they can to reach a heath facility on time, however, the women still gets delayed in accessing care (Mlotha, 2014; Thorsen et al., 2014). Some women are dying even when they reach a comprehensive emergency obstetric care facility where the quality and safety of care is expected to be high. In most situations, the third delays are often blamed on shortage of staff, supplies and medicine, delayed referral and transfers, poor monitoring of patients, missed and incorrect diagnoses, delayed or incorrect treatment (Thorsen et al., 2014), while the attitude and negligence of some health workers which contributed to the delay is not highlighted in most of the cases (Munthalika, 2011). Such delays due to health workers poor attitude and misconduct are unprofessional and unacceptable as they contribute to unnecessary maternal complications and deaths. Health care professionals must always ensure delivery of quality and safe maternal health care service to avoid pregnancy related complications and maternal deaths.

Mlotha (2014) also pointed out that culture beliefs and practices, which undermine the rights of girls and women, are the major contributing factors to the high maternal mortality in Malawi. He cited the example of some initiation ceremonies aimed at enhancing cultural values such as "kuchotsa fumbi" (meaning removing dust) which expose girls to early sexual experience and unwanted pregnancies, thereby increasing maternal mortality. Elimination of harmful cultural beliefs and practices can therefore contribute significantly to reduction of maternal mortality in Malawi. The Government, health care professionals and the whole society have a collective responsibility to raise awareness about harmful cultural beliefs and practices, and to reduce maternal and neonatal deaths. The Government should also promote a culturally and gender sensitive approach to health; by integrating cultural practices and gender issues into maternal health care services.

Other factors contributing to high maternal mortality in Malawi include (1) weak referral systems, (2) weak monitoring, supervision and evaluation of maternal health care services, (3) poor community participation and involvement, (4) inadequate coordination mechanisms among partners and stakeholders, (5) HIV/AIDS pandemic (MoH, 2005; Mlotha, 2014; Thorsen et al., 2014).

3.4 Determinants of Utilisation of Maternal Health Services

A review of the literature suggests that in developing countries such as Malawi, utilization of maternal health services can be influenced by various factors including women's socio-demographic characteristics, household wealth, culture, religion and ethnicity and accessibility of these services (Mekonnen and Mekonnen, 2003; Ye et al., 2010; Abor et al., 2011; De Allegri

et al., 2011; Babalola and Adesegun, 2009; Agus and Horiuchi, 2012; Muchabaiwa et al., 2012; Anyait et al., 2012; Ntambue et al., 2012; Titaley et al., 2010; Tey and Lai, 2013; Agus and Horiuchi, 2012). Socio-demographic characteristics of women such as age, parity, education, marital status, residence and occupation are often cited as determinates of maternal health care use (Agus and Horiuchi, 2012; Abor et al., 2011; Babalola and Adesegun, 2009). The literature also suggests that utilisation of maternal health care services is associated with availability and accessibility of maternal health services, women's autonomy and decision power (Mekonnen and Mekonnen, 2002; Mrisho et al., 2009; Titaley et al., 2010; Titaley et al., 2010; Agha and Carton, 2011; Stephenson et al., 2006; Graves, 2009; Tey and Lai, 2013; Mpembeni et al., 2007). The following discussion presents literature on factors that determine utilisation of maternal health services.

Mother's age determines utilization of maternal health services, though the direction of the effect is often contradictory (Burgard, 2004). Studies show that the probability of using maternal health care increases with age, peaks at a point and falls thereafter (Abor et al., 2011; Anyait et al., 2012). However, mother's age is highly correlated with parity (Burgard, 2004; Tey and Lai, 2013; Agha and Carton, 2011. Women's old age and higher parity are associated with low utilization of maternal health care services (Tey and Lai, 2013; Agha and Carton, 2011; Mekonnen and Mekonnen, 2002; Ntambue et al., 2012). This is due to the fact that when women commence childbirth the associated risks may cause them to use the services more, whereas as women get older the associated risks of child birth reduces and women become more experienced and therefore use maternal health services less (Abor et al., 2011). Older women may also be more confident and have higher autonomy and decision-making power than younger women, (Tey & Lai, 2013), which will improve their likelihood of using maternal health services.

Women who are educated and employed are more likely to use maternal health services because they are usually economically empowered and knowledgeable about the importance of seeking maternal health care and are therefore able to make wise decisions about their own health (Babalola and Adesegun, 2009; Mpembeni et al., 2007; Dhakal et al., 2007). Rural women are less likely to use maternal health services because they usually have limited access to health facilities due to lack of transportation and inadequate availability of health facilities in rural areas (Babalola and Adesegun, 2009). Married women are more likely to use maternal health services due to the support they get from their husbands and the health system that tends to favour married women over unmarried women (Ochako et al., 2011).

Several studies have shown a positive relationship between household wealth and utilization of maternal health services (Abor et al., 2011; Mekonnen and Mekonnen, 2003; Agha and Carton, 2011; Anyait et al., 2012; Babalola and Adesegun, 2009; Muchabaiwa et al., 2012). Women from highest income households are more likely to use maternal health services than those from poorest households because they are economically empowered and are therefore able to meet the

associated costs of health services even when they are delivered for free (Muchabaiwa et al., 2012; Kalin, 2011).

Other important factors that influence utilization of maternal health services, especially in developing countries include culture and religion (Schmidt, 2013; Titaley et al., 2010; Tey and Lai, 2013; Agus and Horiuchi, 2012). Commonly held cultural and religious beliefs, norms and autonomy in decision making influence women's health seeking behaviour and utilization of maternal health services (Tey and Lai, 2013; Stephenson et al., 2006; Maguranyanga, 2011; Muchabaiwa et al., 2012). Cultural and religious beliefs have been found to be significant sources of exclusion from maternal health care utilization in Africa and Asia (Stephenson et al., 2006). Studies done in Zimbabwe found that members of some religious groups such as Apostolic church refrain from using maternal health services because of their religious beliefs (Muchabaiwa et al., 2012; Maguranyanga, 2011). Women with more autonomy in decision making, which in most cases in determine by culture, have been found to be more likely to use maternal health services (Agha and Carton, 2011; Stephenson et al., 2006). A number of studies have also reported ethnicity as a determinant factor of maternal health care utilization Abor et al., 2011; Babalola and Adesegun, 2009; De Allegri et al., 2011).

Accessibility to maternal health care services has been repeatedly shown to be positively associated with utilisation of the services (Ye et al., 2010; Abor et al., 2011; Titaley et al., 2010). Accessibility issues such as physical distance to a health facility, road infrastructure, transportation system, topography and associated cost of using maternal health services affect women's utilization of the services (Graves, 2009; Tey and Lai, 2013; Mpembeni et al., 2007; Agha and Carton, 2011). The associated costs of using maternal health care include costs on transportation, drugs, food, upkeep cost for patients' guardians and the opportunity cost of losing time due to long travel distance and hospital waiting times (Muchabaiwa et al., 2012; Kalin, 2011; Mekonnen and Mekonnen, 2003).

A review of the literature shows that in Malawi studies addressing factors influencing utilization of maternal health services are scanty In addition, most of the research conducted in the country is not published. Apart from the national DHS surveys, the few studies that do exist focused predominantly on rural areas and have identified some important determinants of maternal health care utilization in the country (Katenga-Kaunda, 2010; Kumbani et al., 2013; Abiir et al., 2014; Pell et al., 2013). A study done in the rural health centres in northern Malawi identified women's age, education, marital status and autonomy in decision making as important determinants of maternal health utilization in the country (Katenga-Kaunda, 2010). Another study conducted also identified age, parity, marital status and associated cost of care as determinants of maternal health care utilization (Pell et al., 2013). Abiiro et al., (2014) found that distance and transportation difficulties were some of the key barriers that prevented women from accessing essential health services such as maternal health care in rural communities in the country.

Kumbani et al., (2012) in their study identified socio-cultural factors as some of the determinants to maternal health utilization in Malawi.

3. 5 Equity of Access to Health Care

3.5.1 Some Conceptual Issues and Definitions

The literature on equity of access to health care is complex and confusing (Daniels, 2011), therefore difficult to articulate and understand its meaning. There appears to be little consensus on the meaning of this concept despite the existence of enormous literature on this topic. Different authors and scholars agree that the concept of 'equity of access' to health care is complex, ambiguous and often confusing (Daniels, 2011; Musgrove, 1986; WHO, 2000; Linares-Péreza and López-Arellanob, 2008). In order to address the ambiguity and terminological confusion arising from the various conflicting notions of equity relating to health care, it is important and necessary to define these concepts first before proceeding any further. This will help us to clearly understand the meaning and scope of equity in access to health care. It will also help to guide on how to determine its measurement.

Equity: The term "equity means social justice or fairness; it is an ethical concept, grounded in principles of distributive justice" (Braveman and Gruskin, 2003, pg. 254). It implies fairness in the distribution of opportunities and privileges to ensure well-being of the society (Rawls, 1971; Braveman et., 1996). It also means that people's needs should guide the distribution of opportunities for well-being, not social attributes such as age, gender, socio-economic status, geographical region etc (Braveman et., 1996). "Equity derives from a concept of social justice. It represents a belief that there are some things which people should have, that there are basic needs that should be fulfilled, that burdens and rewards should not be spread too divergently across the community, and that policy should be directed with impartiality, fairness and justice towards these ends" (Falk et al. 1993, p. 2). The concept of equity is well entrenched in international law. The Universal Declaration of Human Rights states that, "the recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world" (United Nations, 1948). Equity entails using the principles of social justice to reduce inequalities due to social attributes within a society (Linares-Péreza and López-Arellanob, 2008; Rawls, 1971). Inequalities or disparities simply refer to the differences or variations between population groups which are unnecessary, avoidable and unjust or unfair (Whitehead and Dahlgren, 2007).

There are mainly two aspects of equity: horizontal equity which implies individuals with similar needs are treated the same (equal treatment for equal need) and vertical equity which refers to "different treatment for different need", particularly "more resources for greater need" (Whitehead and Dahlgren, 2007; Culyer and Wagstaff, 1993). There is however lack of clarity

and difficulty in defining the notion of "*need*", particularly in relation to health care (Mooney, 1993). In most cases, the need for health care is perceived or felt differently by people at different times and in different places and situations. The notion of '*need*' needs clarification to avoid ambiguity and confusion (WHO, 2000). The term equity originates from the Latin word *aequitas* which means 'equal' (Linares-Péreza and López-Arellanob, 2008). It is worth noting that the concepts of equity and equality are often used interchangeably, although they have different meanings (WHO, 2000). Equity is different from equality as it refers to the qualities of justice, fairness, and impartiality while equality is about sharing and exact divisions (Braveman and Gruskin, 2003; Linares-Péreza and López-Arellanob, 2008; Rawls, 1971). In other words equity is about quality, whereas equality is about quantity and is often used to purely express mathematical sense (Linares-Péreza and López-Arellanob, 2008).

Equity in Health: is defined as "the absence of systematic disparities in health (or in the major social determinants of health) between social groups who have different levels of underlying social advantage/disadvantage—that is, different positions in a social hierarchy" (Braveman and Gruskin, 2003, pg. 254). The International Society for Equity in Health (ISEqH) (2010) defines the concept of equity in health as "the absence of systematic and potentially remediable differences in one or more aspects of health across populations or population subgroups defined socially, economically, demographically, or geographically". Equity in health also means minimising avoidable inequalities in health or in its social determinants - including but not limited to health care between groups of people with different levels of underlying social attributes (Braveman, 1998). Equity in health focuses attention on ensuring fair distribution of resources between the more and less advantaged social groups to avoid unfair or unjust systematic inequalities in health (Braveman and Gruskin, 2003).

Although the definition of equity in health varies from one setting to another, and over time within settings (Wagstaff and Doorslaer, 2005), one widely criterion used is the degree of choice involved (Whitehead, 1985). For instance, disadvantaged populations have limited choices over their health and are therefore more vulnerable to health risks and ill health, than the advantaged populations. As such the resulting health differences between such population groups are more likely to be considered unjust than those resulting from health risks which were chosen voluntarily. The pursuit of equity in health is very important as it implies a commitment to eliminate the differences in health status that are unfair and unjust (Braveman, 1998). It is also important because it encompasses and deals with crucial issues such as loss of well-being, discrimination, marginalization etc that are crucial for national economic development (Linares-Péreza and López-Arellanob, 2008).

Equity in Health Care: is defined as equal access to available care for equal need; equal distribution according to need; equal utilization for equal need; equal access, and equal quality of care for all (Whitehead and Dahlgren, 2007; Culyer and Wagstaff, 1993). Equity in health care implies the absence of differences in health care services where health needs are equal (Linares-

Péreza and López-Arellanob, 2008). Equity in health care also means that "health care resources are allocated according to *need*; health care is provided in response to legitimate expectations of people, health services are received according to need regardless of prevailing social attributes, and payment for health services is made according to the *ability to pay*" (WHO, 2000).
The goal of equity in health care is to ensure that all people have equal access to basic and minimum standard of health care according to need and not any other criteria, such as social attributes or ability to pay (Zere et al., 2007). Equity in health care is different from "*equity in health*", in that it focuses on the absence of 'health care inequalities' between different social groups, whilst equity in health focuses on the differences in health status or outcome between different social groups. Both concepts are however measured similarly. Their measurement involves three key steps: (i) classifying people by social groups; (ii) measuring health status or health care; (iii) quantifying the degree of inequality (Zere et al., 2007). The following table 3.2 below presents definitions of key concepts discussed in this section:

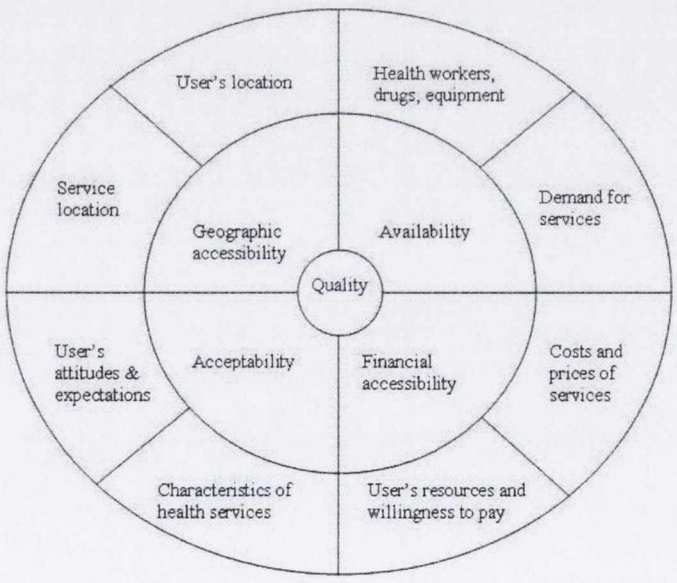
Table 3.2: Definitions of Key Concepts

Key Concepts	Definitions
Equity	- It means social justice or fairness in the distribution of opportunities and privileges to ensure well-being of the society. - It entails creating equal opportunities for everyone and reducing unjust inequalities.
Equity in health	- The absence of unfair and avoidable differences in health among people of different social groups. - Equal opportunity to attain the highest possible level of health and that no one should be a disadvantaged to achieve this potential
Equity in health care	- Equal access to available care for equal need - Equal utilization for equal need - Equal quality of care for all
Access to health care	- Actual utilisation of health services - Availability of health services - Opportunity to obtain health services
Equity of access to health care	- Equal access to health care services for people in equal need - Equal entitlement to the available services for everyone - A ffair distribution of services based on health care needs - Ease of access to health services and the removal of barriers to access of services

Access to Health Care: The term "access" is used ubiquitously in health policy literature, yet its definition has not been clearly and fully articulated (Goddard and Smith, 2001). Although researchers acknowledge that there is no universally accepted definition of access to health

services (Oliver and Mossialos, 2004), this study will use the definition by Aday and Andersen (1981) which implies, 'the actual utilisation of available health services' which is also referred to as realized access. Peters et al., (2008) define access as 'the timely use of services according to need'. Other researchers have defined access as availability of health services, while others have defined it more broadly encompassing the opportunity to obtain health services (Ensor and Cooper, 2004; O'Donnell 2007). In other words, this view is concerned with making health services available, thereby providing an opportunity for those that may need health services to obtain them whenever they need them. However, some authors have argued that this view of access is limited in that people may have access to health services but face challenges to utilize them when in need (Aday and Andersen, 1981; Peters et al., 2008; Wagstaff and Doorslaer, 2005; Rutherford et al., 2010). This means that having access to health care services does not mean that one actually uses health services. Closely related to access, is the concept of 'universal coverage' which has dominated health system discourse in recent years. Universal coverage entails ensuring health access for all people to needed health services (Savedoff et al., 2012). The most common proxy used to measure access to health care is utilization (Jacobs et al., 2011).

Access has four dimensions namely: availability, geographic accessibility, financial accessibility and acceptability (Peters et al., 2008; Ensor and Cooper, 2004; O'Donnell 2007; Rutherford et al., 2010). Peters et al., (2008) have provided a framework for assessing access to health services along these four dimensions of access, each of them having supply-side and demand-side elements as presented in figure 3.2 below:



Source: Peters et al, (2008)

Figure 3.2: Conceptual framework for assessing access to health services

In the above framework, the four main dimensions of access are described as follow:

1. Geographic accessibility— refers to physical distance or travel time from service delivery point to the user
2. Availability— entails having the right type of care available to those who need it, including timeliness of care, as well as having the appropriate type of service providers, drugs and equipment
3. Financial accessibility— refers to the cost and prices of services, as well as the willingness and ability of users to pay for those services (affordability)
4. Acceptability— refers to the nature of service provision and their responsiveness to the social and cultural expectations of individual users and communities.

In this framework, quality of care is considered as an important and integral component of each of the four dimensions of access, as it ultimately relates to the health systems ability to improve population health (Peters et al., 2008). Additionally, the framework entails that, access concerns both *'supply'* and *'demand'* considerations. This means that the variations in access to health care can arise from the interaction of both supply issues (e.g. health care availability, quality and cost) and demand issues (e.g. health user's preference, knowledge, behaviour and attitude) (Goddard and Smith, 2001). Consequently, access has been defined as "a fit between those seeking health services and health services themselves and an ability to receive care when needed and desired" (Rutherford et al., 2010; p 509). It is noteworthy that the framework by Peters et al., (2008) identifies both supply side and demand side barriers to accessing health services. However some researchers have argued that the framework has failed to include some important factors that hinder access to health care such as— poor attitude of health workers, (Jacobs et al., 2011) and lack of social support or women's autonomy (Rutherford et al., 2010).

The framework by Peters et al., (2008) provided an important and useful tool which guided the design of questions for this study relating to potential barriers to maternal health care access in order to determine access to EHP services. It is however noteworthy that while this framework was useful for outlining potential barriers, it does not have significant power to explain why and how women access maternal health services. Its predictive power in shaping policy interventions is therefore limited (Levin, 2010).

3.5.2 Equity of Access to Health Care

Equity of access to health care is defined as "equal access to health care services for people in equal need" (Goddard, M., Smith, 2001). It also refers to the *availability*, *coverage* and *utilization* of health care services according to need (Linares-Péreza and López-Arellanob, 2008). In general, equity of access refers to equal opportunities in health care. The term "*equitable access*" refers to the distribution of health services determined by socio-economic and demographic characteristics and need (Braveman, 1998). An equitable health care system is the one that assures the probabilities of access to health care services by all people with equal needs,

and similar health problems (Musgrove, 1986). This study measures equity of access in terms of equal access to health care for all people in equal need.

3.6 The EHP Concept and Experiences in Other Countries

EHP is not a new concept. Since 1993, the EHP has been widely adopted in many developing countries worldwide (WHO, 2008). Examples of such countries include Tanzania, Lesotho, Uganda, Malawi, Bangladesh, Afghanistan, Liberia and Mexico. The notion of EHP is however named differently in different countries. For instance, in Uganda the EHP is referred to as the Minimum Health Care Package (MHCP), whilst in Afghanistan it is referred to as Basic Package of Health Services (BPHS) and in Bangladesh it is known as the Essential Service Package (ESP). The EHP aims to concentrate scarce resources on interventions which provide the best *'value for money'* and it is often expected to achieve multiple goal such as; improved efficiency, equity, political empowerment, accountability, and altogether more effective care (WHO, 2008). The EHP consists of a limited list of prioritized and cost-effective health services. They include different interventions in different countries; reflecting variations in economic, epidemiological and social conditions. EHPs are delivered either as broad packages covering more interventions or partial packages focusing on a particular disease or condition for example HIV/AIDS prevention, maternal and new-born health.

EHP can enhance equity of access to health care services (WHO, 2001; WHO, 2008). However, different researchers argue that if an EHP is to be universal, or a safety net for the poorest, there must be additional deliberate efforts to improve access (Bennet et al., 2008; Hozumi, 2003; WHO, 2008). Evidence shows that the Tanzania EHP had impressive impacts as a result of combination of different strategies (Bennet et al., 2008). Many EHPs do involve fees (or co-payments in insurance systems) for example in Egypt and Afghanistan (WHO, 2008). However, the challenge in such countries is to design fee structures and exemptions which do not deter utilization by vulnerable groups. In Bangladesh, EHP services were very focused upon diseases of the poor, but other barriers such as inadequate resources and informal fees, still prevented access to services by the poor (Bennet et al., 2008). The literature on how to effectively deliver an EHP is however scanty (WHO, 2008).

It is also argued that making an EHP available is not enough – utilization needs to be actively monitored to ensure that it is achieving its objectives (WHO, 2008). In addition, implementing an EHP requires either attracting new resources or shifting resources away from some existing interventions or programmes. The resources include health workforce, essential drugs, equipment and infrastructure. This implies that implementation of EHP requires to be "plugged into" resource allocation decisions and budgeting (WHO, 2008).

3.7 Summary of the Chapter

In summary, this chapter has presented a review of the literature on the state of maternal health at the global and national level; determinants of maternal health care utilisation, definition of key concepts on equity of access to health services; and overview of the EHP and experiences in other countries. The review of the literature has revealed that many women are dying every day globally, due to preventable pregnancy related causes and complications. The problem is especially big in the Sub-Sahara African countries including Malawi. The major contributing factors to high maternal mortality in Malawi and other developing countries include limited availability and access to comprehensive maternal health services, lack of essential drugs and equipment, teenage pregnancies, unsafe abortion, socio-economic factors, cultural beliefs and practices. The review has also shown that utilisation of maternal health services is influenced by several factors including women's age, parity, education, marital status, residence, household wealth, ethnicity, cultural context, religion, and the availability, accessibility and quality of maternal health services. Based on this review, it is therefore important to address the different causes of maternal mortality and factors affecting utilisation of maternal health care, thereby contributing towards the achievement of MGD 5 target.

The chapter has also reviewed the literature on equity of access to health care services as it relates to this study. The review has demonstrated that the literature on equity of access to health care is complex and confusing, therefore difficult to articulate and understand its meaning. Nevertheless, this chapter articulates and provides the operational definition of equity of access to health care as used in this study- equity of access defined as equal access to health care for all people in equal need. The chapter has also presented the framework by Peters et al., (2008) which outlines potential barriers to accessing (e.g. availability, geographical and financial accessibility, acceptability etc). Also included in this chapter is a review of literature on EHP concept and experiences in other countries. The review has shown that EHP concept has been widely adopted in many developing countries worldwide. However, various challenges are affecting access to EHP services in different countries including due to inadequate resources and informal fees. This chapter has concluded that the literature on how to effectively deliver the EHP is scanty and therefore more research and publications are needed.

CHAPTER 4

THEORETICAL BASE AND CONCEPTUAL FRAMEWORK

4.1 Introduction

This chapter presents the theoretical base (Rawls's theory of justice) and the conceptual framework for this study (Andersen's health care utilization model).

4.2 Theoretical Base

A Theory of Justice

The theoretical base for this study is Rawls's theory of justice. Rawls is widely considered as one of the most important political philosophers of the 20th century. He first published his theory of justice in 1971 and revised it later in 1975 and 1991. Rawls's theory has been widely recognized as the most influential theory of justice in modern moral philosophy (Sen, 2009; Nussbaum 2011). According to Rawls's social justice is about equal and fair distribution of human rights, duties, opportunities and privileges to ensure well-being of the society. To him social justice is also about allocating a fair share of benefits to the least advantaged members of society. To him social justice is also about allocating a fair share of benefits to the least advantaged members of society. Social justice emphasises on the idea that all members of society have an equal access to various features, benefits and opportunities of the society regardless of their social attributes or status in life (Rawls 1971). This entails using the principles of social justice to address inequalities within a society, such as those based on gender, race, religion, socio economic status and so on. Social justice ensures that basic rights and responsibilities are assigned in the social institutions, which enables people to receive primary goods of social cooperation such as health care, education and other public services (Rawls, 1971). Shevory (1986) emphasized that health care is closely bound to issues of social justice and should therefore be connected to the theory of social justice. As such, Shevory's argument clearly presents Rawls' theory of social justice as a relevant theoretical base for this study.

The Social Contract and Original Position

One appealing feature of Rawls's theory of justice is that it was built on the social contract tradition. Indeed, it is recognized as the strongest version of social contract theory (Nussbaum, 2006). Vaggalis (u.d.) and others have acknowledged that no one else has produced a work that matches the scope of Rawls's theory. The social contract theory is based on a hypothetical idea of a contractual agreement among individuals or between an individual and the state, under which the state has legitimate authority over the individual for the benefit of the society as a whole (Freeman, 2007; Hampton 1986; Rawls 1971). Using purely hypothetical version of a social

contract called a "thought experiment" or "original position" Rawls presents a conception of social justice. In this hypothetical situation an imaginary group of rational individuals voluntarily consent to give up their natural freedom and enter into a fair agreement to choose a system of principles for their own society for the betterment of everyone (Rawls, 1999). Hobbes argues that individuals are reasonable beings motivated by individual desires; hence, they will agree to participate in a social contract to be able to live in a public cooperation (Hobbes, 1998). Thus we are to imagine that people who engage in social cooperation choose together the principles which are to assign basic rights and duties and to determine the division of social benefits. These principles are chosen from the original position, behind a metaphorical "veil of ignorance" to ensure that no-one is disadvantaged in the choice of principles by the outcome of natural chance or the contingency of social circumstances (Rawls, 1999).

In the original position, behind the veil of ignorance, these imaginary people would not know certain information for instance about their own characteristics, such as age, gender, ethnicity, social status, religion, abilities or anything else about themselves. They would also be denied information about their position in a society from which they come from. It is also assumed that these individuals do not know their conceptions of what makes for a good life, and the particular state of the society in which they live. They would, however, have general knowledge about how social institutions such as health care, education and economic systems worked. In such a position, behind the veil of ignorance, everyone is in the same situation and is presumed to be equally rational. The original position is what Rawls argued to be the appropriate initial status quo from which rational beings would have to rely on their human powers of reason to choose the principles of social justice that are capable of reaching a fair and impartial agreement (contract) for a just society (Rawls, 1999). Rawls's theory follows the Kantian understanding of persons and their capacities whereby every individual has the capacity to reason from a universal point of view which in turn means that they have the moral capacity of judging principles from an impartial standpoint (Hampton, 1986).

The Principles of Justice

Justice is the basic structure of a society and a first virtue of social institutions (Rawls, 1999). He viewed a well-ordered society as the one that determines a democratic and fair system of cooperation. Using the social contract theory he generated principles of justice for assigning basic rights and duties, as well as for determining fair distribution of social benefits and burdens in social cooperation (Rawls, 1971). In his theory, Rawls identified two fundamental principles that guarantee a just and morally acceptable society. He argued that these two principles would be reached through an agreement in an original position of fairness and equality. The first principle states that every person has the right to the most extensive system of basic liberties compatible with a similar system of liberty for all (*equal liberties principle*). The second principle states that all people should have access to the same socio- economic positions and be

able to take advantage of them; and they are to be the greatest benefit of the least-advantaged of society (*the difference principle*).

The Relevance of Human Rights

Rawls's theory recognizes the importance of human rights and the role they play within a society (Rawls 1999). Rawls emphasized that a just and well-ordered society is the one that fully respects basic human rights. It is worth noting that health is a fundamental human right. According to WHO (1946) every human being has the right to enjoy the highest attainable standard of health in their society without discrimination of race, religion, political belief, economic or social condition. The Universal Declaration of Human Rights states that, everyone has the right to a standard of living adequate for the health and wellbeing of himself and his family, including medical care and necessary social services" (United Nations, 1948). It is therefore important for a health system to organise its health resources equitably, so that access to those resources are open to everyone (Whitehead and Dahlgren, 2007). Universal health access to a basic package of essential health services is one of the most important components of equity in the health system (Rodney and Hill, 2014).

Women's Rights and Health Care

Numerous international human rights treaties and national constitutions all over the world have repeatedly emphasized that all people, including women, have equal human rights and should be able to enjoy them without discrimination. This was affirmed by the Fourth World Conference on Women by United Nations in Beijing, which stated that, "women have the right to the enjoyment of the highest attainable standard of physical and mental health" (United Nations, 1995, pg.34). The rights of women include right to respect and autonomy, right to access power and to participate in decision making process, right to access public services such as health care, right to economic independence and many others. The universal right to health includes access to timely, affordable and adequate health care, as well as access to health information (WHO, 1946). Yet, despite the fact that women's right to health is recognized, there is a lack of social justice in most health care systems (Hankivsky, 1999; United Nations, 1995). The health sector in Malawi is not exceptional in this case. Numerous barriers exist in the health sector which prevent women from enjoying the highest attainable standard of health. Women continue to experience social injustices and inequalities in their health status and interactions with the health care system (Hankivsky, 1999). Gender-based discrimination, inequalities in health care access, lack of access to education, poverty, violence against women, limited power, and lack of influence in decision making, are some of the social realities which affect women's health and prevent them from realizing their rights (United Nations, 1995).

Gender Equality and Mainstreaming

Hankivsky (1999) noted that health systems that are congruent with the goals of social justice have the potential to contribute towards the improvement of health for all people including women. She further noted that applying the values and principles of social justice to health care leads to more democratic and socially inclusive communities where people generally enjoy healthier lives without discrimination.The recognition of the right to health may be pursued through formulation of health policies and delivery of health services that are accessible to everyone without discrimination (Office of the High Commissioner for Human Rights, 2000). In order to promote social justice, women's health and gender equality, the United Nations (1995) recommends that governments and other actors should promote an active and visible policy of mainstreaming a gender perspective and socially inclusive health care in all policies and programmes. It is worth noting that the most recent Malawi National Health Policy (MNHP) has implicitly adopted the idea of social justice through applying the EquiFrame approach to policy development. EquiFrame is a framework for analysis of the inclusion of vulnerable groups and core-concepts of human rights in health policy documents in order to enhance equity in health care (Mannan et al., 2011). The philosophy that underpins the MNHP is one of promoting equity and quality of health services in order to improve the health status of all the people of Malawi, but particularly the vulnerable groups by addressing the barriers to their inclusion in health care access. To ensure universal access and quality in providing EHP health services, all the people of Malawi will have the right to good health, and equitable access to health services without any form of discrimination, whether be it based on ethnicity, gender, age, disability, religion, political beliefs, geographical location, economic and/or social condition (MoH, 2015).

Global Health and Social Justice

"Social justice as a concept of fairness and equality continues to expand globally, such that the principles of social justice may be understood as being part of the international struggle for human rights and dignity" (Kalsem et al., 2010, pg. 150). It should be noted that the global health agenda is based on principles that underpins social justice and is linked to human rights issues (Lee and Sadana, 2011). The growing movement for global health seeks to advance social justice and promote health equity by reducing inequalities in health, eliminating gender and power imbalances, addressing underlying causes of ill health and improving access to health care within countries, as well as globally. It should be noted that the concept of health equity is grounded in the ethical principle of distributive justice and core human rights principles (Braveman and Gruskin, 2003). Rawls sees social justice as "distributive justice". In this regard distributive justice is concerned with the way resources are distributed to individuals by social institutions (Rawls 1971). In health care, the model of social justice is often applied to ensure equal distribution and access of health resources and basic health care for all citizens.

How to Use Rawls Theory of Justice

Robinson (2015) suggested that Rawls' theory of justice can be used to determine if any process or outcome is consistent with social justice. Thus it can be used to assess if any government policies or social services such as health care are consistent or inconsistent with social justice principles. It has already been highlighted in this chapter that the health system in Malawi recognises and promotes the right to health and equity as reflected in the MNHP. The main goal for the Ministry of Health in Malawi is to raise the level of health status for Malawians through development of a sustainable health system that is capable of promoting population health (Ministry of Health, 2004). The EHP services policy in Malawi is designed to help achieve the ministry's goal of promoting universal health coverage, and is based on the principles of social justice. Lee and Sadana, (2011) emphasized that health systems and public health have the potential to improve equity, such as through approaches towards universal coverage, adequate provision of care and elimination of discriminatory practices. Rawls argued that a society cannot avoid inequalities among its people because inequalities can result from such things as one's inherited characteristics, such as race, disability or gender etc. Even so, Rawls insisted that a just society should find ways to reduce inequalities in areas where it can act and should provide "fair equality of opportunity" (Rawls, 1971). It is suggested that some of the ways for a society to do this would be to eliminate discrimination and to provide everyone easy access to public services such as health care services (Constitutional Rights Foundation, 2007).

Criticisms of Rawls's Theory of Justice

Rawls contract theory has received several criticisms. For instance Rawls has been criticized for his hypothetical view because he allows individuals in the imaginary original position to have information about social institutions such as knowledge of politics and economics and yet he excludes knowledge of one's own individual characteristics (Shevory, 1986). In other words Rawls's social contact theory has been criticized of being hypothetical, highly abstract and inconsistent (Schaefer, 1975; Shevory, 1986; Hampton, 1986). Hampton (1986) criticized Rawls by saying that he has constructed what is perhaps the most abstract version of a social contract theory. He argued that Rawls's theory is highly abstract because the hypothetical agreements reached by parties in a social contract in the original position aren't real agreements at all, thus have no normative force and as such it is difficult to apply it in a real existing society. Rawls himself acknowledged that his vision for a just society "carried to a higher level of abstraction the traditional conception of the social contract (Rawls, 1999). Sen (2009) critiqued Rawlsian theory by arguing that the unanimous agreement on one set of principles of justice is neither necessary nor sufficient for advancing justice of current states of affairs.

In his recent book, *The Idea of Justice*, Sen (2009) criticized Rawls's theory for "universalism" by questioning on how such principles would be universally adopted in a society. He argued that people need to come up with their own accounts of justice; thus socially, just outcomes will not

be universal across all cultures and societies. He suggested that there are no universal principles of justice but that different societies will work out their own accounts if they allow deliberative and democratic procedures to flourish. Sen (2009) also criticized Rawls' approach to distributive justice as being flawed. He argued that the task of social justice cannot simply be that of redistributing primary goods among individuals (as Rawls' theory of justice commends) and maximizing aggregate well-being (as utilitarians would have it). Instead, Sen emphasized that justice should aim to ensure that all people have the relevant capability to function well through social cooperation. Furthermore, Young (1999), also criticized Rawls for treating the problem of justice as a distributive problem. The author argued that Rawls view failed to consider the dynamics and group-based power relations (gender, race, ethnicity, dis/ability etc.) through which both goods and persons are socially constituted or produced. Furthermore, Sen (2009) criticized Rawls view on reasoning about what a just society should do. He argued that the most important problems that we need to deal with are comparative problems, concerning ways of moving toward societies that are less unjust.

The difference principle, the idea that "social and economic inequalities are to be arranged to the greatest benefit of the least advantaged members of society" (Rawls, 1971, p. 302), is considered as the most controversial part of Rawls' theory of social justice (Constitutional Rights Foundation, 2007). Several critics including Sen (2010) have argued that it is unfair to take from the most advantaged people what they have earned and redistribute it for the benefit of the least advantaged. Sen also argued that explanation for how people come to be in more or less advantaged positions is relevant to fairness. For example, some people deserve a higher level of material goods because of their hard work or contributions to society. It is should be noted that Rawls himself acknowledged that his vision for a just society was "highly idealized" and he admitted that there was little support for his difference principle in our culture (Rawls, 1999).

Nussbaum (2006) criticized Rawls' version of social contract theory for failing to adequately address issues of basic justice and substantial freedom in situations where there are great asymmetries of power among the parties. For instance she argued that the procedural justice-based approach of social contract theory fails to address issues of justice concerning people with disabilities, citizens of developing nations (transnational justice) and animals. She expressed concern that the social contract design presented in Rawls' theory emphasizes on three premises of contractarianism, which poses some challenges to issues of justice, these are; mutual benefits of all contractors; the contractors are roughly equal in their powers; and they are self-interested and rational in their pursuit of their interests. Nussbaum argued that people with severe disabilities, citizens of developing nations and animals usually are excluded from a social contract that is designed for mutual benefit, nor do they have equal power with other contractors. In addition, she argued that people with cognitive disabilities and animals cannot represent themselves in deliberations that are designed for rational beings. Rawls himself has acknowledged that these three cases present a challenge in conception of the contract theory (Rawls, 1999). Nussbaum (2006) also criticized Rawls's theory for focusing on nation states

only and failing to recognize the importance of other global actors, such as international organizations, multinational corporations, NGOs and others. She argued that Rawls assumes that societies are self-sufficient units, which does not reflect the reality of a globalized world.

Social theorists such as Frantz Fanon (1961) and Paulo Freire (1970) emphasized that social justice is linked to power. Their view was influenced by Marxism, one of the ideas of which is that power and social class differences give rise to inequalities in a society. In this regard, Tew (2002, p. 165) defines power as "a social relation that either opens up or closes off opportunities for individuals or social groups". Weber (1998) noted that socially constructed power relations based on social class, gender and race affect access to basic resources and opportunities in a society (such as wealth, income, access to education and health care etc.). She further noted that dominant or advantaged social groups have greater access to social benefits and opportunities. This entails that power relations are key to determining the degree of inequalities in a society.

Freire (1973) was interested in addressing inequalities and oppression through promotion of critical consciousness. Critical consciousness refers to the individual's ability to perceive social injustice issues and to take action to address them. Influenced by Fanon's theory of "colonization of the mind", Freire (1970) developed the concept of "culture of silence". He argued that dominant social relations create a culture of silence in which dominated individuals lose the means to critically respond to the culture that is imposed upon them by those in power. Consequently, the oppressed people feel ignorant and become dependent on the oppressors, the so called "experts" or specialists in a society (Fritze, n.d.). In addition, he noted that the oppressed people's needs and experience are ignored, devalued and considered as inferior. Freire's concept of social silence can be applied in many social contexts, for example the oppression of women (Fritze, n.d.). In most cases, women in Malawi and other developing countries are still dependent on their husbands or specialists opinions for decision making, for instance on issues regarding maternal health care. According to Fritze (n.d.) this type of mindset and practice is imposed by means of religion, education and socialization. Freire (1970) advocates that individuals need to develop critical thinking to recognize that the culture of silence is created to oppress them and they should strive to break free of it. Tudiver and Hall (1996), observed that access to health services including maternal health care is affected by differentials of power and authority between the roles of doctor and the patient. Illich in his book entitled *Limits to Medicine: Medical Nemesis* (2002), wrote that "the medical establishment has become a major threat to health". His central argument is that professional control over medicine (medicalization) expropriates the power of individuals and expands the authority of medical professionals. This he said may cause members of the society to lose their autonomous coping skills and to depend excessively on health professionals. Loss of autonomy and independence can leave subjects vulnerable to many forms of abuses.

Feminists have asserted that if a theory of social justice is to be complete, it must include women and it must address the gender inequalities which are prevalent in modern-day families and

within the society as a whole (Okin, 1989; MacKinnon, 1989). Feminists critics such as Okin (2008), Nussbaum (2009) and Patman (1988) have criticized Rawls for leaving out gender and the family. Their main questions and concerns were that-- to what extent would Rawls's principles of justice help secure basic rights, liberties and fair opportunities for women and children.They argued that Rawls failed to pay any attention to the internal justice of the family and to address issues of gender inequalities and hierarchies inherent to the familial relations. Furthermore, Okin (2008) criticized Rawls for failing to account for patriarchal social institutions. She argued that women are often excluded from public life and she accused Rawls of using neutral language with regard to gender-structured family and imbalances between men and women. She accused Rawls of hiding something that should be brought into the open. Pateman (1988) also criticized Rawls's social contract theory and asserts that patriarchal control prevails in the marriage contract. She claims surrogacy contracts are the means by which women's reproductive capacities are dominated and patriarchy is upheld.

Rawls has also been criticised for assuming that reason transcends culture. Kymlicka (1995) argued that some individuals are vulnerable to being overrun by the dominant culture, and thus all persons require a relatively stable cultural horizon against which to make choices. Another criticism of Rawls' social contract theory as reported by the Constitutional Rights Foundation (2007), is that it does not allow enough tolerance for different religious and strongly held beliefs. For example, if people belong to a religion that teaches men and women are unequal in certain parts of life, those beliefs would contradict Rawls' principles about equality of basic liberties and equal opportunity. However, surely this is the point of Rawls – to challenge systems; be they political, religious, economic, whereby one group oppresses another e.g. men oppressing women as in Christian or Muslim doctrines.

Coogan (2007) criticized Rawls for not directly addressing health care issues in his theory. The author noted that even Rawls himself recognized that his theory doesn't adequately account for inequalities in health. She complained that, Rawls is almost silent on the issue of health care and the social bases of health. She however noted that Rawls in his book on *Political Liberalism* attempted to address health care, but provides no answers to the question of how health care considerations might be included in his theory. Coogan (2007) suggested that the most direct and defensible account of health care justice under the Rawlsian theory is to include health care itself as a primary good. She alleged that health care fits within the larger objective of the social justice theory and within the definition of primary goods. She pointed out that a broad conception of health care can be found within Rawls's own work. Coogen (2007) suggested that Rawls principles can be used to assess if a health system is just to ensure equity in health care. Furthermore, she noted that central to Rawls's conception of justice as fairness is the recognition that the various institutions of society such as health care systems are interconnected. In this regard she argued that it is the social system as a whole, which is the determinant of justice. This therefore entails that any aspect of the health system (whether demand and supply side factors) which affect individual health outcomes are governed by the principles of justice. This means

that identification of bottlenecks in a health system and taking steps to address them is key to promoting justice and equitable access to health care services.

Application of Rawls Theory of Justice to this Study

In this study, I have used Rawls's theory of social justice to explore social determinants of health that influence use of maternal health care services, thus EHP services. Rawls' theoretical approach provided a mechanism by which to determine unjust inequalities in use of EHP services in Malawi. This has been linked to Aday and Andersen's health care utilization model, a conceptual framework for this study (refer 4 figure 4.1) to determine broader and contextual determinants of health services utilisation. Rawls's theory predominantly focuses on individual social attributes (such as age, gender, socio-economic status, education, residential setting etc) as determinants of health, whilst Andersen's model recognizes the essence of broader and complex factors (such as health policy, individual characteristics, societal determinants and health delivery system factors) in determining utilisation of health services. Thus, in this study Rawls's theory and Andersen's model complimented each other in determining factors that influence use of maternal health services.

MacKinnon (1989) emphasized that conceptualization and application of justice and equity for women is grounded in understanding of the actual lived experience of inequality and injustice that women face. In this study, women were asked several questions pertaining to their experiences in their course of seeking and receiving maternal health care including about- how they make their choice of a health care provider, their expectations of maternal health care, how they make decisions regarding maternal health care, the experiences that they encounter at the health facility level and how these experiences influence their use of maternal health care services. Women were also asked to mention factors that promote or hinder utilization of maternal health care services in their community. Furthermore, the social justice theory provided a framework to explore various factors that influence inequalities in use of the EHP services in Malawi. According to Sen (2009), injustices in society such as discrimination against women, the lack of medical facilities, the lack of universal health care in most countries of the world, can all be identified, targeted, and removed without any need to speculate at all as to what would be perfectly just social arrangements or what would be just institutions. This entails that we can simply identity clear injustices and take steps to remove them.

It is worth mentioning that other theories including the Health Belief Model (HBM) were considered before making the decision to use Rawls's social justice theory in this study. HBM is a health behavior change and psychological theoretical model that attempts to explain and predict health behaviors. The HBM concept is based on the understanding that health behavior including use of health services is more likely to be carried out if people perceived threat of disease, its severity, and benefits of action to outweigh their perceived barriers to action (Armitage and Conner, 2000). While HBM was not selected as the main theoretical base for this

study because of its narrow focus of the individual level and its inability to capture the holistic and complex issues of the health system, it was still helpful in providing guidance to determine factors that influence women's health seeking behavior and methods to influence health behavior change.

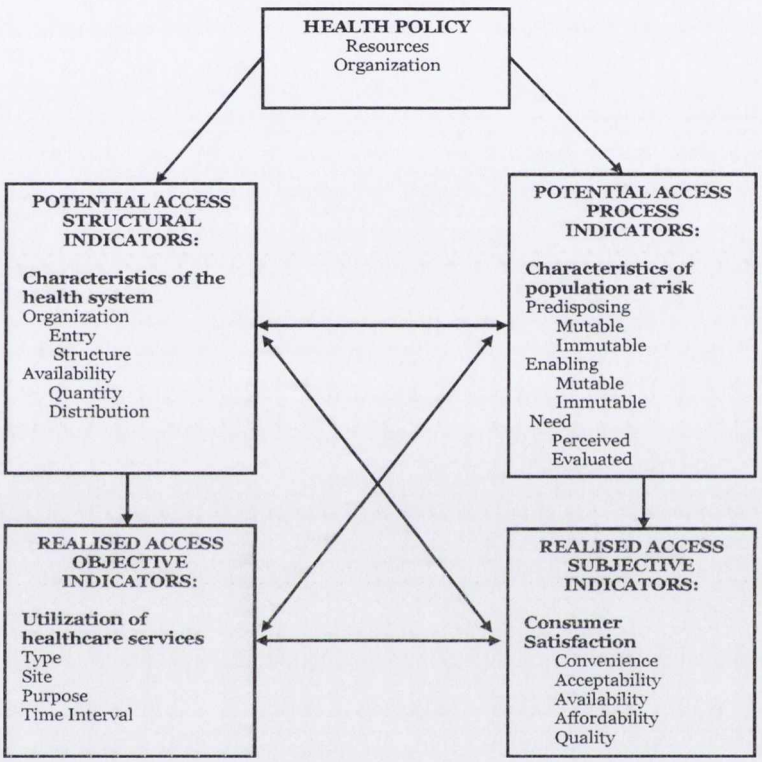
In conclusion, it should be mentioned that while accepting that there are many criticisms of Rawls, it has been a very influential theory and accords with the basic principles on which EHP and Malawian National Health Policy have been designed. It may therefore be a useful "straw man" theory to test; and to see if its limitations accord to the criticisms, or not.

4.3 Conceptual Framework

This study uses Andersen's Behavioral Model of Health Services Utilisation as its conceptual basis. The model was originally developed in 1968 to assist in understanding factors that lead to use of health services; to define and measure equitable access to health care; and to assist in developing policies to promote equitable access to health services (Andersen, 1995). Andersen's model is one of the most widely acknowledged multilevel conceptual frameworks that incorporate both individual and contextual determinants of utilisation of health services (Babitsch et al., 2012). Since its initial development, the model has undergone modifications in four phases. The model originally focused on the family as a unit of analysis (Andersen, 1995). The second phase of the model was as a result of modifications to the original model, by Aday, Andersen and their colleagues at the University of Chicago in 1973 (Aday and Andersen, 1974). At this stage of modification, the importance of the health system in determining health seeking behavior was recognized and the alteration includes inclusion of systematic concepts of health care such as health policy, resources, organization of the health system and consumer satisfaction as an outcome of health service use and an important determinant of health care utilization (Aday and Andersen, 1974). The third phase of the model was developed in 1981 and identifies measures of access to health services and proposes four perspectives in which access can be viewed. The fourth and final phase of the model emerged in 1990's (Andersen, 1995). This model is differentiated from its predecessors by emphasizing on the individual as a unit of analysis, especially focusing on individuals' outcomes regarding their health and satisfaction with health services. In addition, the forth version of the model has a feedback loop that links the effect of the individual's health outcomes with factors affecting health services use.

This study uses the third phase of the model by Aday and Andersen (1981) as it relates well to the study since it provides an integrative conceptual framework for understanding the multiple dimensions and complexity issues of health systems involved in accessing health services. The conceptual framework attempts to integrate a number of ideas about the "how's" and "why's" of health services use (Andersen, 1995). It uses a systems perspective to demonstrate the interrelationships that exist among the various components of the health system to be considered in conceptualizing access and evaluation of equitable access to health services. It integrates a

range of variables and takes into account the inherent complexities involved in accessing health care such as EHP services in Malawi; including health policy, individual characteristics, health behavior, societal determinants, health care delivery system factors and the dynamic interaction between patients and providers (Balabanova et al., 2007). Figure 4.1 below presents Aday and Andersen's framework of health services utilisation.



Source: Aday and Andersen (1981)

Figure 4.1: Framework for Health Services Utilisation

According to Aday and Andersen (1974), access to health care is often considered in a political context and "improved access" to health care is an important goal of health policy. Therefore health policy is considered as the starting point for ensuring access to health care. Health policy may be seen as intended to directly affect characteristics of the health care delivery system or may be directed towards changing characteristics of the population at risk either directly or through the delivery system (Aday and Andersen, 1974). As illustrated in figure 5 above, the health delivery system is characterized by two main elements i.e. resources and organization. Resources refer to labor and capital devoted to health care, such as health personnel, equipment, finances and structures within which health care and education are provided. On the other hand organization refers to the manner in which health personnel and facilities are coordinated and controlled in the process of providing health services (Aday and Andersen, 1974). The resources component includes both the volume and distribution of health care resources, whilst the

components of organization are entry and structure. In this context, entry refers to the process of gaining entrance to the health system (travel time, waiting time, etc.), whereas structure of organization concerns the characteristics of the health system that determine what happens when health care consumers enter into the health system (Aday & Andersen, 1974).

The model identifies four concepts within which access can be viewed (Aday and Andersen, 1981), as shown on the diagram above. Potential access is the presence of enabling resources, allowing the individual to seek care if needed. Realized access is the actual use of care, shown as the outcome of interest in the earlier models. The framework also makes a distinction between equitable and inequitable access. Equitable access is driven by demographic characteristics and need whereas inequitable access is a result of social structure, health beliefs, and enabling resources. The model demonstrates that access to health care is influenced by supply side (health care delivery system) and demand side (individual, household and community level) factors. Two main categories of social indicators of the access concept may be specified on the basis of the framework presented: process and outcome indicators. The process indicators reflect characteristics of the delivery system and population at risk that affect whether entry to the system is gained and how satisfied consumers are with it. The outcome indicators, i.e., utilization and satisfaction, reflect the end products of health policy regarding "access." These measures include both objective and subjective descriptors of the population's entry to and passage through the system (Aday & Andersen, 1974).

Aday and Andersen explains that utilization of health services is determined by characteristics of the population at risk. These characteristics can be viewed in three dimensions i.e. predisposing, enabling and need components. The predisposing component include variables that describe the "propensity" of individuals to use services such as age, sex, race, religion, and health beliefs (Aday and Andersen, 1974). The enabling component describes the “means" individuals have available to them for the use of services. Examples of enabling factors include income, family support, access to health insurance and attributes of the community in which the individual lives (urban-rural settings). The need component refers to illness level, which is the most immediate cause of health service utilization. The need for health care may be either that perceived by the individual or that evaluated by the delivery system.

Aday and Andersen (1974) also introduces the concept of mutability of the factors that determine individual health care utilization. Mutability refers to the degree of manipulability by health policy. Mutable properties are those which can be altered, in the short run, to affect utilization or satisfaction with health care services (medical manpower distribution, insurance coverage, etc.), whilst immutable properties serve more to define subgroups or target populations to whom health policy should be directed e.g. age, sex, race, and residence groups for whom access may differ (Aday and Andersen, 1974). Andersen's model Andersen's model promotes social justice and inclusion in health policy given its focus; “to assist in developing policies to promote

equitable access to health services" (Andersen, 1995, pg.1), and thus it is linked to the theoretical underpinning of this study.

The model describes utilization of health services as having four characteristics namely; type, site, purpose, and time interval (Aday and Andersen, 1981). Type of utilization refers to the kind of service received and who provided the services e.g. nurse, doctor, clinician etc. Health care site refers to the place where the care was received e.g. health center, hospital, outpatient department, etc. The purpose of a visit means whether it was for preventive, curative or palliative care. Time interval for a visit may be expressed in terms of contact, volume, or continuity measures (e.g. waiting times and number of hospital visits) (Aday and Andersen, 1974).

The framework also identifies consumer satisfaction as an outcome of health care services and a determinant of health care use. Consumer satisfaction refers to the attitudes toward the health care system of those who have experienced a contact with it. Dimensions of satisfaction that seem relevant to consider in eliciting subjective perceptions of access are satisfaction with the convenience of care, its availability and affordability, the courtesy shown by providers, information given to the patient about dealing with illness, and perception of the quality of the care received (Aday and Andersen, 1974).

Andersen's model has been used extensively in health services research to investigate factors that lead to utilisation of health services (Babitsch et al., 2012) and to evaluate the extent to which health services are equitably distributed or accessed (Gochman,1997). The model has been used, for example, to analyse determinants and patterns of health care utilisation (Andersen and Newman, 1973; Kushel et al., 2001) and to understand health seeking behaviors (White et al., 2006). It has also been used to assess disparities in health care utilisation (Gruber and Kiesel 2010; Bradley et al., 2002). In this study Andersen's model was used to analyze patterns and determinants of health care utilisation, to assess inequalities in health care utilisation, to understand health seeking behaviors and to identify access barriers to maternal health services. The flexibility of Andersen's model is evidenced by many researcher's frequent additions of other domains of predictors relevant and specific to a particular type of utilization behavior explored they are exploring in their studies (Gochman, 1997; Kwak, 2006). For example some studies have added variables measuring characteristics of kin or caregiver and social support, among other variables as factors may influence health seeking behavior and utilisation of health services (Freeman 1993; Gochman, 1997).

Whilst keeping in mind the strengths of and contributions made by Andersen's model in health services research, it is worth noting that the model has some potential weaknesses and criticisms. Several researchers have expressed a general concern about the validity of the study concepts, specification and testing of the hypothesized relationships, and the robustness and generalizability of the findings based on the model (Porter, 2000; Aday and Awe, 1997). Other critics have noted that the model has failed to include genetics and psychosocial components (e.g

health beliefs and knowledge regarding illness) and has ignored the broader social contexts (such as social networks) in which individuals decide to seek health care (Bradley et al., 2002; Rosenau, 1994). Andersen (1995) however argued that social structure is included in the predisposing characteristics component. Another general criticism is that the wide range of variables and differing levels of analysis included makes it difficult to collect data to test the complete model (Gochman, 1997).

4.4 Summary of the Chapter

This chapter presents the theoretical base (Rawls' theory of justice) and the conceptual framework for this study (Andersen's health care utilization model). In general, Rawls' theory provided a mechanism by which to determine unjust social inequalities in use of maternal health care, whereas Andersen's health care utilisation model was used for multiple purposes to determine broader and contextual determinants of health care utilisation; to understand health seeking behaviors; to identify access barriers to maternal health services; and to assess inequalities in health care utilisation. Both Rawls's theory and Andersen's model complimented each other and were helpful in providing guidance in selection of variables, developing of themes, literature review and discussion of results.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 Introduction

The study was intended to achieve the following objectives namely, to: i) to examine utilization of maternal health services in relation to age, marital status, residence, educational status, work status, household wealth, ethnicity and religion, in order to identify the determinants of utilisation of such services; ii) to measure the extent/magnitude of inequalities in utilization of maternal health services by residence, education and wealth status; iii) to document factors that influence women's utilisation of maternal health services ; iv)to document factors that influence delivery of maternal health services in order to determine access to EHP services; v) to understand key informants' perspectives on EHP implementation in Malawi. This chapter presents the research methodology used in this study. Specifically the chapter presents information about the research design, study setting, eligibility criteria, sampling procedure, data collection and analysis. The chapter also presents information about the ethical consideration issues observed during this study.

5.2 Research Design

The study employed a mixed methods research design to in order to achieve its objectives. Mixed methods research is an approach that combines quantitative and qualitative research techniques within a single study (Venkatesh et al., 2013). Quantitative research refers to studies that use statistical or numerical methods to obtain findings of the investigated phenomenon (Marcyzyk et al., 2006), whilst qualitative research studies use inquiry methods to understand the way people interpret and make sense of their experiences and the world in which they live (Merriam, 2009). A mixed methods research design was chosen because of its potential to provide a holistic picture of the investigated phenomenon than would have been the case using a single method approach. It has a high level of validity, reliability and comprehensiveness, besides that it allow researchers to get an in-depth understanding of the investigated phenomenon (Kelle, 2006; Saunders et al., 2000). Additionally, mixed methods research allows confirmation, corroboration and complementary of results from different methods studying the same phenomenon (Johnson at al., 2007). For example, in this study qualitative inquiry results support and complement findings of the quantitative study design. Quantitative and qualitative data were thus collected and analyzed sequentially. The study began with collection and analysis of quantitative data to examine utilisation of maternal health services; to explore determinants and measure the extent of inequalities in utilization of such services. This was followed by a qualitative inquiry involving detailed exploration of factors that influence delivery and use of maternal health services, as well as implementation of the EHP in Malawi.

For the quantitative study, an observational cross-sectional design was used. A cross-sectional design entails the collection of data from a population at a single point in time or over a short period, in order to obtain a body of quantifiable data in connection with many different variables, which are then examined to detect patterns of association (Bryman, 2008). It is often called a survey design. In this case, quantitative data came from the 2010 MDHS survey. Cross-sectional studies are descriptive in nature and are used to describe characteristics of a population, their behavior or a phenomenon being studied. They are often used to explore relationships between variables and may also be used to support inferences of cause and effect (Bryman, 2008).

Cross sectional studies can have case study elements. A case study design involves an up-close, detailed and in-depth analysis of a single case, as well as its related contextual conditions (Bryman, 2008). For example, in this study, Lilongwe district is used as a "case" study to examine utilisation of maternal health services in Malawi. The benefits of a case study research method is included that it allows a researcher to investigate a topic in far more detail and greater depth using a single case or small number of participants with the aim of 'averaging', than would have been the case with other experimental designs (McLeod, 2008). A major criticism of case studies is that they provide very little basis for scientific generalization since they use a small number of subjects (Zainal, 2007; McLeod, 2008).

The word 'generalizability' is defined as "the degree to which research findings can be generalized from the study sample to the entire population" (Polit and Hungler, 1991, p. 645). It is sometimes referred to as 'transferability' and 'external validity' (Tashakkori and Teddlie 2003). Some authors advocate that generalizability of case studies can be achieved through working with randomized samples and triangulation whereby several research methodologies can be combined within a single study to come up with more general results, as it is the case in mixed methods research design such as this (Onwuegbuzie and Leech 2003; Kemper et al., 2003). Mays and Pope (2000) also explain that a certain degree of generalizability can be achieved by ensuring that the dissertation or research report is sufficiently detailed for the reader to be able to judge whether or not the findings apply in similar settings. Most importantly, the author should ensure that such a detailed description should reveal the social relations that underpin it (Wainwright 1997). In addition, Schofield (1993) pointed out that generalizability may be enhanced by choosing a research setting on the basis of typicality and by providing thick description of the setting to provide readers with enough detail for them to have a better understanding of the context within which the study took place and to assess the applicability of the findings in other similar situations. A detailed description of Lilongwe, the case study site is provided in section 5.3 of this chapter.

Cross-sectional studies are lauded for their ability to allow comparison of multiple variables, besides that they are generally quick, cheap and easy to conduct (Mann, 2003). And since there is no follow up, less resources are required than would have been the case with longitudinal studies. However, cross sectional studies are criticized for their inability to provide definite

information about cause and effect relationship and explanation for their findings (Mann, 2003). This justifies why a qualitative study design was employed to provide an in-depth understanding of the findings of this study. A cross-sectional design with a case study element was therefore chosen for this study as it provided the opportunity to conduct an in-depth examination of utilisation of maternal health services at one specific point in time using a single "case" of Lilongwe. Additionally, this design provided the opportunity to conduct multivariate analyses to determine factors associated with use of maternal health services, thereby giving a much richer and realistic picture than would have been the case if looking only at a single variable and it provided a powerful test of significance compared to univariate techniques (Shiker, 2012).

A review of the literature shows that rrecently, there has been an increased interest in mixed methods research in the fields of social and health services research (O'Cathain et al., 2007). Several researchers argue that quantitative and qualitative research should no longer be viewed as being founded on two opposing philosophical paradigms, but rather that the two approaches can be integrated in a single study for it to benefit from their respective strengths (O'Cathain et al., 2007; Barbour, 1999; Verhoef and Casebee ,1997). Researchers have often cited several justifications for using mixed methods research including that; they afford comprehensiveness in understanding phenomenon of interest; they are useful in understanding the complexity of health and health care systems, they allow complementarity, as well as that they increase confidence in findings (O'Cathain et al., 2007, Pluye et al., 2009; Sale and Brazil, 2002). Thus a mixed methods approach has the potential to generate rich and high quality data.

Despite several benefits and strengths that mixed methods research designs have, the ability to combine qualitative and quantitative research methods in a single study is often thwarted (Casebeer and Verhoef, 1997). This is due to the fact that qualitative and quantitative research is often based on different paradigmatic assumptions which may be seen as mutually and inevitably irreconcilable (Sale and Brazil, 2002; Guba and Lincoln, 2005; Casebeer and Verhoef, 1997). However, Venkatesh et al (2013) encourages researchers to engage in mixed methods research in order for them to provide rich insights into various phenomena of interest that cannot be fully understood using only one single research method. Some researchers have expressed concern that combining quantitative and qualitative research methods in one study may be more complex, costly, complicated and a difficult task to perform than using a single method (Johnson et al., 2007; Lowenthal and Leech, 2009). Nevertheless, the decision to employ a mixed method approach in this study was based on the researcher's careful consideration of the fact that each method is suitable to meet the specific objectives and purpose of this research. This is in line with what Venkatesh and his colleagues (2013) advocate that the decision to conduct mixed methods research should hinge on the research question, purpose and/or context. This research approach acknowledges the fact that every method has positive attributes, limitations and biases; and that integration of different methods in a singular study increases the likelihood of obtaining richer, generalised, more meaningful and useful findings (Johnson et al., 2007).

5.3 Choice and Description of Study Setting

The study was conducted in Lilongwe District in Malawi. The study also collected some national level data from key informants on implementation of the EHP in Malawi. Lilongwe was chosen as the case study to represent Malawi because its health system context and key indicators for maternal health are similar to the national context and indicators presented in section chapter 1 and 2. Besides that Lilongwe was also chosen because it is the capital city of Malawi. It is the largest and fastest urbanizing cities of Malawi with diverse mix of cultures, ethnicities and health care practices. Thus it represents a snapshot of the situation in the country. Additionally, Lilongwe was chosen as a case study for convenience purpose since it is near the researcher and due to limited resources.

Selection of the study areas involved two steps. Firstly, based on geographical location. Health centers were selected as study sites on basis of whether they are geographically located in urban or rural area. It is however worth noting that in Malawi there is currently no standard definition for urban and rural health centers. Definition of urban and rural health centers in Malawi is by virtue of geographical location. United Nations (2013) reports that there is no international standard for defining urban and rural areas and standards may vary even within an individual country. Secondly, a simple random selection was used that involved the following steps: names of all potential study areas were written on pieces of paper; the pieces of paper were concealed and placed in two small bags according to type of health center; and finally two pieces of papers were picked from each bag. These areas include: Kawale and Area 25 (urban health centers) and Chadza and Matapila (rural health centers). The study areas also included a CHAM health center (Mbwatalika) and TBA facility (Nayere) in Lilongwe. Selection of these study areas was done purposively in consultation with the District Health Office. Disaggregated information to capture health and social indicators in the different study areas, within Lilongwe city is currently scanty and unavailable in some cases. Due to this reason an overview of some key health and socio-demographic indicators are presented in this section for the whole Lilongwe as an overall context of the case study.

Lilongwe is the capital city and one of four major cities in Malawi. It is located in the Central Region of Malawi (See map 1 below). Lilongwe has a total land area is 6159 Square Kilometers representing 6.5 % of Malawi's total land area. According to 2008 Population and Housing Census, the largest population in the country was enumerated in Lilongwe District, which registered 674,448 (19.3%) of the national population (NSO, 2008). As the capital, Lilongwe is the fastest growing city in the country with the annual growth rate of 4.3%; by 2020 it is projected to have over 1.3 million residents, representing a doubling of the population within 12 years. The average population density in Lilongwe is 1,479 per square kilometer (NSO, 2008). The age structure of Lilongwe is relatively young similar to national context. However, in the urban and rural areas different population age-groups predominate: under 15 years old (46.5%) in Lilongwe rural and 15-64 years old (57.7%) in Lilongwe city (NSO, 2009).

According to UN_HABITAT report (2011, pg. 14), "Lilongwe was mainly an administrative center until 2005 when many head offices of institutions located in Blantyre moved to the city. This movement attracted economic activities to the town which resulted in increased employment opportunities and population growth. Finance, banking, retail trade, construction, transport, public administration, tourism, and tobacco manufacturing are the main economic activities in Lilongwe". About 75% of the labour force in Lilongwe is employed (NSO, 2008). Lilongwe follows the national trend regarding agricultural activities whereby the vast majority of the rural population relies on subsistence agriculture, with small scale farmers growing maize and tobacco. Other important crops grown in the district include groundnuts, beans, soya beans, sweet potatoes and vegetables. Livestock raised include cattle, goats, pigs and chickens.

Ethnically Lilongwe district is diverse, with the Chewa as the dominant ethnic group. Other ethnic groups include Tumbuka, Yao, Ngoni and others. Traditionally, the Chewa tribe was described as a matrilineal society, but today they include influences of both matrilineal and patrilineal leadership. Christianity is the predominant religion in the district and Muslims are the next largest religious group. There is also a substantial number of people who worship other religions and without religions in the District.

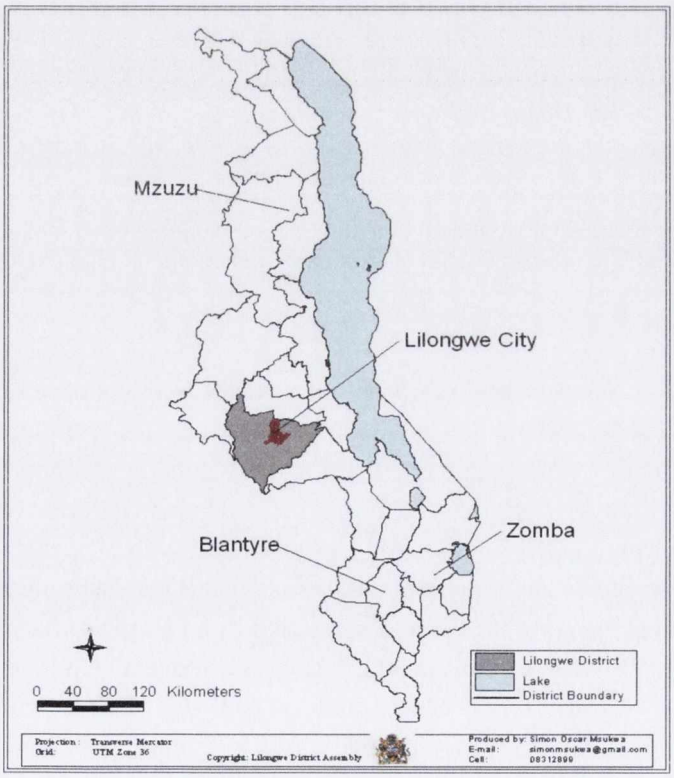


Figure 5.1: Map on Location of Lilongwe District

The organization of health services in Lilongwe is similar to the national context (refer section 2.3.2). There are four major hospitals (one government central/referral hospital; one public secondary level hospital; two secondary level facilities under the CHAM); 143 health centres, clinics and dispensaries run by the government, private sector and CHAM offering primary level health care. The main challenges facing the health sector in Lilongwe are similar to the national context. These include high cases of malaria and HIV/AIDS prevalence rates, high shortage of equipment and health facilities, shortage of qualified medical staff in the hospitals and clinics, limited capacity, and poor sanitation and hygiene (UN-HABITAT, 2011). The maternal mortality rate in the Central Region of Malawi where Lilongwe is located was estimated at 678 per 100,000 live births almost similar to that of national level – 675 per 100,000 live births (NSO, 2006). Table 5.1 below presents selected maternal health indicators for Lilongwe and national level for comparison in order to demonstrate representativeness of the case study area to the broader national context.

Table 5.1: Selected Maternal Health Indicators for Lilongwe and Malawi

Maternal Health Indicators	National	Lilongwe
Fertility rate per 1,000 women	5.7	5.4
Maternal mortality ratio per 100,000 live births	675	678
Antenatal care coverage (%)	95	91
Tetanus Toxoid Vaccine coverage (%)	90	90
Delivered by a skilled attendant (%)	71	68
Institutional deliveries (%)	77	77
Contraceptive prevalence rate (%)	46	48
HIV prevalence rate among women (%)	11	13

Source: 2010 MDHS (NSO and ICF Macro, 2011); 2006 Multiple Indicator Cluster Survey (NSO, 2006)

Table 5.1 above shows that maternal mortality ratio and HIV prevalence rate among women age 15-49 in Lilongwe are slightly higher than national averages, reflecting a high burden of maternal morbidity and mortality. The results of a study done by Colbourn et al., (2013), in the Central Region of Malawi including Lilongwe district indicate that maternal mortality at regional, district and national levels is strongly associated with a number of demographic and socioeconomic variables such as female literacy, age at first marriage, family planning, poverty, and high HIV prevalence among other factors. It is worth mentioning that Lilongwe is one of the priority districts for RMNCH (Reproductive Maternal Neonatal Child Health) Trust Fund in Malawi. The RMNCH Trust Fund, established in 2013 by UNICEF, UNFPA and WHO is designed to finance high impact, priority interventions that selected eight countries including Malawi to enable them to get more support for their RMNCH-related plans and accelerate the reduction of maternal and child deaths (United Nations, 2015). RMNCH comprises of funds from the Government of Norway and DFID.

Table 5.2 below presents characteristics of the facilities that were selected as study sites. It should however be noted that there is paucity of comprehensive disaggregated information for these specific study settings. The information presented in table 5.2 came from Lilongwe District Health Office as presented in their 2013-2016 Health Strategic Plan.

Table 5.2: Characteristics of Facilities Selected as Study Sites

Name of Health Center	Ownership	Geographical Location	Distance to referral Hospital km/time by vehicle	Population by Health Facility	Number of Health Workers		
					Nurses	Nurse/ Midwife	Clinical Officer/MA
Kawale	Public	Urban	8km	249210	1	14	4
Area 25	Public	Urban	25km	50839	2	23	7
Chadza	Public	Rural	30km	53402	0	1	1
Matapila	Public	Rural	42.6km	28926	0	3	2
Mbwatalika	CHAM	Rural	25km	20026		2	1
Nayere	TBA Facility	Rural	18km	-	n/a	n/a	n/a

Source: Lilongwe District Health Office (2014)

5.4 Eligibility Criteria

The inclusion criteria for participation in the in-depth interviews and FGDs entailed the following: women within the child bearing age range of 18-49 years, both *"users"* and *"non-users"* of maternal health services (antenatal, delivery and postnatal) and those residing in Lilongwe district and the catchment areas within the selected study areas i.e. Kawale and Area 25 (urban public health centers), Chadza and Matapila (rural public health centers), Mbwatalika (CHAM rural health center) Nayere TBA facility (Nayere). In this study *"users"* were defined as those women who had visited modern health care facilities at least once in the past 5 years to use maternal health services, whilst *"non-users* refers to those women who had not visited modern health facility in the past 5 years to use maternal health services. Eligibility to participate in health workers interviews entailed working as a provider of maternal health care services at health center level. On the other hand, the criteria used to select participants for the Key Informant Interviews (KIIs) was based on current involvement of the participant in issues of maternal health (policy making and planning, district health management, health care service delivery at health center and community levels).

5.5 Sample Size and Sampling

Sample size and sampling procedure for quantitative study

Quantitative data for this study came from the 2010 MDHS. The MDHS data was collected from a nationally representative sample of 23,020 women aged 15-49. This study analyzed quantitative data from 1126 women aged 15-49 from Lilongwe district. The sampling frame used in the 2010 MDHS was based on data for EAs of the 2008 Malawi Population and Housing Census (NSO and ICF Macro, 2011). The sampling frame was stratified into the 27 districts in the country. Within each of the districts the sampling frame was further stratified into EAs (clusters) by urban and rural areas. In this survey, the definition for urban and rural areas was based on the classification in the 2008 Malawi Population and Housing Census (NSO and ICF Macro, 2011). The sampling frame consisted of 9,145 EAs throughout the nation, whereby out of these 1,076 EAs were urban and 8,069 were rural. Each EA has an average of 249 households. According to NSO and ICF Macro (2011), sample allocation plays an important role in sample design as it relates to survey precision at the national level.

The desired sample size for 2010 MDHS at national level was very large (at least 27,345 household). However, in order to achieve precision both at national and domain level (27 study domains), the sample allocation was designed proportionally to the domain's population size. It is argued that in order ensure comparability across the study domains, the sample size of each district should be the same (NSO and ICF Macro, 2011). As such the initial plan for the sample design included a standard sample size of 1,000 households per district. However, this plan was revised in order to allow for a larger sample size in the two districts (Lilongwe and Blantyre) which have the major urban centers in the country. As such these two districts was increased to 1,300 households and the target sample size was decreased from 1,000 households to 950 in the eight smallest districts to ensure survey precision and achieve accurate representation of each domain (NSO and ICF Macro, 2011).

The 2010 MDHS sample was selected using a stratified, two-stage cluster design, with EAs being the sampling units for the first stage (NSO and ICF Macro, 2011). The survey sample included 849 clusters in both urban and rural areas which were selected with a probability proportional to the size of each EA (number of households contained). After this selection and before data collection a complete listing of households was done in each of the MDHS clusters from May to June 2009. The list of households served as a sampling frame for selection of households. Households comprised the second stage of sampling. A fixed number of 20 households were selected in urban primary sampling units (PSU) and 35 households were selected in rural PSU. In the selected households, a total of 23,748 women age 15-49 were interviewed in the 2010 MDHS survey. Among these, 1126 women were from Lilongwe, thus the sample size for this study. Therefore based on this, the sample size for Lilongwe is considered as adequate to answer the research questions.

A power value was applied to achieve a satisfactory sample size (NSO and ICF Macro, 2011). Each sample was properly weighted to ensure representativeness for their corresponding domains. Thus, in this case, each individual sample is a representative for its domain and thus the overall sample for the whole country is representative for the country as a whole. "Therefore, the 2010 MDHS sample is a representative for the 27 study domains (districts), for urban and rural areas, and for the country as a whole" (NSO and ICF Macro, p. 412, 2011). The results for this study can therefore be generalized and inferred at national level. As indicated earlier in this study Lilongwe was chosen as the case study to represent Malawi because the context of the health system and key indicators for maternal health are same as the national context and the characteristics of the sample is representative of Malawi as a whole.

Sample size and selection procedure of participants for qualitative study

In qualitative study designs samples are generally much smaller than those used in quantitative studies (Mason, 2010). This is because qualitative research is concerned with meaning and not making generalized hypothesis statements (Crouch and McKenzie, 2006). In other words, the aim of qualitative studies is not to be a representative of the population. Determination of sample size in qualitative inquiries is usually not straightforward as there are no explicit rules to guide determination of sample sizes in qualitative research. However, Mason (2010) elucidated that, the factors that can influence qualitative sample size include the scope of the study, the nature of topic; heterogeneity of the population; the number of selection criteria; multiple samples within one study; types of data collection methods used; saturation; and the budget and resources available. Furthermore, other researchers have tried to suggest some kind of guidelines for determining qualitative sample sizes. For example Charmaz (2006, p.114) suggests that "25 participants are adequate for smaller projects" while according to Ritchie et al. (2003, p.84) qualitative samples often "lie under 50". Further to this, Green and Thorogood (2009, p.120) reported that "the experience of most qualitative researchers is that in interview studies little that is 'new' comes out of transcripts after you have interviewed 20 or so people". A study done by Thomson (2004) in which he conducted a review of fifty qualitative research articles found that the majority — over a third (34%) of the qualitative studies used samples between Creswell's (1998, p.128) suggested range of 20 and 30.

Nonetheless, other researchers have strongly advocated that determination of sample size in qualitative research studies should generally follow the concept of saturation (Glasser and Strauss, 1967; Saumure and Given, 2008). Data saturation manifests when information occurs so repeatedly that the researcher can anticipate it and whereby the collection of new data does not shed any further light on the issue under investigation and has no additional interpretive worth (Sandelowski 2008; Saumure and Given, 2008; Mason, 2010). Green and Thorogood (2009) argue that while saturation is a convincing concept, it has a number of practical weaknesses. They therefore suggested that researchers should not only engage in open-ended research that saturation requires, but rather should also consider other factors that determine qualitative

sample sizes and should give a clearly detailed rationale and strategy. In this study therefore, data saturation as well as Creswell's suggested sample range were used to guide the ultimate sample size for the qualitative inquiries.

A total of 30 in-depth interviews (IDIs) and 8 Focus Group Discussions (FGDs) with women were conducted in the five selected urban and rural health centers (Kawale, Area 25, Chadza, Matapila and Mbwatalika) and at a TBA facility (Nayere) in Lilongwe. Among these 30 women IDIs, 25 IDIs involved *"users"* of maternal health services, whilst 5 IDIs involved *"non-users"* of maternal health services. Each facility had 5 women and each FGD involved 8-12 participants and collectively 76 women participated in the FGDs. A range of 6 to 12 participants is recommended as a best size for FGDs to achieve effective discussion (Bowling, 2009). A total of 15 participants were involved in Key Informant Interviews (including policy makers, health managers, health care providers and a TBA). Thus in total the whole qualitative sample constituted 121 participants. Table 5.3 below presents the qualitative sampling unit.

Table 5.3: Sampling Unit of the Qualitative Study Design

Participants	Sampling Unit	Sample Size
IDIs and FGDs participants (women)	Kawale H/C	5 IDIs and 2 FGDs (FGD 1: N=8; FGD: N=10)
	Area 25 H/C	5 IDIs and 1 FGD (N=9)
	Chadza H/C	5 IDIs and 2 FGDs (FGD 1: N=6; FGD 2: N=12
	Matapila H/C	5 IDIs and 1 FGD (N= 11)
	Mbwatalika H/C	5 IDIs and 1 FGDs (N=12)
	Nayere TBA facility	5 IDIs and1 FGDs (N=8)
Key Informants Interview (KII) participants	Ministry of Health Headquarters	3 (2 senior officers at Department of Policy and Planning, 1 Chairperson of EHP technical working group)
	Reproductive Health Unit (RHU), MoH	1 (Director for RHU)
	District Health Office	1 (a senior District Health Management Team member)
	Health Centers	9 (4 health workers and 5 In-charges of health centers)
	Nayere TBA facility	1 (Traditional Birth attendant)

Participants for the qualitative inquiries were selected using nonprobability sampling techniques. Non-probability sampling is a technique commonly used in qualitative research whereby researchers use their judgment to select a sample and participants are chosen because they meet pre-established criteria (Saumure and Given, 2008). In particular, participants for the IDIs and FGDs in this study were selected using convenience sampling technique. "In convenience sampling researcher participants are selected because they are accessible and therefore relatively easy for the researcher to recruit" (Saumure and Given, 2008.pg 562). The advantages of

convenience samples are that they are usually small; data is less expensive and takes less time to collect. The major weakness of convenience sampling technique is related to issues of bias whereby the researcher may probably show bias in selecting study participants and the transferability of data and study findings to other population groups (Saumure and Given, 2008). The selection procedure using convenience sampling technique therefore entailed visiting the six targeted facilities and conveniently selecting eligible study participants who were available at the time of recruitment. We started first by collecting data from women "users" of maternal health care services in the five health centers before going to a TBA facility to conduct qualitative inquiries with "non-users".

Permission was sought from the Gatekeepers (Health Center In-charges) before visiting each health facility through both written and verbal communication to conduct the study at their facilities. Gatekeepers play a crucial role in gaining access to participants in qualitative research. Gatekeepers are individuals who can be used as an entry point to a specific community or organization (Saumure and Given, 2008). They have "inside" information that can help the researcher in determining who are the suitable participants to access in the given community or organization. Gatekeepers can also help the researcher to access the community through introductions and by establishing a relaxed or appropriate environment for the research process (Saumure and Given, 2008). Communication to gate keepers was given a week in advance before our visit to the health facility. Fortunately, permission was granted in all the selected five health centers. Upon arrival at each health facility the study team met the In-charges and/or health care workers (gate keepers) at ANC clinics, maternity and postnatal wards and informed them about the study objectives and eligibility criteria for selection of study participants. Then the health care staff together with the research team informed the women about the study, eligibility criteria and recruited those who were eligible and had consented to participate in the study. It should however be acknowledged that this selection approach has a limitation due to the power dynamics between the gatekeepers (health workers) and the women whereby some who participated in this study might have possibly been influenced by the gatekeepers since patients usually have less authority and are considered as being 'owned' by health care providers.

Access to women in the health facilities was done at the "point of exit". Selection of women "users" participants at each of the five health centers included those who had received ANC services; those who delivered a baby; as well as those who were discharged from the health facility after receiving postnatal care. Since clients in the Postnatal ward normally have short hospital stays (2 days on average); a day or two days before conducting IDIs and FGDs, members of the research team met those who had expressed interest to participate and screened them for their eligibility to participate in the study. During this time, the clients were also given the study information sheet (for those who can read) or were given information about the study verbally (for those who cannot read) to reflect on before giving their informed consent. Those who consented were recruited in the study.

On the other hand selection of women "non-users" who participated in this study included clients who go to a TBA facility and do not use maternal health services offered at modern health facilities. These women were accessed at a TBA facility. Permission to conduct the study at this facility was sought from the TBA (gate keeper). The TBA was informed about the study objectives and eligibility criteria. Thereafter, the TBA together with the research team informed the women about the study and invited those who were eligible and willing to participate in the study. The women "non-users" who were interested to participate in the study were screened by the research team together with the TBA to make sure that they met the eligibility criteria for the study. After identifying eligible clients, they were informed about the study and their consent was sought first before recruiting them in the study. In total 5.4 women "non-users" were recruited to participate in the IDIs and 1 FGD (N=8) was conducted at the TBA facility.

Table 5.4: Demographic Characteristics of IDI and FGD Participants

Demographic Characteristics	Number of Participants for IDIs and FGDs												
	Kawale H/C		Area 25 H/C		Chadza H/C		Matapila H/C		Mbwatalika H/C		TBA Facility		Total
	IDI	FGD	IDI	FGD	IDI	FGD	IDI	FGD	IDI	FGD	IDI	FGD	
Age													
15-19	1	2	3	3	2	5	1	3	1	1	0	2	24
20-34	3	11	2	4	2	10	3	6	2	7	2	3	55
35-49	1	5	0	2	1	3	1	2	2	4	3	3	27
Marital status													
Married	5	16	4	7	5	17	4	11	5	11	5	8	98
Not married	0	2	1	2	0	1	1	0	0	1	0	0	8
Residence													
Urban	5	18	5	9	n/a	n/a	n/a	n/a	n/a	n/a	1	0	38
Rural	n/a	n/a	n/a	n/a	5	18	5	11	5	12	4	8	68
Education													
No education	0	0	1	0	2	13	4	6	3	7	3	7	46
Primary	1	3	0	2	3	4	1	4	2	4	1	1	26
Secondary and above	4	15	4	7	0	1	0	1	0	1	1	0	34
Work status													
Not working	1	5	0	2	4	15	3	9	5	10	4	8	66
Working	4	13	5	7	1	3	2	2	0	2	1	0	40
Ethnicity													
Chewa	3	8	2	3	5	15	5	8	4	7	4	5	69
Tumbuka	1	3	1	2	0	0	0	0	0	1	0	0	8
Lomwe	0	1	0	0	0	1	0	0	0	1	0	1	4
Yao	1	2	1	2	0	1	0	2	0	2	1	0	12
Ngoni	0	2	1	1	0	0	0	1	1	1	0	1	8
Other	0	2	0	1	0	1	0	0	0	0	0	1	5
Religion													
Catholic	2	6	3	4	1	7	1	3	2	5	1	2	37
C.C.A.P	2	3	1	1	1	3	2	3	2	3	2	2	25
SDA	0	2	0	1	0	1	0	1	0	1	0	0	6
Muslim	1	5	1	2	0	2	1	1	0	2	0	1	16
Other/no religion	0	2	0	1	3	5	1	3	1	1	2	3	22

To ensure homogeneity, participants for the FGDs in this study were selected based on consideration that they shared a similar perspective toward the discussion topic. This was done in order to create homogenous groups with participants that would feel comfortable talking to each other about the research topic and lively participate in the discussions. Saumure and Given (2008, pg 353) explained that "homogeneity is based on what the participants share with regard to the research topic rather than simple similarity in demographic characteristics". They further explained that the value of homogeneity in group composition is that it encourages the

participants to relate to the topic; to share their thoughts and feelings about the research topic; and to compare where they each stand with regard to the topic. Saumure and Given (2008) argued that without giving much attention to participants point of views when determining the group composition for FGD, some participants may not feel comfortable to freely participate in the discussion. Therefore in this study group composition was considered as crucial in the designing of FGDs to ensure homogeneity and collection of rich data.

Participants for Key Informant Interviews (KIIs) were selected using a mix of purposive and snowball sampling techniques. Purposive sampling is a process of selecting a sample based on experience or knowledge of the group to be sampled (Jacobs, 2011). Snowball sampling involves asking key informants to identify and nominate individuals to be interviewed in the study, and then asking these cases to identify further cases and so on and so forth (Walt and Gilson, 1994). Saumure and Given (2008) explained that a typical process of a snowball sampling begins with interviewing an "initial set" of research participants who serve as informants not only for the research topic but also about other potential participants and assists in recruiting additional participants into the study. The advantage of using this sampling approach is that it is convenient, inexpensive and less time consuming (Jacobs, 2011). Its main disadvantages include the potential for bias and its inability to make generalization concerning total population (Jacobs, 2011; Singh, 2006).

Participants for KIIs were identified through consultation with a key informant at Ministry of Health who provided a list of 10 eligible key informants who are involved in maternal health. Using the list, the researcher then contacted the identified key informants and explained to them about the study. Those who were interested and willing to participate in the study were given the information sheet seven days prior to participating in the study. Before participating in the study each participant was asked to sign a consent form and those who consented were recruited. The researcher conducted additional 5 KIIs until when saturation point was reached. Key informants were asked to identify and nominate further cases to be interviewed in this study. In total 15 KIIs were interviewed as per eligibility criteria— involvement of the participant in issues of maternal health (policy making and planning, district health management, health care service delivery at health center and community levels).

5.4 Data Collection

5.4.1. Sources of Data

This study used both primary and secondary data. Primary data refers to data that is collected directly from individuals with first-hand information (Sweeney, 1991). Primary data is derived from sources such as surveys, experiments or direct observations and transcribed data from qualitative inquiries (Saumure and Given, 2008). In this study primary data was collected through IDIs and FGDs. The advantages of primary data include that it addresses specific

research issues, data interpretation is better and it ensures real-time data. However, its disadvantages include that it expensive and time consuming. On the other hand, secondary data refers to published data and information that has already been collected in the past by other parties and is readily available from other sources (Sweeney, 1991). The secondary data sources for this study include the MDHS dataset, official government documents, Ministry of Health reports, research publications/journals and health facility data. The process of conducting secondary data entail considerable savings in time, money and labour compared to primary data collection (Saumure and Given, 2008). Secondary data is usually inexpensive, easily accessible and immediately available. Conducting research using secondary data can also reduce intrusions into research participants' lives because data collected in a single research study from participant could inform a broad range of research projects, thereby maximizing potential societal benefits and scholarly contributions (Saumure and Given, 2008).

5.4.2 Research Variables

Research variables are described as the attitudes and attributes of the subjects examined in a study (Saunders et al., 2000). Furthermore, attitudes refer to a record of how respondents feel about something, whilst attributes refer to the data about the respondents' characteristics, such as age, gender, marital status, education, occupation and income. Research variables are classified in two categories namely dependent and independent variables. Dependent variables are the responses, behaviors, or outcomes that the researcher wishes to predict or explain, whilst on the other hand independent variables refer to factors which help to explain changes in the dependent variables (Walsham, 1995). The independent variables in this study were age, marital status, residence (urban/rural), educational status, work status, economic status (household wealth), ethnicity and religion. On the other hand the dependent variables were utilization of EHP services, particularly ANC, delivery and postnatal care services.

5.4.3 Data Collection Instruments and Methods

Three questionnaires were used for the 2010 MDHS: the Household Questionnaire, Woman's Questionnaire, and Man's Questionnaire. These questionnaires were adapted to reflect the population and health issues relevant to Malawi. The quantitative component of this study used the woman's questionnaire and it mainly focused on a number of key questions asked to women about use of antenatal, delivery and postnatal care services for the most recent live birth within the five years preceding the survey. In particular, women were asked whether they received antenatal care, delivery care and postnatal care from a skilled attendant (i.e. doctor, clinical officer, nurse or midwife) during the most recent birth in the five years preceding the survey.

For qualitative inquiries, the researcher used interview guides for IDI, FGD and KII as data collection tools (see attached appendices). Open ended questions were used in order to provide

the researcher with the opportunity to probe answers where the interviewee(s) have to clarify or build their answer, hence have the capacity to obtain more information on issues of interest.

IDIs with Women Users and Non-Users

Prior to undertaking each IDI, informed consent was obtained for voluntary participation from the participants. The IDIs with women *"users"* and *"non-users"* were done in order to get a thorough understanding of the health seeking behaviors of individual participants and the factors the influence utilization of maternal health services. The IDIs were especially focused on obtaining information about the participants' knowledge, attitude and practice pertaining to maternal health care. The IDI guide had a total of 5 key questions with probes. The questions were related to; 1) women's experience of using maternal health care; 2) their perceptions of different providers of maternal health care; 3) barriers to using maternal health services; 4) their views on equity of access to health care; 5) suggestions on how to address challenges affecting women in accessing maternal health services. Each individual interview took 40-60 minutes to be completed. All interviews were recorded and transcribed. Notes were also taken during individual interviews.

FGDs with Women Users and Non-Users

The study conducted FGDs to collect information about factors that influence women's health seeking behavior and utilization of maternal health services particularly at community level. FGD is a qualitative research technique for collecting data in which a purposively selected set of participants gather to discuss issues and concerns based on a list of key themes drawn up by the researcher (Kumar, 1987). The purpose of the FGDs is to gain in-depth understanding about a specific topic by interviewing a group of individuals directly affected by the issue. This technique offers an opportunity for participants to interact, and allows the researcher to probe and obtain more information relating to the topic under discussion. However, the main disadvantage of this method is that it has a potential for bias by the researcher or facilitator, who has the liberty to select what information to transcribe or not (Kumar, 1987). In addition, vocal participants often tend to dominate more than others in discussions, thereby preventing other participants from sharing their views. To overcome this challenge, the research team was trained on how to conduct successful FGD interviews. An FGD guide (see Appendix 7) was used to facilitate data collection in each FGDs. Informed consent was obtained from each participant after explaining to them about the study. Duration for each FDG ranged from 40-60 minutes

Key Informant Interviews

Key informant interviews were conducted by the PhD researcher at their respective work places. An interview guide (see appendix 9) was use to facilitate data collection from policy makers, managers, health care providers and a TBA in order to get their opinion on different issues

pertaining to delivery and utilization of maternal health services in Malawi. In addition, key informants were also asked to give their views on how the EHP is being implemented in Malawi and to give suggestions on ways to improve implementation of EHP services in the country. Informed consent was obtained from each participant after reading the participant information leaflet (see appendix 3) and being explained to about the study. Each interview ranged between 40 and 60 minutes. All interviews were audio recorded and note taking was done by an assistant in the course of the interview.

5.5 Validity and Reliability of the Study

Validity and reliability are important aspects which must be addressed in all research studies to determine rigor and quality of the research process. The accuracy, credibility, dependability and comparativeness of the study results depend on it. Guba and Lincoln (1981) stated that all research must have "truth value", "applicability", "consistency", and "neutrality" in order to be considered worthwhile. They noted that, the criteria to reach the goal of trustworthiness or rigor include validity and reliability. Validity refers to the degree to which a study actually measures what it is supposed to measure (Saumure and Given, 2008). Reliability refers to the consistency of data collection instruments in producing similar results in repeated investigations (Saumure and Given, 2008). In other words, reliability is refers to standardization of data collection instruments. To address validity and reliability, various approaches were used in this study including expert review of data collection instruments, training of data collectors, pilot study, supervision during data collection, triangulation of information among different sources of data and member checks.

Expert Review of Data Collection Instruments

Expert review, also known as peer review is a method that helps to ensure quality of the research process and outcomes by engaging independent and qualified experts to provide critical and consultative evaluation of the different aspects of a research project (Saumure and Given, 2008). After developing data collection tools for qualitative inquiries and before conducting a pilot study, expert review was sought from research supervisors, fellow PhD researchers and others with expertise and knowledge in maternal health to render decisions of quality and to offer suggestions for improvement on the data collection instruments. This was done through regular meetings with supervisors and consultative meetings with other researchers and experts in the area. The PhD researcher also had opportunities for scrutiny of the research project by PhD colleagues, peers and academics where feedback was offered to the researcher during different research presentation forums (e.g. during PhD research seminars and at conferences) that were made over the duration of the PhD research project. The expert review process was intended to determine if the questions were clear and relevant to the study. Revisions on the data instruments were made accordingly based on expert review feedback. This helped to ensure that the tools measured what they were supposed to measure.

Recruitment and Training of Data Collectors

Credibility of the researcher is especially important in qualitative research. Selection of individuals to make up the research team is crucial in ensuring quality of the research process and outcome. Saumure and Given (2008) consider the researcher as the most important instrument in the collection and analysis of data. They explained further that both the researcher and research participants are seen as present and meaning is constructed and interpreted in the interaction between these two positionalities. They further argue that different qualitative researchers may look for, see, experience, and interpret data differently based on their experiences, skills, interests etc. It is therefore important when developing a research team to select individuals with relevant knowledge, skills and experience to the study phenomenon to ensure collection of rich, meaningful and quality data.

The research team for this study included the PhD researcher (Lead) and 2 data collectors: a Registered Nurse Midwife (moderator/facilitator) from a central hospital and a university Graduate (note taker/recorder). Selection of these two research assistants was based on a number of considerations; having— knowledge in maternal health, previous experience in qualitative research, good interpersonal and communication skills (both verbal and written). These set of skills and knowledge about the research topic were deemed important especially because in qualitative inquiries researchers seek to understand meaning and as such they are engaged in a continuous intellectual process that requires reflection on research questions and managing relationship dynamics. Saumure and Given (2008) argue that qualitative researchers should embrace the notion of reflexivity— the idea that researchers backgrounds, interests, skills, and biases play unique roles in framing of research questions, data collection, analysis, and interpretation of data, as well as ensuring effective and meaningful interaction with participants. The two data collectors were especially helpful in assisting to conduct IDIs and FGDs with women, as well as data transcription. All KIIs were conducted by the PhD researcher herself. The research assistants were paid a compensation fee for their time. Transport for field visits was provided to them.

To ensure quality of data, the two data collectors were trained by the PhD researcher. The training was conducted in one day prior to undertaking the pilot study. The training covered various areas including: objectives of the research, eligibility criteria for study participants, orientation to data collection tools, interviewing skills (including probing), how to conduct FGDs, obtaining informed consent, note taking, voice recording, data transcription and data management. The training also included practical sessions to give the data collectors a chance to practice asking using each other questions using the data collection tools before going to the field in order to familiarize themselves with the tools and to perfect their interviewing skills.

Pilot Study and supervision during data collection

Data collection instruments for the qualitative inquiries were pilot tested at Mitundu Community Hospital to ensure reliability and consistency. Data was collected from 5 women and 2 health workers. This pre-testing study was very helpful in assisting the PhD researcher to identify problems in the design of the questions (e.g. flow, unclear, ambiguous or hard questions) and determining how long it took to conduct each IDI and FGD. Based on the experience and findings of the pilot study revisions were made on the data collection tools. The revisions included rephrasing and deleting some questions, as well as re-organizing the flow of questions. Supervision was done by the PhD researcher during the pilot study and main data collection to ensure adherence to ethical requirements and quality data. All field notes and voice recording were checked on daily basis at the end of each day. Transcripts were also checked for quality, especially completeness and consistency of the data.

Triangulation

Triangulation is an important aspect of research of any paradigm. Triangulation refers the use of different methods in one research study. It involves comparing data from different methods and comparing perspectives of people from different points of view. Lincoln and Guba (1985) argued that triangulation helps researchers to achieve validity or credibility by ensuring that their study measures or tests what is actually intended. They further argued that the use of different methods in one single study compensates for their individual limitations and exploits their respective benefits. Furthermore, a mixed method design contributes to research rigor and credibility by enabling the researcher to understand fully the lived experience of the people or context being studied (Saumure and Given, 2008). In this study triangulation was done by employing both qualitative and quantitative research designs. In addition, in the qualitative studies, triangulation of methods was done through use of IDIs, FGDs and KIIs. Another form of triangulation also involved the use of a wide range of key informants. In this case individual viewpoints and experiences were verified against others and, ultimately, a rich picture of the main issues under scrutiny was constructed based on the contributions of a range of people. In addition, data was collected from participants from both users of maternal services and the health professionals who deliver the services to get a complete picture of the study phenomenon.

Member Check

The member check also referred to as respondent validation, is a strategy most often used to improve validity of qualitative research findings (Saumure and Given, 2008). Lincoln and Guba (1985) recommend member check as one of the techniques that can help to enhance a study's credibility, accuracy and validity. Member checking involves a process of validation whereby research participants are asked to evaluate whether researchers have accurately captured their experiences and have fully understood the meaning of their experiences. This helps to ensure that

researchers get the information collected during interviews right. Member checking is an ongoing process that is integral to qualitative data collection (Saumure and Given, 2008). In this study member checks were done through use of probes to elicit detailed data and iterative questioning. Iterative questioning is a technique whereby researchers ask participants to elaborate on or clarify what they have said in interviews. This technique also allows the researcher to return to matters previously raised by an informant and extracts related data through rephrased questions (Shenton, 2004). In so doing, the researcher is able to detect contradictions and falsehoods and may decide to discard the suspect data. It is worth noting that member checks can also be done after completion of qualitative data collection with individual research participants or when doing content analysis for example, by using more than one researcher to analyze the data and seeking agreement between different researchers on the content gathered (Saumure and Given, 2008). In addition, it can also be done once thematic categories are identified, to determine whether groupings or categories of data are properly defined. In this study, a team approach to coding and data analysis was used to compare and contrast of emerging codes and themes between different coders to establish reliability and validity of coding categories. More details on how this is provided in the data analysis section.

5.5 Data Analysis

Quantitative Data Analysis

Quantitative data for this study was analyzed using SPSS. A small component of the analysis (gini-coefficient analysis) was done using STATA. The first step of the analysis involved exploration and manipulation of the data. The data file was explored in order to get familiar with the data and to check the nature of variables and missing data. After that, the raw data was manipulated into a form that would enable the researcher to address the research questions in this study. The activities in this step included collapsing and combining of variables, handling of multiple responses, inclusion and exclusion of missing values. Some of the data from original dataset was collapsed or combined to derive some variables of interest. For example a maternal health care index was created by combining ANC, delivery and postnatal care variables to indicate the continuum of maternal health care service. The outcome variables were coded as 1 if the women received maternal health care from a skilled attendant and as 0 if she did not receive maternal health care from a skilled attendant. The response category was collapsed to create dichotomous dependent variables with only two categories i.e. "yes" and "no", on the basis of whether or not the woman had received maternal health care from a skilled health attendant. Categories of a categorical variable with a small sample size were collapsed by combining them with another category to enable meaningful analysis. For example the sample size for some ethnic and religious groups were very small, as such they were combined with others. If the respondent mentioned more than one person who provided assistance during delivery, only the most qualified person was considered in the tabulation. Missing values were either included or excluded in the study depending on the type of data analysis.

The second step involved a descriptive analysis of the demographic and socioeconomic characteristics of survey respondents and use of maternal health care services (i.e. antenatal, delivery and postnatal) in Lilongwe. Descriptive statistics were obtained using frequencies, percentages and cross tabulation. Descriptive data is presented through tables, graphs and charts in the results chapter. After conducting a descriptive analysis on use of maternal health care, a Pearson Chi-square test was used to explore the relationship between two categorical variables in order to identify which proportions (descriptive statistics) within different background characteristics were statistically significant in relation to use of maternal health care. Statistical significance was established at p-values of < 0.05.

Multiple comparisons were conducted through multivariate logistic regression. Logistic models were developed using a three step approach. The first step involved running a series of univariate binary logistic regression models in which the relationship of each of the independent variables with respective dependent variables was examined. Statistical outputs of this analysis for each dependent variable are presented using crude Odds Ratios (OR) with their corresponding 95% Confidence Intervals and indication of their statistical significance (or lack of it). Independent variables that were significant at 10% ($P < 0.10$) were considered important for inclusion in the next step of the process.

The second step involved undertaking collinearity diagnostics for independent variables chosen from the first step, considering that logistic regression is sensitive to multicollineality (Pallant, 2010). Multicollineality entails correlation between two or more independent variables in the model. The Variance Inflation Factor (VIF) was used to measure the degree of multicollineality between independent variables in the regression model. A cut off point of the VIF value of 10 was used to determine the presence of multicollineality (Pallant, 2013). A VIF value greater than 10 is indicative of multicollineality. Output from collinearity diagnostics for each of the independent variables included for each of the dependent variable models indicated that there was no multicollineality.

The third step involved running binary logistic regression models using variables from the first step having been assessed for multicollinearity in step two. Models used the "ENTER" method. Out of the eight independent variables, six variables (mother's age, marital status, residence, education, work status and wealth status were treated as potential confounders hence were included in binary logistic regression models for use of skilled attendance for maternal health care whether they had attained the $P < 0.10$ or not in the first step. Ethnicity and religion were excluded in the regression models as potential confounders, based on literature. This stage represented the multivariate model and results were reported as adjusted odds ratio with their corresponding 95% Confidence Interval and indication of statistical significance. Statistical significance for the final models was set at $P < 0.05$.

The regression model was tested for 'goodness of fit' using the Hosmer-Lemeshow test. A good model fit is indicated by a Hosmer-Lemeshow test statistic value of $P > 0.05$. The Nagelkerke R Square was used as an indication of the variation in the dependent variable that could be explained by the model (Pallant, 2013). The results showed a high significant value (p-value < 0.001) for the tested variables. Figure 5.2 below shows the plan for statistical analysis:

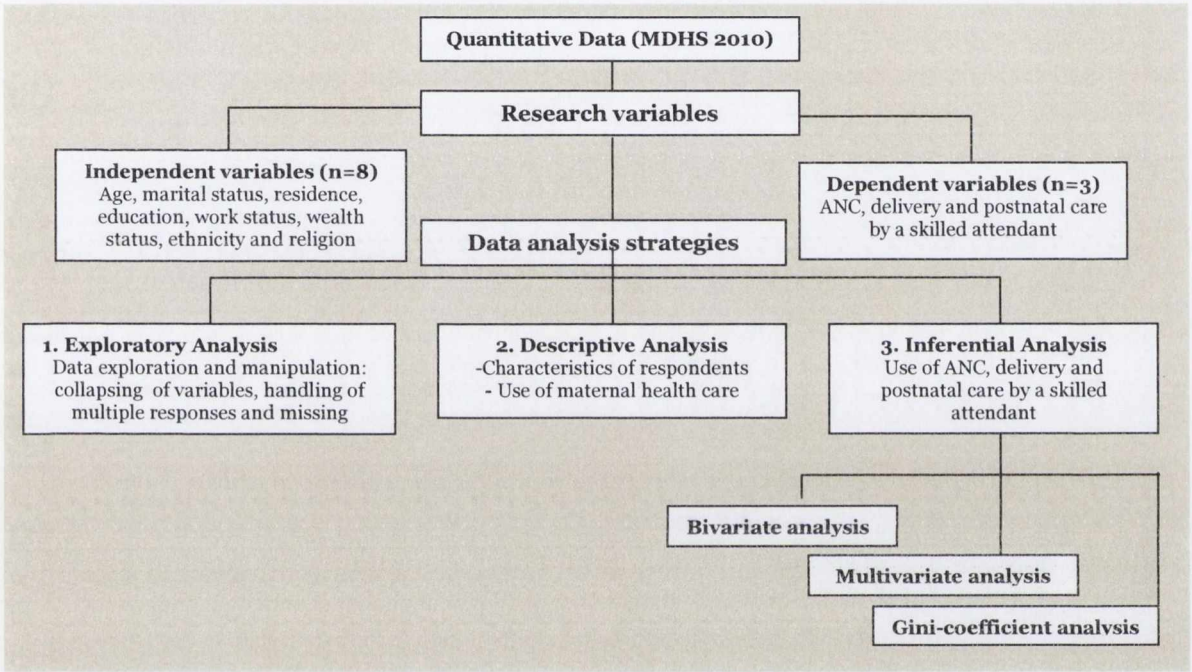


Figure 5.2: Plan for Statistical Analysis

The logistic regression model considers the relationship between a binary dependent variable and a set of independent variables ($X_1, X_2, \ldots, X_k$) (Hintze, 2007). In this study binary logistic regression was used to determine predictors that are significantly associated with use of maternal health care services provided by a skilled attendant. The logistic regression function is stated in terms of the probability that Y equal to 1 (rather than 0) given certain values of X. That is to say, if there is a positive association between X and Y, the probability that Y=1 increases, as the value of X increases. The probability that Y=1 is referred to as p and the probability that Y is 0 is 1-p (Hintze, 2007).

$$P = \Pr(Y=1 \mid X_1, X_2, \ldots, X_k)$$

$$\text{and } p = \frac{1}{1 + \exp[-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k)]}$$

The linear regression equation is written as $Y = \beta_0 + \beta_1 X + e$. The logit form of logistic model quantifies the relationship of dichotomous variable with its predictors using the odds ratio. The odds ratio is equal to the exponential function calculated as *exp* (β) and can also be written as e^B (Hintze, 2007).

$$\text{Odds (Y=1)} = \frac{p}{1-p}$$

$$\text{logit (p)} = \text{In}\left[\frac{p}{1-p}\right] = \beta_0 + \beta_1 X$$

$$\text{and } p = \frac{\exp(\beta_0 + \beta_1 X)}{1+\exp(\beta_0 + \beta_1 X)} = \frac{e^{\beta 0 + \beta_1 X}}{1+e^{\beta 0 + \beta_1 X}}$$

Where:
p = the probability that a case is in a particular category
logit (p) = the log of the odds ratio or likelihood ratio that the dependent variable is 1
exp = the base of natural logarithms (approx 2.72),
α = the constant of the equation
ß = the coefficient of the predictor variables (Hintze, 2007)

The *ln* symbol refers to a natural logarithm. The exponential function involves a constant with the value of approx 2.72 of which when raised to the power of ß, we get the odds ratio. The *exp* (β) has a 95% confidence interval giving a lower and upper values (Hintze, 2007).

Gini coefficient analysis was conducted to measure the degree of inequality in the distribution of maternal health care utilisation. The Gini coefficient (G) compares the Lorenz curve of a ranked empirical distribution with the line of perfect equality (Rodrigue, 2013) which is a linear relationship that plots a distribution of values on X and Y axis. The perfect equality line forms an angle of 45 degrees. The Gini coefficient represents the area of concentration between the Lorenz curve and the line of perfect equality (Rodrigue, 2013). It is ratio with a range from 0 to 1 and can also be expressed as a percentage with a range from 0 and 100. A Gini coefficient of 0 or 0% indicates perfect equality index, whilst 1 or 100% indicates perfect inequality index. A low Gini index indicates a more equal distribution, while higher Gini index indicates more unequal distribution, with 1 corresponding to complete inequality. The function that presents the Gini-coefficient is:

$$G = 1 - \sum_{i=0}^{N} (\sigma Y_{i-1} + \sigma Y_i)(\sigma X_{i-1} - \sigma X_i)$$

Where σX and σY are cumulative percentages of Xs and Ys (in fractions) and N is the number of elements (observations) (Rodrigue, 2013)

This study measured equity of access to health care services using the indicator of utilization as a proxy for measurement, in the context of the MDHS. The study particularly focuses on selected sections of the MDHS instrument and details about this have been presented earlier in section 5.4.3 of this chapter.

Qualitative Data Analysis

Qualitative data was analyzed using thematic content analysis approach. Systematic coding was done and a code book in excel was used to organize and manage the data. The analysis was done in five stages. The first stage involved going through all the transcripts in order to get familiar with the data. During this stage short notes were made on transcripts and highlighter colors were used to indicate key words or statements within text. The second stage involved eliciting codes from text 'line-by-line' to generate initial codes. The third stage involved sorting and categorical grouping of codes into sub-themes. The fourth stage involved generation and naming of analytical themes. The last stage involved producing the analysis report.

During the systematic coding process, a coding frame was developed by the PhD researcher in consultation with research supervisors. The research assistant, a Registered Nurse (RN) was also involved undertaking a detailed coding and development of themes. The primary supervisor had read the transcripts and contributed to the development of the themes and structuring of the coding frame, drawing upon his expertise and experience in qualitative research. The iterative process of reading and analyzing the transcripts, additional themes emerged and informed modifications made to the initial coding frame. The third version of the coding frame was subsequently used for content analysis of transcripts. A rigorous line by line transcript coding for final thematic content analysis was undertaken by the PhD researcher independently and the research assistant (RN). The two compared their respective coding for some randomly selected IDI, FGDs and KII transcripts. This process allowed for denoting cases of disagreements in which case further discussion and scrutiny were undertaken to reach consensus and attach appropriate coding or undertake modification of the coding frame. The PhD researcher then compared coding for all the transcripts and calculated an inter-coder reliability to establish levels of agreement in transcript coding. In thematic content analysis, an inter-coder reliability coefficient of 60% is considered acceptable (Saumure and Given, 2008). In this study, an average inter-coder reliability of 80% was achieved. This entails that, the inter-coder reliability result for this qualitative study is within acceptable level and is ultimately indicative of the validity of the coding frame; common interpretive understanding and an overall reliable analysis.

5.6 Ethical Considerations

Ethical consideration issues were strictly observed during this study. Burns and Grove (Burns and Grove, 2004) explain that research must not only have the potential to generate and refine knowledge, but also must be ethical in its development and implementation. Ethical consideration issues are important especially in research dealing with human beings because they provide a basis for moral conduct in respect to human life, dignity, integrity and authority. Human subjects' rights must be protected at all times. To ensure that the subjects have ethical protection, the researcher obtained informed consent from each participant before conducting data collection. To do this, the participants were informed about the study, and allowed to voluntarily choose to participate or not. They were informed of their right to accept or refuse to participate, and that if they chose not to participate, they were not going to be affected in any way. In addition, the subjects were informed of their right to terminate participation in the study at any time without any penalty. The participants were also be provided with information leaflets with details about the study and were asked to sign a consent form to confirm their approval of participation in the study. The information sheet and consent forms were written in a simple way and translated into local language Chichewa (See appendices 1, 2, 3 and 4) for easy understanding of the participants. For participants who could not read and write, they were provided with information in Chichewa and were assisted to endorse their voluntary consent to participate. A witness was used in case of communication difficulties, such as a nurse or other health care workers. For those who cannot write, their thumb prints were obtained and a third witness was used to certify that the individuals have been informed about the study and chosen willingly to participate in the study.

The subjects' right to anonymity and confidentiality of the data collected during the study was protected. Individual interviews were conducted in a private place to ensure privacy. Code numbers were used to hide the subjects' identity. Participants were asked to give consent to have their conversations tape-recorded. Any personal identifying information was removed from the interview and FGD transcripts. No participant in this study will be identified by name in any publication or presentation arising from the study in the future. Raw data will be stored for the duration of the study, until the work is fully reported and disseminated. Anonymised data will then be kept for the period of ten years, when it will be destroyed. This information was communicated to the subjects.

Permission to conduct this study was sought from authorities and local leaders before data collection began. After approval was granted from the Ethics Council at Trinity College Dublin, and College of Medicine Research Ethics Committee (COMREC), a letter was sent to MoH and CHAM informing them of the approval (see attached letters in appendices). Both the MoH and CHAM were requested to write letters to the health facilities introducing the research and team. A verbal permission was obtained from Lilongwe DHO by presenting the introduction letter and approval letter from COMREC. This process was repeated at the health centers.

This study had no potential harm to the participants. However, a "safety net" was put in place to protect the participants from potential psychological and social harms. In the event of any adverse experience, arrangements were to be made with the local counsellors within Lilongwe district to provide counselling support. The adverse effect which was anticipated in this study was emotional distress. For example some questions might have caused the respondent to feel sad or upset which could potentially cause distress, especially those women with previous bad experiences of using maternal health care. If such events occurred, there might have been a need for a counsellor to provide support and the participants could have been referred accordingly to get the required support. Furthermore, to avoid causing social harm to the participants, individual and group interviews did not include any topics or issues that were sensitive, embarrassing or upsetting to the participants. There were no direct benefits for the participants of this study. However, the study findings may provide important information for health systems strengthening and promotion of equitable access to health care services, through use of the EHP in Malawi.

5.7 Summary of the Chapter

This chapter has presented the research methodology used in this study. This was a mixed methods study that employed: (i) a cross-sectional design involving 1126 women aged 15-49 who had received maternal health services for the most recent live birth within the five years preceding the MDHS survey in Lilongwe; (ii) qualitative studies that employed 30 in-depth interviews and 8 FGDs with women "users" and "non-users" of maternal health services, and 15 key informant interviews. The interviews and FGDs with women were conducted in Kawale, Area 25, Chadza, Matapila and Mbwatalika health centers and at Nayere TBA facility in Lilongwe. The key informants interviewed included health workers, heath facility in charges at health center level, district health facility manager, health managers and policy makers based at the Ministry of Health headquarters and Reproductive Health Unit, and a TBA. Eligibility to participate in the key informant interviews entailed current involvement of the participant in maternal health issues. Quantitative data was analyzed using SPSS. Multivariate logistic regression was used to determine predictors of maternal health utilization. Gini coefficient analysis was done to measure the degree of inequalities in use of maternal health services. Qualitative data was analyzed using thematic content analysis approach.

CHAPTER 6

UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN LILONGWE DISTRICT

6.1 Introduction

This chapter examines utilization of maternal health care services in Lilongwe District in order to identify predictors and factors associated with use of these services. The chapter also measures equity of access to maternal health care services in order to determine equitable access to the EHP. The chapter begins by presenting the demographic and socioeconomic characteristics of survey respondents. The second part of the chapter presents descriptive and bivariate results of the utilization of maternal health care services in Lilongwe. The third part presents results of multivariate analyses of the use of maternal health care services in Lilongwe. The fourth part presents results of the Gini-coefficient analysis to determine equity of access to maternal health care services, hence the EHP. The chapter ends with a summary and discussion.

6.2 Characteristics of Survey Respondents

6.2.1 Age and Residence

Table 6.1 shows that out of 1126 respondents interviewed, 22% (n=243) were teenage girls aged 15-19, while 54% (n=602) were young women aged 20-34 and 25% (n=281) were older women aged 35-49 years. The results further show that the majority of the respondents were rural women (57%) compared to urban women (43%).

Table 6.1: Percent Distribution of Women by Age and Residence, Lilongwe, 2010

Age and residence		Frequency (N)	Percentage (%)
Age	15-19	243	21.6
	20-34	602	53.4
	35-49	281	25.0
Residence	Urban	480	42.6
	Rural	646	57.4
	Total	1126	100.0

6.2.2 Marital Status

Table 6.2 shows that the majority of respondents were married (49%), while 24% had never been married and 18% were living together with a man. The results also show that 7% of women were divorced or separated while 3% of women were widowed.

Table 6.2: Percent Distribution of Women by Marital Status, Lilongwe, 2010

Marital status	Frequency (N)	Percentage (%)
Never Married	267	23.7
Married	548	48.7
Cohabiting	197	17.5
Widowed	34	3.0
Divorced/separated	80	7.1
Total	1126	100.0

6.2.3 Educational Attainment

Figure 6.1 shows that 14% of the women had never been to school, while 59% had attained primary education, 22% completed secondary school and only 5% attained higher education.

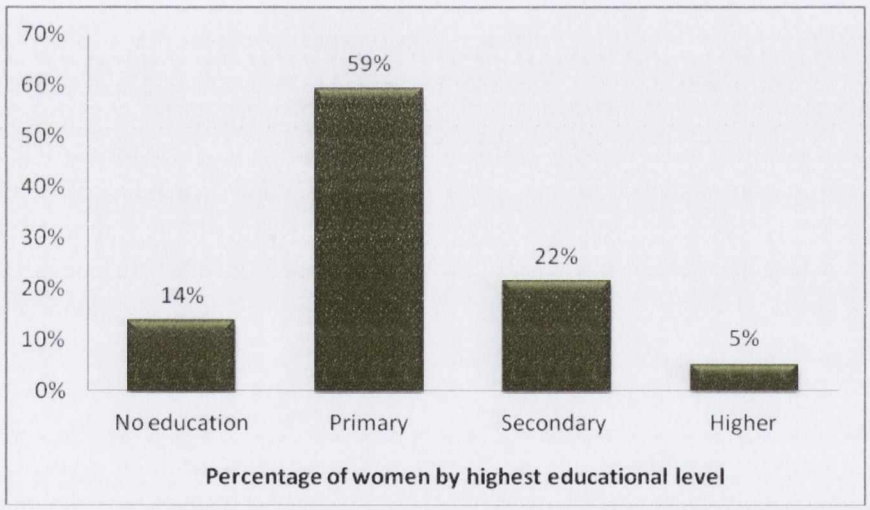


Figure 6.1: Percent Distribution of Women by Educational Attainment, Lilongwe 2010

The study further examined the literacy level of the respondents. The literacy status of the respondents in the 2010 MDHS was determined by assessing their ability to read all or part of a simple sentence in any of the four languages; English, Chichewa, Yao, or Tumbuka. The literacy test was administered only to respondents who had less than a secondary school education because those with a secondary education or higher were assumed to be literate. The results reveal that 69% of the respondents were able to read only parts of the sentence or whole sentence, while 31% of the respondents could not read at all.

6.2.4 Employment Status

The respondents were asked whether they were currently employed. Table 6.3 below shows that 58% of participants were employed. The majority of unemployed women were residing the rural area (23%).

Table 6.3: Percent Distribution of Women by Employment Status and Residence, Lilongwe, 2010

Employment Status	Residence	Frequency (N)	Percentage (%)
Not employed	Urban	215	19.1
	Rural	262	23.3
		477	42.4
Employed	Urban	265	23. 5
	Rural	384	34.1
		649	57.6
Total		1126	100.0

6.2.5 Wealth Index

The wealth index of respondents in the 2010 MDHS serves as proxy for measuring the long-term standard of living and is based on data from the household's ownership of consumer goods; dwelling characteristics; type of drinking water source; toilet facilities; and other characteristics that are related to a household's socioeconomic status. To construct the index, each of these assets was assigned a weight (factor score) generated through principal component analysis, and the resulting asset scores were standardized in relation to a standard normal distribution with a mean of zero and standard deviation of one. Each household was then assigned a score for each asset, and the scores were summed for each household. Individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest) (NSO, 2011). Figure 6.2 shows that the majority of the respondents were ranked in the richest wealth quintile (38%), then as poorest (19%), richer (15%), middle (14%) and poorer (14%).

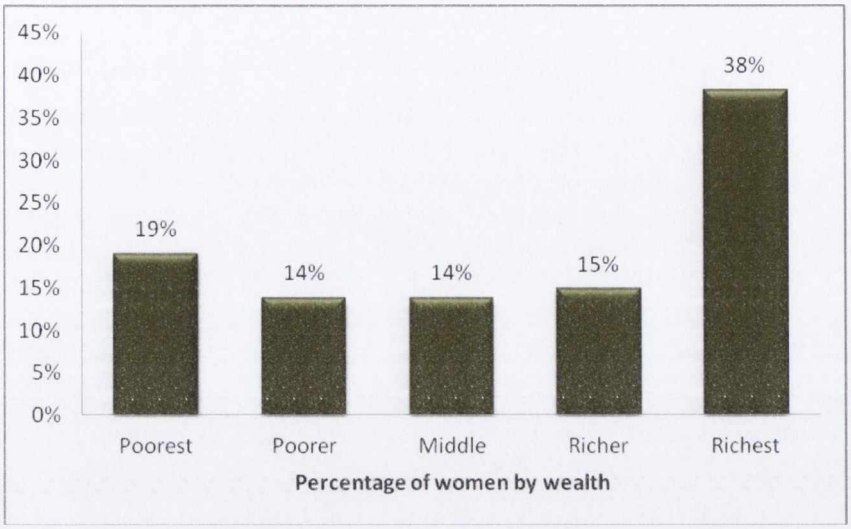


Figure 6.2: Percent Distribution of Women according to Wealth Index, Lilongwe 2010

6.2.6 Religion

Figure 6.3 shows that 27% of the respondents were members of Church of Central Africa Presbyterian (CCAP), while 21% were Catholics, 7% were Seventh Day Adventist Church members, 5% were Muslims and 30% belonged to other religions.

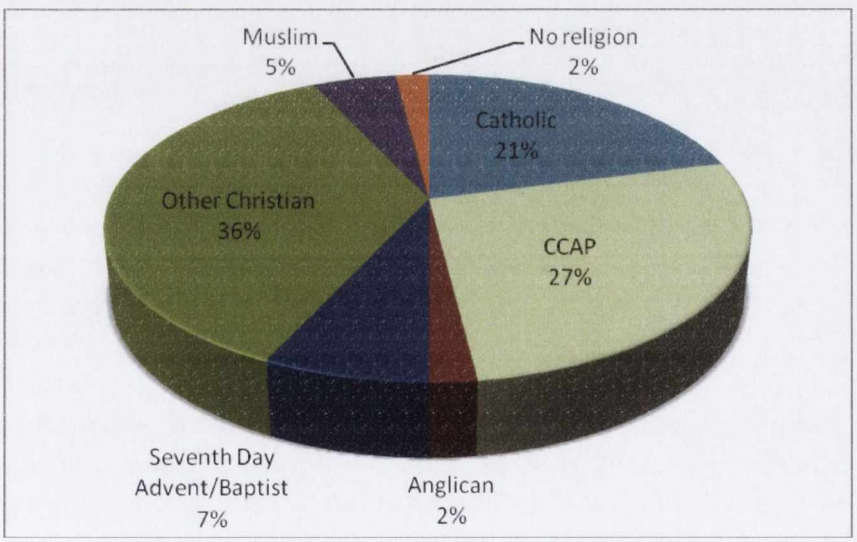


Figure 6.3: Percent Distribution of Women by Religion, Lilongwe 2010

6.2.7 Ethnicity

Table 6.4 shows that the majority of respondents were of Chewa ethnic tribe (73.8%), then Ngoni (9.9%), Yao (4.9%), Lomwe (3.6%), Tumbuka (3.3%), Tonga (1.5%), and other (2.6%). The results also show that 1.4% of the respondents belonged to other ethnic groups (e.g. Sena, Nkhonde, Nyanja, Mang'anja, Ndali etc)

Table 6.4: Percent Distribution of Women by Ethnicity, Lilongwe, 2010

Ethnicity	Frequency (N)	Percentage (%)
Chewa	831	73.8
Tumbuka	37	3.3
Lomwe	41	3.6
Tonga	17	1.5
Yao	55	4.9
Ngoni	112	9.9
Other	33	2.9
Total	1126	100

6.3 Descriptive Analysis Results of Maternal Health care Utilization

This section presents descriptive results of maternal health care utilization in Lilongwe District and it includes information pertaining to antenatal, delivery and postnatal care.

6.3.1 Antenatal Care

6.3.1.1 Skilled Providers of Antenatal Care

The respondents were asked to mention the type of provider from whom they received ANC for the most recent live birth within the five years preceding the survey. Figure 6.4 shows that 91% of women age 15-49 obtained ANC from skilled providers i.e. a nurse or midwife (82%), and doctor or clinical officer (9%). This percentage is slightly lower than that of national level. According to 2010 MDHS report, 95% of women age 15-49 received ANC (ANC) from a skilled attendant (doctor, clinical officer, nurse, or midwife) (NSO and ICF Macro, 2011). Results further show that a small proportion of women received ANC from a Patient Attendant (5%) and Health Surveillance Assistant (1%). Less than 1% of women received ANC from a TBA (Traditional Birth Attendant) while 3% of women did not receive any ANC services.

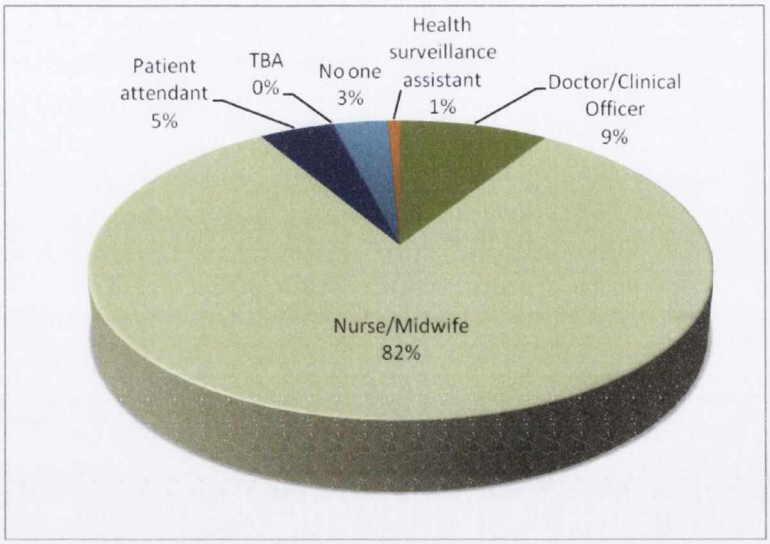


Figure 6.4: Distribution of Women who received ANC by Type of Provider, Lilongwe 2010

Table 6.5 below shows the proportion distribution of women who received ANC from a skilled attendant according to background characteristics. Results showed that women's age was not associated with use of a skilled provider for ANC care (chi-square: p=0.17). More young women age 20-34 received ANC from a skilled attendant (93%) compared to older women 35-49 and teenage women age 15-19 (89% and 85%, respectively). Additionally, women's marital status appeared to be significantly associated with use of skilled ANC (chi-square: p=0.04). Married women were most likely to receive ANC from a skilled attendant (93%) and compared to women who were not married (88%). By contrast, women's residence appeared not to be associated with use of skilled ANC (chi-square: p= 0.34). No marked difference was observed between proportion of urban and rural women who obtained ANC from a skilled provider. Results showed that 93% of urban women and 91% of rural women received ANC from skilled health providers. Women's education status also appeared to be highly associated with use of ANC provided by a skilled provider (chi-square: p=0.001). All women with higher educational level (100%) reported to have received ANC from a skilled provider compared to women with primary, secondary and no education (92%, 97% and 80%, respectively). About 11% of women who had never been to school did not receive any ANC services.

Additionally, the results showed no significant relationship between women's work status and use of ANC provided by a skilled health attendant (chi-square: p=0.22). No marked difference was observed between proportion of employed and unemployed women (93% and 90%, respectively) who received antenatal care from a skilled health provider. However, results revealed a significant relationship between women's household wealth status and use of a skilled health provider for ANC (chi-square: p=0.001). More rich women received ANC from a skilled attendant compared to poor women (97% and 82%, respectively).

Table 6.5: Antenatal Care Providers and Skilled Attendants

Percent distribution of women who received antenatal care from a skilled attendant according to background characteristics, Lilongwe 2010

Background Characteristics	[1]Skilled Attendant		[2] Unskilled Attendant					Percentage who received ANC from skilled attendant	Number of women
	Doctor/ clinical officer	Nurse/ Midwife	Patient attendant	[3]HSA	TBA	No one	Total		
Mother's age at birth									
15-19	9.1	75.8	12.1	3.0	0.0	0.0	100	84.8	33
20-34	8.6	83.9	3.5	0.4	0.2	3.3	100	92.5	453
35-49	10.4	78.4	5.6	0.8	0.8	4.0	100	88.8	125
Marital status									
Married	11.3	81.8	2.3	0.8	0.5	3.3	100	93.1	390
Not married	5.0	83.3	8.1	0.5	0.0	3.2	100	88.2	221
Residence									
Urban	13.1	79.6	4.1	0.9	0.0	2.3	100	92.8	221
Rural	6.7	83.8	4.6	0.5	0.5	3.8	100	90.5	390
Education									
No education	8.2	72.2	5.2	2.1	1.0	11.3	100	80.4	97
Primary	9.0	83.0	5.2	0.5	0.3	2.1	100	92.0	388
Secondary	5.5	91.8	1.8	0.0	0.0	0.9	100	97.3	110
Higher	37.5	62.5	0.0	0.0	0.0	0.0	100	100.0	16
Work status									
Not working	9.0	84.0	4.5	0.8	0.0	1.6	100	93.0	244
Working	9.0	81.2	4.4	0.5	0.5	4.4	100	90.2	367
Wealth quintile									
Poorest	4.4	77.8	8.9	0.7	1.5	6.7	100	82.2	135
Poorer	12.5	80.4	2.7	0.9	0.0	3.6	100	92.9	112
Middle	6.4	84.0	7.4	0.0	0.0	2.1	100	90.4	94
Richer	9.8	83.7	1.1	2.2	0.0	3.3	100	93.5	92
Richest	11.2	85.4	2.2	0.0	0.0	1.1	100	96.6	179
Ethnicity									
Chewa	6.9	83.8	5.0	0.4	0.4	3.5	100	90.4	481
Tumbuka	20.0	80.0	0.0	0.0	0.0	0.0	100	100.0	15
Lomwe	10.5	84.2	5.3	0.0	0.0	0.0	100	94.7	19
Yao	16.1	74.2	3.2	3.2	0.0	3.2	100	90.3	31
Ngoni	17.8	75.6	2.2	0.0	0.0	4.4	100	90.9	45
Other	20.0	75.0	0.0	5.0	0.0	0.0	100	95.0	20
Religion									
Catholic	11.8	79.8	7.6	0.0	0.0	0.8	100	91.6	119
C.C.A.P	9.2	87.9	1.4	0.0	0.0	1.4	100	97.2	141
Seventh Day advent/Baptist	4.5	90.9	2.3	0.0	0.0	2.3	100	95.5	44
Muslim	14.3	75.0	3.6	3.6	0.0	3.6	100	89.3	28
Other Christian	8.2	80.9	4.3	1.2	0.4	5.1	100	89.1	257
Other/no religion	4.5	68.2	13.6	0.0	4.5	9.1	100	72.7	22
Total	9.0	82.3	4.4	0.7	0.3	3.3	100	91.3	611

Note: If more than one provider of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.[1] Skilled attendant includes doctor, clinical officer, nurse and midwife. [2] Unskilled attendant include patient attendant, health surveillance attendant (HSA) and traditional birth attendant (TBA).

Furthermore, the results showed no significant association between women's ethnicity and use of ANC provided by a skilled attendant (chi-square: p=0.53). All women of Tumbuka tribe (100%) and more women of Lomwe ethnic group (95%) and those who belonged to other tribes (95%)

reported to have received antenatal care from a skilled attendant compared to women of Ngoni, Chewa and Yao tribes (91%, 90% and 90%, respectively). Women's religion appeared to be significantly associated with use of antenatal care provided by a skilled attendant (chi-square: p=0.03). More women who belonged to C.C.A.P (97%), Seventh Day Adventists/Baptist (96%) and Catholic churches (92%) reported to have received antenatal care from a skilled attendant compared to other Christians (89%), Muslim women (89%) and women who belonged to other religion or without a religion (73%).

6.3.1.2 Number of ANC Visits and Timing of First Visit

Women were asked about the number of visits they made to the ANC clinic and the timing of the first visit during the most recent pregnancy within the five years preceding the survey. Figure 6.5 shows that among the women who went to the ANC clinic, 50% visited the ANC at least four times or more during their last pregnancy. About 43% of women had two or three ANC visits, while 3% of women visited the ANC clinic only once. At least 3% of women did not visit any ANC clinic. Furthermore, results showed that 47% of women had their first ANC visit during the second trimester (4-5 months) of pregnancy. About 11% of women had their first ANC visit within the first trimester (<4 months), whereas 40% had their first ANC visit between the third trimester (6-7 months) of pregnancy. At least 2% of women had their first ANC visit at eight months or more during the last pregnancy. The MoH policy in Malawi recommends that women should visit the ANC clinic four times during pregnancy. WHO also recommends that all women with uncomplicated pregnancy should have at least four ANC visits as a minimum and these should be spaced at regular intervals throughout pregnancy commencing as early as possible in the first trimester to allow early diagnosis and efficacious treatment of problems and diseases (WHO, 2006a).

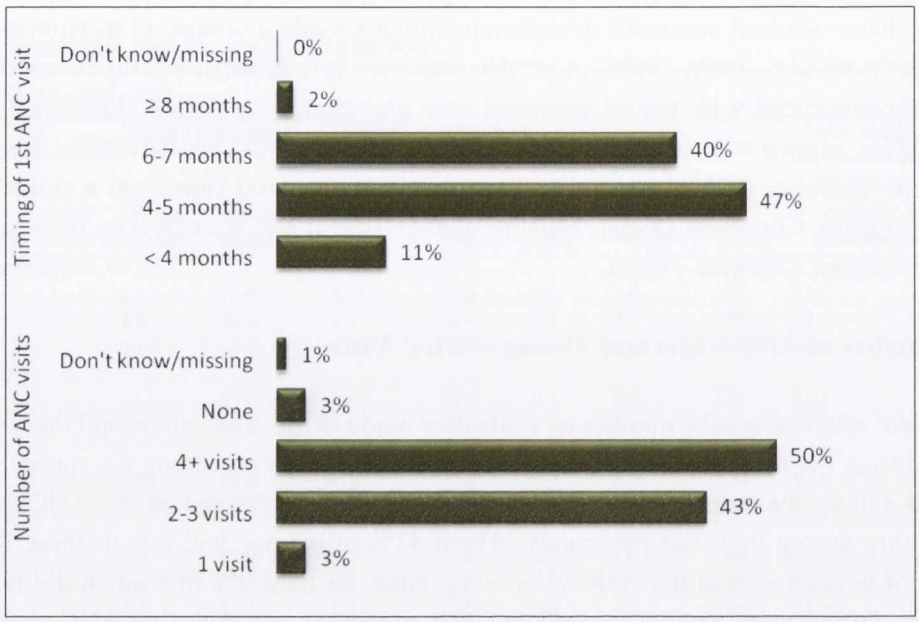


Figure 6.5: Percent Distribution of Women by Number of ANC Visits and Timing of the First ANC visit

The study further examined the distribution of women by number of ANC visits and timing of the first visit for the most recent birth in the five years preceding the survey according to background characteristics. Table 6.6 shows no differences between proportion of women age 20-24 and 35-49 who visited the ANC four times or more (both age groups had 51% women). However, a difference was observed in women age 15-19 whereby fewer women (36%) in this age group visited the ANC clinic four times or more. Additionally, more women aged 15-19 (52%) visited the ANC at least two to three times compared to women aged 20-34 and 35-49 (43% and 41%, respectively). About 6% of women age 15-19, 2% of women age 20-34 and 4% of women age 35-49 reported to have visited the ANC clinic only once.

Furthermore, results showed that 12% of women aged less than 34 years had their first ANC visit during the first trimester of pregnancy, whereas 8% of women age 35-49 had their first ANC visit during the first trimester of pregnancy. About half of teenage girls (52%) age 15-19 had their first ANC visit during the second trimester of pregnancy. Just about 40% of women age 35-49 had their first visit to the ANC clinic during the third trimester of pregnancy. About 3% of women age 15-19 and 35-49 had their first ANC visit at eight months or more.

By women's marital status, the results showed no substantial difference between proportions of married and unmarried women who made four or more ANC visits (50% and 51%, respectively). About one tenth (10%) of married women and 13% of unmarried women had their first ANC visit during the first trimester (>4 months) of pregnancy. More married women (41%) had the

first ANC visit during the sixth and seventh month of pregnancy compared to unmarried women (35%). Almost 4% of married women and 3% of unmarried women had their first ANC visit at eighth month or more during their last pregnancy.

Table 6.6: Number of ANC visits and timing of first visit

Percent distribution of women by number of ANC visits and the timing of the first visit according to background characteristics, Lilongwe 2010

Background Characteristics	Number of Antenatal care visits						Number of months pregnant at time of first ANC visit						Number of women
	1	2 – 3	4+	None	Don't know/ missing	Total	>4	4 – 5	6 – 7	8+	Don't know/ Missing	Total	
Age													
15-19	6.1	51.5	36.4	0.0	6.1	100	12.1	51.5	33.3	3.0	0.0	100	33
20-34	2.0	43.3	51.2	3.3	0.2	100	12.1	45.0	38.2	1.1	3.0	100	453
35-49	4.0	40.8	51.2	4.0	0.0	100	7.2	45.6	40.0	3.2	4.0	100	125
Marital status													
Married	3.1	43.1	50.0	3.3	0.5	100	10.0	44.6	40.8	1.0	3.6	100	390
Not married	1.8	43.4	51.1	3.2	0.5	100	13.1	47.1	33.9	2.7	3.2	100	221
Residence													
Urban	1.8	40.7	54.8	2.3	0.5	100	9.5	47.1	40.7	0.5	2.3	100	221
Rural	3.1	44.6	47.9	3.8	0.5	100	12.1	44.6	36.9	2.3	4.1	100	390
Education													
No education	3.1	40.2	44.3	11.3	1.0	100	7.2	37.1	42.3	1.0	12.4	100	97
Primary	3.4	46.6	47.7	2.1	0.3	100	11.3	46.9	37.4	2.3	2.1	100	388
Secondary	0.0	36.4	61.8	0.9	0.9	100	12.7	46.4	40.0	0.0	0.9	100	110
Higher	0.0	25.0	75.0	0.0	0.0	100	18.8	56.3	25.0	0.0	0.0	100	16
Work status													
Not working	2.5	44.3	51.2	1.6	0.4	100	9.0	47.1	39.8	2.0	2.0	100	244
Working	2.7	42.5	59.9	4.4	0.3	100	12.5	44.4	37.3	1.4	4.4	100	367
Wealth quintile													
Poorest	5.2	45.9	41.5	6.7	0.7	100	13.1	43.7	33.3	3.0	6.7	100	135
Poorer	0.9	45.5	50.0	3.6	0.0	100	10.7	50.9	33.0	1.8	3.6	100	112
Middle	3.2	43.6	51.1	2.1	0.0	100	12.8	41.5	41.5	1.1	3.2	100	94
Richer	3.3	44.6	47.8	3.3	1.1	100	7.6	44.6	42.4	2.2	3.3	100	92
Richest	1.1	38.8	58.4	1.1	0.6	100	10.7	46.1	41.6	0.6	1.1	100	178
Ethnicity													
Chewa	2.3	44.1	49.7	3.5	0.4	100	11.2	44.3	38.9	1.9	3.7	100	481
Tumbuka	0.0	53.3	46.7	0.0	0.0	100	20.0	46.7	33.3	0.0	0.0	100	15
Lomwe	5.3	47.4	47.4	0.0	0.0	100	15.8	57.9	26.3	0.0	0.0	100	19
Yao	3.2	48.4	41.9	3.2	3.2	100	9.7	29.0	58.1	0.0	3.2	100	31
Ngoni	4.4	35.6	55.6	4.4	0.0	100	4.4	53.3	35.6	2.2	4.4	100	45
Other	5.0	20.0	75.0	0.0	0.0	100	15.0	70.0	15.0	0.0	0.0	100	20
Religion													
Catholic	3.4	55.5	39.5	0.8	0.8	100	10.9	40.3	46.2	1.7	0.8	100	119
C.C.A.P	1.4	43.3	53.2	1.4	0.7	100	14.2	48.2	34.8	0.7	2.1	100	141
Seventh Day Advt/Baptist	6.8	27.3	61.4	2.3	2.3	100	9.1	52.3	29.5	6.8	2.3	100	44
Muslim	3.6	50.0	42.9	3.6	0.0	100	3.6	35.7	57.1	0.0	3.6	100	28
Other Christian	2.3	40.5	52.1	5.1	0.0	100	10.5	47.1	35.8	1.6	5.1	100	257
Other/no religion	0.0	31.8	59.1	9.1	0.0	100	13.6	36.4	40.9	0.0	9.1	100	22
Total	2.6	43.2	50.4	3.3	0.5	100	11.1	45.5	38.3	1.6	3.4	100	611

Note: Table includes data only for the most recent birth in the five years preceding the survey.

Table 6.6 also shows that more urban women (55%) visited the ANC clinic four or more times during pregnancy than rural women (48%). By contrast, slightly more rural women (45%) visited the ANC clinic two to three times during pregnancy compared to urban women (41%). Only about 3% of rural women and 2% of urban women had one ANC visit during pregnancy. In addition to this, about 12% of rural women and 10% of urban women had their first ANC visit during the first trimester (>4 months) of pregnancy.

Additionally, results showed that a high proportion of women with higher education (75%) visited the ANC clinic four or more times during pregnancy compared to women with secondary education, primary education and no education (62%, 45% and 44% respectively). More uneducated women (11%) did not visit any ANC clinic compared to women with primary, secondary and higher education (2%, 1% and 0%, respectively). Furthermore, more women with higher education (19%) had their first ANC visit during the first trimester (>4 months) of pregnancy compared to women with secondary education (11%), primary education (11%) and no education (13%)

The findings also showed that more rich women visited the ANC clinic four or more times during pregnancy compared to poor women (58% and 42%, respectively). On the other hand, more poor women visited the ANC clinic two to three times during their last pregnancy compared to rich women (46% and 39%, respectively). At least 5% of poor women and 1% of rich women reported to have had one ANC visit. About 7% and 1% of poor and rich women did not visit any ANC clinic during their pregnancy. Additionally, results showed that 13% of poor women had their first ANC visit during the first trimester of pregnancy (>4 months), while 11% of rich women had their first ANC visit during the first trimester of pregnancy.

By ethnicity, results showed that a high proportion of women who belonged to other ethnic groups (75%) visited the ANC clinic four or more times during pregnancy compared to women of the Ngoni (56%), Chewa (50%), Lomwe and Tumbuka (47%) and Yao (42%) tribes. About 4% of Chewa and Ngoni women and 3% of Yao women did not visit any ANC clinic. A high proportion of Tumbuka women (20%) made their first ANC visit within the first three months of pregnancy. By religion status, most of the Catholic and Muslim women (56% and 50%, respectively) visited the ANC clinic four or more times during pregnancy. The majority of women who made their first ANC visit during the first three months of pregnancy were women who belonged to C.C.A.P (14%) and other/no religion (14%).

In general results in this section show that utilization of ANC is very high in Lilongwe. The factors associated with use of ANC include marital status, education and religion. The significance of these factors is however tested further using multilogistic regression analysis. The findings have also shown that a small proportion of women had the recommended four ANC visits and most of the women had their first ANC visit late after first trimester of pregnancy.

6.3.2 Delivery Care

6.3.2.1 Place of delivery

The respondents were asked to mention the place where they gave birth during their most recent birth in the five years preceding the survey. Figure 6.6 shows that 76% of the deliveries occurred in a health facility, with most of the deliveries taking place in a public health facility (56%), CHAM (18%) and private health facilities (2%). About 23% of the deliveries took place at home, while 1% occurred in other health facilities.

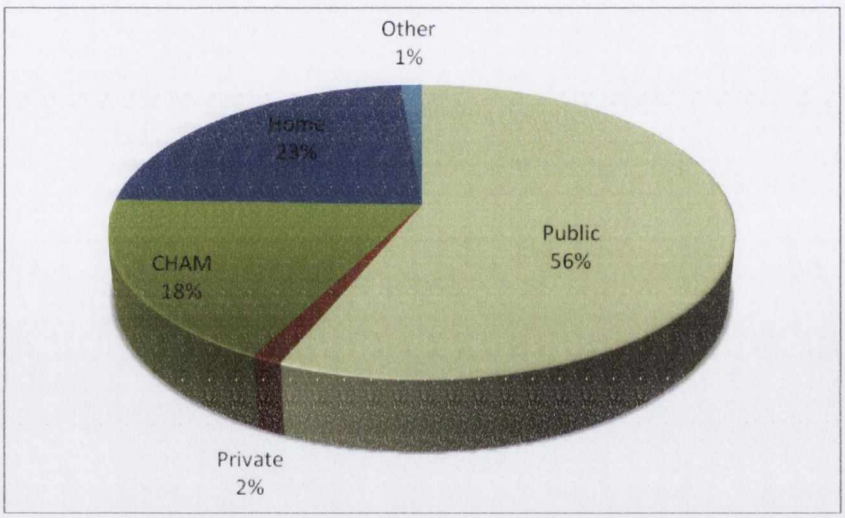


Figure 6.6: Distribution of the most recent births in the five years preceding the survey

The study further analyzed the percent distribution of the most recent births in the five years preceding the survey by place of delivery according to background characteristics. Table 6.7 below shows that more teenage girls age 15-19 (85%) delivered in a health facility compared to young women age 20-34 and older women age 35-49 (78% and 63% respectively). The results also showed that more teenage girls age 15-19 (85%) delivered in a public health facility compared to young women age 20-34 and older women age 35-49 (57% and 51%, respectively). Only few teenage girls age 15-19 (3%) and women age 20-34 (1%) delivered in a private health facility. By contrast, slightly more young women age 20-34 (20%) delivered in a CHAM facility compared to teenage girls age 15-19 and older women age 35-49 (18% and 12%, respectively). In addition, results showed that more older women age 35-49 (36%) delivered at home compared to young women age 20-34 and teenage girls age 15-19 (20% and 15%, respectively).

Table 6.7: Place of Delivery

Percent distribution of most recent births delivered in health facilities in the five years preceding the survey according to background characteristics, Lilongwe 2010

Background Characteristics	Health Facility			Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector	CHAM						
Mother's age at birth									
15-19	63.6	3.0	18.2	15.2	0.0	0.0	100	84.8	33
20-34	57.0	1.5	19.6	20.1	1.5	0.2	100	78.1	453
35-49	51.2	0.0	12.0	36.0	0.8	0.0	100	63.2	125
Marital status									
Married	51.8	1.5	19.5	24.9	2.1	0.3	100	72.8	390
Not married	63.8	0.9	15.4	19.9	0.0	0.0	100	80.1	221
Residence									
Urban	63.3	2.7	19.0	13.6	1.4	0.0	100	85.1	221
Rural	52.1	0.5	17.4	28.5	1.3	0.3	100	70.0	390
Mother's education									
No education	51.5	0.0	9.3	39.2	0.0	0.0	100	60.8	97
Primary	55.2	1.3	17.8	24.0	1.5	0.3	100	74.2	388
Secondary	64.5	1.8	23.6	8.2	1.8	0.0	100	90.0	110
Higher	50.0	6.3	37.5	6.3	0.0	0.0	100	93.8	16
Work status									
Not working	53.3	1.6	20.9	22.1	2.0	0.0	100	75.8	244
Working	58.0	1.1	16.1	23.7	0.8	0.3	100	75.2	367
Wealth quintile									
Poorest	47.4	0.0	17.0	34.8	0.7	0.0	100	64.4	135
Poorer	57.1	1.8	13.4	25.9	1.8	0.0	100	72.3	112
Middle	43.6	1.1	16.0	37.2	1.1	1.1	100	60.6	94
Richer	55.4	0.0	19.6	25.0	0.0	0.0	100	75.0	92
Richest	69.1	2.8	21.9	3.9	2.2	0.0	100	93.8	178
Ethnicity									
Chewa	54.5	1.0	16.4	26.6	1.2	0.2	100	71.9	481
Tumbuka	73.3	6.7	6.7	6.7	6.7	0.0	100	86.7	15
Lomwe	52.6	0.0	36.8	10.5	0.0	0.0	100	89.5	19
Yao	61.3	6.5	25.8	6.5	0.0	0.0	100	93.5	31
Ngoni	62.2	0.0	20.0	15.6	2.2	0.0	100	82.2	45
Other	65.0	0.0	30.0	5.0	0.0	0.0	100	95.0	20
Religion									
Catholic	50.4	0.8	26.1	19.3	2.5	0.8	100	77.3	119
C.C.A.P	60.3	1.4	19.9	18.4	0.0	0.0	100	81.6	141
Seventh Day Advent/Baptist	52.3	0.0	6.8	38.6	2.3	0.0	100	59.1	44
Muslim	53.6	3.6	28.6	14.3	0.0	0.0	100	85.7	28
Other Christian	59.1	1.6	14.4	23.7	1.2	0.0	100	75.1	257
Other/no religion	36.4	0.0	13.6	23.7	4.5	0.0	100	50.0	22
Total	56.1	1.3	18.0	23.1	1.3	0.2	100	75.5	611

Note: Table includes data only for the most recent birth in the five years preceding the survey

Table 6.7 also shows that by women's marital status, the results showed that more single women delivered in a health facility compared to married women (80% and 73%, respectively). Similarly, more single women (64%) delivered in a public health facility compared to married women (64% and 52%, respectively). By contrast, slightly more married women delivered in a CHAM institution compared to single women (20% and 15%, respectively). About 25% of married women and 20% of single women delivered at home.

Urban women were most likely to deliver in a health facility compared to rural women (85% and 70%, respectively). Similarly, more urban women delivered in public and private health facilities (65% and 3%, respectively) compared to rural women (52% and 1%, respectively). Additionally, slightly more urban women (19%) delivered in a CHAM health facility compared to rural women (17%). The majority of women who delivered at home were rural women (29%) unlike urban women (14%).

Additionally, results showed that delivery in a health facility increased the higher the educational level. More women with higher education (94%) delivered in a health facility compared to women with secondary education, primary education and no education (90%, 74% and 61%, respectively). More women with secondary education (65%) delivered in a public health facility compared to women with primary education, higher education and no education (52%, 59% and 52%, respectively). The majority of women who delivered in a CHAM facility were women with higher education (38%) compared to women with primary, secondary and no education (18%, 24% and 9% respectively). More uneducated women (39%) delivered at home compared to women with primary, secondary and higher education (24%, 8% and 6%, respectively)

According to women's work status, the results showed no marked difference in proportion of women who delivered at a health facility. About 76% of employed women and 75% of unemployed women delivered in a health facility during their most recent birth. More employed women (58%) delivered in a public health facility compared to women who were not employed (53%). Only 2% and 1% of employed and unemployed women respectively delivered in a private health facility. By contrast, more women who were not employed (21%) delivered in a CHAM health facility than employed women (16%). At least 24% and 22% of employed and unemployed women respectively, delivered at home.

Furthermore, the results showed that rich women were most likely to deliver in a health facility compared to poor women (94% and 64%, respectively). Similarly, more rich women reported to have delivered in a public health facility compared to poor women (69% and 47%, respectively). Only rich women (3%) delivered in a private health facility and none of the poor women delivered in a private health facility. Slightly more rich women delivered in a CHAM facility compared to poor women (22% and 17%, respectively). The majority of respondents who reported to have delivered at home were poor women (35%) compared to rich women (4%).

A high proportion of women who belonged to other ethnic groups such as Sena, Nkhonde, Nyanja, Mang'anja etc (95%), Yao (94%) and Lomwe (90%) reported to have delivered in a health facility, whereas women of Chewa tribe had the lowest proportion of women who delivered in a health facility (72%). A high proportion of women of Tumbuka ethnic group delivered in a public health facility (73%) and more women of Lomwe tribe (38%) delivered at a CHAM facility. About 7% of women of Tumbuka and Lomwe tribes delivered in a private health

facility. More Chewa women (27%) delivered at home compared to women of Tumbuka and Yao tribes (7%).

By religious groupings, the results showed that majority of Muslim women and women who belonged to C.C.A.P church (86% and 82%, respectively) delivered in a health facility compared to Catholic and Seventh Day Adventist/Baptist women (77% and 59%, respectively). Additionally, the results showed that women who belonged to other religions or no religion at all were more likely not to deliver in a health facility (50%). The majority of women who delivered at home belonged to Seventh Day Adventist/Baptist church (37%).

6.3.2.2 Delivery by a Skilled Attendant

Figure 6.7 shows the type of provider who provided assistance to women during the most recent delivery in the five years preceding the survey. Results showed that most of the deliveries (76%) were conducted by a skilled attendant i.e. nurse or midwife (62%) and doctor or clinical officer (14%). At least 3% of the deliveries were assisted by a patient attendant. Results revealed that 16% of births were assisted by a TBA whereas 3% births were assisted by a relative or friend. About 1% of births were assisted by other providers while 2% of births were assisted by no one.

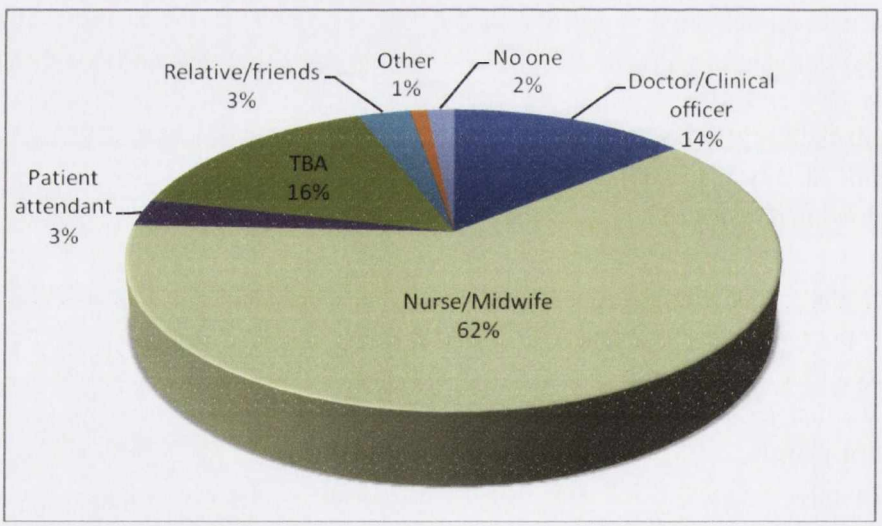


Figure 6.7: Distribution of Births in the Five years preceding the survey by person providing assistance during delivery, Lilongwe 2010

Mother's age was significantly associated with being assisted by a skilled health attendant during delivery (chi-square: p=0.01). Results in table 6.8 shows that more teenage girls age 15-19 and young women 20-24 were assisted by a skilled attendant during delivery (79% and 78%, respectively) compared to older women age 35-49 (65%). Almost 29% of older women age 34-

49 were assisted by unskilled attendant including a patient attendant, TBA, relative or friend compared to teenage girls age 15-19 and young women age 20-34 (18% and 19%, respectively). At least 3% each of teenage girls age 15-19 and older women age 34-49 were attended by no one during delivery.

Table 6.8: Delivery by a Skilled Attendant

Percent distribution of births assisted by a skilled attendant in the five years preceding the survey according to background characteristics, Lilongwe 2010

Background characteristics	Skilled attendant		Unskilled attendant						Percentage delivered by a skilled attendant	Number of births
	Doctor/ clinical officer	Nurse/ Midwife	Patient attendant	TBA	Relative/ friends	Other	No one	Total		
Mother's age at birth										
15-19	12.1	66.7	9.1	9.1	0.0	0.0	3.0	100	78.8	33
20-34	14.6	63.8	2.9	14.1	3.1	0.4	1.1	100	78.4	453
35-49	12.0	52.8	1.6	23.2	4.0	3.2	3.2	100	64.8	125
Marital status										
Married	13.8	60.8	2.3	17.2	3.1	1.3	1.5	100	74.6	390
Not married	14.0	63.3	4.1	13.1	3.2	0.5	1.8	100	77.4	221
Residence										
Urban	25.3	57.0	4.1	7.7	2.7	0.9	2.3	100	82.4	221
Rural	7.4	64.4	2.3	20.3	3.3	1.0	1.3	100	71.8	390
Education										
No education	8.2	54.6	2.1	20.6	5.2	4.1	5.2	100	62.9	97
Primary	12.1	62.4	3.6	17.8	3.1	0.5	0.5	100	74.5	388
Secondary	20.9	67.3	1.8	6.4	0.9	0.0	2.7	100	88.2	110
Higher	43.8	50.0	0.0	0.0	6.3	0.0	0.0	100	93.8	16
Work status										
Not working	13.3	62.3	3.7	13.9	3.7	0.8	2.0	100	75.8	244
Working	14.2	61.3	2.5	16.9	2.7	1.1	1.4	100	75.5	367
Wealth quintile										
Poorest	8.1	60.0	1.5	21.5	5.2	0.7	3.0	100	68.1	135
Poorer	8.9	62.5	2.7	19.6	4.5	0.9	0.9	100	71.4	112
Middle	8.5	53.2	4.3	28.7	3.2	0.0	2.1	100	61.7	94
Richer	10.9	66.3	3.3	14.1	2.2	3.3	0.0	100	77.2	92
Richest	25.8	64.6	3.4	2.8	1.1	0.6	1.7	100	90.4	178
Ethnicity										
Chewa	11.0	62.0	2.9	18.7	3.3	0.6	1.5	100	73.0	481
Tumbuka	26.7	53.3	6.7	0.0	6.7	0.0	6.7	100	80.0	15
Lomwe	36.8	52.6	0.0	5.3	0.0	0.0	5.3	100	89.5	19
Yao	19.4	67.7	3.2	3.2	0.0	3.2	3.2	100	87.1	31
Ngoni	17.8	62.2	4.4	6.7	4.4	4.4	0.0	100	80.0	45
Other	35.0	61.7	2.9	15.7	3.1	1.0	1.6	100	95.0	20
Religion										
Catholic	16.0	63.0	4.2	11.8	2.5	0.8	1.7	100	79.0	119
C.C.A.P	11.3	66.7	5.7	12.8	2.8	0.7	0.0	100	78.0	141
Seventh Day Advent/Baptist	13.6	54.5	0.0	27.3	2.3	0.0	2.3	100	68.2	44
Muslim	21.4	57.1	7.1	7.1	3.6	3.6	0.0	100	78.6	28
Other Christian	14.4	61.1	1.2	16.3	3.9	1.2	1.9	100	75.5	257
Other/no religion	4.5	50.0	0.0	36.4	0.0	0.0	9.1	100	54.5	22
Total	13.9	61.7	2.9	15.7	3.1	1.0	1.6	100	75.6	611

Note: If the respondent mentioned more than one person who provided assistance during delivery, only the most qualified person is considered in this tabulation. Skilled attendant includes doctor, clinical officer, nurse and midwife.

The findings showed no significant relationship between mothers marital status and getting assistance from a skilled health attendant during delivery (chi-square: p=0.45). No marked variation was observed in proportion between married and unmarried women who were assisted

by a skilled attendant during delivery (75% and 77%, respectively). Similarly, no difference was observed between the proportion of married (14%) and unmarried women (14%) who were assisted by a doctor of clinical officer during delivery. About 61% of married women and 63% of unmarried women were assisted by a nurse or midwife. More married women were assisted by a TBA during delivery compared to unmarried women (17% and 3%, respectively).

Table 6.8 above also shows that mother's residential status was significantly associated with being assisted by a skilled health provider during delivery (chi-square: p=0.01). More urban women urban women reported to have been assisted by a skilled attendant during delivery compared to rural women (82% and 72%, respectively). About 25% of urban women and 7% of rural women reported to have been assisted by a doctor or clinical officer during delivery. In contrast, more rural women were assisted by either a nurse or midwife unlike urban women (64% and 57%, respectively) during delivery. About 20% of rural women and 8% urban women were assisted by a TBA during delivery. At least 2% of urban woman and 1% of rural women were attended by no one during delivery.

Furthermore, the results showed a high level of significance in the relationship between mother's education and receiving assistance from a skilled health provider during delivery (chi-square: p=0.001). The majority of women with the highest educational status (94%) were assisted by a skilled attendant during delivery compared women with secondary, primary and no education (88%, 75% and 63%). Similarly, women with the highest education (44%) were assisted by a doctor or nurse during delivery compared to women with secondary, primary and no education (21%, 12% and 8% respectively). More women who had never been to school were assisted by a TBA or no one (21% and 5%, respectively) during delivery compared to women with primary (18% and 1%, respectively), secondary (6% and 3%, respectively).

The results showed no significant relationship between mother's work status and delivering with assistance by a skilled health provider (chi-square: p=0.92). There was no marked difference between the proportion of employed and unemployed women who were assisted by a skilled health attendant during delivery (both categories had 76% of women). Similarly, no marked variation was noticed between employed and unemployed women who were assisted by a doctor or clinical officer (14% and 13%, respectively) and nurse or midwife (62% and 61%, respectively). The results however showed that slightly more employed women were assisted by a TBA compared to unemployed women (17% and 14%, respectively).

Mother's wealth status appeared to be highly significantly associated with receiving assistance from a skilled health attendant during delivery (chi-square: p=0.001). The majority of rich women reported to have been assisted by a skilled attendant during delivery compared to poor women (90% and 68%, respectively). Similarly, more rich women reported to have been assisted by a doctor or clinical officer (26%) and nurse or midwife (62%) during delivery compared to poor women (8% and 60% respectively). On the contrary, the results showed that more poor

women were assisted by a TBA during delivery (22%), relative/friend (5%) or no one (3%) compared to rich women (3%, 2% and 1%, respectively).

Mother's ethnicity appeared to be significantly associated with being assisted by a skilled health attendant during delivery (chi-square: p=0.02). A high proportion of women who belonged to "other ethnic groups" (95%) reported to have been assisted by a skilled attendant during delivery compared to women who belonged to the tribes of Lomwe (90%), Yao (87%), Tumbuka (80%), Ngoni (80%) and Chewa (73%). Among the women who were delivered by a TBA the majority were women of Chewa tribe (19%). Additionally, the results showed that the majority of women who were assisted by no one during delivery were of Tumbuka tribe (7%).

Additionally, the results showed no significant relationship between mother's religion and use of skilled health attendant for delivery care (chi-square: p=0.53). No marked variations were observed among women of various religious groupings who were assisted by a skilled attendant during delivery (most groups ranged from 76% and 79%), except for women who belonged to Seventh Day Adventist/Baptist churches and other/no religious groupings as they had the lowest proportions (68% and 55%, respectively). Additionally, the results showed that a higher proportion of women who belonged to other religious groups or no religion reported to have been assisted by a TBA (36%) and no one (9%) during delivery. About 27% of women who belonged to Seventh Day Adventist/Baptist churches and 16% of women who belonged to other Christian denominations (16%) reported to have been assisted by a TBA during delivery.

In conclusion, the findings in this section have shown that a significant proportion of deliveries is conducted by unskilled attendants. At this stage of the analysis, mother's age, residential status, education, wealth and ethnicity were the only factors that appeared to be significantly associated with skilled assistance during delivery. However, significance of these factors was tested further in the multivariate analysis.

6.3.3 Postnatal Care

6.3.3.1 Timing of First Postnatal Check-up

Women were asked whether or not they received a postnatal check-up after their most recent birth and the timing when the first postnatal check-up was done. According to MoH policy and practice, it is recommended that all women should receive a postnatal check-up within the first 24 hours after delivery. Results in figure 6.8 shows that almost 34% of women did not receive any postnatal check-up after delivery. About 32% of women received a postnatal check-up in the first hour of giving birth and 20% of women received a postnatal check-up after one to twenty three hours of delivery. Just about 6% of women received a postnatal check-up after one to two days after delivery. Similarly, 6% of women received a postnatal check-up after three to forty one days after delivery.

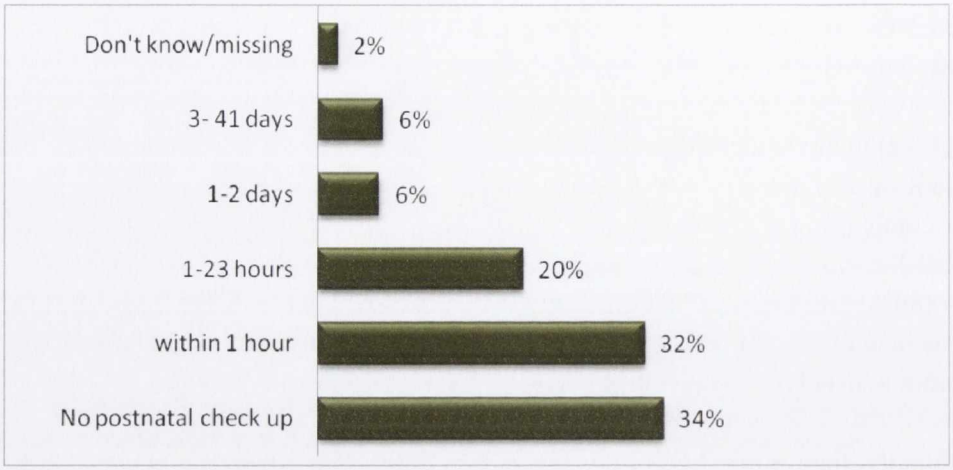


Figure 6.8: Timing of first postnatal check-up, Lilongwe 2010

The study further analyzed the distribution of women's first postnatal check-up for their most recent birth and timing for the first postnatal check-up according to background characteristics. Table 6.9 shows no remarkable difference in utilization of postnatal check-up across mother's age groups within the first hour of delivery. However, the results showed that the proportion of women who did not receive postnatal check-up decreased with increase in women's age, from 46% for women age 15-19 to about 34% for women age 20-49. Less than half of women age 15-19 (45%) received a postnatal check-up within two days after delivery, whereas more than half of women age 20-34 (60%) and 35-49 (58%) received a postnatal check-up within two days after delivery, respectively.

About half of unmarried women (51%) and 21% of married women received a postnatal check-up in the first hour after birth. More married women did not receive any postnatal check-up after delivery compared to unmarried women (42% and 20%, respectively). More unmarried women received a postnatal check-up within two days after giving birth (73%) compared to married women (50%). Additionally, more rural women reported to have received their first postnatal check-up within two days after delivery compared to their urban counterparts (63% and 49%, respectively). Likewise, rural women were most likely to receive a postnatal check-up within one hour of delivery compared to urban women (43% and 12%, respectively). On the contrary, more urban women received a first postnatal check-up between one and twenty three hours after delivery. Almost 38% of urban women and 32% of rural women did not receive any postnatal check-up after giving birth.

Table 6.9: Timing of First Postnatal Check

Percent distribution of women who gave birth in the five years preceding the survey by whether or not they received a postnatal check-up after their most recent live birth and the timing of the first postnatal check-up, according to background characteristics, Lilongwe 2010

Background Characteristics	Time after delivery of mother's first postnatal check-up					No postnatal check up	Total	Percentage who received PNC within 2 days after Delivery	Number of women
	Within 1 hour	1-23 hours	1-2 Days	3-41 Days	Don't know/ missing				
Mother's age at birth									
15-19	33.3	12.1	0.0	3.0	6.1	45.5	100	45.4	33
20-34	31.8	20.8	6.4	6.6	1.5	32.9	100	59.9	453
35-49	32.0	19.2	6.4	6.4	2.4	33.6	100	57.6	125
Marital status									
Married	21.0	22.3	6.2	6.2	2.6	41.8	100	49.5	390
Not married	51.1	15.8	5.9	6.8	0.9	19.5	100	72.8	221
Residence									
Urban	12.2	26.2	10.4	9.5	4.1	37.6	100	48.8	221
Rural	43.1	16.4	3.6	4.6	0.8	31.5	100	63.1	390
Education									
No education	28.9	10.3	7.2	6.2	46.4	46.4	100	46.4	97
Primary	35.8	19.1	4.6	5.2	33.8	33.8	100	59.6	388
Secondary	22.7	30.0	9.1	9.1	25.5	25.5	100	61.8	110
Higher	18.8	31.3	18.8	18.8	12.5	12.5	100	68.9	16
Work status									
Not working	30.7	23.0	5.3	4.5	2.0	34.4	100	59.0	244
Working	32.7	18.0	6.5	7.6	1.9	33.2	100	57.2	367
Wealth quintile									
Poorest	39.3	14.1	5.2	6.7	0.0	34.8	100	58.6	135
Poorer	39.3	17.9	1.8	1.8	0.9	38.4	100	59.0	112
Middle	35.1	20.2	1.1	5.3	1.1	37.2	100	56.4	94
Richer	32.6	25.0	3.3	5.4	2.2	31.5	100	60.9	92
Richest	19.7	23.0	13.5	10.1	4.5	29.2	100	56.2	179
Ethnicity									
Chewa	37.0	17.9	5.0	4.8	0.8	34.5	100	59.9	481
Tumbuka	20.0	33.3	0.0	13.3	13.3	20.0	100	53.3	15
Lomwe	10.5	15.8	10.5	15.8	5.3	42.1	100	36.8	19
Yao	12.9	25.8	12.9	16.1	3.2	29.0	100	51.6	31
Ngoni	11.1	33.3	6.7	8.9	8.9	31.1	100	51.1	45
Other	15.0	25.0	20.0	10.0	0.0	30.0	100	60.0	20
Religion									
Catholic	26.9	28.6	4.2	7.6	1.7	31.1	100	59.7	119
C.C.A.P	29.1	19.1	5.0	4.3	3.5	39.0	100	53.2	141
Seventh Day Advent/Baptist	34.1	22.7	2.3	6.8	2.3	31.8	100	59.1	44
Muslim	3.6	25.0	21.4	14.3	3.6	32.1	100	50.0	28
Other Christian	38.1	15.2	6.6	6.2	1.2	32.7	100	59.9	257
Other/no religion	31.8	18.2	4.5	4.5	0.0	40.9	100	54.5	22
Total	31.9	20.0	6.1	6.4	2.0	33.7	100	58.0	611

Women with highest education (19%) were less likely to receive a postnatal check-up within the first one hour of giving birth compared to women with secondary, primary and no education (23%, 36% and 30%). Among the women who did not receive any postnatal check-up, 46% were not educated, while 34% had primary education, 26% had secondary education and 13% had higher education. Women with highest education were less likely to receive a first postnatal check-up within two days after delivery compared to women without education (70% and 46%, respectively).

Women belonging to richest wealth quintile are less likely to receive a postnatal check-up within two days after delivery compared to their rural counterparts (56% and 58%, respectively). On the contrary, poor women are most likely to receive a postnatal check-up within the first one hour of birth compared to rich women (39% and 20%, respectively). Additionally, rich women are less likely not to receive any postnatal check-up after delivery compared to poor women (29% and 35%, respectively).

More women of Chewa tribe (60%) received their first postnatal check-up within two days of delivery. The majority of women who received a first postnatal check-up within one hour were Chewa women (37%). A high proportion of Lomwe women did not receive any postnatal check-up within forty one days after delivery (42%). Additionally, the results show that a large proportion of women who belonged to Catholic and Seventh Day Adventist received their first postnatal check-up within two days after delivery (60% and 59%, respectively).

6.3.3.2 Providers of First Postnatal Check-up

Figure 6.9 presents results of women who delivered within the five years preceding the survey according to the type of provider who performed the mother's first postnatal check-up. Half of the women (50%) received the first postnatal check-up from a nurse or midwife, while 6% of women received this care from a doctor or clinical officer. About 6% of women received the first postnatal check-up from a TBA, while 3% and 1% of women received their first postnatal check-up from a patient attendant and other providers, respectively.

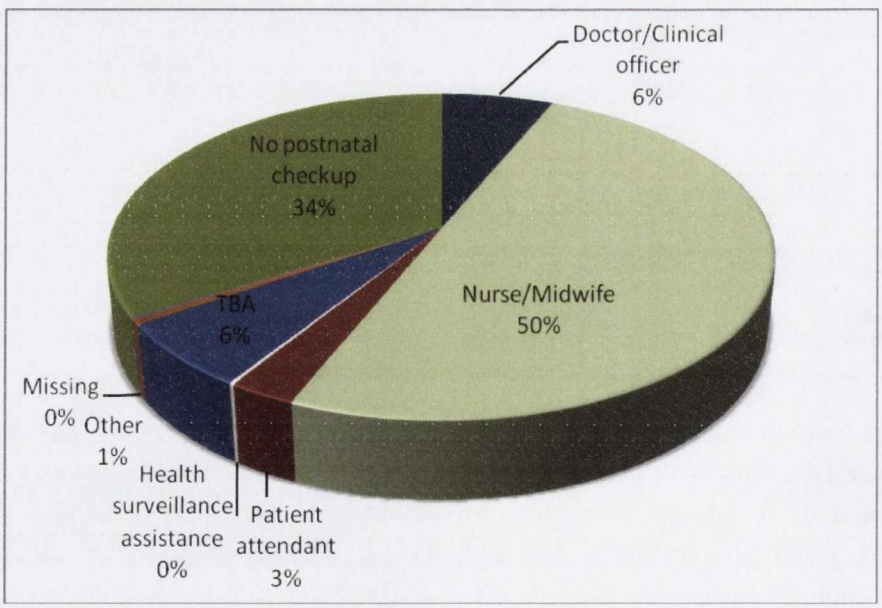


Figure 6.9: Distribution of women who delivered in the five years preceding the survey by type of provider of first postnatal check-up, Lilongwe 2010

6.3.3.3 First Postnatal Check-up by a Skilled Attendant

Table 6.10 presents results on distribution of women who delivered in the five years preceding the survey and who received the first postnatal check-up from a skilled attendant according to background characteristics. The results showed no significant relationship between mother's age and receiving a first postnatal check-up from a skilled health attendant (chi-square: p=0.14). However, the results showed that more young women age 20-34 (59%) received their first postnatal check-up from a skilled attendant compared to teenage girls age 15-19 (42%) and older women age (54%). Additionally, more teenage girls age 15-19 (46%) did not receive any postnatal check-up compared to young women age 20-34 (33%) and older women age 35-49 (34%). At least 10% of older women age 35-49 and 6% of young women age (20-34) received their first postnatal check-up from a TBA.

The results also showed that mother's marital status appeared to be associated with receiving a first postnatal check-up from a skilled health attendant (chi-square: p=0.01). Married women were less likely to receive their first postnatal check-up from a skilled attendant compared to unmarried women (53% and 62%, respectively). Only about 9% and 6% of married and unmarried women respectively, received their first postnatal check-up from a TBA. Most of the women who did not receive any postnatal check-up were married compared unmarried women (42% and 20%, respectively).

No significant relationship was found between mother's residential status and receiving a first postnatal check up from a skilled health attendant (chi-square: p=0.34). The results showed minor differences between proportion of urban and rural women who received a first postnatal check-up from a skilled attendant (58% and 55%, respectively). However, there was a notable difference in proportion of women who did not receive any postnatal check-up between urban and rural women (38% and 32%, respectively). More rural women received postnatal care from a TBA than urban women (9% and 1%, respectively).

Mother's education status appeared to be significantly associated with receiving a first postnatal check up from a skilled health attendant (chi-square: p=0.001). Women with higher education (88%) were more likely to receive their first postnatal check-up from a skilled attendant compared to women with secondary education (69%), primary education (55%) and no education (43%). None of the women with higher education received postnatal care from unskilled attendant. More women with primary education (8%) received their first postnatal check up from a TBA compared to women with secondary education (1.8%) and women with no education (6%).

Table 6.10: First Postnatal Check-up by a Skilled Attendant

Percent distribution of women who delivered in the five years preceding the survey and who received first postnatal check-up from a skilled attendant within 41 days after delivery for the most recent birth by type of provider at the first check-up, Lilongwe 2010

Background characteristics	Skilled attendant		Unskilled attendant							Percentage received PNC from a skilled attendant	Number of women
	Doctor/ clinical officer	Nurse/ Midwife	Patient attendant	[1]HAS	[2]TBA	Other	Missing	No postnatal check up	Total		
Mother's age at birth											
15-19	3.0	39.4	6.1	3.0	0.0	3.0	0.0	45.5	100	42.4	33
20-34	7.3	50.8	2.4	0.0	6.0	0.4	0.2	32.9	100	58.1	453
35-49	4.0	49.6	3.2	0.0	9.6	0.0	0.0	33.6	100	53.6	125
Marital status											
Married	5.9	47.2	1.3	0.0	3.6	0.0	0.3	41.8	100	53.1	390
Not married	7.2	54.8	5.4	0.5	11.3	1.4	0.0	19.5	100	62.0	221
Residence											
Urban	14.9	43.4	2.3	0.0	1.4	0.5	0.0	37.6	100	58.4	221
Rural	1.5	53.6	3.1	0.3	9.2	0.5	0.3	31.5	100	55.1	390
Education											
No education	1.0	42.3	3.1	0.0	6.2	1.0	0.0	46.4	100	43.3	97
Primary	4.9	49.7	3.1	0.3	8.0	0.3	0.0	33.8	100	54.6	388
Secondary	15.5	53.6	1.8	0.0	1.8	0.9	0.9	25.5	100	69.1	110
Higher	12.5	75.0	0.0	0.0	0.0	0.0	0.0	12.5	100	87.5	16
Work status											
Not working	6.6	50.0	2.5	0.0	6.1	0.4	0.0	34.4	100	56.6	244
Working	6.3	49.9	3.0	0.3	6.5	0.5	0.3	33.2	100	56.1	367
Wealth quintile											
Poorest	1.5	51.9	2.2	0.0	8.9	0.7	0.0	34.8	100	53.3	135
Poorer	0.9	50.0	2.7	0.0	8.0	0.0	0.0	38.4	100	50.9	112
Middle	1.1	42.6	5.3	1.1	11.7	1.1	0.0	37.2	100	43.6	94
Richer	8.7	51.1	1.1	0.0	6.5	0.0	1.1	31.5	100	59.8	92
Richest	15.2	51.7	2.8	0.0	0.6	0.6	0.1	29.2	100	66.9	178
Ethnicity											
Chewa	4.0	49.9	2.9	0.2	8.1	0.4	0.0	34.5	100	53.8	481
Tumbuka	26.7	53.3	0.0	0.0	0.0	0.0	0.0	20.0	100	80.0	15
Lomwe	15.8	42.1	0.0	0.0	0.0	0.0	0.0	42.1	100	57.9	19
Yao	12.9	54.8	3.2	0.0	0.0	0.0	0.0	29.0	100	67.7	45
Ngoni	8.9	51.1	4.4	0.0	0.0	0.0	2.2	31.1	100	60.0	31
Other	25.0	45.0	0.0	0.0	0.0	0.0	0.0	30.0	100	70.0	20
Religion											
Catholic	8.4	53.8	2.5	0.0	4.2	0.0	0.0	31.1	100	62.2	119
C.C.A.P	4.3	47.5	4.3	0.7	3.5	0.0	0.7	39.0	100	51.8	141
Seventh Day Advent/Baptist	4.5	52.3	2.3	0.0	9.1	0.0	0.0	31.8	100	56.8	44
Muslim	10.7	50.0	7.1	0.0	0.0	0.0	0.0	32.1	100	60.7	28
Other Christian	6.6	49.0	1.6	0.0	8.9	1.2	0.0	32.7	100	55.6	257
Other/no religion	4.5	50.0	4.5	0.0	9.1	0.0	0.0	31.8	100	54.5	22
Total	6.4	49.9	2.8	0.2	6.4	0.5	0.2	33.7	100	56.3	611

Note: Skilled attendant includes doctor, clinical officer, nurse and midwife.[1] HSA: Health Surveillance Assistance. [2] TBA: Traditional Birth Attendant

Additionally, mother's work status appeared not to be associated with receiving a first postnatal check up from a skilled health attendant (chi-square: p=0.95). No marked difference was found between the proportion of employed and unemployed women who received a first postnatal check-up from a skilled attendant (56% and 57%, respectively). Similarly, no significant difference was shown between employed and unemployed women.

Furthermore the results showed that mother's wealth status was associated mother's probability of receiving the first postnatal check-up from a skilled health attendant (chi-square: p=0.01). More rich women reported to have received their first postnatal check-up from a skilled attendant compared to rural women (67% and 53%, respectively).

No significant relationship was found between mother's ethnicity and receiving a first postnatal check-up from a skilled health attendant (chi-square: p=0.07). However, a high proportion of women of Tumbuka tribe reported to have received postnatal care from a skilled attendant (80%) compared to women from other ethnic groups. Women of Chewa tribe had the lowest proportion of women who received postnatal check up from a skilled attendant (54%).

Similarly, the results found no significant relationship between mother's religion and receiving a first postnatal check-up from a skilled health attendant (chi-square: p=0.71). However, the results showed that more women who belonged to Catholic and Muslim religion received their first postnatal check-up from a skilled attendant (65% and 61%, respectively) compared to women who belonged to C.C.A.P church (52%), Seventh Day Adventist/Baptist (57%), other Christians (56%), as well as those who belonged to other religious groups or no religion (55%).

In conclusion, results in this section have shown that utilization of skilled postnatal care is very low in Lilongwe District. Generally, a small proportion of women received postnatal care from a skilled provider within the first one hour and 24 hours following delivery. Mother's age, marital status, education and work status appeared to be associated with receiving a first postnatal check-up from a skilled attendant at bivariate analysis level.

6.3.4 Differentials in Use of Maternal Health care provided by a Skilled Attendant: A Comparative Analysis of Lilongwe and Malawi

This section presents a comparative analysis on use of maternal health care services provided by a skilled attendant between women in Lilongwe and Malawi (national level). The analysis includes information from the results of descriptive analyses on use of antenatal, delivery and postnatal care provided by a skilled attendant in Lilongwe and data from the 2011 MDHS report on use of maternal health services provided by a skilled attendant at national level.

Figure 6.10 shows that slightly more women at national level received ANC care from a skilled attendant compared to women in Lilongwe (95% and 91% respectively). By contrast, more women in Lilongwe received delivery care and postnatal care from a skilled attendant (76% and 56%, respectively) compared to women at national level (71% and 49%, respectively). Generally, results showed that the majority of women both in Lilongwe and at national level received ANC from a skilled health attendant. However, the proportion of women who received maternal health care from a skilled attendant decreased during delivery and postnatal care period.

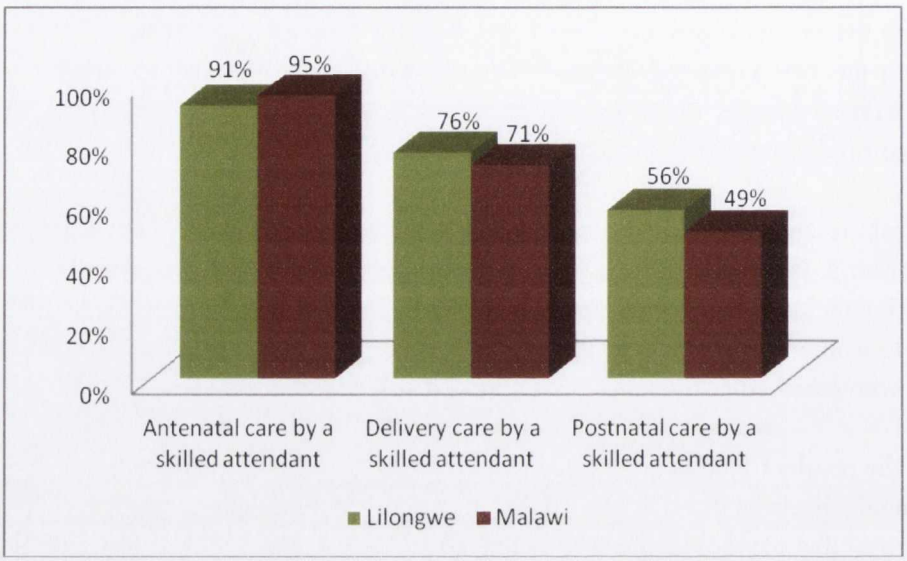


Figure 6.10: Distribution of women who received antenatal, delivery and postnatal care from a skilled attendant, Lilongwe- Malawi 2010

The study further examined differentials in use of maternal health services between Lilongwe and national level according to some selected background characteristics of the respondents. Table 11 shows that more women age 15-19, 20-34 and 35-49 at national level received ANC from a skilled attendant (96%, 95% and 94%, respectively) compared to women in Lilongwe (85%, 93% and 89%, respectively). Furthermore, the results showed that more women age 15-19 and 20-34 in Lilongwe were assisted by skilled health provider during delivery (79% and 78%, respectively) compared to women at national level (74% and 72%, respectively). However the results showed no difference in proportion of women age 35-49 who received delivery care from a skilled attendant in Lilongwe and at national level.

Additionally, table 11 shows that by comparison a high proportion of women age 20-34 and 35-49 in Lilongwe received postnatal care from a skilled attendant (58% and 65%, respectively) than women of the same groups at national level (49% and 54%, respectively). Additionally the results show that more women age 20-34 and 35-49 in Lilongwe received postnatal care from a skilled attendant (58% and 54%, respectively) compared to women at national level (49% and 48%, respectively). By contrast, the results show that slightly more teenage girls age 15-19 at national level received postnatal care from a skilled attendant compared to women in Lilongwe within the same age group (49% and 42%, respectively).

Table 6.11: Differentials in use of maternal health care provided by skilled attendant: Comparison between Lilongwe and Malawi

Percentage of women who had a live birth in the five years preceding the survey who received antenatal care, delivery care and postnatal care from a skilled health provider (doctor, clinical officer, nurse or midwife), by background characteristics, Lilongwe – Malawi, 2010

Background Characteristics	Percentage who received antenatal care		Percentage who received delivery care		Percentage who received postnatal care		Number of women	
	[1]LL	[2]MW	LL	MW	LL	MW	LL	MW
Mother's age at birth								
15-19	84.8	95.6	78.9	74.0	42.2	48.5	33	2,185
20-34	92.5	94.6	78.4	71.7	58.1	49.4	453	9,580
35-49	88.8	93.8	64.8	65.1	53.6	48.1	125	1,899
Residence								
Urban	92.8	96.2	82.4	84.0	58.4	63.0	221	2,107
Rural	90.5	94.4	71.8	69.2	55.1	46.5	390	11,558
Education								
No education	80.4	91.5	62.9	61.5	43.3	41.2	97	2,277
Primary	92.0	94.8	74.5	70.4	54.6	47.3	388	9,144
Secondary	97.3	96.8	88.2	87.0	69.1	62.8	110	2,119
Higher	100.0	100.0	93.8	97.6	87.5	89.7	16	125
Wealth index								
Poorest	82.2	92.4	68.2	63.3	53.3	41.5	135	2,821
Poorer	92.9	94.0	71.4	65.5	50.9	40.7	112	2,894
Middle	90.4	94.1	61.7	67.6	43.6	47.3	94	2,906
Richer	93.5	96.1	77.2	76.8	59.8	53.6	92	2,602
Richest	96.6	97,2	90.4	88.5	66.9	64.8	178	2,442
Total	91.3	94.7	75.6	71.4	56.3	49.0	611	13,644

Note: [1]LL stands for Lilongwe and [2]MW stands for Malawi. Table includes data for the most recent birth in the five years preceding the survey. Tabulation for national data comes from the 2011 DHS report for Malawi.

By residence, the results show minor differences in use of skilled ANC, delivery and postnatal care between urban and rural women in Lilongwe and at national level. A slightly high proportion of urban women at national level received ANC, delivery and postnatal care from a skilled attendant (96%, 84% and 63%, respectively) compared to urban women in Lilongwe (94%, 82% and 53%, respectively). Similarly, slightly more rural women at national level received antenatal care from a skilled attendant compared to rural women in Lilongwe (94% and 91%, respectively). However, on the contrary, more rural women in Lilongwe received delivery and postnatal care (72% and 55%, respectively) from a skilled attendant compared to rural women at national level (69% and 47%, respectively). In general, results showed that urban women both in Lilongwe and at national level were more likely to receive maternal health care services from a skilled attendant than rural women.

Women with higher educational status were most likely to receive antenatal, delivery and postnatal care from a skilled attendant both in Lilongwe (100%, 94% and 88%, respectively) and at national level (100%, 97% and 90%, respectively), with minor differentials. Generally, the results showed that women with higher education status both in Lilongwe and at national level were most likely to use maternal health care services provided by a skilled health attendant.

Additionally, results showed that women's household wealth appeared to be association with receiving ANC, delivery care and postnatal care from a skilled attendant both in Lilongwe and at national level. A high proportion of women in the richest wealth quintile received antenatal, delivery and postnatal care from a skilled attendant both in Lilongwe (97%, 90% and 67%, respectively) and at national level (97%, 89% and 65%, respectively) with no or very minor differences between the two settings. By contract, fewer women in the poorest wealth quintile received ANC care, delivery care and postnatal care from a skilled attendant both in Lilongwe (82%, 68% and 53%, respectively) and at national level (92%, 63% and 42% respectively) with some variations depicted between the two settings. In general, the results revealed that rich women both in Lilongwe and at national level were more likely to receive maternal health care services provided by a skilled provider compared to poor women.

6.3.5 Bivariate Analysis

Table 6.12 below presents results of the bivariate analysis of the use of maternal health services provided by a skilled attendant in Lilongwe. The Pearson Chi-square test was conducted to identify statistically significant relationships between each of the women's background characteristics and the use of maternal health care provided by a skilled attendant. Chi-square test results show that marital status ($p<0.04$), mother's education ($p<0.001$), wealth status ($p<0.001$) and religion ($p<0.03$) were significantly associated with use of ANC provided by a skilled attendant.

Additionally, the Chi-square test results showed that age ($p<0.01$), residence ($p<0.01$), education ($p<0.001$), wealth ($p<0.001$) and ethnicity ($p<0.02$) appeared to be significantly associated with use of delivery care provided by a skilled attendant. Regarding the use of postnatal care, the results showed that marital status ($p<0.01$), education ($p<0.001$) and wealth ($p<0.01$) appeared to be significantly associated with use of postnatal care provided by a skilled attendant.

These results are however not conclusive, because the chi-square test does not consider the interrelationships between independent variables. As such a multivariate analysis was conducted to examine the effect of multiple independent variables on use of maternal health care

Table 6.12: Bivariate Results of the Chi-square Test: Use of Maternal Health care provided by a Skilled Health Attendant

Background Characteristics	Antenatal Care		Delivery Care		Postnatal Care		Number of women
	%	*p*-value	%	*p*-value	%	*p*-value	
Age		0.171		0.007		0.140	
15-19	84.4		78.8		42.4		33
20-34	95.2		78.4		58.3		453
35-49	88.9		64.8		52.8		125
Marital status		0.041		0.445		0.013	
Not married	88.2		77.4		62.9		221
Married	93.1		74.6		52.6		390
Residence		0.343		0.003		0.344	
Rural	90.5		71.8		58.8		390
Urban	92.8		82.4		54.9		221
Education		0.000		0.000		0.000	
No education	80.4		62.9		42.3		97
Primary	92.0		74.5		55.2		388
Secondary and above	97.6		88.9		70.6		126
Work status		0.222		0.923		0.950	
Not working	93.0		75.8		56.4		244
Working	90.2		75.5		56.1		367
Wealth status		0.000		0.000		0.003	
Poorest	82.2		68.1		51.9		135
Poorer	92.9		71.4		51.8		112
Middle	90.4		61.7		44.7		94
Richer	95.5		77.2		59.8		92
Richest	96.6		90.4		66.9		178
Ethnicity		0.525		0.022		0.073	
Chewa	90.6		73.0		53.6		481
Yao	90.3		87.1		67.7		31
Ngoni	93.3		80.0		62.2		45
Other	96.3		88.9		68.5		54
Religion		0.027		0.525		0.710	
Catholic	91.6		79.0		61.3		119
C.C.A.P	97.2		78.0		53.2		141
Seventh Day Advent/Baptist	95.5		68.2		56.8		44
Muslim	89.3		78.6		60.7		28
Other	88.1		73.6		55.2		277

6.4 Multivariate Analysis Results

Direct logistic regression was performed to determine predictors and factors that are significantly associated with utilization of maternal health care services provided by a skilled health attendant. The model contained all the eight independent variables of this study. The results for binary logistic regression analysis are presented in table 6.13 and the sections below.

6.4.1 Predictors of Utilization of Skilled ANC Services

Multilogistic regression results show that women's marital status ($p<0.05$), education ($p<0.02$) and wealth status ($p<0.001$) were identified as independent predictors of utilization of skilled antenatal care in Lilongwe. Married women were almost 2 times more likely (OR: 1.8, 95% CI, 0.99-3.43) to receive antenatal care from a skilled attendant than single women. Women with primary education were 3 times more likely (OR: 2.8, 95% CI, 1.30-5.91; $p<0.01$) to receive skilled antenatal care compared to uneducated women, whereas women with secondary/highest education were 5 times more likely (OR: 5.07, 95% CI, 1.11- 23.00; $p<0.04$) to receive skilled antenatal care compared to uneducated women. The strongest predictor of utilization of skilled antenatal care was women's wealth status, whereby rich women were almost 9 times more likely to use skilled antenatal care (OR: 8.97, 95% CI, 2.21-36.34; $p<0.002$) than to poor women. Women's residence and religion appeared to be associated with receiving skilled antenatal care at the bivariate level but not in multivariate analysis.

6.4.2 Predictors of Utilization of Skilled Delivery Services

Women's wealth status ($p<0.001$) was identified as the only independent predictor of utilization of delivery care provided by a skilled health attendant in Lilongwe. Rich women were about 5 times more likely (OR: 4.74, 95% CI, 1.98-11.30; $p<0.001$) to be assisted by a skilled health provider during delivery compared to poor women. At bivariate level, mother's age, residence, education and ethnicity appeared to be associated with utilization of delivery care provided by a skilled attendant, but not in multivariate analysis.

Background Characteristics	Antenatal Care		Delivery Care		Postnatal Care		Maternal Health care Index	
	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
Mother's age at birth		0.281		0.143		0.383		0.329
15-19 *(ref)*								
20-34	2.179 (0.718 – 6.614)	0.169	0.812 (0.331 - 1.989)	0.648	1.664 (0.792 – 3.495)	0.179	0.603 (0.262-1.384)	0.233
35-49	2.756 (0.782 – 9.709)	0.115	0.516 (0.198 - 1.345)	0.176	1.721 (0.763 – 3.882)	0.191	1.073 (0.686-1.679)	0.757
Marital status		0.051		0.705		0.013		0.106
Not married *(ref)*								
Married	1.849 (0.998 – 3.426)		0.923 (0.610 - 1.397)		0.639 (0.448 - 0.911)		1.335 (0.941-1.895)	
Residence		0.105		0.185		0.012		0.006
Rural								
Urban	2.104 (0.857 – 5.165)		1.500 (0.824 - 2.732)		1.944 (1.154 - 3.274)		0.475(0.280-0.808)	
Mother's education		0.016		0.466		0.016		0.004
No education *(ref)*								
Primary	2.773 (1.301 – 5.908)	0.008	1.318 (0.775 - 2.242)	0.308	1.761 (1.067 - 2.908)	0.027	0.320 (0.160-0.639)	0.001
Secondary and above	5.071 (1.118 – 23.001)	0.035	1.657 (0.702 - 3.912)	0.249	2.727 (1.366 - 5.442)	0.004	0.667 (0.401- 1.109)	0.118
Work status		0.432		0.890		0.939		0.871
Not working *(ref)*								
Working	0.772 (0.405 –1.471)		1.029 (0.689 - 1.535)		0.987 (0.700 - 1.392)		0.927 (0.690-1.369)	
Wealth quintile		0.022		0.000		0.084		0.018
Poorest *(ref)*								
Poorer	2.326 (0.956 – 5.661)	0.063	1.109 (0.632 - 1.946)	0.717	1.012 (0.602 - 1.699)	0.965	0.503 (0.259- 0.975)	0.042
Middle	1.604 (0.670 – 3.839)	0.288	0.673 (0.380 - 1.192)	0.174	0.685 (0.395 - 1.189)	0.178	0.598 (0.302- 1.184)	0.140
Richer	3.407 (1.076 – 10.787)	0.037	1.653 (0.836 - 3.270)	0.149	1.414 (0.777 - 2.572)	0.256	0.327 (0.166 -0.645)	0.001
Richest	8.973 (2.216 – 36.342)	0.002	4.736 (1.984 - 11.304)	0.000	1.750 (0.901 - 3.396)	0.098	0.786 (0.433- 1.426)	0.428
Ethnicity		0.756		0.842		0.487		0.515
Chewa *(ref)*								
Yao	0.394 (0.051 – 3.053)	0.372	1.821 (0.385 - 8.610)	0.449	1.735 (0.588 - 5.120)	0.318	0.644 (0.320-1.297)	0.218
Ngoni	0.594 (0.144 – 2.457)	0.472	0.891 (0.370 - 1.146)	0.796	1.353 (0.666 - 2.752)	0.403	0.842 (0.275- 2.581)	0.764
Other	0.989 (0.186 – 0.5262)	0.990	1.199 (0.31 - 3.332)	0.728	1.602 (0.781 - 3.286)	0.198	0.980 (0.420- 2.289)	0.964
Religion		0.129		0.650		0.676		0.948
Catholic *(ref)*								
C.C.A.P	2.679 (0.784 –9.160)	0.116	0.875 (0.468 - 1.637)	0.676	0.673 (0.400 - 1.132)	0.135	1.078 (0.680-1.709)	0.749
Seventh Day Advent/Baptist	3.749 (0.694 – 20.258)	0.126	0.600 (0.260 - 1.383)	0230	0.891 (0.423 - 1.875)	0.761	0.873 (0.565-1.350)	0.542
Muslim	1.100 (0.135 –8.988)	0.929	0.425 (0.103 - 1.745)	0.235	0.796 (0.261 - 2.425)	0.687	1.021 (0.523- 1.992)	0.953
Other	0.859 (0.376 – 1.965)	0.719	0.847 (0.485- 1.497)	0.559	0.826 (0.518 - 1.317)	0.422	1.089 (0.376-3.154)	0.875

*Note: Tabulation for maternal health care index indicates the continuum of care and is based on combination of data for utilization of antenatal, delivery and postnatal care provided by a skilled attendant

6.4.3 Predictors of Utilization of Skilled Postnatal Care Services

Table 6.14 shows that women's marital status ($p<0.01$), residence ($p<0.01$) and education status ($p<0.02$) were the only predictors of utilization of postnatal care provided by a skilled health attendant. Married women were less likely (OR: 0.64, 95% CI, 0.45-0.91) to be assisted by a skilled attendant during postnatal care. According to residential status, urban women were almost 2 times more likely (OR: 1.94, 95% CI, 1.15-3.27) to be assisted by a skilled attendant during postnatal care. Women with primary education were about 2 times most likely (OR: 1.76, 95% CI, 1.07-2.9; $p<0.03$) to receive postnatal care from a skilled attendant compared with women who had never been to school. Additionally, women with secondary and above education were 3 times more likely (OR: 2.71, 95% CI, 1.37-5.44; ($p<0.004$) to get skilled care during postnatal compared to uneducated women. Women's household wealth appeared to be associated with utilization of postnatal care provided by a skilled attendant, but not in multivariate analysis.

6.4.4 Predictors of Utilization of Skilled Attendance for Maternal Health Services

A maternal health care index was created to indicate the continuum of maternal health care services. Among all the eight independent variables of this study, only three variables;- women's residence ($p<0.01$), education ($p<0.004$) and wealth ($p<0.02$) were significant predictors of utilization of maternal health care provided by a skilled attendant. Urban women were less likely to (OR: 0.48, 95% CI, 0.28-0.81) receive a continuum of maternal health care from a skilled health attendant compared to rural women. Similarly, women with less education (OR: 0.32, 95% CI, 0.16-0.64; $p<0.001$) and poor women (OR 0.50, 95% CI, 0.26-0.98; $p<0.04$) were less likely to receive a continuum of maternal health care from a skilled health attendant.

6.5 Gini-coefficient Analysis Results

This section presents results of the Gini coefficient analysis measure of inequality. All the three significant predictors of skilled maternal health care use were included in the Gini-coefficient analysis (i.e. residence, education and wealth). Below are the results of the analysis

6.5.1 Poor- Rich Inequalities in Use of Skilled Attendance for Maternal Health Services

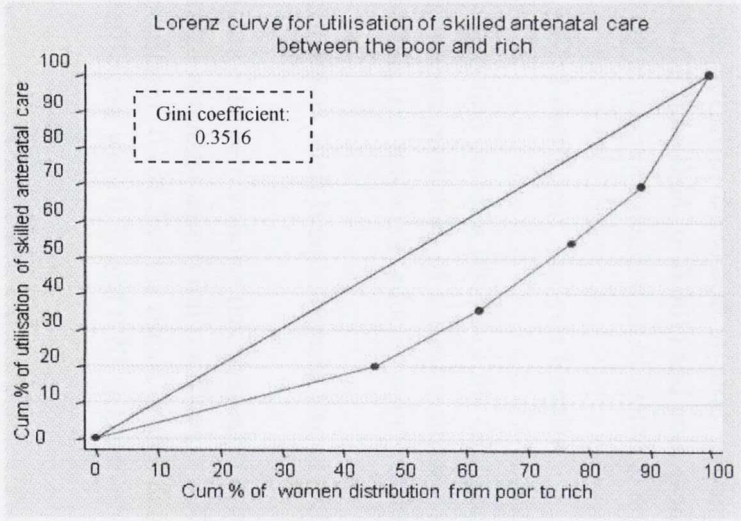
Figure 6.11 below shows that inequality between the poor and rich women was highest for use of skilled antenatal care (Gini coefficient: 0.35) and lowest for use of skilled postnatal care (Gini coefficient: 0.18). For the use of skilled delivery care and maternal health care services the Gini coefficients were 0.31 and 0.20, respectively.

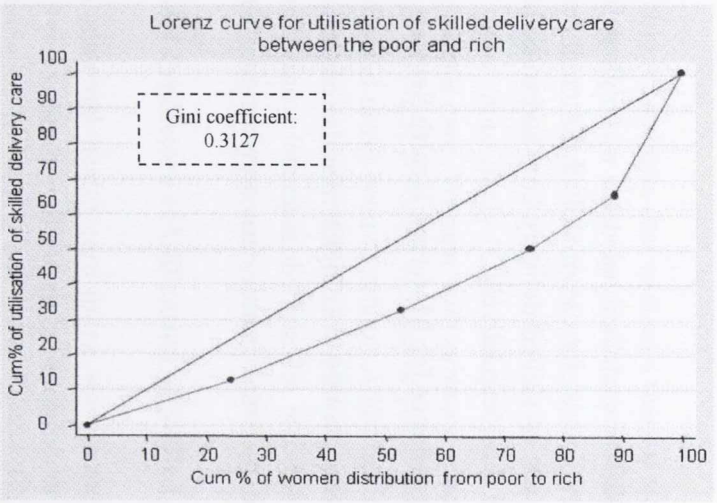
6.5.2 Inequalities in Use of Skilled Attendance for Maternal Health Services according to Women's Educational Level

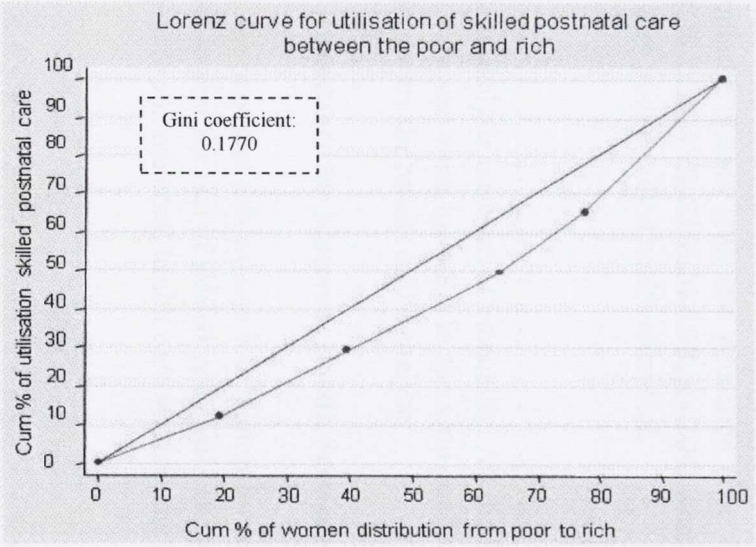
Figure 6.12 shows that inequality among women with different educational status was highest for use of skilled antenatal care (Gini coefficient: 0.31) and lowest for use of skilled postnatal care (Gini coefficient: 0.17). While on the other hand the use of skilled delivery care and maternal health care services the Gini coefficients were 0.21 and 0.19, respectively.

6.5.3 Rural- Urban Inequalities in Use of Skilled Attendance for Maternal Health Service

Figure 6.13 shows that inequality between rural and urban women was highest for use of skilled delivery care (Gini coefficient: 0.13) and lowest for use of skilled antenatal care (Gini coefficient: 0.07). For the use of postnatal care and maternal health care services the Gini coefficients were 0.04 and 0.03, respectively.







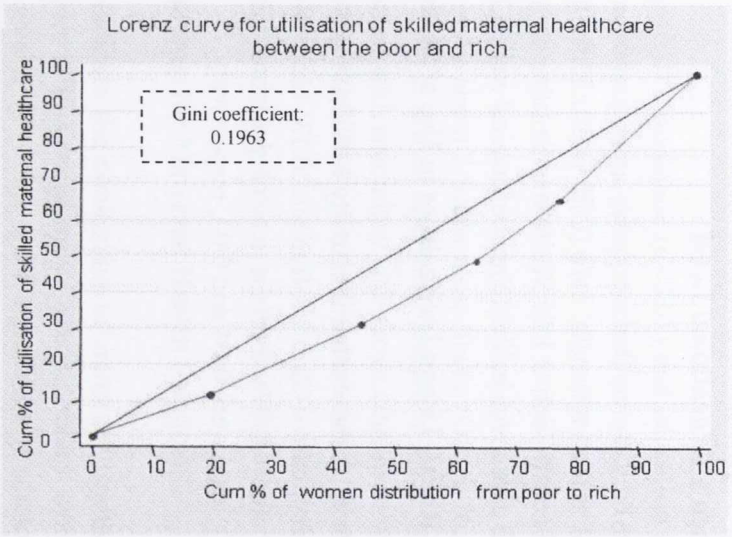
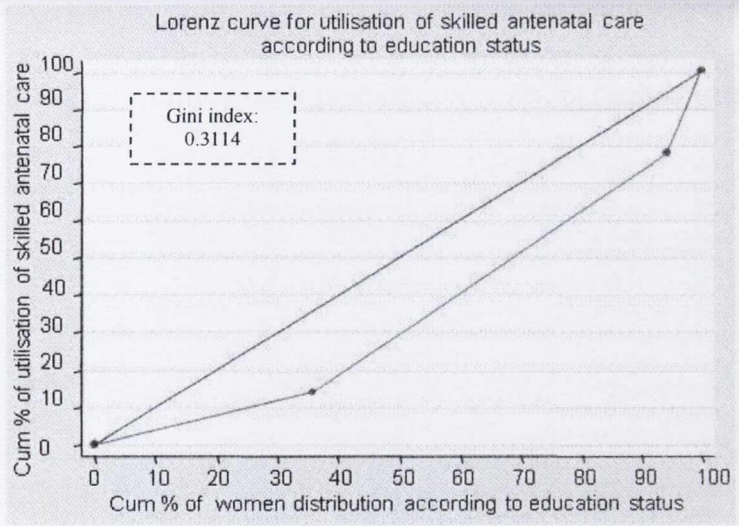
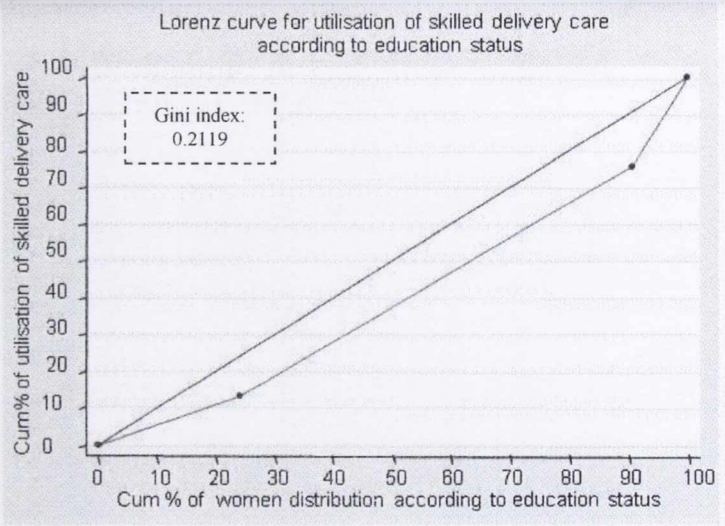
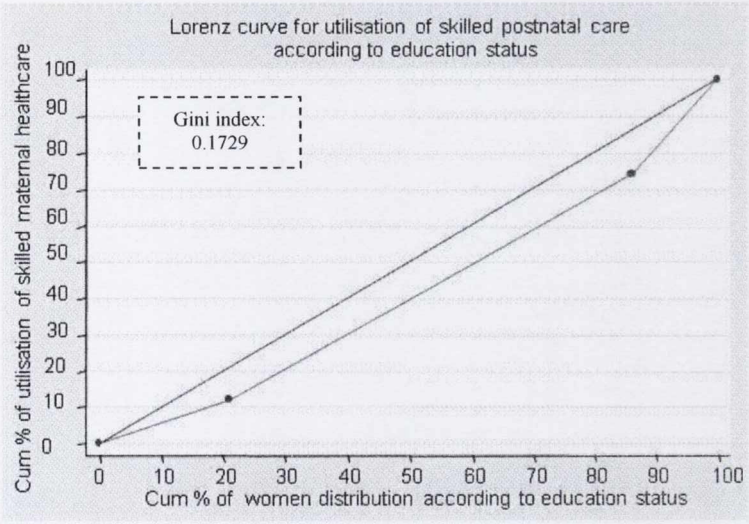


Figure 6.11: Poor- Rich Inequalities in Utilization of Skilled Attendance for Maternal Health Services







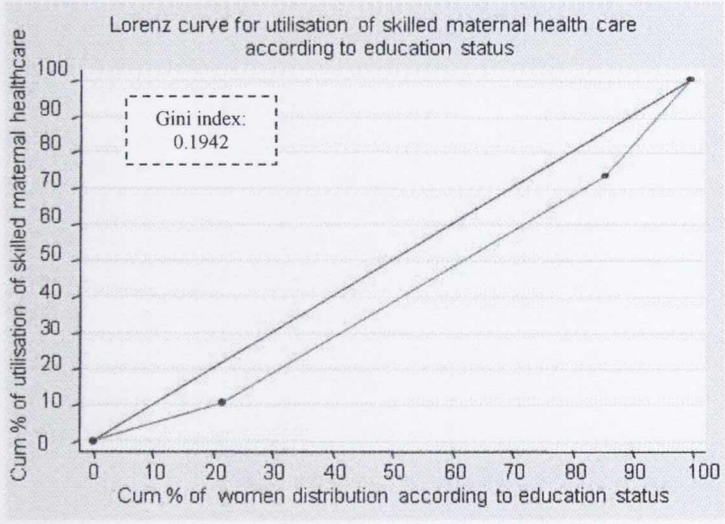
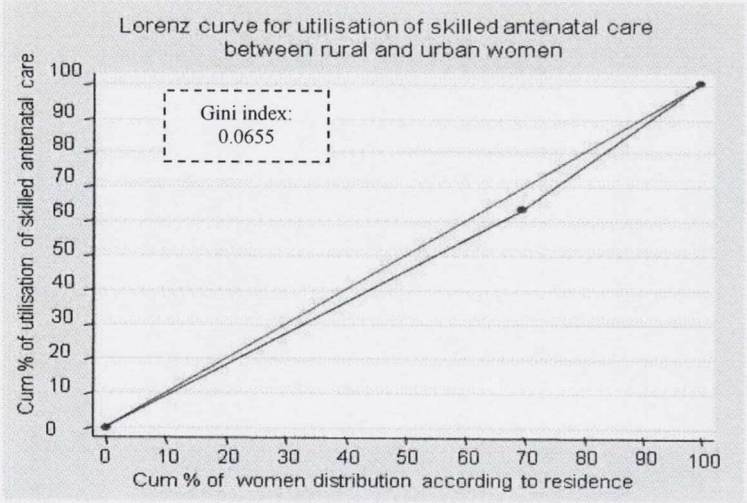
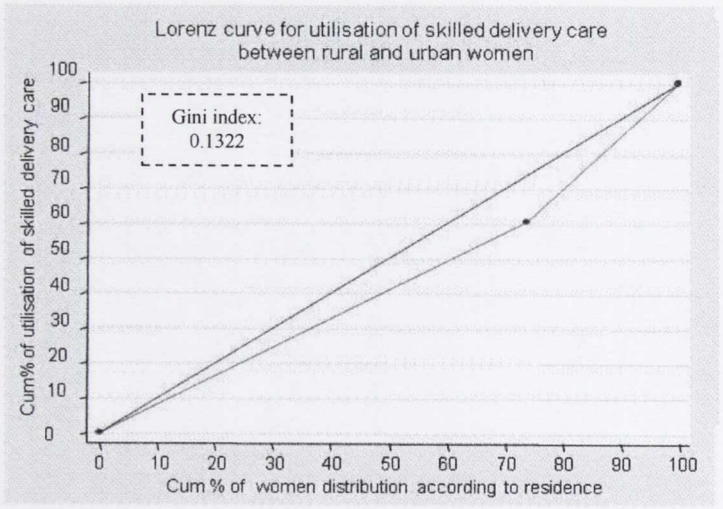
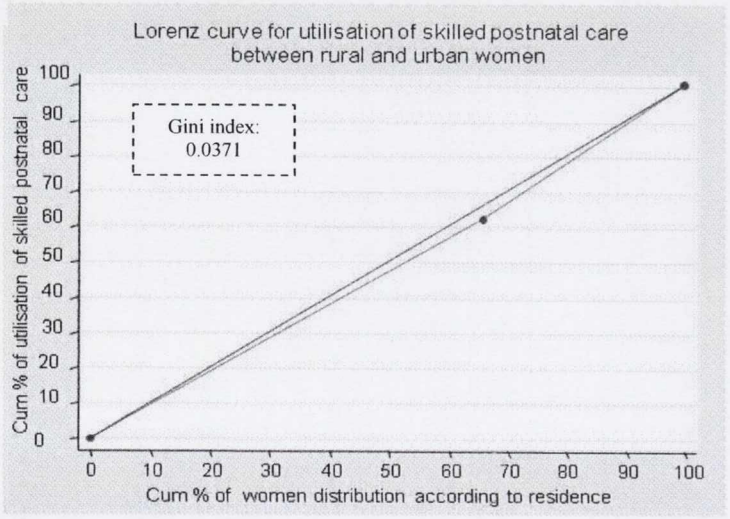


Figure 6.12: Inequalities in Use of Skilled Attendance for Maternal Health Services according to Women's Educational Level







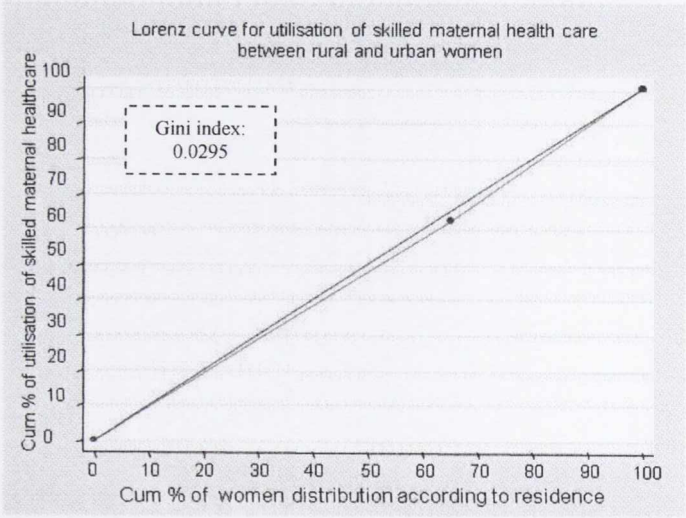


Figure 6.13: Rural- Urban Inequalities in Use of Skilled Attendance for Maternal Health Services

6.6 Summary and Discussion

The purpose of this study was to examine utilization of maternal health care services amongst women in Lilongwe, Malawi using DHS data for 2010. In general, the study found that utilization of skilled ANC services is very high in Lilongwe, as previously reported in other studies (NSO and ICF Macro, 2011, NSO and UNICEF, 2006; Kongnyuy et al., 2009). However, moving along the continuum of care, results show that utilization of skilled care among women in Lilongwe strikingly drops off during childbirth and postnatal period. This observed trend is consistent at a national level. The 2010 MDHS shows higher levels of skilled ANC coverage at national level, compared to skilled delivery and postnatal care (NSO and Macro, 2011). The higher utilization rate for ANC compared with both delivery and postnatal care is also consistent with several other studies done elsewhere (Mpembeni et al., 2007; Ntambue et al, 2012; Wang et al., 2011; Babalola and Adesegun, 2009; Mekonnen and Mekonnen, 2002). A study conducted in several countries including Malawi indicates that the developing world has achieved great strides in increasing ANC coverage with most of the countries reaching a coverage of 90% (Wang et al., 2011). Evidence shows that women who attend ANC are more likely to seek care from a skilled attendant during delivery and postnatal period (Katenga-Kaunda, 2010; Barry et al.,2014; Khanal et al., 2014; Ntambue et al., 2012; Killewo et al., 2004). This study however has confirmed that receiving ANC from skilled professionals does not in itself guarantee that women will seek skilled delivery and postnatal care services. This therefore calls for the need to develop proper interventions that will facilitate continuity in the use of maternal health care services from antenatal, delivery to postnatal period.

Results reveal that although utilization of ANC is high in Lilongwe, most women do not achieve the recommended four ANC visits and neither do they seek ANC during the first trimester as per WHO recommendation (WHO, 2002). These results reflect critical gaps in quality of ANC services. This failure by women to attend ANC as recommended by WHO, makes them not to receive a full package of ANC services. As a critical link in the continuum of care, ANC offers tremendous opportunities to reach all women with effective clinical and health promotion interventions (Lincetto et al., 2006). Studies done elsewhere report that women fail to visit the antenatal clinic as recommended due to lack of adequate information on the content, schedule and advantages of ANC visits (Agus and Horiuchi, 2012; Ntambue et al., 2012). Studies done in Tanzania identified late recognition of pregnancy, lack of support by the husband or partner (Gros et al., 2012) and avoidance to make several visits to the clinic; that is if a woman starts early she will have to attend the clinic many times (Mrisho et al., 2009) as factors associated with delayed and few ANC visits. Other factors also include lack of money and avoidance from being turned away by health care providers for initiating ANC too early and late (Mrisho et al., 2009).

Even though the study found a higher utilization rate of skilled antenatal care among women in Lilongwe, few women reported to have been assisted by a skilled health provider during delivery. This confirms the findings of several other studies done elsewhere which show that

receiving antenatal care from a skilled attendant does not in itself guarantee that that women will seek and receive skilled delivery care (Mpembeni et al., 2007; Wang et al., 2011; Babalola and Adesegun, 2009; Mekonnen and Mekonnen, 2002; Pfeiffer and Mwaipopo, 2013).

The study found that the proportion of deliveries assisted by skilled attendants in Lilongwe, as well as Malawi is low and below the international set targets (ICPD+5) of attaining 85% of deliveries attended by skilled personnel by 2010, and 90% by 2015 (United Nations, 1999). These set target levels of service coverage are however considered high by African standards and even globally. In 2007 only 46.5% and 63.1% of women in Africa and worldwide, respectively, gave birth with the help of a skilled birth attendant (WHO, 2007). Low utilization of skilled attendants especially during delivery in developing countries has been reported by several other researchers (Mpembeni et al., 2007; Wang et al., 2011; Babalola and Adesegun, 2009; Mekonnen and Mekonnen, 2002). A survey conducted in 38 developing countries found that coverage for skilled delivery and postnatal care was low in most countries (Wang et al., 2011). Low utilization of skilled birth attendants during delivery is attributed to several factors including lack of knowledge on the importance of skilled delivery, shortage of skilled health workers, transportation problems, cultural and religious beliefs, poor interaction with health workers and perceived poor quality of care, among other factors (Government of Malawi, 2010; McAuliffe et al., 2009; Mangham, 2007; Mueller et al., 2011; Katenga-Kaunda, 2010; Schmidt, 2013; Titaley et al., 2010; Muchabaiwa et al., 2012). Skilled assistance during delivery is recommended as a means to reduce maternal and child mortality (Vallières et al., 2013), and therefore should be promoted at all cost.

Despite the government's ban on TBAs and efforts to encourage women to deliver in health facilities with the assistance of skilled professionals, the findings show that a significant proportion of women in Lilongwe (16%), as well as Malawi (15%) as a whole, continue to deliver at TBA facilities and home. These findings support results of studies previously done in Malawi (Kumbani et al., 2012) and other countries (Ebuehi and Akintujoye, 2012; Ochako et al., 2011; Titaley et al., 2010; Agus and Horiuchi, 2012). Ochako et al., (2011) in their study done in Kenya also observed that a considerably high proportion of women use TBAs as opposed to skilled professionals. They stated that the finding is baffling and calls for further research. Cotter et al., (2006) suggest that targeted programmatic efforts are necessary to increase skilled attendant-assisted deliveries, with the ultimate goal of reducing maternal and child mortality.

Postnatal care, especially within the first 24 hours after childbirth, is critical to the health and survival of a mother and her newborn (WHO, 2009; Warren et al., 2006). The study shows a very low utilization rate of skilled attendance for postnatal care during the first 1 hour after birth (32%), contrary to WHO recommendation. This result is consistent with findings of several other studies conducted in developing countries which show very low coverage levels of postnatal care services (Wang et al., 2011; Khanal et al., 2014; Babalola and Adesegun, 2009; Dhakal et al., 2007; 2009; Ntambau et al., 2012; Mekonnen and Mekonnen, 2002). For instance, in Tanzania only 42.1% of women receive postnatal care (Babalola and Adesegun, 2009), whilst in Congo and Nepal, about 34% of women receive postnatal care (Dhakal et al.,

2007, Ntambau et al., 2012). The fact that more women in developing countries do not give birth in a health facility poses challenges in access of postnatal care for women and their newborns (Warren et al., 2006). Evidence shows that women who attend four or more ANC visits and deliver in a health facility in the presence of a skilled birth attendant are more likely to receive immediate skilled postnatal care (Khanal et al., 2014; Wang et al., 2011).

Universal access to skilled health providers for maternal health care is crucial to ensuring high quality, effective and safe care, as well as achievement of the MDGs 4 and 5. WHO and UNICEF recommend that all women should have access to a skilled health practitioner during pregnancy, childbirth and postnatal period in order to reduce maternal and neonatal deaths (WHO and UNICEF, 2009). Access to skilled health providers for antenatal, delivery and postnatal care is important because it enables early detection of complications for mothers and newborn, and allows prompt treatment, as well as timely referral to a facility where a complication can be appropriately managed, besides being cost-effective and feasible in resource-poor countries (Bernis et al., 2003; NSO 2011). Wang et al (2011) explain that skilled health providers are effective in identifying problems and pregnancy complications because they are educated and trained to be proficient in the skills of diagnosing, managing and referring complicated pregnancies.

Regarding use of skilled providers for ANC (i.e. doctor, clinical officer, nurse or midwife), most women reported that they received ANC from nurses and midwives (82%). This result is almost exactly the same with finding of the recent national DHS report which indicates that 83% of women in Malawi received ANC from a skilled attendant (NSO, 2011). The 2006 MICS study showed that 92% of women in Malawi were attended to by a skilled attendant during ANC (NSO and UNICEF, 2008). The result is consistent with the findings of a survey done in other countries which show that nurses and midwives are the main providers of ANC in most developing countries, especially in sub-Sahara African region, whilst doctors are the main providers of ANC in developed countries (Wang et al., 2011; Wado et al., 2013).

The likelihood of a woman receiving ANC from a skilled health attendant was significantly associated with being married, educated and belonging to a richer household. This finding corroborates with results of other studies previously done in Malawi and elsewhere (Ochako et al., 2011; Kululanga et al., 2012; Katenga-Kaunda, 2010; Mangeni et al., 2013; Mekonnen and Mekonnen, 2002). A study previously done in Malawi found that married women are more likely to use ANC services because their husbands play a supportive role like getting women to the hospital and providing financial and material resources (Kululanga et al., 2012). A study done in Kenya found that married women are most likely to use ANC services especially when their spouses are directly involved in the care because they get support and encouragement from their husbands (Mangeni et al., 2013) and are therefore well motivated and more willing to seek ANC compared to women who are not married. In Malawi most communities practice patrilineal family structure and most decisions are made by men (Katenga-Kaunda, 2010). As such married women depend on decisions of their husbands. Since men are usually the key decision makers in the home, they often influence women to make a joint decision regarding ANC and they can help to ensure that their wives get

appropriate attention during pregnancy and in obstetric emergencies (Turyakira and Pettersson, 2012; Mangeni et al., 2013).

Although marriage is universal in Malawi, about 36% of births in this present study occurred among women who were not married. Results also show that 42% of the women in this study had never been married or were living together with a man. It is therefore reasonable to assume that most of such pregnancies are unintended or unwanted. It should however be noted that the stigma associated with out-of-wedlock pregnancies in Malawi is very high. As such most women with unintended pregnancies attempt to deny their pregnancies to themselves and to conceal them from others especially during the first trimester (Mekonnen and Mekonnen, 2002). Consequently such women feel less motivated to seek ANC. Studies done elsewhere in Sub-Sahara Africa confirms that women with unintended pregnancies are more likely not to attend ANC in comparison to those with intended pregnancies (Ntambue et al., 2012).

Results of study confirms findings of other studies that educated and rich women are more likely to receive ANC from a skilled attendant than women who are not educated (Wang et al., 2011; Ye et al., 2010; Mekonnen and Mekonnen, 2002). Women with higher education are five times more likely to receive skilled ANC services compared to uneducated women. This is due to the fact that education enhances women's autonomy and empowers them to make decisions regarding their own health and to seek skilled ANC during pregnancy (Mekonnen and Mekonnen, 2002). Rich women are nine times more likely to use skilled ANC services than poor women. This is because they have higher levels of knowledge, better access to services and health promotion information through mass media compared to their rural counterparts (Mekonnen and Mekonnen, 2002). In addition to this, rich women can easily afford to meet the associated cost of ANC services. The associated costs include transport, opportunity cost of waiting and information costs (Muchabaiwa et al., 2012).

In terms of the number and timing of ANC visits, results showed that only half of women in Lilongwe received the recommended four of ANC visits and only few women had their first ANC visit within the first trimester. These findings are consistent with findings of the recent MDHS report which show a similar trend at national level (NSO, 2011). This problem of women having low number of ANC visits and reporting late for the first ANC visit can be attributed to the lack of adequate information on the content, schedule and advantages of antenatal care visits (Agus and Horiuchi, 2012; Ntambue et al, 2012). Well informed women are expected to make favorable decisions regarding the starting time and frequency of their ANC visits (Ntambue et al., 2012).

An interesting finding was that, women who reside in urban areas and those with a higher education level, employed or rich were most likely to visit the ANC clinic four or more times. This finding is consistent with findings of several other studies done elsewhere (Agus and Horiuchi, 2012; Ntambue et al., 2012; Wang et al., 2011; Babalola and Adesegun, 2009). Ethnic disparity was evident with Tumbuka women being more likely to receive ANC in the first trimester compared to women from other ethnic groups, even though significance was

not tested. A further investigation on the data revealed that most of the Tumbuka women had a higher educational level, were employed and richer than their counterparts from other ethnic groups. Perhaps this explains the reason why the results show a higher utilization rate of ANC services among Tumbuka women.

Institutional delivery is an important factor in reducing maternal and neonatal deaths arising from complications of pregnancy (WHO, 2014). Institutional delivery provides an opportunity to promote the benefits of skilled birth attendance and it enables skilled management of complications arising during delivery and timely referral of the mother to the next level of care for proper and further management (NSO, 2011). Among the women who had institutional deliveries, most of the women reported to have had delivered their babies in a public health facility, whilst few women delivered their babies at CHAM and private health facilities. The public health services in Malawi are delivered free of charge by the Ministry of health (MoH). This is one of the possible explanations as to why most women delivered in a public health facility. CHAM institutions are non-profit making organizations but they still charge a small amount of user fees. Despite their user fees being lower than that charged by private health facilities, many people still cannot afford to pay the fees, as a result this acts as a barrier to health care access (Kachala, 2011). Since 2004, the MoH has increasingly promoted the formation of Service Level Agreements (SLAs) with private partners, such as CHAM in order to overcome the financial barrier by removing user fees for selected services especially maternal and neonatal interventions. Since this removal of user fees in CHAM facilities, there has been an increase in the number of women seeking maternal health services in these facilities (Chirwa et al., 2013; Ministry of Health, 2011).

The likelihood of delivering in a health facility was high among women who were young, educated, rich, not married and residing in the urban area. This finding confirms the findings of a study done earlier in Malawi which found that the rich benefit more from public health services than the poor (Mangham, 2006). Younger women are most likely to deliver in a health facility because they tend to fear home deliveries as they consider themselves as a high risk group (Mpembeni et al., 2007). Several studies show that women who are educated, single and of higher economic status have higher autonomy to make decisions regarding their own health and where to seek delivery care than their counterparts (Mpembeni et al., 2007; Ochako et al., 2011; Katenga-Kaunda, 2010; 2010; Anyait et al., 2012; Agha and Carton, 2011). In addition, studies show that women who are educated and rich are economically empowered, as a result they are most likely to seek high quality services and to deliver in a health facility with the assistance of a skilled attendant than their counterparts (Babalola and Adesegun, 2009; Mpembeni et al., 2007). On the other hand women residing in urban settings are more likely to have institutional deliveries because they have better access to health care services (Kumbani et al., 2013; Anyait et al., 2012).

The likelihood of delivering using a TBA was high among women who were older, married, poor, uneducated and residing in the rural area, even though significance was not tested.

Older women are most likely to follow old traditions which encourage TBA assisted delivery. Poor, uneducated and rural women usually lack the knowledge, transportation and reside far from health facilities as such they have problems to access health facilities during delivery. Married women are usually influenced by their spouses to deliver at a TBA. These findings are consistent with studies done elsewhere (Titaley et al., 2010; Ebuehi and Akintujoye, 2012). A study done in Indonesia found that women use TBAs due to the influence of family members such as husbands or parents (Titaley et al., 2010). Ethnic and religious disparities were observed in women of Chewa tribe and Seventh Day Adventist women possibly due to cultural and religious beliefs which influence women to have home deliveries.

A surprising finding is that multilogistic regression analysis identified women's wealth status as the only independent predictor for use of assisted skilled delivery care in Lilongwe. Rich women are more likely to be assisted by a skilled health provider during delivery because they have higher levels of knowledge, better access to services and health promotion information through mass media compared to their rural counterparts (Mekonnen and Mekonnen, 2002). There is better access in the urban areas because the distribution pattern of skilled health workers favors them at the expense of rural areas, where most of the poor reside. This is due to the unattractive working environment in the rural areas, such as the lack of social amenities and accommodation.

A very low utilization rate of skilled attendance during postnatal care was observed. This is contrary to WHO and UNICEF recommendation that postnatal care should be provided to all women by a skilled attendant during and immediately after birth irrespective of where the birth takes place (WHO and UNICEF, 2009). WHO also recommends that women who give birth in a health facility and their newborns should be assessed for problems and given a specific date to return for further postnatal care, even if everything is going well, and advised to return immediately if they notice any danger signs (WHO, 2006). Postnatal care is essential for both the mother and the infant as it enables health practitioners to provide prompt treatment for complications arising from the delivery as well as to provide the mother with important information on caring for herself and her baby (NSO, 2011).

Only about half of the interviewed women reported to have received a postnatal check-up from a skilled health attendant within twenty four hours after delivery. This is contrary to the MoH policy and recommendation that all women should receive a postnatal check-up within the first 24 hours after delivery. In Malawi, utilization of postnatal services is low due to shortage of skilled health workers, inadequacy of health facilities, cultural beliefs, among other reasons. A study done in Nepal identified lack of awareness as the main barrier to utilization of postnatal care (Dhakal et al., 2007). Furthermore a study done in Tanzania found that shortage of staff, equipment and supplies were common factors contribution to low utilization of postnatal care services (Mrisho et al., 2009a).

Results show that single, educated and urban women are more likely to receive skilled postnatal care services. Even though women's household wealth appeared to be associated with utilization of skilled postnatal care at bivariate level, it was not found significant in

multivariate analysis. Women who were single, rich, well-educated and residing in the urban area were most likely to receive postnatal care from a skilled health attendant because they are autonomous, financially empowered, well knowledgeable and they have better access to health facilities with competent and skilled health personnel. These findings corroborate with studies done elsewhere (Khanal et al., 2014; Dhakal et al., 2007; Ntambue et al., 2012).

The continuum or continuity of care is the core principle underlying maternal and child health programmes (WHO and UNICEF, 2009). Although it was difficult to assess continuum of care, the study established that only few women received care from a skilled health attendant throughout the life cycle of maternal and child health. Results show that moving along the continuum of care, utilization of care drops off strikingly during childbirth and postnatal period. Alva et al., (2011) emphasize that lack of appropriate care at all levels – i.e. ANC, delivery and postnatal care, is associated with poor maternal and newborn health outcomes.

A surprising finding is that among all the eight independent variables of this study only three variables, (i.e. residence, education and wealth) were identified as significant factors which determine utilization and continuum of maternal health services provided by a skilled health attendant. Results show that urban women are less likely to receive a continuum of maternal health care from a skilled health attendant compared to rural women. This finding is contrary to findings of several studies which show that generally urban women are more likely to use maternal health services than rural women (Baral et al., 2012; Muchabaiwa et al., 2012; Chakraborty, 2003). There is a need for further research to investigate this finding. Results also show that less educated and poor women are less likely to receive a continuum of maternal health services from a skilled health attendant. This finding suggests that government should give priority to women of lower socio-economic status when designing interventions to promote continuity in use of maternal health services.

Gini coefficient analysis results show inequalities in use of maternal health services in Malawi. These results corroborates with findings of other studies previously done in Malawi and elsewhere, which indicate inequalities in access to maternal health services (Zere et al., 2007; USAID, 2007; Wabiri et al., 2013; Zere et al., 2011). This study shows the existence of pro-rich inequality in use of maternal health services. The degree of pro-rich inequality was highest for use of skilled ANC services (gini index: 0.35), even though currently there is high coverage and provision of free ANC services. This finding confirms that increasing high coverage of essential services and provision of free health services does not guarantee equitable access to health services. Evidence shows that inequalities in use of ANC services have increased over the past years, since the introduction of the EHP in Malawi (Zere et al., 2007; USAID, 2007). A study conducted previously in the country showed a very low level of inequality (gini index: 0.04) in use of ANC services in 2000 (USAID, 2007).

The study also detected inequalities in use of skilled ANC, delivery and postnatal care services between urban and rural women. Results show that urban women are more likely to use maternal health services than their rural counterparts. The highest level of urban-rural inequality was detected in use of skilled delivery services (gini index: 0.13), while use of

skilled ANC had the lowest level of inequality (gini index: 0.07). Urban women are more likely to use maternal health care services because they usually have higher levels of knowledge, wealth and greater access to health facilities with skilled health personnel (Wang et al., 2011; Mekonnen and Mekonnen, 2002; Zere et al., 2007; Ochako et al., 2011). Furthermore, the gini-coefficient analysis also detected inequalities in use of skilled maternal health services between educated and uneducated women. This finding corroborates with studies done elsewhere (Ochako et al., 2011; Zere et al., 2011; Anyait et al., 2012).

A surprising finding was that even though skilled ANC had the highest coverage, results of the gini-coefficient analysis show that inequalities were highest during use of skilled ANC services especially in relation to income status (wealth quintiles). Higher inequalities were also observed during utilization of skilled delivery care between women in the poorest and richest wealth quintiles. On the other hand the lowest rate of inequality was detected during overall use of skilled maternal health services between rural and urban women. These findings therefore indicate inequalities in use of the EHP.

6.7 Summary of the Chapter

This quantitative study was aimed at assessing equity of access to EHP services, focusing on uptake of maternal health services. In general the findings show that utilization of skilled ANC services is very high in Lilongwe. However, moving along the continuum of care, results show that utilization of skilled care among women in Lilongwe strikingly drops off during childbirth and postnatal period. This finding however has confirmed that receiving ANC from skilled professionals does not in itself guarantee that women will seek skilled delivery and postnatal care services. This therefore calls for the need to develop proper interventions that will facilitate continuity in the use of maternal health care services from antenatal, delivery to postnatal period.

The study has uncovered existence of inequalities in use maternal health care services (in relation to wealth status, education and place of residence) thereby indicating inequalities in use of EHP services. This implies that although the EHP is aimed at promoting access to essential health services to vulnerable populations such as the poor, uneducated and rural residents, it is the rich, educated and urban residents who have more access to health care services. Measures to address inequalities in use of maternal health services should therefore not only focus on increasing coverage of services, but should also be aimed at improving access for the poor, rural and uneducated women in Malawi by removing specific barriers that affect their access to health care services.

CHAPTER 7

WOMEN'S PERCEPTIONS ON FACTORS INFLUENCING USE OF MATERNAL HEALTH SERVICES IN LILONGWE DISTRICT

7.1 Introduction

This chapter presents findings on factors that women perceive as determinants of maternal health care utilization in Lilongwe. This will help to determine factors which influence access to the EHP. The chapter also examines how these factors influence women's health seeking behavior. It also includes barriers to use of maternal health care services and recommendations made by women on how to improve access and use of the services. As indicated previously in chapter 5, a total of 30 IDIs and 8 FGDs with women were conducted in the five selected urban and rural health centers (Kawale, Area 25, Chadza, Matapila and Mbwatalika) and at a TBA facility (Nayere) in Lilongwe. Among these 30 women IDIs, 25 IDIs involved *"users"* of maternal health services, whilst 5 IDIs involved *"non-users"* of maternal health services. Each facility had 5 women and each FGD involved 8-12 participants and collectively 76 women participated in the FGDs. In some cases the results also include perspectives of key informants (i.e. health workers and policy makers) on the subject matter.

The major themes that emerged from the results this study include; 1) knowledge about maternal health services; 2) geographical accessibility; 3) financial accessibility; 4) decision making, gender and power issues; 5) attitude of health workers; 6) availability of health workers and drugs; 7) quality of care; 8) mandatory HIV testing; 9) socio-cultural issues; 10) religion. The findings are presented in the subsequent sections and direct quotations are used to support various themes that emerged. In such cases ID numbers are used for anonymity of the respondents.

7.2 Knowledge about maternal health services

Most women cited knowledge about maternal health services as a significant factor that determines use of the services. Results indicate that women will either use maternal health services or not depending on their level of knowledge and information about the services available, as well as their understanding of the importance of seeking the services. This assertion is better illustrated by the following remarks below:

> *"I think having knowledge is very important for one to be able to use maternal health services. Women need to know what services are available and where to get them"* (Resp 4, urban health center)

> *"One of the key factors that prevent women from accessing maternal health care is lack of knowledge and information on the services available and the importance of*

going to the hospital when pregnant and during delivery" (Resp 2, urban health center).

They attributed the problem of lack of knowledge and information about maternal health services to illiteracy (ignorance) which they said limits their perception of the benefit of seeking maternal health care. As one of the women explained:

> *"Low literacy level is affecting most women because it limits their perception on the benefits of seeking health care"* (Resp 8, urban health center).

It was established that due to ignorance and lack of knowledge on importance of seeking maternal health care services at health facilities, some women go to TBAs. The quote below illustrates this assertion:

> *"Some women are ignorant; they don't know the importance of coming to the hospital. That's why they go to the TBA"* (Resp 20, rural health center).

Women recognized the need for government to promote education and awareness creation amongst them regarding the importance of using maternal health care services. They suggested that government should encourage women to seek maternal health care services at health facilities through which they will receive instruction on good maternal health care practices. The women suggested that:

> "*The government should educate and encourage women to go to the hospital for maternal health services"* (FGD 2, urban health center).

> *"There is also a need to create and promote awareness on the importance of receiving maternal health care, for instance through community health education"* (Resp 12, rural health center).

7.3 Geographical Accessibility

Geographical accessibility emerged as one of the key thematic factors influencing use of maternal health services, especially in the rural areas. Under this theme three issues were identified; distance to health facility, availability of transport and cost, as well as road infrastructure. This theme emerged in all in-depth interviews and FGDs with women in rural areas, whereas as it was cited by few women in urban areas.

7.3.1 Distance to Health Facility

Distance to health facility was cited as an important factor that determines use of maternal services. Women indicated that proximity to health facility promote use of maternal health services, whereas long distance to health facility prevent some women from accessing and using maternal health care services. As some of the women indicated:

"Women come to this hospital because it is the closest health facility... the ability to access the services is the most important factor"" (FGD 7, rural health center).

"Some women don't go to hospitals because they stay far from the hospital" (Resp 13, rural health center).

The long distance was attributed to the inadequacy of health facilities. This emerged as a problem especially in the rural areas where they have few health facilities which are located far from many communities. It was further established that because of the long distance, women feel it's a burden to walk such long distance; as a result they visit the antenatal clinic only few times and go to the hospital only during delivery while others prefer just to stay home. Some women were quoted saying:

"This is the only hospital in this area and it is located far from many communities as a result it is difficult for women to come here and as a result most of them just come for one antenatal care visit and/or delivery" (FDG 5, rural health center).

"Some women feel it's a burden to walk long distance as a result they prefer to stay at home and not come to the hospital" (Health worker, rural health facility).

A TBA confirmed that one of the reasons why some women go to TBAs is because health facilities are located far from the communities and therefore some women are not able to go there to access the services. As she was quoted saying:

"The government is not helping because hospitals are located far from the communities and some women are not able to go there. As a result of this, most women opt to visit my facility for maternal health care services" (TBA, rural area).

This is the reason why most of the women particularly those in the rural areas, suggested that Government should construct more health facilities in order to improve access and use of maternal health care services. The women explained that building more health facilities would help to shorten the distance that women have to travel to access maternal health care services. Some women said:

"Government should build more hospitals because they are few" (Resp 30, TBA facility).

"If possible, the government should build us a health care facility close to our community so that women should not be traveling long distances in order to access and use maternal health care services" (Resp 8, rural health center).

7.3.2 Availability of Transport

Most women cited the availability of transport as a very important factor influencing access and use of maternal health services. It was established that women use various modes of

transportation to get to a health facility. Most women indicated that they walk to get to a health facility, whilst others said that they use personal bicycles or public transport such as bicycle taxis commonly known as "kabaza", pickups, taxis or mini buses. Sometimes the women also use an ox-cart when travelling to a health facility, especially during emergencies:

> *"In my opinion, transport is the most important factor... I used a hired bicycle [Kabaza] to get here"* (FGD 6, rural health center).

> "*Sometimes, when a woman is in labor or when she has a complication, we use an ox-cart to take her to the hospital"* (FGD 7, rural health center).

Lack of transport emerged as major barrier to accessing maternal health services, as evidenced by its recurrence and dominance in most of the FGDs and interview discussions. It was established that due to lack of transport many women fail to attend antenatal care services and in some cases pregnant women end up delivering at home or a TBA. The statements below underscore this assertion:

> *".....some women fail to access health care services because they don't have any means of transport"* (Resp 22, rural health center).

> *"Sometimes pregnant women start labour during the night and find themselves in a situation where there is no transport to take them to the hospital. They end up delivering at home ..."* (FGD 7, rural health center).

The participants also reported that sometimes when women are in labour and due lack of proper transport (such as public buses and ambulances), they end up hiring a bicycle which they said is uncomfortable and unsafe during such conditions. Some women were quoted as saying:

> *"When I was coming here to deliver my baby my husband brought me on a bicycle but I wasn't comfortable. We stay far from the hospital...and here we don't have any ambulance to help us"* (Resp 14, rural health center).

Women requested that government should improve transportation in most areas in order to promote access to health care facilities. They proposed that government should provide bicycles to be used for transporting pregnant women to hospitals in areas where there is no public transportation such as minibuses.

> *"The government should improve transportation in our community so that women should not have problems to travel to the hospital"* (FGD 7, rural health center).

> *"I would like to suggest that the government should provide us with bicycles which will be used to transport pregnant women to the hospital. In this community, we do*

not have public transport such as minibuses. So if we can be given bicycles it can help to ease transportation problem" (FGD 5, rural health center).

A major concern to women seeking maternal health care was lack of transport during obstetric emergencies. They therefore suggested that government should equip health centers with ambulances to be used for transportation of pregnant women with complications to referral hospitals. They explained that when there is an emergency, women are required to find their own transport to referral hospitals. In many cases most of them fail to raise the required amount for the transport cost. They argued that if health centers are equipped with ambulances, it could ease transportation problems and ensure that women reach referral hospitals in good time. They recommended:

"If it's possible the Government should provide us with an ambulance so that it can be helping us when we are sick" (Resp 22, rural health center).

"There should always be an ambulance on standby at every health centre so that in case of an emergency, the ambulance can transport patients to the referral hospital. If we depend on calling for an ambulance that is stationed at another hospital, then you find that when you need the ambulance urgently, it has already been assigned elsewhere, so it is better for each health center to have its own ambulance" (FGD 1, urban health center).

The women also suggested that if government cannot afford placing a conventional ambulance vehicle at each health center, then it should consider providing bicycles to be used as ambulances:

"I would like to suggest that the government should provide us with bicycles which will be used to transport pregnant women to the hospital" (FGD 5, rural health center).

7.3.3 Road Infrastructure

Poor road infrastructure was cited as a barrier to access and use of maternal health services. It was established that in some areas, due to poor road infrastructure, women experience difficulties when travelling to a health facility. This was particularly a problem in the rural areas where the roads have no tarmac. It was further reported that in those areas the roads are usually bumpy and they get worse during the rainy season due to mud, pot holes and broken bridges. They said that sometimes this makes some of the roads impassable. As a result, women experience problems when they want to access and use maternal health care services. This assertion is exemplified by the following remark:

"The problem we have is that our main road to the hospital is in bad condition. As you have noticed, the road is dusty and bumpy. During the rainy season, the road becomes muddy and impassable. As result, pregnant women opt to just stay at home and sometimes they deliver on their way to the health facility" (FGD 7, rural health center).

It was further reported that in some cases, women develop induced premature labour and some deliver on the way before they reach a health facility due to travel delays as a result of poor condition of the roads. The illustration below underscores women's concerns

> *"The road is bad especially in the rainy season when it gets muddy and has large potholes. In addition, some areas, bridges are washed away such that people or cars cannot pass through. That prevents women to go to the hospital on time.... we have had cases whereby some women developed complications of premature labour due to bumpy roads and others have even delivered on the way because they had delayed to get to the hospital due to bad roads"* (FDG 5, rural health center).

Women recommended that government should improve the road infrastructure in order to improve travel to health facilities and use of maternal health services. As one woman suggested as follows:

> *"The Government should consider constructing a good road in our community so that we should have good and easy access to the hospital. This will help women to have no problems when travelling to the hospital for antenatal care or delivery"* (Resp 33, rural health center).

7.4 Financial Accessibility

Financial accessibility emerged as one of the prominent themes cited in all FGDs and the majority of IDIs. Under this theme, cost of health care and household income emerged as two inseparable factors that determine access and use of maternal health services. Majority of women reported that they mostly use public health facilities, whilst others said that they use CHAM facilities because they offer free maternal health services. As such the cost of health care did not emerge as an explicit theme suggestive of its deterrent effect to access maternal health care services. However, most women reported that they could not afford to pay for the services at private health facilities because they are expensive. One woman was quoted as follow:

> *"Most women prefer to go to government hospitals because the services are free...private hospitals are usually expensive. As for me I cannot afford to pay for private health services"* (Resp 6, urban health center).

Results reveal that although maternal health services are delivered free of charge in public health facilities and some CHAM facilities, women still incur some costs associated with use of health care in the non- paying facilities. For instance the women reported that they are charged to pay for a health passport (a health passport is a booklet containing person's medical record) when they go to public and CHAM health facilities.

> *"We don't pay for the health care services except for the health passport which we buy at K100"* (Resp 6, urban health center).

"I haven't paid anything for the services. I only paid K60 for the health passport book" (Resp 18, CHAM health center).

Contrary to this report, some women reported that when they went to a public health facility, they were asked to pay money (informal payment) in order to receive medication. One woman was quoted as follow:

"...when I was referred to go to health facility x they demanded that everyone should pay the sum of K250 in order to receive medication" (Resp 2, urban health center).

Some women complained that private health facilities are money oriented and sometimes they overcharge patients or prescribe unnecessary treatment to them just to make more money. Some women were quoted saying:

"....private hospitals are money oriented. They sometimes overcharge patients in order to make more profit" (Resp 13, urban health center).

"Another issue that people who visit private hospitals complain about is that private practitioners overprescribe drugs because they just want to make money" (Resp 2, rural health center).

Lack of finances emerged as a barrier to use of maternal health care services. Some women reported that they cannot afford to pay the transportation cost to go to the health facility because it's high and expensive for them; as a result they fail to go to the hospital.

"....In case of emergencies, it requires us to hire a car for us to travel to the hospital which costs a lot of money which we can't afford. As a result some women end up going to TBAs because it is the cheaper way for them" (Resp 22, rural health center).

It was also reported that because of poverty some women don't have nice clothes and they feel embarrassed to go to the hospital. Furthermore, due to poverty some women lack the necessary materials required for women to bring to the hospital during delivery such as, pieces of cloth, plastic paper and basin. As a result of this some women shun going to the hospital.

"Due to poverty some women fail to come here because they don't have decent clothes and they are embarrassed to come here" (Health worker, rural health center).

"Some women do not go to access maternal health care due to poverty. For example, if an expectant woman does not have a piece of cloth, plastic and a basin or any other supplies that will be required during the delivery of the baby, then they are more likely to refrain from giving birth in a hospital. Such women do not shun hospitals

deliberately; they do so because their husbands do not have sufficient income to provide them with these necessities" (Resp 3, urban health center).

It was also established that some women are not willing to go and wait at the hospital for delivery because they cannot afford to meet the cost of food, and they prefer to just stay at home because it is cheaper for them. This assertion is better illustrated by the following remark below:

> *"I think when we were talking about waiting homes...what women identified as a problem with using waiting homes was the high cost that associated with being fed as during this time resources get shared with other family members at home. The sharing of these resources is deemed expensive. They believe it is cheaper to stay at home and share the resources with the rest of family members. Economic constraint is hence an important key factor"* (Policy Maker, Ministry of Health).

7.5 Decision Making, Gender and Power Issues

The study investigated issues about women's autonomy and decision making at household level. Women were asked about who decides when and where to seek maternal health care and to explain why that is the case. The findings reveal that gender and power issues play a crucial role in influencing decision making at household level and in determining use of maternal health care services. The findings further reveal that decisions regarding maternal health care are made at different levels within the household. For instance the findings show that some decisions are made by women themselves, their husbands or both. Below is a detailed presentation of the different levels of decision making at household level.

7.5.1Women Centered Decision Making

Most women reported that they make their own decisions regarding maternal health because it concerns their life and they feel obliged to take care of their own life by seeking medical assistance. Some women reported as follow:

> *"We decide by ourselves because the one who is sick is the one who looks for help and we go to the hospital because we know we will be assisted"* (FGD 7, rural health center).

> *"I make my own decisions regarding maternal health. I just tell my husband what I have decided because it's my life and I have to take care of it on my own"* (FGD 5, rural health center).

The women further explained that although most of them make their own decisions regarding maternal health care, not all have the liberty to make such decisions due to prevailing cultural norms and expectations which require men to make key decisions for the families including seeking health care:

"I decide for myself concerning maternal health care issues. For example, when I am pregnant, I decide where to go for antenatal care. Of course, as a married woman and out of respect, I have to tell my husband so that he knows where I have gone. I know some women do not have the same freedom that I have; their husbands make decisions for them. In our culture, a man is considered as a head of family and is therefore expected to make decisions for the family" (FGD 1, urban health center).

It was further established that women who make decisions by themselves without involving their husbands are sometimes viewed as disrespectful or competitive by their spouses. As one respondent was quoted explaining as follows during an FGD:

"Women decide where to go for antenatal or delivery, but I know sometimes men don't like it when women make their own decisions and they consider such women as disrespectful or competitive" (FGD 5, rural health center).

It was further established that women who make decisions by themselves without involving their husbands are sometimes viewed as disrespectful or competitive by their spouses. As one respondent was quoted explaining as follows during an FGD:

"Women decide where to go for antenatal or delivery, but I know sometimes men don't like it when women make their own decisions and they consider such women as disrespectful or competitive" (FGD 5, rural health center).

7.5.2 Husband Centered Decision Making

Some women reported that their husbands decide for them where to seek maternal health care while others explained that when their husbands are away, they are free to make their own decisions. Some women were quoted as follow:

"My husband is the one who decides which hospital I should go to for antenatal or delivery" (FGD 3, rural health center).

"My husband makes the decision and it depends whether he is around or not and he has the final say. When he is not around I make my own decision, but largely my husband makes the decisions" (FGD 6, CHAM health center).

Moral support and culture were cited as the main factors that influence men to make decisions for their wives regarding maternal health care. As some women were quoted saying:

"My husband decides because he is the head of the family and sometimes he decides to provide moral support and he also has to provide transport for me to go to the health facility. We have a bicycle at home and my husband escorts me when I have to go to the hospital because we stay far" (FGD 7, rural health center).

An interesting finding is that in some families, where the husband makes all the decisions, women were being denied permission to go to the hospital due to lack of trust and jealousy; thinking that when the women go to the hospital for ANC, they will meet other men. So husbands deny women permission to go to the hospital as a way to keep the women to themselves and to prevent them from having affairs with other men. The women also reported that because of jealousy, some men do not allow women to go to the hospital for antenatal or delivery because they don't want male health workers to see their wives naked. As a result, such practices act as barriers to some women and prevent them from seeking maternal health care services. Some women were quoted as follow:

> *"....some women don't go to the hospital because their husbands make all the decisions. And if in a family there is lack of trust, the husband may feel insecure and refuse the woman permission to go out even to the hospital because of jealousy thinking that the woman might meet other men if she goes out. In that case the woman might end up not seeking antenatal care"* (Resp 22, rural health center).

> *"Because of jealousy, some husbands do not allow their wives to go to antenatal clinic because they don't want other men [male nurse/midwives] to see their wives naked. Such men encourage their wives to go to TBAs for delivery because most of the TBAs are women and they feel comfortable that way"* (FGD 8, TBA facility).

7.5.3 Shared Decision Making

Some women said they decide together with their husbands regarding where to seek maternal health care. The women said that this was important because it helps to keep their families together:

> *"I decide together with my husband on where to go for antenatal care or delivery. We do this together because we are a family and that's what families are supposed to do. If I do one thing and my husband does the other, then our family will be divided"* (FGD 2, urban health center).

7.5.4 Decision Making by Other Family Members

An interesting finding was that some women reported that other family members such as parents and in-laws make decisions for them regarding where to seek maternal health care. The women explained that parents make the decisions for them because they are "old enough" and therefore competent to make the right decisions for them. The women also explained that due to culture, the families of their husbands decide where they go to seek maternal health care. For instance some women were quoted as saying:

> *"My parents decide where I get maternity care because they are old enough to make the right decision*" (women FGD 5, rural health center).

"...some women because of culture, the families of their husbands decide and choose where they should go" (women FGD 7, rural health center).

It was further established that in some areas, due to culture, other members of the family such as uncles and in-laws decide whether a woman should go to the hospital or not and that women have no control over the decision making process:

"There are some cultural beliefs that a woman cannot go to health care facility and start antenatal care on her own. She needs to wait for the approval of the husband's side. They sit together and make a decision and give her an okay to seek maternal health care services. If a woman goes on her own without seeking permission from the husband's side, she is considered disrespectful and uncultured and this results in marriage break ups. Such women cannot go to seek antenatal services unless the decision comes from the husband or the husband's relatives" (Policy maker, MoH).

"In some cases other members of the household influence on when the decision is actually taken to go to the health center when they are in trouble; quite often it is out of their control. In some districts, it is the uncle who makes the decision as to whether the woman should go to the hospital or not" (Health manager, MoH).

Women's lack of autonomy and low decision making power thus emerged as crucial barriers to accessing maternal health services in this study.

7.6 Attitude of Health Workers

Most women cited attitudes of health workers as a major factor influencing use of maternal health services. It was established that women feel encouraged to use maternal health care services when they are treated by friendly and respectful health care providers. For instance some women reported that they were received and treated well by friendly and respectful health care workers when they went to the ANC and labour ward at a public and CHAM health facility; as such they indicated that they will go there gain to access the services. Some woman were quoted saying:

"I was welcomed well. They didn't shout at me like other nurses do. I will come again to this hospital because ... the nurse is very friendly...the nurse is so caring and willing to help" (Resp 16, CHAM health facility).

Most women indicated that the attitude of health workers was generally better in private and CHAM health facilities, compared to public health facilities. They explained that health workers in private and CHAM health facilities treat patients well probably because people pay for the services, unlike in public health facilities where the services are free and patients are taken for granted and treated harshly. Women were quoted as follow:

"Health workers in private hospitals treat patients well because they know that they will pay for the services while in government hospitals patients are taken for granted and treated harshly, maybe because the services are free" (Resp 13, urban health center).

In almost all IDIs and FGDs, negative attitude of health workers was cited as a significant barrier to effective utilisation of maternal health care services. Women reported that most often they are treated badly by nurses who lack respect and professionalism. Concerning the lack of respect by health workers, most women reported that some midwives use bad language, say inappropriate things and shout at women instead of assisting them accordingly. Some women narrated their experiences as follow:

"Some nurses at this facility have no respect for patients. For, instance, some use bad language and say inappropriate things. I remember one midwife told a young lady who was in the delivery room and was having difficulties to push out the baby that she was stupid [opusa]. She shouted at her and told her that she was going to kill the baby by failing to push out and that if she kills the baby she will have no one to blame but herself; instead of assisting her accordingly" (Resp 4, urban health center).

"I arrived at the hospital when I was in labour and when I entered the door in the labour ward, instead of welcoming me, I was shouted at. The midwife said, "don't just enter here as if it's your office. I did not like that attitude" (FGD 2, urban health center).

In addition one woman explained that sometimes nurses and midwives treat them so badly to the extent that they make them feel as if they are children or stupid. An extract below illustrates this claim:

"Sometimes we come here when we are ill the nurses yell at us making us feel like we are children or stupid" (FDG 1, urban health center).

Most women expressed concern that health workers neglect them when they go to health centers to seek care during pregnancy and delivery. The women reported that sometimes when they go for antenatal care, their temperature and blood pressures are not checked and they were not sure whether this was due to work overload or just negligence. As one woman was quoted explaining:

"...sometimes my temperature and blood pressure were not checked during antenatal visit. I was only checked once, maybe I presume it was because they have more work to do or maybe they are just negligent" (Resp 4, urban health center).

Few women also reported that they were not examined during labour and that they were left to deliver on their own without the assistance of a nurse or midwife. The women further reported that after delivering on their own they were shouted at and blamed by the nurses for

delivering without the nurses' help. Some women narrated their experiences during labour and delivery as follow:

> *"When labour started I was a lone and there was no one to help me. ... I delivered without the nurses' help. After I had delivered by myself, I went to call the nurse and when she noted that I had delivered, she started shouting at me questioning as to why I delivered while my time was not yet due and without the nurses' help"* (Resp 9, urban health center).

> *"Sometimes when we come here, they don't examine us at all; they just tell us to lie down. The nurses do not attend to us; instead they just watch us through the glass window. When the baby dies during birth because there was no nurse to assist you, the nurse shifts the blame towards us, alleging that the baby died as a result of our carelessness"* (women FGD 1, urban health center).

> *The nurses neglect women that are in labour and show up only after the baby has been born. Pregnant women are left unattended to, so they end up giving birth without any assistance"* (Resp 1, urban health center).

The women also expressed concern that some health workers, especially in the public health facilities do not treat patients as humans but as objects. One woman was quoted as saying:

> *"In public health facilities, work has become just like any other job; not treating patients as humans but as objects"* (Resp 4, urban health center).

In addition the women also expressed concern that in public health facilities, health workers were not dedicated and treated patients inappropriately and with unnecessary delays, unlike in private hospitals where health workers tend to be more serious. As one women woman was quoted saying:

> *"The problem I have with government hospitals is the lack of staff dedication and delays. For instance, some health workers leave patients unattended to and spend time on the phone, whilst in private hospitals they tend to be more serious. At government hospitals health workers are pompous [amayelekedwa]. Before you even finish telling them about your problem, they finish writing and give you a prescription* (Resp 4, urban health center).

The findings clearly indicate that women's past experience of being treated badly by health workers prevents some women from seeking maternal health care especially if the women had very unpleasant experiences. For instance some women reported that due to the poor attitude of some health workers and the bad experiences they had when they went to the hospital; they indicated that there were not going to go back to those health facilities in future. Some women were quoted as follow:

"Sometimes when nurses shout at women during delivery, they get discouraged to come again for maternal health care services in future" (FGD 6, CHAM health center).

"When I was giving birth they left me to give birth on my own...they did not treat me well because if they had been there, they would have helped me increase my birth canal; due to this, the baby has increased my birth canal and has injured me...No, I will not come here again, I would rather go to a private hospital where they know that I will pay for the services and they will treat me very well, unlike these government hospitals where they know that treatment is for free and they do not treat patients accordingly. No, I would not recommend to a friend to come here because of how they have treated me. I will tell my friend of the problems I faced and suggest another good hospital for her" (Resp 15, urban health facility).

There was a general consensus that one of the reasons why women prefer to go to TBAs is because health workers ill-treat women by shouting at them and leaving them to deliver on their own without providing assistance. As a result the women prefer going to TBAs than to hospitals to avoid such experiences. They also reported that the TBA was friendly and caring to them. One woman said:

"Some women say they prefer to deliver at TBAs because they treat women with respect and they don't shout at women or leave them to deliver on their own" (women FGD 7, rural health center).

Women interviewed at a TBA facility reported that they prefer to go to TBAs because they treat them with respect, besides that they have also established good and trustworthy relationships with them. This is how some women were quoted as saying:

"During antenatal visits, the TBA received and treated me well... Here, we are treated immediately during delivery; when we come during labor, she puts us in the ward immediately and she stays with us throughout the time until we deliver our babies. She is a caring and friendly woman. To us she is our grandmother" (Resp 39, TBA facility).

"I trust TBAs because they treat women well and with respect and I am used to them. I come here because there is good relationship with the community and they are able to solve our problems and treat us well. People say government hospitals ill-treat women. They are also very slow to provide care" (Resp 29, TBA facility).

A TBA also expressed the same concern saying that the reason why women prefer to go to TBAs is because the nurses have a bad attitude and they treat women disrespectfully. As a result some women avoid going to the hospital so that they do not get insulted by the nurses.

"Women prefer to come here because they say that nurses at the hospital have a bad attitude. They don't speak to them well and they are disrespectful" (TBA, rural area).

The TBA also made the following remark:

"I make sure that my clients are assisted nicely and I don't shout at them. I am very happy because most women come here" (TBA, rural area)

Women suggested that government should encourage nurses and midwives in public health facilities to change their attitude and work hard otherwise women will continue to seek care elsewhere including at TBAs. Some women were quoted as follow:

"*Nurses should change their attitude and take good care of women otherwise some will continue to go to other places such as TBAs"* (FGD 3, urban health center).

They also suggested the need to reinforce discipline in public health facilities as well as close monitoring and supervision of health workers on a regular basis in order to ensure good attitude, conduct and professionalism.

"There is need to reinforce discipline in government health facilities" (Resp 29, TBA facility).

"I suggest that the supervisors should be coming regularly to monitor how nurses are working" (FGD 6, CHAM health center).

The women also felt that substandard work by health workers was due to their overstaying at health centers. To them, they felt that new members of staff would offer them better services than those offered by the overstayed workers. Transfers would be the solution, they said:

"I suggest that old staff should be transferred to other areas because it seems they are so used to this place. We need new staff that is willing to serve the community" (Resp 23, rural health center).

7.7 Availability of Health Workers and Drugs

Availability of health workers and drugs emerged as crucial factors that determine use of maternal health care services. Most women reported that they feel encouraged to use maternal health services when health facilities have well qualified, experienced and adequate staff, as well as essential drugs. As some women indicated:

"When there are plenty of nurses...when nurses are well trained to perform their duties well, women get encourage to use health services" (Resp 1, urban health center).

Shortage of health workers emerged as a major barrier to use of maternal health services. Women explained that due to shortage of health care staff, it is difficult for health workers to assist all women appropriately and at once. As a result this creates congestion and long queues in hospitals. Due to the long queues and waiting times some women shun to go to health facilities. As one woman indicated:

> *"Some women don't go to hospitals because... of the long queues due to shortage of staff and that delays them. They end up going to TBAs because they see that's the easiest way for them"* (woman resp13, rural health center).

The findings clearly indicate that women prefer to go to health facilities where they know they will have shorter waiting times and will be treated faster. This was confirmed by one of the women as follow:

> *"Most women come here because there are no queues. Women are treated faster and don't have to wait for long before they receive care"* (Resp 30, TBA facility).

Most women noted the need for having adequate staff in order to ensure that clients are attended to quickly when receiving maternal health care. The women suggested that the government should increase the number of health workers since currently they are not enough to meet demand of the population.

> *"Government should increase the number of nurses and midwives because they are few"* (Resp 25, urban health center).

> *"The hospitals should have adequate staff so that when we go there they should attend to us quickly"* (Resp 30, TBA facility).

Inadequate availability of drugs was noted as an issue of concern to women. Most women expressed concern that sometimes public health facilities have no drugs and request patients to buy medicines from private pharmacies using their own money. As a result, the shortage of drugs in public health facilities acts as a barrier to use of maternal health services. As one simply said:

> *"...the problem with local public health facilities is that sometimes there is no medicine and patients are asked to buy drugs on their own..."* (Resp19, rural health center)

A TBA expressed concern that sometimes women are sent back from public health facilities without medication as a result they are discouraged to go back next time should a need arise. As a result when women fail to get treatment at the public health facilities they go to the TBA:

"Women are discouraged when they fail to get medicine at the public hospital since government hospitals often run out of drugs. As a result of this, most women opt to visit my facility for maternal health care services" (TBA, rural area)

This is the reason why some women reported that they prefer to go to private health facilities because they have adequate stock of drugs compared to public health facilities which experience frequent drug stock outs. As one woman was quoted as follow:

"Private hospitals are good because...they have adequate drugs unlike in government hospitals which usually run out of drugs" (Resp 11, urban health center).

To promote use of maternal health care services at health centers, women urged government to ensure that health centers have adequate availability of drugs. They lamented that due to persistent drug stock-outs at health centers, they are sometimes told to buy drugs from the private pharmacies using their own money. They stated that this prevented them from accessing drugs as they could not afford buying them due to lack of money. Many women therefore get discouraged from using maternal health care services. They lamented:

"Sometimes there is shortage of medicine and we are told to buy at the pharmacy which is difficult for us because we don't have enough money so government should consider providing adequate drugs to hospitals" (Resp 13, rural health center).

"Drugs should be available in the hospitals because when there are no drugs women are discouraged to use maternal health care services" (Resp 10, rural health center).

7.8 Perceptions on Quality of Care

Quality of care emerged as a significant factor that influence women's health seeking behavior and their use of maternal health care services. In general results reveal women's choice of a health care provider is influenced by their perceptions of quality of care. In general women prefer to have access to good quality health care services which are not only safe, but also delivered by competent and well trained skilled personnel, in a timely and respectful manner. In this regard, most women reported that they prefer to seek maternal health care services at health facilities because they know they will get good quality and safe health care services, unlike at TBAs where quality and safety is often compromised. The following quote below illustrates this assertion:

"I go to government and private hospitals because when a woman delivers at home or TBA there can be complications and even death" (Resp 24, urban health facility)

The study found that some women perceive the quality of care at public health facilities as good. The women attributed the quality of care in public health facilities to the availability of well qualified and experienced staff, as well as specialists. The women also noted that public health facilities prioritize patient care unlike private hospitals whose main interest is money. The following remarks below confirm this assertion:

"I prefer to go to government health facilities because they take good care of patients... they have well qualified and experienced staff" (Resp 4, urban health center).

"I prefer government hospitals because their priority is to take care of patients, whilst private hospitals are money oriented. I don't trust TBAs because they are not trained, but I know government hospitals have well trained and competent personnel..." (Resp 13, urban health facility).

Additionally, the women explained that public hospitals are preferred among women because when there is an emergency problem, they organize an ambulance and refer patients to larger hospitals where they can get proper and specialized care, unlike TBAs who are usually untrained and lack the knowledge and means on how to handle emergency conditions. As one of the women was quoted as follow:

"I prefer government hospitals because if you have a big problem they call an ambulance and it takes you to a bigger hospital where there are specialists" (Resp 12, urban health facility).

The women also reported that public health facilities offer quality services because they provide health education and HIV testing which they don't get from TBAs. As some women were quoted saying:

"Public health facilities are good because they provide good care... when I come here to get treatment, I receive good care and health education unlike at the TBA" (Resp 18, rural health center).

"Government health facilities are good because they test you if you are HIV positive during your antenatal so that they can know how to help you when delivering..." (Resp 17, rural health center).

However, most women expressed concern that in public health facilities quality of care is often not good due to various factors including inadequate resources (such as health workers and medicines) and the poor attitude of health workers. Another major issue of concern for the women was the unnecessary delays in public health facilities which they said affect quality of care and consequently prevent women from accessing maternal health services. As some women were quoted as follow:

"Women prefer to go to health facilities that offer services in a timely way... In government hospitals they make us wait for so long without treatment. As a result women are reluctant to go there for antenatal care. They prefer to go to private clinics or just stay at home" (Resp 12, urban health center).

"The problem I have with government hospitals is the lack of staff dedication and delays. For instance, leaving patients unattended to and spending time on phone, whilst in private hospitals they tend to be more serious. At government hospitals health workers "amayelekedwa". Before you even finish telling them about your problem they finish writing and give you a prescription" (Resp 4, urban health center)

There were few comments from women regarding their perception of the quality of care in CHAM facilities. The women reported that CHAM hospitals have dedicated staff and are more responsive to patients unlike public health facilities. Some woman was quoted saying:

"To my side I think CHAM is the best; like here they do take good care of us than in public health facilities.... At CHAM the reputation is good and I trust them because of the way they treat us. The nurse knows her job and she is dedicated. She helps us without any problem" (Resp 24, CHAM health center).

"There is a very great responsiveness in CHAM hospitals than in government hospitals..." (Resp 6, urban health center).

On the other hand, some women felt that private health facilities offer better quality health care services. They attributed the good quality services in private health facilities to the availability of adequate resources (drugs, equipment and health workers) and the fact that patients/clients pay for the services, as such private health facilities are more responsible. One woman was quoted as follow:

"Private hospitals offer better quality services than government hospitals because patients pay for the services while government hospitals treat patients poorly because the services are free" (Resp 4, urban health center).

Most women expressed concern that TBAs do not provide good quality maternal health care because they are often not trained to manage obstetric cases well. In addition to this, they said that TBAs don't have the necessary resources and expertise to perform certain procedures (such as scanning, HIV testing, surgical operation, and administration of blood transfusions) which are essential for ensuring a safe pregnancy and delivery of the baby, as well as proper management of emergency situations. For instance the women explained that sometimes when there is a complication that requires blood transfusion or surgery, TBAs fail to perform such important procedures because they lack such expertise. They said that these are some of the reasons why most children die at TBAs. Some women were quoted as follow:

"I do not see the reason why some women go to TBAs because they are not good as they cannot manage to assist women properly if complications arise. TBAs will only use their herbs they will not be able to scan you and assist you effectively. That is why most of the children die at the TBAs ... TBAs would not manage to operate on you because they do not have the expertise and resources with which to perform such procedures when the need arise" (Resp 16, urban health center).

"TBAs can't test you to check if you have HIV/AIDS" (Resp 17, rural health center).

Additionally, the women said that they do not feel safe when they go to TBAs because they make so many mistakes. For instance they make pregnant women to start pushing the baby before time and yet when a complication happens they are not able to manage them. Besides that, women also reported that sometimes TBAs give pregnant women local pitocin to accelerate labour and that may result in complications.

> *"TBAs make you start pushing before time and they can't help you when there are complications"* (Resp 18, rural health center).

> *"Sometimes TBAs give pregnant women traditional medicine to quicken labour. This is not good, because some women develop complications and they can even die"* (Resp 14, urban health center).

The women also said that some TBAs are just after money. As some women were quoted saying:

> *"As for me I cannot go to a TBA because their services are not usually safe and some of them are just after money"* (Resp 10, urban health center).

Results show that most TBAs are no longer practicing in the communities because of the government ban. However the women reported that it was possible that some TBAs were still practicing in secret. The women explained that if a TBA is found practicing she is fined together with her clients and normally they are told to pay a goat, chickens or money to the chief as a fine. One of the women was quoted as follow:

> *"TBAs are no longer providing care in our community because of the ban by the government, but there could be some who are still practicing in secret... When a TBA is found practicing she gets fined. The women who go to TBAs are also fined. They are told to pay goats, chickens or money to the chief as a fine"* (Resp 15, rural health center).

It was interesting to learn through the interview with one of the well-known TBAs in the country that her facility has been operating since 1960 and that she receives about 10 clients every day and assists about 150-250 women every month. She reported that her clients come from all the parts of Malawi and neighboring countries such as Mozambique. She said she also gets women from different races especially white people and Indians and that the Indians go there in large numbers. The TBA was quoted as follow:

> *"This facility was opened in the 1960's. I learned to do this job from my mother. There are so many people who deliver here. ... I attend to about 20 clients every day. In a month I assist about 150- 250 women, for instance last month in August I had*

245 clients. The clients come from all parts of Malawi, from Nsanje to Chitipa, but most women come from around. I also get women of different races especially white people and Indians. Indians like to come here and they come in large numbers. Some clients also come from neighboring countries such as Mozambique" (Traditional Birth Attendant, rural area).

The study further explored how women's satisfaction with quality of maternal health care affects their health seeking behavior and use of the services. It was established that women who reported to be satisfied with the quality of maternal health care services were most likely to use the health care services next time and to recommend the service to a friend, unlike those who were not satisfied with the services. Some women reported their views as follow:

"At this health facility they treat women well... I am satisfied with the services. My experience has been great because I have received quality services and that's why I would encourage my friends to come here... Yes, I will come here again next time and will strongly recommend my friends to seek medical assistance here as opposed to other hospitals" (Resp 8, urban health center).

"I was very satisfied with the service....I will come again to this hospital because they provide good care and the nurse is very friendly and she knows her job and I would recommend to a friend because the nurse is so caring and willing to help" (Resp 17, CHAM health center).

"...they did not treat me well...No, I will not come here again, I would rather go to another hospital... No, I would not recommend to a friend to come here because of how they have treated me" (Resp 15, urban health facility).

Women suggested that government should closely monitor and supervise of health facilities on a regular basis in order to ensure quality of care:

"There is also a need to engage supervisors to closely monitor and supervise the performance of health facilities to ensure quality of care" (Resp 4, urban health center).

7.9 Mandatory HIV testing

Mandatory HIV testing emerged as a barrier to maternal health care utilisation. Although HIV testing is supposed to be done on a voluntarily basis, all pregnant women undergo mandatory HIV testing during the initial antenatal care in all health facilities in Malawi. Results revealed that due to this compulsory HIV testing, some women shun attending antenatal clinic for fear of being tested HIV positive. As such TBAs are preferred by women because they don't test HIV. They explained:

"Some women refrain from coming to the hospital because they don't want to get tested for HIV, since it is compulsory for all pregnant women to get tested" (FGD 1, urban health center).

"I would have loved if HIV/AIDS testing could be voluntary and that women should be counseled properly and testing should be done privately and not publicly. Some women are scared to go to the antenatal clinic because HIV testing is compulsory for all pregnant women. Sometimes, the women are counseled as a group and some women are afraid that if they test positive then other women will know their status. So to avoid that, some women do not go to the antenatal clinic and they just stay at home or go to TBAs" (Resp 4, urban health center).

It was further established that women fear that if tested HIV positive nurses will disclose the results to other people who will discriminate them after knowing their results.

".... HIV testing during the initial antenatal visit results in discrimination of positive women as a result some women are afraid to get tested. They think, if the nurse knows about their status, then people will know as well and since it's a must to get tested whether one likes it or not, then they prefer not to get tested and to stay at home" (Resp 4, urban health center).

However, on the contrary, some women reported that they prefer to go to public health facilities because they provide HIV/AIDS testing and counselling which they don't get from TBAs. As some women were quoted saying:

"Government health facilities...they test you if you are HIV positive during your antenatal so that they can know how to help you when delivering..." (Resp 17, rural health center).

7.10 Cultural Beliefs and Practices

The findings revealed that cultural beliefs and practices prevent women from using maternal health care services. It was established that cultural beliefs and practices are still prominent in some areas especially in rural areas where due to culture; women prefer traditional medicine and TBAs to the conventional medicine and professional care. It was also found that despite the government's ban on TBAs' practice in Malawi, women continue to access care from TBAs. It was also revealed that women go to TBAs instead of going to the hospital because they have no alternative and in some cases due to the influence of their families. Some women were quoted reporting as follow:

"Cultural beliefs and practices are still prominent in Malawi especially in rural areas. For example, many people still believe in traditional medicine and therefore prefer to seek care from TBAs or traditional healers. They believe that it is better to get traditional medicine than modern medicine" (Health worker, rural health center).

"Some women go to TBAs because of culture just because their parents believe in TBAs or maybe their parents are TBAs or maybe everyone in their house has never been to the hospital" (Resp13, rural health center).

Furthermore, the findings show that due to cultural beliefs some pregnant women refrain from going to antenatal clinic especially during early stages of pregnancy for fear of being bewitched. As one of the women reported:

"Some women hide pregnancy when it's in the early stages and do not go to the antenatal clinic for fear of bewitchment" (Resp 21, rural health center)

Male involvement also emerged as a cultural barrier issue to use of maternal health services. In Malawi, some hospitals encourage women to go to the hospital with their husbands during pregnancy and delivery as one way of promoting male involvement in maternal health care. It was however established that some women find this practice culturally challenging since their spouses are not always available to accompany them to the hospital due to other commitments such as work. One woman said:

"The main challenge at this hospital is the insistence by hospital personnel that women should be coming with husbands during antenatal. It is not possible to come all the time with our husbands because they go to work in town" (Resp 5, urban health center).

It was further established that some women do not actually like the idea of going to the antenatal clinic or labour ward with their husbands. The women reported that they do not want their husbands to see them going through the child bearing process. They said it is culturally unacceptable for men to watch their wives giving birth.

"Sometimes nurses tell women to come to ANC and labor ward with their husbands; some women don't like that. They do not want their husbands to see them going through the process of delivery because it's culturally unacceptable. Some men say when women go to the antenatal clinic they sing songs and they wonder why a man should go there and sing together with women. They say that's ok for women to do that, but not men. Sometimes the nurses tell husbands to accompany women to the delivery room and to watch them whilst they deliver their babies. Sometimes men are told to be massaging their wives back during labor. I remember one young man was left mentally traumatized after watching his wife deliver their baby. He was told to be in the labor ward and watch where the baby comes from and receive the baby. Now the couple is divorced due to this experience. I don't think it's good for husbands to be there when their wives are delivering. That's why some women prefer to come here and not go to the hospital. It is good for husbands to go for ANC with their wives but not during delivery. I encourage husbands to support their wives and to accompany them when they come here for ANC and I cannot allow them to be there during

delivery because in our culture that is not acceptable and some people find it very disturbing and shocking" (Traditional Birth Attendant, rural area).

An interesting finding was that in health facilities where male involvement is encouraged in maternal health care some women were taking their male relatives or hiring other men to pose as their spouses at the antenatal clinic in cases where their husbands were unwilling or too busy to accompany then to the clinic. The women explained that this was happening because in some health facilities women are denied care or served last if they don't come with their husbands to the antenatal care clinic. This assertion is well illustrated in the following remark below:

"We are told to come to the antenatal clinic with our husbands....however it is not always possible for us to come here with our husbands because they are busy with work or other businesses.... When we come here without our husbands, sometimes the nurses tell us to wait until they first treat all women who have come with their husbands...this is a challenge to most women...As a result some women come here with their brothers, houseboys, garden boys or they even hire men to pose as their husband so that they get treatment quickly" (FGD 1, urban health center).

Male participation in maternal health care is considered as an important aspect in the promotion of maternal health care use. Some women recommended active male involvement in maternal health care in order to support their spouses to use maternal health care services. They said:

"There is a need to promote male participation in maternal health care so that they should support and encourage women to deliver at the hospital" (Resp15, rural health center).

"Men should be encouraged to take part in maternal health care issues because it helps to promote their support to women. My husband refused to escort me to the hospital because there is a belief that reproductive health issues are tackled by women, so my landlord is the one who escorted me and it did not feel right" (Resp 9, rural health center).

It was also established that due to social norms and expectations, some women were embarrassed to go for ANC because of old age and high parity.

"Some women are embarrassed to go for antenatal care because they are old and have many children and they feel ashamed to be among young women" (Resp 9, urban health center).

Another finding was that some women prefer to be assisted by female attendants during antenatal and delivery because their husbands don't want them to be seen naked by male health providers; hence their choice of TBAs, since in Malawi TBAs are usually women. In

addition, the women also said that child birth is culturally considered as women's issue as such it delivery should be conducted by fellow women. With regards to this, the women requested that government should consider recruiting more female midwives.

> *"Some women go to TBAs because their husbands do not want their wives to be assisted by men during ANC or delivery because they don't want other men to see their wives naked"* (Resp 27, TBA facility).

7.11 Religion

Religion was cited as a factor that prevents women from using maternal health care. The women reported that there are some religious groups such as Apostolic and Zion churches which do not allow their members seek medical help. Such religious groups encourage their members to pray because they believe that only God heals.

> *"Some women do not go to the hospital because they belong to religious groups that forbid their members seek medical assistance at hospitals. Examples of such religious groups include the Apostolic and Zion churches. They believe that God is the only one that heals and therefore it is pointless to seek healing from the hospital. Instead they encourage their members to pray because God is the one who heals"* (Resp 2, urban health center).

It was further reported that women who belong to such churches as Zion normally deliver at home with the assistance of other women who belong to the same church. If a complication occurs during pregnancy or delivery, women are brought to the church where they are prayed for and sometimes delivery happens at the church. When a member decides to seek medical help at the hospital, she gets excommunicated from the church.

> *"Because of religious beliefs, some women, for example those who belong to the Zion church do not go to the hospital for antenatal care and even at the time of delivery. This is because their church forbids them to do so. Such women deliver at home with the assistance of other women who are fellow members of their church. In case where a woman is having problems to deliver, they take the woman to the church where church elders and other members pray for her. Yes, sometimes women deliver at church depending on the situation...If a member of Zion goes to the hospital she gets excommunicated from church"* (FGD 2, urban health center).

It was also established that due to religion, some women do not receive immunizations during pregnancy and are not allowed to use family planning methods. Some health workers were quoted as saying:

> *"Some religious groups prohibit its members to go to the hospital and to receive immunizations even during pregnancy....I remember there was a time when there was a measles outbreak in Malawi. The members of Zion refused to receive measles*

vaccine because of their religion. The government tried to force them to receive the vaccine but it did not work. ... " (Health worker, urban health facility).

"Some women do not come to the hospital because of religious beliefs. For example members of Roman Catholic Church are not allowed to use contraceptives. As a results the women do not come to access family planning services" (Health worker, CHAM health center).

7.12 Discussion of Findings

This study has identified factors that women perceive as determinants of maternal health care utilisation i.e. EHP services. The findings show that these factors exist at various levels i.e. individual, household, community and health facility level. The following ten major themes have emerged from the results of this study: 1) knowledge about maternal health services; 2) geographical accessibility; 3) financial accessibility; 4) decision making, gender and power issues; 5) attitude of health workers; 6) availability of health workers and essential drugs; 7) perception on quality of care 8) mandatory HIV testing; 9) cultural beliefs and practices 10) religion.

Knowledge about maternal health services emerged as a significant factor influencing use of maternal health care services. The findings reveal that some women don't use maternal health care services because they lack requisite knowledge and information about the importance of seeking maternal health care. Several other studies have also found that lack of knowledge and information prevent women from seeking or receiving maternal health care (Dhakal et al., 2007; Ensor et al., 2014; Anya et al., 2008; Fotso et al., 2009; Ye et al., 2010). For instance, a study done in northern Malawi low utilization of ANC and postnatal care corresponded to women's lack of knowledge on importance of these services (Katenga-Kaunda, 2010). A study conducted in Sub-Sahara African counties found that lack of knowledge or information on the importance of giving birth in a health facility posed as a barrier to the utilization of maternal health services (Tey and Lai, 2013). Another study conducted in Nepal also found that lack of awareness among women was the main barrier to the utilization of postnatal care (Dhakal et al., 2007). Additionally, a study done in Japan reported that limited knowledge about ANC services was the major constraint behind low utilization of ANC services (Ye et al., 2010).

The lack of knowledge on the importance of seeking maternal health care is attributed to low literacy levels amongst women which limits their understanding of maternal health care needs The findings reveal that illiterate women with limited knowledge and understanding of the importance of maternal health care are most likely to seek maternal health care from TBAs instead of going to the health care facility. These findings are supported by several studies which report low utilization of maternal health services in rural areas where most women are poor with less education and limited knowledge and understanding about the importance of using maternal health care services (Ochako et al., 2011; NSO, 2011; Fotso et al., 2009; Babalola and Fatusi, 2009; Mpembeni et al., 2007). Providing education and information to

individuals, households and communities, is a way of dealing with the knowledge gap (Ensor and Cooper, 2004; Ensor et al, 2014; Gabrysch and Campbell, 2009; Ntambue et al., 2012; Tey and Lai, 2013; Fotso et al., 2009). A study done in Nigeria however found that even though pregnant women demonstrated knowledge and awareness of ANC services, some of them did not attend ANC due to several reasons including women's stubbornness, husbands refusal, health workers attitude, long waiting times and distance (Sanda, 2014). Maternal health knowledge would therefore significantly be improved with wide application of community-based interventions to improve understanding and use of maternal health care services (Ensor et al., 2014).

Geographical accessibility was identified as a factor that influences use of maternal health care services. The dimension of physical accessibility includes empirical measures such as distance, travel time, transportation and the associated cost (Graves, 2009). Women in this study cited long distance to a health facility, poor road infrastructure and lack of transportation as some of the challenges that prevent them from accessing and using maternal health care services. These findings corroborates with findings of several other studies (Tey and Lai, 2013; Mpembeni et al, 2007; Agha and Carton, 2011). For instance, a study conducted by Tey and Lai (2013) in six African countries found that distance and lack of transport were the most important reason for the non-use of health services for delivery in Kenya and Tanzania and the second most important reason in Nigeria. Another study conducted in Pakistan found that women who had a longer travel time and those who travelled by foot to the nearest health facility were less likely to use ANC and delivery care services (Agha and Carton, 2011).

In this study, the long distance was attributed to the insufficiency of health facilities. This emerged as a problem especially in the rural areas where there are few health facilities which are located far from many communities. In general, the public health infrastructure in Malawi is considered inadequate to meet the ever-increasing health demands for the population. Health care coverage and distance to health facilities still needs improvement. On average 81% of Malawi's population is residing within a radius of 8 kilometers from a public health facility (Ministry of Health, 2011). The women also expressed concern that they lack transport to go to the hospital and when they go there they have long waiting times because of long queues due to shortage of staff, as a result some women just go to TBAs because they feel it's the easiest option for them.

Furthermore, it was established that that in some places, especially in rural areas, women walk or travel long distances to get to a health facility. As such, pregnant women feel it's a burden to walk such long distance; as a result they visit the antenatal clinic only few times and go to the hospital only during delivery while others prefer just to stay home. A study done in Pakistan found that women who were staying far from a health facility had few ANC visits compared to those who were staying closer to a health facility (Agha and Carton, 2011). In some cases, the women may delay or skip going to the ANC clinic for routine check-ups, and may go to the hospital only when they have a problem. A study done in Tanzania reported that among other reasons women delay to make the initial ANC visit to

avoid having to make several visits to the clinic (Mrisho et al., 2009b). Poor and inaccessible roads, as well as lack of emergency transportation also emerged as factors that prevent women from accessing and using maternal health care services. Most of roads in rural areas in Malawi are neglected and in bad shape. This makes it difficult for the pregnant women to travel to health centers to access maternal health care services. The health centers in rural areas also lack ambulances to transport women to the hospital obstetric emergencies.

In order to improve geographical accessibility, women suggested that government should build more health facilities especially in the rural areas and that all health centers with ambulances to be used for transportation of pregnant women with complications to referral hospitals. The women also suggested that if government cannot afford placing a conventional ambulance vehicle at each health centre, then it should consider providing bicycles to be used as ambulances. Kotter et al, (2006) however noted that issues regarding distance to health facilities, access to transport and maintenance of roads infrastructure are dependent on the long term-development of the economy and infrastructure.

The study also identified financial accessibility as a factor that influences women's use of maternal health care services. Several studies report that women with high economic status are more likely to use maternal health care services compared to their counterpart women with low income status (Agha and Carton, 2011; Anyait et al, 2012; Babalola and Adesegun, 2009; Mpembeni et al., 2007). Although maternal health services are delivered for free by the public health sector in Malawi, the study identified lack of finances as a barrier to use of maternal health care services. A study conducted in Ghana found that wealth had a positive and significant influence on use of maternal health services even after the introduction and implementation of a free maternal health policy (Arthur, 2012). This finding demonstrates that even though maternal health services can be delivered for free, there are costs associated with access and use of the services. These costs can be incurred either directly or indirectly and those with resources are more likely to afford and use the services (Arthur, 2012). Muchabaiwa et al, (2012) observed that public health services aimed at reaching the poor end up benefiting only the rich instead. The costs associated with use of maternal health services may include travelling costs, drug costs and the opportunity cost of losing time due to long travel distance and hospital waiting times (Muchabaiwa et al., 2012; Kalin et al, 2011).

Women in this study reported that due to poverty they cannot afford to pay the transportation cost to go to the health center and as a result they fail to access and use maternal health care services. Furthermore, the study established that some public health centers are unable to provide some services and medication due to different problems, such as shortage of health workers and lack of essential drugs. As a result, pregnant women go to private hospitals to access to health services or to private pharmacies to buy medicines using their own money. This becomes a major problem more especially to poor women who cannot afford to pay the cost of private health care services or medicines. Out-of pocket payments therefore act as a barrier to health care access for the poor people. Evidence shows that the public health sector in Malawi is experiencing shortage of funds to support the delivery of EHP services (Bowie

and Mwase, 2011) and that household out-of-pocket payment has increased during the implementation of EHP services (Ministry of Health, 2011).

The findings also revealed that due to poverty some pregnant women shun going to ANC clinic because don't have descent clothes to wear and therefore they feel embarrassed to go to the health center. In addition, it was established that because of poverty some women lack money to buy the necessary materials required for them to bring to the hospital during delivery such as, pieces of cloth, plastic paper and basin. Furthermore, it was established that some women are not willing to go and wait at the hospital for delivery because they cannot afford to meet the cost of food, and they prefer to just stay at home. Ahmed et al., (2010) recommended that efforts to expand maternal health care services utilization can be accelerated by parallel investments in programs aimed at poverty reduction (MDG 1), universal primary education (MDG 2) and women empowerment (MDG 3). They also recommended that that government should ensure provision of food and other material resources required during delivery in order to promote use of maternal health services among the low income women.

Negative attitude of health workers emerged as major barrier to maternal health care utilisation. In Malawi, media reports on some negative attitudes of health workers have been reported confirming the existence of the problem on a broader level. This collaborates with findings of a another study done in Malawi which identifies health workers' attitude as one of the reasons why women fail to deliver in health facilities (Kumbani, et al., 2012; Lunan at al, 2011). An investigation on specific reasons contributing to health workers poor attitude was beyond the scope of this study. However, other studies cite the following reasons: excessive work load which result in burn out and stress, poor work environment, lack of resources; lack of interpersonal skills by health workers; lack of professionalism; limited supervision of health workers, and overall demotivation by health workers and lack of incentives (McAuliffe et al., 2009; Manafa et al., 2009; Mlotha, 2014).

Shortage of health workers and drugs were cited as key barriers of access to maternal health services. Indeed, various reports have indicated severe shortage of health workers and erratic availability of essential medicines over the years in the Malawi health system (Mangham, 2007; McAuliffe et al., 2009; Palmer, 2006; Dovlo, 2004; Ministry of Health, 2011; Mueller et al., 2011). Related to the shortage of health workers, long waiting times emerged as a related health quality dimensions that are challenges to access of maternal health services. Women recommended that government and other service providers should ensure availability of adequate human resources and essential drugs in order to ensure quality health services and facilitate use of maternal health care (Arthur, 2012).

The results also show that quality and safety of care influences women's health seeking behavior and use of maternal health care services (Anya et al, 2008; Ensor et al, 2014). The women indicated that they prefer to receive care from health providers who offer quality and safe health care services which is delivered in a respectful and timely manner. Besides that, the women also stated that given a choice, they would prefer to receive maternal health care

services from health workers who are competent, responsible, trustworthy and friendly. However, a study done at a district hospital in Malawi reported that most women do not know the standard of care to expect because they are not well informed; instead they have low expectations (Kumbani, et al., 2012). The study revealed that health workers have a responsibility to inform women about the care they should expect.

Another aspect that hinders women's use of maternal health care services is related to compulsory HIV testing during pregnancy. It was noted that generally some women shun attending antenatal clinic for fear of being tested HIV positive and the resultant stigmatization. Malawi government is proposing a controversial bill for mandatory HIV testing for all pregnant women . The bill is aimed at promoting prevention of mother-to-child transmission of HIV. The current policy mandates every pregnant woman to undergo routine HIV testing during the initial ANC visit in all health facilities. This practice and the proposed bill has raised great concern among the general public on whether it is ethical to subject women to mandatory HIV testing or not (Mfutso-Bengo et al, 2014). In 2008, the centre for Reproductive Rights reported that in Kenya pregnant women were being subjected to HIV testing without their knowledge or consent, or being forced to submit to an HIV test. The Centre stated that forcing women to submit to an HIV test or without their consent is a violation to their rights and can diminish their confidence in the health care system. They argued that this tendency can drive women away from participating in prevention of mother-to-child transmission of HIV (PMTCT) programmes (The Center for Reproductive Rights, 2008). A study done in Uganda reported that routine HIV testing and counselling is largely acceptable by the pregnant women in Uganda and has enabled most of them to know their HIV status and to take part in PMTCT services (Byamugisha et al., 2010).

In addition, it was also established that women's previous experiences and satisfaction of quality of services influences their use of maternal health care services. The findings revealed that women's past experience and satisfaction of using maternal health care can either promote or prevent them from seeking or using the services. It was clear that women who reported to have had a good experience and being satisfied with the services were most likely to use the services again and to recommend the services to friends, whilst women who reported to have had a bad experience and being dissatisfied with the services were discouraged from using the services again. A study done in Nigeria collaborated this finding. It found that high utilization of antenatal care services was associated with women's high level of satisfaction with quality of maternal health services (Onyeonoro et al., 2014). Women emphasized the importance of their interaction with health care providers and the effect of this has on their health seeking behavior.

This study found that socio-cultural and religious factors influence utilization of maternal health care services. This concurs with findings of other studies done in Malawi and elsewhere (Kumbani et al., 2012; Titaley et al., 2010; Schmidt, 2013; Tey and Lai, 2013). With regard to cultural factors, women cited cultural beliefs and practices, social norms, male involvement issues, religious beliefs and practices as some of the barriers that prevent women from using maternal health care services. The findings of this study revealed that cultural

beliefs and practices are still prominent in some areas especially in rural areas and that these have an impact on maternal health seeking behavior. Women reported that due to cultural influence, husbands and family members such as parents, uncles and in-laws play an important role in deciding whether a woman should go to the hospital or not, as well as where and when they should seek maternal health care. This clearly indicates that some women have limited autonomy or control over the decision making process regarding maternal health care. Kalin, (2011) describes female autonomy as the ability of a woman to make decisions within the household relative to her husband. He/she explains that when women's autonomy is constrained, their access and use of maternal health care services can be limited. Other studies show that women who have a say in their own health care are more likely to use maternal health care services (Agha and Carton, 2011; Anyait et al., 2012; Stephenson et al., 2006). A study done in six African countries including Malawi found that women with more autonomy in decision making were more likely to use maternal health care (Stephenson et al., 2006). On the other hand, Tey and Lai (2013) argue that women's autonomy over their decisions have little or no impact on use of use of maternal health care services (Tey and Lai, 2013).

It was established during this study that men make decisions for women because culturally they are viewed as key decision makers for their families. Shaikh and Hatcher (2005) contend that the decision to seek maternal health care also depends on who controls the household resources who in most cases are men. The study revealed that in cases where decisions to seek maternal health care at health facilities were predominantly made by husbands, some pregnant women were denied permission. This was attributed to lack of trust and jealousy. This practice violates women's rights to health. Access to health is a basic human right (United Nations, 1948). Every person is entitled to self-determination (autonomy) including the freedom to make independent decisions (United Nations, 1976). By virtue of these rights, women have the right to freely make decisions regarding maternal health and to access health care services without interference or coercion.

It was established that some women don't go to the hospital to receive maternal health care because they have never gone there before. They are used to going to TBAs. On the other hand it was learnt that some are so used to taking traditional medicine and therefore they don't see the need for going to the hospital. It was further found that some women deliberately delay going to antenatal care clinic for fear of being bewitched. This concurs with findings of a study previously done in Malawi which found that some women believe that witchcraft can cause miscarriage or make them delay in giving birth and as a result they delay in going to the hospital or do not comply at all (Kumbani, et al., 2012). Another study done in Zambia reported that some women prefer to wait and go to a health facility until labor is well established, so that it cannot be stopped by witchcraft (Maimbolwa et al., 2003).

In addition, due to culture, some pregnant women prefer TBAs to skilled birth attendants. The beliefs surrounding maternal health care are passed on to younger generations through parents, relatives, husbands or TBAs (Schmidt, 2013; Titaley et al., 2010). Although TBAs lack the medical background necessary to enable them identify obstetric emergency cases

early, they are often considered as valued, trusted and respected members of the community (Lunan et al, 2011; Schmidt, 2013; Kavinya, 2012). This is the case especially in developing countries like Malawi where TBAs provide alternative maternity care. TBAs provide basic health care, support and advice during and after pregnancy and childbirth, based primarily on experience and knowledge acquired informally through the traditions and practices of the communities where they originated (Kavinya, 2012). TBAs are often elderly women and they have vast knowledge of the local people and their cultural beliefs (Schmidt, 2013). They also speak the women's local language and usually work in rural, remote and other medically underserved areas (Kavinya, 2012; Schmidt, 2013). It is estimated that currently in Malawi about 15% of deliveries in rural areas are assisted by TBAs, whilst 8% of deliveries in urban areas are assisted by TBAs (NSO, 2011).

Recently, authorities in Malawi advised traditional leaders, communities and all stakeholders to ensure that no woman delivers at TBAs to avoid maternal deaths (Kavinya, 2012), and also to reduce mother-to-child HIV transmission on the basis that women should be encouraged to attend ANC clinics where they can have access to HIV testing and Anti Retroviral treatment. The authorities further banned TBAs from conducting deliveries in the communities and instead urged them to play the role of referring expectant women to health facilities for safe delivery (Kavinya, 2012). Despite this ban on TBAs, women in Malawi continue to seek and receive maternal health care from them. Women gave different reasons why they prefer TBAs to professional health providers. For instance, they said that TBAs have good interpersonal skills, and treat women with special care unlike health workers at the health centers. They also mentioned that TBAs are trustworthy and have better understanding and respect traditional customs. Similar reasons were reported in a study done in rural west Sumatra in Indonesia regarding as to why women prefer TBAs to professional birth attendants (Agus and Horiuchi, 2012). They asserted that traditional beliefs were positively correlated with preferences of TBAs. Titaley et al. (2010), reported in their study that despite the availability of village midwives in the villages in west Java Province in Indonesia, some communities preferred TBAs because they were perceived as more mature, patient and caring compared with the midwives. In addition, Agus and Horiuchi (2012), observed that family income was also associated with women's preferences of TBAs and midwives. They also found that women with low household income were most likely to use TBAs because of the cost considerations.

Additionally, this study found that due to traditional norms and expectations, some women were embarrassed to go for ANC because of old age and high parity. First and foremost, older pregnant women feel shy to be attended by younger health care providers during antenatal and delivery. By observation, the majority health care providers in Malawi are young. Secondly, family planning is a considered as a new phenomenon in Malawi and hence women with high parity are viewed as ignorant. As a result of this they shun going to the hospital during antenatal and pregnancy. These findings are supported by other studies which found that women's old age and higher parity are associated with low utilization of maternal health care services (Tey and Lai, 2013; Agha and Carton, 2011; Mekonnen and Mekonnen, 2002; Ntambue et al., 2012). A study done in Asia and African countries found that the

likelihood of institutional delivery decreased with older age and the number of children, as women may feel more confident and feel that there is no need for institutional delivery (Tey and Lai, 2013). They suggested that women should be informed of the increased risk of the complications associated with old age and high parity.

This study has also identified male involvement as a factor that influences women's utilization of maternal health care services. Over the past years, in Malawi pregnancy and childbirth have been viewed as women's domain and maternal health care services have focused on women, with very little male involvement (Kululanga et al., 2011). However, lately there has been increasing interest in mainstreaming male participation in maternal health care and promoting their role in uptake of maternal health care services. Since men are usually the key decision-makers in the home and often control household finances, they may use this opportunity to ensure that their pregnant wives seek maternity services or arrange for skilled care during delivery (Mangeni et al., 2013). Mullany et al (2007), argues that for men to make the right decision for their wives regarding place of delivery and professional attention, they need to understand the importance of maternal health care.

Furthermore, some studies have shown that, when men know the danger signs of pregnancy and delivery, they may act as life-saving agents, ensuring that their wives get appropriate attention in obstetric emergencies (Chowdhury et al., 2007; Rahman et al., 2011). Several studies show that women are more likely to use maternal health care services and have better outcomes when their husbands got directly involved in maternal health care by attending ANC visits. For instance a study done in Kenya by found that woman whose husbands attended at least one ANC visit were more likely to have skilled birth attendance than those whose husbands did not attend any ANC visits (Mangeni et al., 2013). Another study also done in Kenya found that husbands greatly influence women's decisions to use health care services (UNFPA, 2009). Additionally, a study conducted in Indonesia found that husbands' social support was associated with delivery care utilization (Story et al., 2012). In addition to this, Kululanga et al., (2011) reported that men's participation in ANC education programmes has positive effects including increase in men's reproductive health and child health knowledge, besides increasing utilization of antenatal care services by women.

This study established that in some health centers pregnant women are encouraged to go with their husbands to the hospital during ANC and delivery as one way to male participate in maternal health care. It was clear during the discussions with women that some supported 'male involvement', whilst others did not. Women who indicated that they supported male involvement in maternal health care reported that they think it is a good practice which promotes decision making, support and love within families. This is consistent with findings of a study previously done in Malawi which found that male involvement is viewed as an act of love and support (Kululanga et al., 2012). In their study, a belief was portrayed that a 'loving' husband will accompany a wife to the ANC clinic and escorts her to the hospital for delivery. In addition, their study found that male involvement is perceived as a culturally constructed role assigned to men and they play a supportive role like getting women to the hospital and providing financial and material resources (Kululanga et al., 2012).

However, contrary to these sentiments, some women expressed concern saying that they find 'male involvement' challenging since it is not always possible for them to convince their husbands to accompany them to the ANC clinic since some men are not willing to participate whilst others are committed to doing other things. A study done by Kululanga et al, (2012) revealed that some men in Malawi view male participation as a foreign concept and they think that pregnancy and childbirth issues are women's business. As such they are not willing to participate in 'male involvement issues. It was further established that in some cases when women go to the ANC clinics without their husbands they are sent back home or treated at the end. As a result 'male involvement' acts as an obstacle to them when seeking maternal health care, they stated. Some people in Malawi view male participation as unfair programme for women without partners (Kululanga et al., 2012). It has been learnt outside this study, that in some districts women 'hire' and pay men who stand on the gates of the hospitals to escort them to the ANC and to pose as their husbands. Women do that to avoid being sent back home and to be assisted faster when they go to the ANC clinic, in the case where their husbands have failed to accompany them to the clinic.

A study done in Malawi observed that male participation depends upon the willingness of both the wife and husband to participate (Kululanga et al., 2011). The study by Kululanga et al (2011) also observed that four main strategies were being used to invite men to participate in maternal health care in Malawi i.e. health care provider initiative, partner notification, couple initiative and community mobilization. Among these four initiatives, they found that couple based initiative was more effective and sustainable because it originated from the couple itself that felt a need to jointly get involved in maternal health care services. This strategy however, was mostly adopted by the educated and city residents, they reported. On the other hand, they found that community based strategies were more effective in rural settings, but they worked well where there were incentives, which in most cases they said were donor driven. They therefore recommended that more emphasis should be made to promote couple based strategies to sustain male participation in maternal health care and also the need to implement long-term strategies targeting a whole generation in order to bring the desired behavior change in male involvement (Kululanga et al., 2011).

Another challenge regarding male involvement was that some women in this study thought it violates cultural traditions and therefore they do not accept it. Women mentioned the example of cases where women are requested bring their husbands in the labour ward to support them during labour and to observe childbirth as being culturally insensitive and shocking. Kumbani et al, (2013) explain that is not easy to change cultural traditions. Therefore it is equally difficult to convince some women to bring their husbands to the hospital during antenatal and delivery. This calls for the need for program planners to develop innovative and cultural sensitive approaches to promote male involvement in maternal health at various levels (Mangeni et al, 2013; Story et al., 2012). The programs should include measures to create community awareness emphasizing the men's role in maternal health services and the benefits of their involvement in pregnancy care and outcomes, as well as measures to address negative beliefs regarding men's involvement in maternal health care (Mangeni et al., 2013; Kabagenyi et al., 2014).

This study identified religion as a factor that influences women's health seeking behavior and utilization of maternal health care services. This corroborates with findings of other studies (Stephenson et al., 2006; Maguranyanga, 2011; Muchabaiwa et al., 2012; Abor et al., 2011; UNFPA, 2008). For instance, a study conducted in six African countries found that religious affiliation is a significant source of either inclusion or exclusion from maternal health care utilization (Stephenson et al., 2006). The study, found that in Ghana, Muslim women were less likely to deliver in a health facility than Catholic women, whereas in Kenya and Tanzania, Protestant women were more likely than Catholic women to report having done so. Another study done in Ethiopia, found that Orthodox women are more likely to seek maternal health care from health professionals compared to women who belong to other religious groups. On the other hand, studies done in Zimbabwe report that women affiliated to apostolic sects do not take medical services (Maguranyanga, 2011; Stephenson et al., 2006). Additionally, a study conducted in Nigeria found that religion influenced the choice of a health care provider in majority of respondents, for instance traditionalists do not believe in modern medicine and they prefer cleansing and traditional herbs (Muchabaiwa et al., 2012).

In this study, it was discovered that some women who belong to the Apostolic and Zion churches do not seek maternal health care services during pregnancy and delivery. Maguranyanga (2011), explains that apostolic groups are less likely to use health care services primarily because of their religious beliefs, teaching, and church regulations as well as social control mechanisms to enforce adherence to these teachings. Furthermore, Maguranyanga (2011), explained that since the apostolic church principles forbid followers from seeking medical services, refusal of treatment has often resulted in serious health implications, even death, for some members.

The findings also revealed that women who belong to the apostolic and Zion churches normally deliver at home with the assistance of other women who belong to the same churches except in the event where a complication has occurred during pregnancy or delivery, then the women are brought to church where they are prayed for and sometimes delivery happens at the church. In addition to this, it was also learnt that members of these churches are also forbidden to receive immunizations during pregnancy and are not allowed to use family planning methods. Maguranyanga (2011), explains that such practices have a direct consequence on maternal and child morbidity and mortality as it increases risks to avoidable illnesses, deaths, and vaccine-preventable diseases. This calls for the need for the government and key stakeholders to identify practical steps to improve health while respecting religious values and concerns.

7.13 Summary of the Chapter

This chapter has presented results on factors that influence women use on maternal health care services. Results indicate that public health services are predominantly used by women to access maternal health care because of the free health services delivery. However, women expressed concern that there are some factors that act as barriers to use of maternal health services. These barriers include lack of knowledge about maternal health services, long

distance to health facility, lack of transport to access health facilities, poor road infrastructure, lack of finances to meet the associated cost of care, lack of women's autonomy and decision making power, shortage of health workers and drugs, poor attitude of health workers, cultural beliefs and practices and religion. The findings of this study suggest that in order to promote access and use of maternal health services, there is a need to address multiple factors at household, community and health facility levels which prevent women from accessing maternal health care services.

CHAPTER 8

HEALTH WORKERS' PERCEPTIONS ON FACTORS THAT INFLUENCE DELIVERY OF MATERNAL HEALTH SERVICES

8.1 Introduction

This chapter identifies factors that influence delivery of maternal health services in Lilongwe district in order to determine factors that influence access to EHP services. Participants for this qualitative study included health workers in both urban and rural health facilities within which this study took place. The findings also include perspectives of key informants from the Ministry of Health Headquarters, Reproductive Health Directorate, Lilongwe District Health Office (DHO) and TBA. The chapter also includes a discussion of findings and recommendations provided by participants on how delivery of maternal health care services can be improved. It ends with a summary and conclusion.

As indicated earlier in chapter five, a total of 15 participants were involved in Key Informants Interviews (KIIs). These included 5 health workers, 5 heath facility in charges at health center level, 1 district health facility manager, 4 policy makers and a TBA. Eligibility to participate in the KIIs entailed— current involvement of the participant in maternal health issues (policy making and planning, district health management, health care service delivery at health center level). Participants for KIIs were selected through purposive and snowball sampling techniques. Precisely, participants at health center and district health office were selected through consultation with the facility in-charges whilst participants from the Ministry of Health Headquarters were selected through consultation with a key informant at the Ministry who provided a list of names of eligible key informants who are involved in maternal health. Using the list, the researcher then contacted the identified key informants and recruited those who were interested to participate in the study. The identified key informants were asked to identify and nominate further cases to be interviewed in this study.

The following three major themes emerged from the results of this study: 1) creation of demand for maternal health services; 2) availability of resources; 3) communication and collaboration with partners. The findings are presented in the subsequent sections and direct quotations are used to support various themes that emerged.

8.2 Creation of Demand for Maternal Health Services

The study established that creation of demand (enhancement of the need and desire) for maternal health services plays a crucial role in facilitating delivery of the services. Results show that creation of demand for maternal health services is very important in influencing women's health seeking behavior and utilisation of the services. Participants reported that they create demand for maternal health care services through different strategies which include ensuring availability and accessibility of the services, health education, community awareness and mobilization, as well as ensuring delivery of quality health care services:

8.2.1 Availability and Accessibility of Maternal Health Services

The study found that availability (having the right type of care available to those who need it) and accessibility (distance to health facility and cost of care) of maternal health services is very crucial in creation of demand for the services. Participants emphasized the importance of ensuring availability of maternal health services at all times to make sure that women have access to them whenever in need, thereby enabling effective demand creation:

> *"We create demand for maternal health care services by ensuring that such services are available so that women can access them whenever in need. I think this is important. First the services must be there to meet women's needs"* (Community Health Nurse Midwife # 7, urban health center).

Participants reported that different strategies are being used to promote accessibility to maternal health care services in Malawi. One of the strategies includes delivery of free health care services both in the public health sector and some CHAM health facilities. Participants further reported that due to Service Level Agreement (SLA) between government and some CHAM health facilities; there has been an improvement in access and use of maternal health care services:

> *"Our services are free. We don't charge user fees. That motivates women to use our services"* (In charge of ANC clinic and maternity ward # 8, urban health center).

> "*Even though we are a CHAM facility, we provide free maternal health care services to all women within our catchment area. We have a Service Level Agreement with government which mandates us to provide free maternal and child health care services. Free services provision is one way that has helped us to create demand for maternal health care services. Since the introduction of SLAs, we have seen more pregnant women coming to attend antenatal clinic and to deliver at our health facility"* (Health Facility In-charge # 13, CHAM health center).

The findings however revealed that although access to public health services was free of charge, there were still some charges associated with their use. For instance it was revealed that due to shortage of resources in public health facilities, pregnant women were being requested to buy plastic papers on their own, to be used when they go to the health center for delivery. The participants also said that due to drug shortage, women are sometimes requested to buy medicines from private pharmacies or stores using their own money. The fact that women at times incur indirect charges when using maternal health care services imply that the services are not entirely free. It also implies that indirect charges of care may prevent some women from accessing the services:

> *"No they don't pay. Our services are free. But because of shortage of resources, sometimes we ask pregnant women during antenatal visits to buy materials such as black plastic bags on their own, to be used during the time of delivery. To me this is a*

cost which we are supposed to cover and yet we leave it up to the women to pay on their own" (In Charge ANC Clinic and Maternity Ward # 9, rural health center).

"There are no user fees charges for our services. But even though that is the case, I feel that our clients still pay for the services in one way or the other. For example, sometimes we ask patients to buy drugs such as panadol, aspirin or antibiotics from pharmacies or groceries using their money when we do not have the drugs in stock" (Nurse Midwife # 14, rural health center).

8.2.2 Health Education and Community Awareness

Health education and community awareness were also cited as factors that are vital in creation of demand for maternal health services. Majority of the participants reported that they create demand for maternal health care services through health education and community awareness, whereby they inform pregnant women, their partners, families and communities about the services available at health facilities and the importance of using them, as well as the associated costs of care. They said that this helps women and communities to be aware of what services are available and to understand why it is important for them to access and use the services:

"Information giving is one way of creating demand for services because people become aware of the available services and understand why they need to access such services" (In charge of ANC clinic and maternity ward # 6, urban health center).

"We inform women and communities about the services that are offered here so that they become aware of what services are available" (Nurse Midwife # 9, urban health center).

The study established that information about maternal health care is provided to women and communities at different levels i.e. at health facility, community and national levels. At health facility level, health workers inform pregnant women about maternal health care services through health education. When pregnant women go to the antenatal clinic they are given health education on maternal health care either as individuals or in groups.

"We inform clients about the services that are provided at this health facility when they come for antenatal care. We provide health education to individuals and groups. When women come to the antenatal clinic, before we begin to attend to them, we give them health talks as a group whereby we teach various topics relating to maternal health care. We also provide one to one health education to women during and after examination" (In charge of ANC clinic and maternity ward # 6, urban health center).

Participants reported that at community level, information about maternal health care services is disseminated through community awareness activities such as open air briefing meetings, dramas, songs and by conducting meetings with influential leaders such as community and religious leaders:

"We conduct open air briefings with the community during which we tell them different issues relating to maternal health care. We also have meetings with village leaders like chiefs and religious leaders where we inform them about the services being offered at this facility and we encourage them to tell their subjects to access our services" (Health Facility In-charge # 10, rural health center).

"Sometimes we use local songs and drama which contain health messages that inform communities about different health issues" (Midwife # 14, rural health center).

Results showed that different types of community health workers and leaders are involved in providing information to the communities regarding maternal health care. The community health workers include Community Health Nurses, Health Surveillance Assistants (HSAs), Volunteers, Village Health Committees (VHCs), Community Based Distribution Agents (CBDAs) and Health Center Advisory Committees.

"HSAs conduct health talks in our catchment areas to tell people what we do, in terms of the services that we provide. We also tell chiefs to inform their subjects about our services and encourage them to use them... chiefs help to encourage pregnant women to come to the hospital early for maternal services" (Health Facility In charge # 11, rural health center).

"We have a health center advisory committee and also volunteers who provide health care information to the communities" (Health Facility In Charge # 13, CHAM health center).

Key informants at the Ministry of Health and Reproductive Health Unit were asked about the ways information regarding maternal health care services is disseminated at national level. The participants reported that at national level, information regarding maternal health care is disseminated through mass media e.g. radio, TV, newspapers, billboards and information leaflets. They reported as follow:

"...we use the media such as newspapers, radios and TV" (Policy maker # 3, Ministry of Health).

"For those clients who can read and write, we give them leaflets with health information for them to read" (Policy Maker # 5, Reproductive Health Unit).

The study established that information given to pregnant women and communities cover a wide range of topics aimed at improving knowledge and practice of maternal health care. The information includes advice on importance of using maternal health care services, danger signs during pregnancy, emergency preparedness, child birth preparedness, HIV prevention and family planning, among others:

"We teach them why it's important to attend antenatal clinics during pregnancy and we encourage them to deliver at the hospital. We also inform them on how to identify danger signs and complications during pregnancy. In addition to this, we also tell them how to prepare for childbirth and what things to bring to the hospital during the time of delivery" (In charge of ANC clinic and maternity ward # 6, urban health center).

"*We tell them different issues relating to maternal health care, for example the dangers of delivering at TBAs, advantages of starting ANC quickly, how to prepare for child birth, HIV and AIDS, family planning etc"* (Health Center In charge # 10, rural health center).

Health workers indicated that creation of demand for maternal health care services is challenging, but emphasized that health education and information is key to changing women's and community' knowledge, attitudes and practices regarding maternal health care. For instance, the In-charge of a rural health center reported that due to promotion of awareness, there has been an increase in number of women using maternal health care services at their health facility:

"It is difficult to create demand because you can't follow people in their homes. But with awareness, little by little things are changing. People's attitudes are changing. There is an increase in the number of women coming for ANC and deliveries" (Health Center In charge # 10, rural health center).

Health workers recommended that government should promote health education, community awareness in order to improve knowledge, understanding and use of maternal health care services.

"....lack of knowledge on the importance of seeking maternal health care can be addressed through health education and community sensitization" (Health Facility Incharge # 11, rural health center).

8.2.3 Community Mobilization

Participants also cited community mobilization as one of the strategies they use for creating demand and promoting use of maternal health care service. Health workers reported that they work with community health workers (HSAs, volunteers and VHC) and leaders to sensitize and mobilize members of the community to use maternal health care services and this ultimately influences care seeking behavior. Participants reported that in some communities, chiefs have established bylaws which prohibit women from delivering at TBAs and instead encourage them to deliver at the health facility. The chiefs, it was learnt, enforce compliance to such bylaws through penalties or punishments. For instance, if a woman delivers at a TBA, she is requested to pay a goat, chicken or money to the chief.

"We work with chiefs and community health workers to sensitise and mobilize communities to use the services. In some communities they have bylaws which prohibit women from delivering at TBAs and that there are penalties for breaking such bylaws... If a family or woman breaks that bylaw, they are told to pay a goat, chicken or money to the chief as penalty or punishment. This has helped a lot in mobilising the community to use maternal health care services" (Nurse Midwife # 14, rural health center).

8.2.4 Delivery of Quality Services

The study also found that health care providers create demand for maternal health care services by ensuring delivery of quality services. Participants explained that they ensure delivery of quality maternal health care services in order to satisfy and motivate clients so that they should use the services again:

"We work towards improving quality of services, so that clients or patients should come and be satisfied with them. We believe that if we deliver a good service, they will be motivated and come again" (In charge of ANC clinic and maternity ward # 6, urban health center).

This study also explored health care providers' opinion on quality of maternal health care services. The majority of health workers perceived quality of maternal health care services in their health facilities as good and effective. They said that despite many challenges that they face, they endeavor to provide quality services:

"I think quality of our services is good despite the challenges we face. We try our best to ensure that women receive good care when they come for antenatal and delivery using the little resources that we have" (Nurse Midwife # 9, urban health center).

Participants recognized that there are different challenges such as limited resources and poor attitude of health workers that compromise effective delivery of quality maternal health care services:

"We have limited resources to provide the quality of care that is needed" (In charge ANC clinic and maternity ward # 9, urban health center).

"I can say the quality is good only that we are few health workers and therefore the quality of services could have been better if we had more staff....the attitude of some nurses towards patients is also not good. That in away negatively affects the quality of our services" (Health Facility In charge # 11, rural health center).

Participants noted that improved delivery of quality maternal health care services has resulted in increased access to services and resultant reduction in maternal and neonatal deaths in their health facilities:

"Our services are effective because we are able to reach out to many women. The number of women coming here has increased. We haven't recorded any maternal death since December last year in 2011" (Health Facility In charge # 10, rural health center).

"I think the quality of maternal health care services provided here is good because if you can go through our database, you will discover that the whole of last year we did not have any maternal deaths. The number of neonatal deaths has also reduced. I can estimate that neonatal death rate is now about 2%. I can say the services are effective because the number of women that come for services has gone up" (In-charge of ANC clinic and maternity ward # 6, urban health center).

8.3 Availability of Resources

The study identified availability of resources as one of the key factors that influence delivery of maternal health care services. There was a general consensus among health workers in all health centers that health care resources were not adequate for effective delivery of maternal health care services. Results however indicated that rural health facilities were the most affected by the problem of inadequate resources. It was found that health facilities were experiencing inadequate funding, shortage of health workers, inadequate health infrastructure, shortage of essential drugs, equipment and lack of transport. Health workers mentioned that such challenges hindered effective delivery of maternal health care services.

i) Inadequate Health Funding

Health workers said that public health facilities were being inadequately funded and that this affect procurement of resources and hence the facilities' failure to deliver quality maternal health care services. Although public health centers do not get direct funding from central government, they nonetheless get resources from the District Health Office (DHO). Health workers noted that when the DHO is underfunded, they do not receive some of the requisite resources. They attributed their failure to deliver adequate and quality maternal health care services to low funding. They also expressed concern on untimely supply of some resources from the DHO, such as drugs and other medical supplies:

"To be honest we don't have adequate resources and funds. It is a very big challenge. The funds are not sufficient. We don't get funds directly from the DHO, we just get resources. We order resources from the DHO on a monthly basis. But this is the second month; last month we did not get some of the resources. This month we have not yet received the resources. They are saying that they do not have the resources yet. This affects the way we deliver some of our services" (In charge of ANC clinic and maternity ward # 6, urban health center).

An official at the District Health Office collaborated with the views of health workers that the DHO was getting inadequate funding from the Ministry of Health to support implementation

of the District Implementation Plan (DIP). The official explained that at the beginning of each year the DHO prepares a DIP which includes a budget for all health activities and programs for the district. The Ministry of Health provides a ceiling or limit within which the budget should be. The budget ceilings are usually less than the funds that the DHO require to discharge his operations effectively. The official also stated that in many cases, there is late disbursement of funds from the Ministry of Health Headquarters. This affects management of health services within the district, he observed.

> *"I think it is undisputable fact that financial resources are inadequate. This is due to the fact that government does not have money. Every year we are asked to prepare the District Implementation Plan which includes a budget for all health activities and programs for the whole district. However, in most cases, if not all, we get less money than what we requested for in the budget. During the budgeting process, we are given a ceiling by the Ministry of Health and we are told to budget within the ceiling. Usually, the set ceiling is below our budgetary expectation and requirement. This is challenging for us as it affects the way we deliver our services. Sometimes the funds come late and we struggle to keep the hospital running. This affects health centers, health posts, outreach clinics and other health programs that we are running. You may be aware that it is the responsibility of the District Health Office to manage and support all health activities within a district"* (District Health Manager # 2, District Health facility level).

Another official at the Ministry of Health headquarters confirmed the assertion that treasury was failing to disburse funds according to districts' budgetary plans due to lack of funds.

> *"I don't think anybody can ever say that we have enough funds. There is always a gap in funding. At the end of every year we are asked by government to advise them to come up with annual plan for that year and then we cost the actual plan. That means we come up with the budget for the year for the programs. All the programs are costed but when it comes to funding, the amount of money we get from treasury is less than what was allocated for the programs in the budget"* (Policy maker # 3, Ministry of Health).

An official at the Reproductive Health Unit observed inadequacy of health funds due to mismatch between district budget plans and allocated funds as a result of failure to take into consideration of inflationary rate. The inflationary rate affects cost of utility bills for water, electricity and telephone:

> "*The budget is never adequate especially in 2012. The cost of water and electricity bills has increased. Budgetary allocations do not taking into consideration the rise in cost of utility bills*" (Policy maker 5, Reproductive Health Unit)

It was also revealed that despite the public health sector getting more donor funding and support towards maternal health care, funds are however not being well coordinated and aligned to address priority needs for maternal health care:

> *"There are a lot of partners in maternal health care but they are not being sufficiently coordinated. They are doing parallel programs and what have you. And I think there is a lot of donor funding but the funds are put in wrong places...There is plenty of funding out there, it's just that funding is not addressing priorities and needs of the Reproductive Health Unit or reproductive health in general, especially maternal health"* (Policy maker # 1, Ministry of Health).

ii) Shortage of Health Workers

There was a general consensus among health workers both in rural and urban health facilities that human resource for maternal health care was inadequate. The shortage of staff was however noted to be more severe in rural areas as compared to urban areas:

> *"This facility has very few health workers. There are only two of us; one Nurse and one Medical Assistant against 51,000 population"* (Health Facility In Charge # 10, rural health center).

> "*Our staff is not adequate. The number of staff that I would consider adequate is fifteen but currently there are only ten nurses"* (In charge of ANC clinic and maternity ward # 8, urban health center).

Health workers stated that due to understaffing and increased program services at their health facility (e.g PMTCT and HIV/AIDS clinic) they were experiencing high workload, stress and burn out. This was affecting their delivery of quality maternal health care services:

> *"...staffing level is inadequate...the additional HIV/AIDS clinic is even stressing us more. I usually operate alone in ANC, postnatal and delivery, while the HIV/AIDS clinic is waiting for me as well. We have no time to rest, as a result we suffer from stress and burn out"* (Midwife # 12, CHAM health center).

Some health workers also stated that due to shortage of staff, they were working day in and out throughout the year and expressed concern that this was affecting their personal life:

> *"Because we are very few, I am always on duty day and night which is tiresome. I do not have time to do personal things as I am supposed to always be around"* (Health Facility In charge # 11, rural health facility).

The findings revealed that due to shortage of staff, some health facilities, especially in rural areas, remain closed when health care personnel go out for outreach clinic services or to attend meetings and trainings.

"Another challenge is that, the health facility closes two days a week because nurses go to outreach clinics. It is difficult for a woman who gets sick during these days to be attended to because there is no personnel. As I am talking there is no one to attend to patients in some stations because staff members have gone for a meeting" (Health Facility In charge # 11, rural health facility).

This shortage of skilled health providers for maternal health care in rural areas is further compounded by their unwillingness to work in remote areas. Many health workers cited poor road network, lack of electricity, housing and portable water, as some of the reasons why they do not want to work in rural health facilities.

*"There is no electricity...we use candles which makes it difficult to work. There is also no running water; we collect water from boreholes" (*Midwife #12, rural health center).

"Most people are not interested to come and work at this health center because this place is remote and somehow isolated. We are far from town and the main road. We don't have a proper road and there are no houses for health workers. We rent houses in villages which in most cases are very sub-standard. Besides that, we do not have electricity and running water... we normally use boreholes. Because of these problems many people refuse to come and work here" (Nurse Midwife # 14, rural health center).

iii) Inadequate Health Facilities

The problem of inadequate health facilities was identified as one of the challenges affecting delivery and coverage of maternal health care services in Lilongwe. Health workers reported that in some communities, especially in rural areas, there was a general lack of public health facilities. Women seeking maternal health care walk long distances to access a health facility. It was further noted that the existing health facilities have inadequate space to accommodate the high number of patients that seek professional care.

"Some rural areas have no health facilities to cater for the health needs of the communities. Women seeking maternal health care from these areas visit this facility when in need of care. Unfortunately, this health center is too small to accommodate all women that seek maternal health care. ... We don't have enough space to accommodate all our patients" (Nurse Midwife # 14, rural health center).

"*The buildings are inadequate. For example the drug store room is very small and there is inadequate space for services' delivery...there is only one room for antenatal"* (Nursing In Charge # 8, urban health center).

Health care providers recommended that there is a need for government to construct more health facilities close to communities in order to promote delivery and access to maternal health care services:

> *"I wish government had more health facilities located close to communities so that we are able to reach out to many women. As of now there are still more women who are staying very far from health facilities and we are not able to reach them"* (Midwife # 12, rural health center).

In addition to this, health care providers recommended that there be an expansion of the existing health facilities in order to accommodate more patients:

> *"I wish government could increase the size of our health facility by building more rooms for us to be able to accommodate more patients"* (Nurse Midwife # 14, rural health center).

iv) Shortage of Essential Drugs and Equipment

There was a general concern among all health workers in both urban and rural health facilities stated that their facilities experience consistent shortage of essential drugs and equipment. They said this was negatively impacting on their delivery of quality of maternal health care services. The problem was noted to be more serious in rural health facilities than was the case in urban health facilities. It was further noted that some rural health centers lacked even the most basic drugs such as SP which is given to pregnant women for malaria prevention and treatment. Most of the participants also lamented the consistent shortage of critical equipment with which to screen women during antenatal clinics such as sphygmomanometer machines for checking blood pressure and scales for body weighing.

> *"...sometimes we don't have some of the essential medicines such as SP to give women when they come to the antenatal clinic. It is very difficult to work at a clinic with no essential drugs. We also don't have enough BP machines for checking blood pressure, thermometers for checking temperature and scales for body weighing, as well as other equipment needed in labour ward for use when conducting deliveries ...."* (Health worker # 14, rural health center).

An official from the Ministry of Health headquarters confirmed the existence of the shortage of essential drugs and equipment in the public health sector. He admitted that indeed some of the important drugs were such as magnesium sulphate and oxytocin for treating eclampsia and post-partum hemorrhage, respectively, are consistently in short supply in public health facilities. They noted that this shortage of essential drugs and equipment affects their delivery of quality maternal health care services:

> *"I think the resources are very gravely inadequate. Because time and time again you actually hear of reports of drug stock outs ... there was a time not long ago when some health facilities had no essential drugs such as magnesium sulphate and*

oxytocin... There were also times not long ago when they were reports that IV fluids weren't adequate in a number of facilities so I think in terms of medical supplies they are inadequate" (Policy maker # 4, Ministry of Health).

In addition, results showed that in some health centers, there were few beds to accommodate the high number of in-patients:

> *"...as you can see in the maternity ward, there are only 3 beds against 15 women who deliver in a day. The demand is very high and the ward is small"* (Health worker # 9, urban health center).

On the contrary, CHAM facilities were noted to be well stocked with essential drugs and equipment compared to public health facilities. Health personnel at CHAM facilities said that they were not experiencing serious drug shortages and equipment:

> *"We have a lot f drugs; drugs are not scarce as it is the case with other hospitals... "* (Health worker # 12, CHAM health center).

v) Lack of Transport

Another challenge that was identified to affect delivery of maternal health care services in public health facilities was lack of transport. Both public and emergency transport, to facilitate access to health facilities, was noted to be lacking, particularly in rural areas. Rural health facilities had no ambulances of their own to use during an emergency. Participants said this was making referrals difficult and responsible for patients' delays in getting treatment. Due to inadequacy of ambulances in public health facilities, the Ministry of Health allocates the few available ambulances to the "Health Area Headquarters" and District Health Office to enhance equity of transport distribution within the district. A Health Area Headquarters refers to a health center which oversees a specific group of health centers. In such a case, whenever there is a referral case at a health center, a request for an ambulance service is made either to the Health Area Headquarters or District Health Office or in some cases to the nearest CHAM health facility.

> *"We do not have an ambulance and it becomes a problem when there is an emergency case that has to be referred to the central hospital. We call for an ambulance service from health centre x [Health Area Headquarters] or [CHAM health facility]. And if there is no ambulance available in both places we ask the DHO to help. In the case where we have failed to arrange referral transport, we request patients and their families to arrange their own transport"* (Health worker # 10, rural health center).

A health worker at CHAM health center also cited lack of ambulances as one of the problems that was affecting their delivery of quality maternal health care services. Participant stated that currently they do not have an ambulance of their own and that an ambulance from the

nearest public health center is servicing them. This health worker said the situation is posing a serious challenge. In the event of a maternity emergency and need for a referral, it is at times impossible to get an ambulance service from the recommended sources because the same ambulance might have been deployed elsewhere.

> *"The ambulance that we use comes from public health center x. The lack of ambulances creates problems to us. For instance, we have had situations whereby pregnant women had developed complications during delivery and we had referred them to the central hospital for proper and further management, and yet we could not manage to get an ambulance for them, maybe because the ambulances are busy in their respective places. In such cases we ask our patients to hire cars on their own. It is challenging to us; and I wish we could be assisted to have an ambulance of our own"* (Health worker #12, rural health center).

The problem of lack of transport has not spared the TBAs to the extent that they fail to transport their patients to a referral health facility during an emergency. A TBA stated that sometimes when there is an emergency, they are forced to use inappropriate transport mode such as an ox-cart or a bicycle to transport patients to a referral health facility. These transport modes are both unsafe especially during the night and also very slow:

> *"...transport for patients to referral health facilities is always a problem. When there is a maternity emergency I refer patients to a referral health facility. Sometimes they use an ox-cart or bicycle and as you know they can be unsafe at night and very slow"* (Traditional Birth Attendant, rural area).

An officer at the DHO confirmed that there was indeed a shortage of ambulances in Lilongwe District. The officer reported that the district had nine ambulances and that only 6 were functional. There are 45 health facilities in Lilongwe. The Officer indicated that Lilongwe DHO was in need of 35 ambulances for the district to operate its services effectively:

> *"...we don't have enough ambulances. We don't really have an ambulance service. I don't think we can call it an ambulance service we just have vehicles. We have 9 ambulances but only 6 are reliable. The recommendation is that one ambulance should cater for 50,000 people and therefore going by this recommendation Lilongwe district needs 35 ambulances and not the 6 ambulances that we have"* (Health manager #2, District Health Office).

An official from the Ministry of Health also confirmed that there was a serious shortage of ambulances in public health facilities in the country and that Lilongwe District is not an exceptional. This official also corroborated that the recommended ratio of 1 ambulance to 50,000 people and explained that the MoH was conducting an inventory of available ambulances in all public hospitals in order to determine the number of additional ambulances to be purchased. She stated that at the beginning of the HSSP, there was a gap of 169

ambulances in all public health facilities and was quick to say that the figure may have changed by now:

> *"We are probably in need of several hundred ambulances. The basic ambulance to population ratio should be about 1 to 50,000 population... I don't know the exact number of ambulances now, but they are doing an inventory. When we started the HSSP, there was a gap of about 169 ambulances, but of course the population has changed now and the status of ambulances changes every day. But we are seriously under resourced in terms of resources for health. And of course CHAM has ambulances but clients have to pay and that acts as a barrier to health care access* (Policy maker # 1, Ministry of Health headquarters).

Health workers recommended that measures be put in place to ensure availability of adequate resources (i.e. human, financial and material) in public health facilities in order to improve delivery of maternal health care services:

> *"If we could have adequate essential drugs and supplies then we can deliver maternal health care services well. We also need more nurses and midwives because our staff is not enough* (Health Facility In charge # 9, urban health center).

In addition health workers recommended that health facilities be provided with adequate ambulances in order to facilitate transportation of patients to referral health facilities:

> *"If the Ministry can increase the number of ambulance, it can really help to refer patients on time for further treatment"* (Health facility In charge # 11, rural health center).

8.4 Communication and Collaboration with Stakeholders

Communication and collaboration with stakeholders emerged as important factors that influence delivery of maternal health care services. The study investigated how health centers communicate and collaborate with stakeholders on issues relating to maternal health care. Health care providers reported that communication is done through various ways including: written reports, meetings, telephone, letters, trainings and workshops. They said that communication is also done verbally during District Health Management Team (DHMT) supervision. Participants were however quick to state that supervision by the DHMT is done on irregular basis. Possible causes for irregular supervision included busy schedules and lack of transport for those concerned, as well as lack of prioritization of the supervisory visits:

> *"We communicate with our stakeholders through telephone and written reports. Sometimes communication is also done during supervision by members from the DHO who are supposed to visit us and check how we are discharging our duties. However, I have observed that even though we are supposed to be supervised regularly, supervision is not being done on a regular basis. The reasons for that they say is*

because they are busy or due to lack of transport, but I think it's because they do not appreciate the importance of supervision and therefore they don't prioritize it" (Nurse Midwife # 14, rural health center).

Participants noted that lack of supervision of health centres by DHMT cause demotivation among health workers in these health facilities:

> *"We rarely get support visits from the DHO. I came here in September 2011. I have never seen the DHMT coming to the facility to do a supportive supervision and that demotivates us because we feel like we are just dumped here"* (In charge ANC clinic and maternity ward # 9).

It was also noted that public health facilities, especially those in rural areas, lack telephones and computers to facilitate effective communication:

> *"We don't have a telephone for communication. We also don't have a computer and electricity"* (Health facility In charge # 10, rural health center).

On collaboration with stakeholders, the study found that different NGOs are working together with public health facilities in providing maternal health care services. In general, the findings showed that more NGOs are operating in urban areas than in rural areas. The respondents who were interviewed listed UNC (University of North Caroline), BLM (Banja la Mtsogolo), FPAM (Family Planning Association of Malawi) and Interaid as some of the NGOs that they work with in providing maternal health care. These NGOs provide different services and support in both urban and rural health facilities. For example FPAM provides family planning services, ANC and cervical cancer screening whilst BLM also provides family planning services and cervical cancer screening. UNC provides PMTCT services. On the other hand Interaid provides transport support to health centers to conduct mobile and outreach clinics. One of the participants however noted that there was lack of coordination between health centers and NGOs resulting in duplication of efforts and waste of resources:

> *"I have observed that sometimes there is poor coordination between NGOs and health centers and this result in duplication of activities. Sometimes we get NGOs that are conducting similar research projects or providing same health programs at the same time. For me I think that is a waste of resources"* (Health facility In-charge # 9, urban health center).

Health workers recommended the improvement of communication systems in public health facilities, as well as coordination with partners working in maternal health care. This, they argued will facilitate communication, avoid duplication of activities and maximize use of resources. They also recommended intensification of DHMT supervisory visits to health centers to ensure improved performance:

"I wish government could do something to ensure that there is good communication and coordination with our partners to avoid duplication of activities. This will maximize use of resources... I also wish if the DHO could supervise us regularly" (In-charge of ANC clinic and maternity ward # 6, urban health center).

8.6 Discussion of Findings

The study identified three major thematic factors that influence delivery of maternal health care services viz: creation of demand for maternal health services, availability of resources and communication and collaboration with partners. The study established that demand creation is crucial in facilitating delivery of maternal health care services. In this context, demand for maternal health care services is envisioned as the individual's willingness and/or ability to seek, use and in some settings, pay for the services (WHO, 2004). The demand for maternal health care services arises from individual's desire to possess good health (Jacobs et al., 2011; Ensor et al., 2012). The findings show that different strategies are used to create demand for maternal health care services. These strategies include ensuring availability and accessibility of the services, health education, community awareness and mobilization as well as delivery of quality health care services. The strategies are aimed at improving the knowledge, attitude and practices of women and the community regarding maternal health care. Different studies confirm that availability and accessibility of maternal health services, health education, community awareness and mobilisation as well as delivery of quality services are critical to promoting women's care seeking and use of maternal health services (Ensor et al., 2014; Sanda, 2014; Story et al., 2012; Gabrysch and Campbell, 2009; Onyeonoro et al., 2014).

The findings further revealed that creation of demand for maternal health care services depends on both supply-side (e.g. health care availability, accessibility and quality) and demand-side determinants (e.g. health user's knowledge, behavior and attitude). Supply-side determinants are aspects inherent to the health system that influence uptake of health services, while demand-side determinants are factors that influence the ability to use health services at individual, household or community level (Jacobs et al., 2011). The need to differentiate supply-side from demand-side factors is crucial for formulation of appropriate demand creation strategies. O'Donnell (2007) emphasized that factors on both sides must be addressed concurrently in order to have the biggest effect. This is important because supply and demand-side factors may not always be mutually exclusive and may interact and influence each other (Andersen, 1995).

Availability of maternal health services emerged as a very significant factor that influences delivery of the services. Availability entails having the right type of care available to those who need it, as well as having the appropriate type of service providers and materials (Peters et al., 2008). Results show that it not only the availability of maternal health services that is important, but also accessibility to the available services. The findings reveal that emphasis is being placed on promoting access to maternal health care, not only on availability of services in order to create demand and promote use of the services. Results of this study and evidence

from several other studies (Kumbani et al., 2013; Katenga-Kaunda 2010; Babalola and Fatusi, 2009; Ye et al., 2010; Anyait et al., 2012) show that barriers to accessing maternal health care services limits women's uptake of the available and needed services. Although maternal health services may be available, women may fail to use them due to various access barriers such as geographic, affordability and acceptability (Jacobs et al., 2011, Peters et al., 2008; Ensor and Cooper, 2004). A systematic review and meta- analysis on use antenatal services in low- and middle-income countries by Finlayson and Downe (2013) found that antenatal services are more likely to be underused even in settings where health services are delivered free of charge due to various access barriers including lack of transport and long distance to the health facility.

In efforts to increase access and promote equity in access to health services, Ministry of Health has subsidized health facilities owned by CHAM, to deliver care at no fee to the most vulnerable and underserved populations in the form of Service Level Agreements (SLAs) (Chirwa et al., 2013). In so doing SLAs helps to effectively remove the financial and distance barriers to health services. Most SLAs in operation are focused on maternal and child health services. Evidence shows that SLAs have the potential to improve universal health care coverage and access to services, despite facing several challenges including inadequate human and material resources, lack of clear guidelines, late payment of bills and lack of systems to monitor performance of SLAs, amongst others (Chirwa et al., 2013). In order to increase access to maternal health services the government should develop more strategies and interventions based on situational analysis and formative research (MoH, 2011). More focus should be placed on interventions with potential positive effects on overcoming access barriers in the short or medium term (such as lack of health information and community awareness) and ongoing efforts should be directed to address issues that require considerable time to tackle, for example the lack of female autonomy and poor attitude of health workers (Jacobs et al., 2011).

Health education and community awareness were cited as key factors that promote creation of demand and delivery of maternal health services. Provision of health education and community awareness helps to ensure that pregnant women, their partners, families and communities are well informed about the services available and their importance which consequently promotes their awareness and uptake of maternal health services. A study done in Tanzania shows that women who are exposed to more health education are more likely to utilize maternal health services (Mpembeni et al., 2007). Another study done in Nigeria found that inadequacy of health information results to under-utilization of ANC services by pregnant women (Sanda, 2014). On the other hand, a study done in Nepal by Dhakal et al., (2007) found that lack of awareness was the main barrier to maternal health services. The WHO (2006) recognizes the importance of health education promoting the need for all women to access maternal health services whenever they need them. Fotso et al., (2009) recommends that women should be encouraged to attend antenatal care where they can be given appropriate advice on various issues pertaining to maternal health care. Participants of this study expressed the need for increased health education and community awareness of maternal health services. This could be achieved through the media. Simkhanda et al., (2006)

recommends raising awareness through the mass media could health to improve uptake of maternal health services. Thus the mass media plays a crucial role of providing health information, raising awareness and empowers users to action regarding public health issues including maternal health care (Thorsen et al., 2006; Sanda, 2014).

Community mobilization emerged as another important factor that promotes creation of demand and delivery of maternal health services. Community mobilization is a process that engages and motivates communities to raise awareness of and stimulate demand for health services (Morrison et al., 2011; UNICEF, 2014). The importance of community mobilization in improving both the supply and demand for maternal health services is well recognized internationally (Rosato et al., 2008). Community participation in health is one of WHO's key strategies to achieve health for all (WHO, 1978). Advocates believe that community mobilization has the potential to raise awareness and improve care seeking behavior than can yield lasting improvements in health outcomes (0; Morrison et al., 2005). Evidence shows that increased participation of communities in maternal health care significantly helps to increase access to the needed health services and improve maternal health outcomes (Morrison et al., 2005; Manandhar et al., 2004). A study done in Nepal found significant increase in institutional deliveries and trained birth attendance associated with increased participation of communities in maternal health care (Manandhar et al., 2004). Results of this study show that health workers mobilize members of the community to use maternal health care services and that in some settings it has led to the establishment of by-laws which prohibit women from delivering at TBAs and instead encourage them to deliver at the health facility. This is a good development. However, observation shows that enforcement of by-laws in the country is often weak and requires strengthening.

The study also established that creation of demand for maternal health services is done through ensuring delivery of and access to good quality services. Indeed quality of care is very important and it is placed at the center of all dimensions of access (Peters et al., 2008). There is evidence that women are more willing to use maternal health care in health facilities where they perceive better quality of care (Kumbani et al., 2013; Schieber et al., 2006; Mrisho et al., 2009). Several studies previously done in Malawi and elsewhere also show that women's perceptions on quality of maternal health care is important as it influences whether women will use the services or not (Kumbani et al., 2012; Katenga-Kaunda, 2010; Gross et al., 2012; Mrisho et al., 2009; Dhakal et al., 2009; Cotter et al., 2006; Abiiro et al., 2014; Levin. 2010; Wang et al., 2011; Agha and Carton, 2011; Schieber et al., 2006; Ntambau et al., 2012). Poor quality of maternal health care deter women from using services and consequently lead to under-utilization of the services (Gross et al., 2012; Ntambau et al., 2012; Kumbani et al., 2012). In Malawi, provision of quality maternal health care is a challenge especially in rural areas (Kumbani et al.,2012; Katenga-Kaunda, 2010; Abiiro et al., 2014). Several factors compromise quality of maternal health services in the country including shortage of skilled health workers, lack of essential drugs and equipment, insufficient infrastructure, weak referral system and poor attitude of health workers (Kumbani et al., 2012; Mlotha, 2012; Chirwa et al., 2013). Numerous international bodies recognize the importance of provision of quality maternal health services in order to improve access to

services and reduce maternal mortality (The Amnesty International, 2009; United Nations, 1995; WHO, 1946). The Ministry of Health is committed to promoting access to quality maternal health services. However, more emphasis should be placed on ensuring adequate availability of skilled birth attendants, essential drugs and equipment, emergency transport, as well as improving referral systems and attitude of health workers (MoH, 2005).

Availability of resources was identified as one of the factors that influence delivery of maternal health care services. There was a general consensus among participants that public health facilities have inadequate resources for effective delivery of maternal health care services. . Indeed, various reports and studies have indicated inadequate availability of various resources in the Malawi health system (Ministry of Health, 2011; Mueller et al., 2011;WHO, 2007; MoH, 2012; McAuliffe et al., 2009; Mlotha, 2014). The problem of inadequate resources was reported to be worse and acute in rural than urban health facilities. The study further established that the public health sector in Malawi was lacking various resources such as finances, skilled health workers, infrastructure, essential drugs and equipment, as well as transport for patients to referral health facilities during emergencies Participants noted that health funding is inadequate to ensure effective delivery of maternal health services. Different documentation shows that Malawi's current expenditure on health at 9.7% of the GDP is very low (MoH, 2012; MoH, 2011; Mwase, 2010; Zere et al., 2010). This is below the Abuja declaration target agreed by Heads of States of African Union (AU) member states of allocating 15% or more of the national budget to health (Organization of African Unity, 2001). However, there is no data available related to actual expenditures on specific priority programs such as maternal and child health services (MoH, 2012). A systematic review of research studies by Bucagu et al., (2010) found that availability of sufficient health funds is essential for improving coverage of maternal health services.

Shortage of health care professionals in public health facilities has been noted to negatively affect delivery and quality of maternal health care services. Several studies confirm that the public health sector in Malawi has indeed inadequate skilled health care professionals (MoH, 2004; McAuliffe et al., 2009; Mangham, 2007; Palmer, 2006). There are shortages across all health workforce cadres, but the problem is more acute in nursing, midwifery and physician cadres (Lindsay Mangham, 2007). Regrettably, these cadres are key in the delivery of maternal health care services. The problem is further compounded by their unwillingness to work in rural health facilities owing to unattractive working and living conditions that subsist in such areas (McAuliffe et al., 2009; Mangham, 2007).

It was further noted during this study that in some rural health facilities, due to understaffing, health workers work day in and out throughout the year. This finding collaborates with findings of other studies previously done in Malawi (Mlotha, 2014; Mueller et al., 2011; McAuliffe et al., 2009). This in all fairness is very stressful and a recipe for demotivation. In addition to that, members of the community are denied maximum use of the health facilities since the facilities are closed on some days to create time for outreach clinic services, meetings and trainings. This result collaborates with the finding of a study previously done in Malawi which found that in some health centers delivery of health services was rationalized

to specific week days and clients were told to report to the health center on specific days (Katenga-Kaunda, 2010).

The study also established that implementation of vertical health programs such as PMTCT and ART also put extra pressure on the existing few health workers resulting in high workload, stress and burn out. This affects the quality of maternal health care services. This finding is consistent with the finding of another study previously done in Malawi (Katenga-Kaunda, 2010). Several studies confirm that heavy workload on health workers adversely affects their performance and compromises quality of services, as well as patient outcomes (Maestad et al.,, 2010; Kane et al, 2007; Lang et al., 2004).

Delivery of maternal health care services is also limited by the existence of inadequate health facilities to carter for health needs of members of the communities. The inadequate space to accommodate the high number of patients has created severe congestion in the few existing health facilities a scenario that has compromised quality and patients safety (Chirwa et al., 2013). Generally, the public health infrastructure in Malawi is considered inadequate to meet the ever-increasing health demands for the population. Health care coverage and distance to health facilities still needs improvement. On average 81% of Malawi's population is residing within a radius of 8 kilometers from a public health facility (MoH, 2011). In addition, most of the health facilities have inadequate space for patients' load and are not in very good shape to effectively deliver quality maternal health care services and other EHP services (MoH, 2011).

Shortage of essential drugs and equipment in public health facilities greatly affects delivery and quality of maternal health care services. This shortage of drugs and equipment can be attributed to many factors among which are lack of effective national policies, guidelines and regulations to guide the process of procurement and management systems, inadequate funding, high purchasing prices, weak drug supply systems, wastefulness and corruption (Mueller et al., 2011; MoH, 2011; Mwase, 2010; Carlson et al., 2008). The high disease burden in Malawi also places exceptional demand on the already available scarce medical products and supplies (Bowie, 2006). Evidence shows that in 2011 about 60% of the health facilities in Malawi had insufficient supply of essential drugs for the EHP services including maternal health care, whilst 13% of the facilities were completely out of stock during that year (Mueller et al., 2011). A study conducted in 309 health facilities in Malawi showed that generally there was shortage of basic diagnostic equipment and supplies in both hospitals and health centers. For example the study found that, only 29% of the hospitals and 7% of health centers had blood sugar testing sticks (MoH, 2010). The problem of lack of availability of essential drugs and equipment is more critical in rural than urban health facilities where health care access is limited. The 2010 Malawi DHS report shows that women in urban areas are more likely to receive the essential components of ANC than women in rural areas (NSO and ICF Macro, 2011). The essential components of ANC include prevention and treatment of anaemia, malaria and intestinal parasites, measurement of body weight, monitoring of blood pressure and protein level in urine, just to mention a few.

Lack of transport especially in remote areas affects delivery of maternal health care services. In most rural areas in Africa including Malawi, transport problems are due to limited availability of vehicular transport (both general transport and transport for medical emergencies), long distance (between communities and health facilities or between the different levels within the health system) and difficult geographical terrain (due to poor roads, mountainous terrain and isolated areas during the rainy season) (Maternal Health Task Force, 2014). Several studies corroborate that lack of adequate transport is a key barrier to women's access to appropriate maternal health care services (Simkhada et al, 2006; Essendi, Mills, and Fotso, 2011; Cham et al., 2005). There have been attempts to address transportation problems in some health facilities through use of bicycle ambulances.

Lack of effective communication systems and collaboration with different stakeholders compromise delivery of maternal health care services. Some health facilities especially those in rural areas lack telephones and computers an obstacle to effective communication. Studies done elsewhere confirm that lack of communication systems is an obstacle to providing quality maternal health care services especially in rural areas (Simkhada et al, 2006; Pearson and Shoo, 2005). The concern of health workers who participated in this study is that there is no regular supervision by the DHMT to enforce delivery of quality services. In this regard, health personnel do not feel motivated. This supports findings of a study previously done in Malawi which found that supervision of health workers was extremely limited and that this has a negative impact on staff motivation and performance (Bradley and McAuliffe, 2009). Lack of collaboration between public health facilities and different stakeholders working in maternal health care, result in duplication of efforts and wastefulness as has been reported in this study. This calls for a need to strengthen collaborative partnerships in order to improve delivery of maternal health care services and promote efficient use of resources.

8.7 Summary of the Chapter

In summary this study has established that factors such as demand creation, availability of resources; communication and collaboration with partners play a very important role in influencing delivery of maternal health care services hence the EHP. The findings clearly demonstrate that health providers have the responsibility not only to ensure availability of quality and affordable health care services, but also to create demand for the services. They must also make deliberate effort to promote access to the services. Creation of demand for maternal health care services is done through different strategies which include ensuring availability and accessibility of the services, health education, community awareness and mobilization, as well as ensuring delivery of quality health care services. However, several factors affect delivery of maternal health services. These factors include insufficiency of health facilities, shortage of skilled health workers, inadequate funding, lack of essential drugs and equipment, lack of transport, weak communication systems and poor collaboration with partners. In order to promote delivery of maternal health care services, health workers made the following recommendations; construction of more health facilities, refurbishment of the existing health infrastructures, ensuring availability of adequate human, financial and material resources and provision of adequate ambulances to facilitate referral transportation.

They also recommended promotion of community awareness and mobilization to improve knowledge, understanding and use of maternal health services and improvement of communication systems and supervision in public health facilities, as well as coordination with partners working in maternal health care.

In conclusion this study has demonstrated that improving delivery of maternal health services and increasing uptake of the needed services requires addressing both demand (e.g. women's knowledge, behavior and attitude, socio-economic status, cultural and religious beliefs) and supply- side factors (e.g. health care availability, affordability, accessibility and quality). Both sides must be addressed concurrently in order to have the biggest effect. Future strategies should therefore focus on intensifying health education and community awareness on services available and the importance of seeking care. Women should be encouraged to attend antenatal care where they can receive appropriate health information. Additional strategies include strengthening the health system to effectively respond to consumers' needs and expectations. Most importantly, there is a need to strengthen collaborative partnerships in order to improve delivery of maternal health care services and promote efficient use of resources.

CHAPTER 9

KEY INFORMANTS' PERSPECTIVES ON IMPLEMENTATION OF THE EHP IN MALAWI

9.1 Introduction

This chapter presents results on key informants' perspectives on implementation of the EHP in Malawi. The main issues presented in this chapter relate to key informants' knowledge of the EHP and their perceptions on availability of resources, accessibility of EHP services, EHP policy enforcement and monitoring systems. It also presents key informants views on successes and failures of the EHP implementation in Malawi. The chapter also includes recommendations from key informants on how to improve implementation of the EHP in Malawi and a discussion of findings. It ends with a summary and conclusion.

As indicated previously in chapters 5 and 8, a total of 15 participants were involved in the Key Informant Interviews. The key informants interviewed included health workers (n=5), heath facility in charges at health center level (n=5), district health facility manager (n=1), health managers and policy makers based at the Ministry of Health headquarters and Reproductive Health Unit (n=4) and a TBA. Eligibility to participate in the KIIs entailed—current involvement of the participant in maternal health issues (policy making and planning, district health management, health care service delivery at health center level). Participants for KIIs were selected using a mix of purposive and snowball sampling techniques. Precisely, participants at health center and district health office were selected through consultation with the facility in-charges whilst participants from the Ministry of Health Headquarters were selected through a key informant at the Ministry who provided a list of names of eligible key informants who are involved in maternal health. Using the list, the researcher then contacted the identified key informants and recruited those who were interested to participate in the study. The identified key informants were asked to identify and nominate further cases to be interviewed in this study. The subsequent sections of this chapter therefore present results and discussion of findings of this qualitative study.

9.2 Knowledge of the EHP

The study investigated if the interviewed key informants were aware of the existence of EHP in Malawi. Results show that only few key informants knew about the EHP and were able to explain it in basic terms. The findings further revealed that knowledge of the EHP was highest among key informants at district and national and levels compared to those at health center level. Key informants at national and district levels demonstrated good knowledge and understanding of the EHP in Malawi. Some of the participants defined the EHP as follow:

> *"EHP is a package of cost effective interventions that have been prioritized to target diseases that affect the largest number of people"* (Policy Maker # 1, Ministry of Health Headquarters).

"EHP is a list of interventions that address the commonest causes of morbidity and mortality in the country" (Policy Maker # 4, Ministry of Health Headquarters).

The majority of respondents from health centers indicated that they knew about the existence of EHP in Malawi, but only few were able to demonstrate a clear understanding of what EHP stands for. Some of the respondents who demonstrated lack of understanding of the meaning of EHP were quoted as follow:

"EHP is a health package which the government through UNICEF provides to us every month and it comprises of many drugs and supplies to assist us in provision of maternal health services" (Health Center In-charge # 13, CHAM health center).

"... is when the government is trying its best so that it gives good quality services to help us by providing us with enough resources like drugs and infrastructures" (Health Center In-charge # 9, urban health center).

It was further revealed that some participants misunderstood the meaning or definition of EHP as they thought it is just a list of diseases or services. One of the participants stated:

"I think I know EHP [pauses], I can give examples of the services such as family planning, postnatal care and post abortion services" (Health Center In-charge # 10, urban health center).

On the other hand, some respondents said they did not know the meaning of EHP. One respondent was quoted simply saying:

"I don't know the meaning of EHP" (Nurse Midwife # 8, urban health facility).

A participant from the Ministry of Health corroborated that some people misunderstand the meaning of EHP by thinking that it is "just a list of conditions". The official emphasized that the concept of EHP includes cost-effective interventions. He explained as follow:

"I still meet people who think EHP is just a list of conditions...there are some people when you ask them what EHP is, they will tell you there is Malaria, TB, and what have you; that's what they would say. But I hope I am right to say that my understanding of EHP is that you need to look at TB and say what are the cost effective interventions addressing TB because they might be other interventions that are not cost effective and therefore they wouldn't be in the EHP..." (Policy Maker # 4, Ministry of Health Headquarters).

Participants who said they knew about EHP were further asked to explain how they first came to know about it. The participants said that they came to know about EHP through different mean such as meetings, written documents, radio, internet, during training at school

and in their work places. It was noted during the interviews that EHP was not included in the curricula of some health training institutions, a development that some participants deplored:

> *"I knew EHP through a government meeting. When I was at school we didn't learn anything about EHP...The EHP was not included in our curriculum"* (Health Manager # 2, District Health Office).

> *"I first came to know about EHP when they were defining the SWAP (Sector Wide Approach). We were called to the sensitization meeting where priority areas for the EHP were outlined"* (Policy Maker # 5, Reproductive Health Unit).

The study also sought the participants' views on how EHP is understood among key stakeholders. Some participants thought that EHP is generally well understood by stakeholders working in public health sector, particularly those working at central level, zonal officers, District Health Management Teams (DHMTs), donors, NGOs, as well as those working in health training institutions and other ministries:

> *"I think most of the officers at Ministry of Health Headquarters understand what the EHP is....Zonal Officers and DHMTs to my knowledge should be reasonably aware of the EHP...Most of the donors, NGOs and other ministries such as ministry of education and finance and what have you, also know"* (Policy maker # 1, Ministry of Health Headquarters).

Other participants indicated that knowledge of the EHP is limited among stakeholders in rural and CHAM facilities, as well as those at community level:

> *"Health personnel in CHAM facilities might have very little understanding. They might have heard about it, but they have very little understanding...I think understanding of the EHP at community level is almost none existent"* (Policy maker # 4, Ministry of Health Headquarters).

Participants observed that the importance attached to EHP is more in the public health sector than CHAM facilities. In addition, they also noted that the public health sector has more communication on EHP than CHAM facilities

> *"I think the importance attached to EHP is more in the public health sector than CHAM. This could be due to the high level of knowledge and information about the EHP among workers in public health facilities as compared to those working in CHAM facilities. Public health facilities have quite a number of forums where the Ministry of health engages people from both central level and district hospitals on issues relating to EHP, but there isn't more communication on EHP within CHAM. Understandably their emphasis might not be on the EHP as it is the case with the Ministry of Health"* (Policy maker # 4, Ministry of Health Headquarters).

Lack of knowledge about EHP among key stakeholders was identified as one of the key barriers to EHP implementation in Malawi. Participants argued that since EHP is a key health initiative for the Ministry of Health, there is a need to create adequate awareness about it amongst all stakeholders as opposed to the current situation where awareness is limited to few stakeholders:

> *"Lack of knowledge and information on EHP among health personnel affects delivery of essential services..."* (Key Informant # 9, urban health center).

Key informants suggested that if EHP is to be implemented effectively, there should be extensive EHP awareness creation among all stakeholders. As one of the participants was quoted as follow:

> *"If EHP is an important policy for the Ministry of Health, then they should find means to create awareness among key stakeholders"* (Health Center In charge # 10, rural health center).

They proposed different strategies which they said can help promote EHP awareness. The strategies include promotion of access to disseminate information about EHP some of which the Ministry of Health is already doing but needs strengthening, such as through meetings, workshops, academic and in-service trainings, written documents and media. Some stakeholders were quoted as follow:

> *"One of the strategies to promote awareness of EHP is organizing meetings; inviting all the stakeholders and briefing them about the EHP so that they all know about it."* (Sister In-Charge # 6, urban health center).

> *"And we should put information regarding the EHP in newspapers and electronic media. We have got a number of radio stations; I think we need to use that to send messages. We have got Umoyo magazine that comes out through the health education services...There are also quite a number of other magazines that we can use ..."* (Policy maker # 1, Ministry of Health Headquarters).

They further recommended the inclusion of EHP in the curriculums of all health training institutions to enhance EHP awareness:

> *"... we need introduce EHP concept in all colleges such as Kamuzu College of Nursing, other nursing schools and College of Medicine... we need to introduce EHP in the curriculum of all health training schools so that students should know about the EHP even before they graduate.."* (Health manager # 3, Ministry of Health Headquarters).

Another suggestion was that creation of EHP awareness should extend to health professionals who have been trained abroad to ensure that they are aware of the EHP policy for Malawi:

"*...someone might say they don't know anything about EHP, because they have been trained in Europe and they did not learn it in school. So we need to find a way to inform these people as well"* (Health manager # 3, Ministry of Health Headquarters).

Additionally the participants suggested that the DIP development process needs to be more inclusive in order to promote sensitization of EHP among stakeholders:

"On measures to promote EHP awareness, I think the DIP development process needs to be more inclusive. Some districts are very good at it. They have very good partnerships with NGOs, and civil society, whilst some districts are not. I think that's where sensitization of EHP should start from when developing DIPs" (Policy maker # 1, Ministry of Health Headquarters).

9.3 Availability of Resources

The study sought the views of key informants on availability of resources for EHP. Participants observed that resources for EHP were inadequate. They cited the availability of inadequate resources as a major barrier to EHP implementation in Malawi. Some of the participants were quoted as follow:

"I think availability of staff and other resources are some of the key factors that affect delivery of EHP services" (Nurse Midwife, In-charge # 8, urban health center).

An official from the Ministry of Health headquarter lamented lack of funds in the public health sector to effectively support implementation of SLAs in order to promote universal coverage and access to EHP services. The official questioned the cost-effective of SLAs in light of these challenges:

"...our budget is not sufficient to be able to pay for the SLAs. Whether SLAs are cost effective or not, is another question that needs to be addressed" (Policy maker # 1, Ministry of Health Headquarters).

Participants noted that there is inequitable distribution and availability of resources in the Malawi health system. With regards to this, participants observed that more resources are allocated to urban than rural health facilities. They also observed that urban areas have more health facilities than rural areas. This, they observed contributes to inequalities in access to EHP services between urban and rural areas.

"....there is a tendency of allocating more resources in urban health facilities than rural health facilities.... So that affects access to services ... there is far much better access to EHP services in the urban areas than rural areas" (Policy maker # 4, Ministry of Health, Headquarters).

However, some participants disagree with the view that resource allocation favors urban health facilities than rural health facilities. They argued that resource allocation is rather calculated based on a formula which takes into consideration of the population size, and hence resources are distributed equally:

> *"I think implementation is the same in rural and urban areas because resources are distributed equally based on a formula which takes into consideration the population size"* (Nurse Midwife, In-charge # 8, urban health center).

On the issue of unequal availability of resources, participants felt that urban health facilities have more resources (e.g. health workers, essential drugs, ambulances etc) than rural health facilities. This, they said is what is contributing to disparities in access of EHP services:

> *"...between the rural and urban health facilities, there are differences in terms of staffing levels. For instance in urban health facilities they have more health workers including doctors working there, than in rural health facilities"* (Health center In-charge # 10, rural health center).

One of the participants from the Ministry of Health explained why there are few health workers available in rural health facilities as compared to urban health facilities. He stated that nurses and doctors prefer working in urban than in rural areas. He suggested that these (nurses and doctors) be incentivized in order to motivate them to work in rural health facilities:

> *"I think rural areas suffer more...you know how hard it if for the DNO to send a nurse to a rural health center or the DHO to send a doctor to a rural health centre...most of the nurses and doctors are not willing to work in rural areas...I think there is a need to decide what incentives should be given to motivate health workers to work in rural areas"* (Health Manager # 3, Ministry of Health headquarters).

Another Official explained why there are more resources at urban health facilities than rural health facilities. The presence of health managers (DHMT) at district hospitals and hence urban health facilities makes them to immediately appreciate a problem within their health facilities and to act on them promptly. Rural health facilities therefore get less priority in terms of resource allocation.

> *"....it is easier for an urban health facility especially a district hospital to get more resources because managers are based within the facility... for example they might be no oxytocin at the district hospital, maybe because they have exhausted the stock during the day and then within the night they can start making arrangement and then by the next day they will have oxytocin. If the same thing happens at a health center it's not going to be that fast... since managers are based there so they can appreciate the problems more and quicker, whilst at a rural health center they might not act in a*

timely manner to resolve such problems" (Policy makers # 4, Ministry of Health Headquarters).

Noting that there is lack of resources in the public health sector in Malawi, participants suggested for EHP to be successful, there should be deliberate effort to ensure that adequate resources are always available. They recommended that government should increase budgetary allocation to the health sector and at the same time improve financial management and accountability.

"Increasing financial resource allocation to the health sector, is critical in promoting EHP implementation....we need to have a very good health financial management strategy that will prevent preferage of resources. This will improve availability of supplies hence help improve access to EHP" (Policy maker # 4, Ministry of Health Headquarters).

On the other hand, participants recommended that government should increase the number and improve retention of skilled health care professionals. They emphasized the importance of having a well-motivated health workforce to ensure delivery of quality EHP services. Some participants offered their suggestions as follow:

"To improve implementation of the EHP, we need more trained health care providers ...when these people are trained, the government should ensure that they are retained....The government can retain health care workers by increasing their salaries because most of them go to look for greener pastures abroad or in NGOs. Government should also provide accommodation incentives to them. You see someone working for ten years with no promotion, they need to be motivated" (Community Health Nurse Midwife # 7, urban health center).

"...we need to motivate our health workers if we want to deliver a successful and complete EHP. We need to have enough people to ensure a right skill mix" (Health manager # 3, Ministry of Health headquarters).

The participants suggested that health workers can be motivated through increased remuneration packages, further training and promotional opportunities, improved housing and general working conditions:

"Talk about the shortage of staff. We need to pay our health professionals better...Our colleagues at the department of Justice have better pay. We have got the 52% salary increment for the 11 cadres, but the actual agreement was 100%. It's understandable, the government doesn't have enough financial resources, but I think we need to revise the salary of health workers again. Honestly, we need to sort out their housing and basic necessities. Better housing, water, I mean all these things are absolutely critical..." (Policy maker # 1, Ministry of Health Headquarters).

Regarding lack of transport resources, participants recommended purchasing of more utility vehicles and ambulances to reduce transport bottlenecks affecting EHP implementation. To this effect they suggested recruitment and training of transport staff to ensure proper transport management in public health facilities. They also suggested the revamping of the transport system by among other things developing transport guidelines and policy:

> *"...transport management guidelines need to be put in place and revamped. There should also be proper training for transport staff so that we get value for money for our transport resources. There is also a need for purchasing more utility vehicles, because that will relieve the burden on ambulances"* (Policy Makers # 1, Ministry of Health Headquarters).

In view of the inadequate number of health facilities, participants recommended construction of additional health facilities to promote easy access to EHP services. They further recommended renovation of the existing health infrastructures:

> *"Health facilities should not be located far from each other in the communities so that they can easily be accessed by people"* (Health Center In-Charge # 9, rural health center).

> *The existing health infrastructure needs to be improved, because you see the services are being provided maybe in the facilities that were built twenty years ago when the population was small. There is need to improve the infrastructure to take into account the increased population in order to ensure effective delivery of EHP services"* (Sister In-Charge # 6, urban health facility).

9.4 Accessibility to EHP Services

The study also explored key informants' views on accessibility of EHP services. The majority of participants noted that accessibility to EHP services was better in public health facilities than in CHAM facilities. They stated that the provision of free health services delivery in all public health facilities helps to promote universal coverage and access to EHP services. On the other hand, they noted that some CHAM facilities under SLA offer only a few selected EHP services for free, especially maternal and child health care services. They further observed that the user fees that CHAM facilities charge are a barrier to accessing EHP services especially to poor resource people. One of the participants reported as follow:

> *"... government offers EHP services for free which means everyone can access the services, while at CHAM you pay for the services. In addition, CHAM facilities under SLAs offer only few selected services for free, whilst the government offers all EHP for free"* (Nurse Midwife # 14, rural health center)

An Official from the Ministry of Health headquarters corroborated that only few CHAM facilities have signed SLAs to facilitate delivery of EHP services, particularly to women and children. It was further reported that government is working together with CHAM secretariat

to ensure that more CHAM health facilities sign SLAs especially in those areas where there are no public health facilities:

> *"We have introduced what we call service level agreements to enable CHAM facilities to provide free services within EHP. I think we are not yet there because we have not managed to sign agreements with some of CHAM health facilities... there are only few CHAM facilities which have signed SLAs, some are yet to sign them... some poor people in those areas cannot access EHP services because the user fee charges are acting as a barrier. That's why the government is working together with CHAM to make sure that we increase the number facilities signing SLAs"* (Health Manager # 3, Ministry of Health Headquarters).

The study sought the views of participants on whether EHP has improved equity of access to health care services or not. The general consensus amongst the participants was that EHP has helped to improve equity of access to health care services, despite the many challenges being faced. They said that since EHP services are delivered for free to everyone, it helps to ensure that the services are accessed by everyone regardless of their socio-economic status:

> "*Yes, it is improving equity of access to health care services despite the different challenges...*" (Health Center In-Charge # 9, urban health center).

> *"Yes, because EHP services are free. Everyone whether poor or rich, old or young have access to the services*" (Health Center In-Charge # 10, rural health center).

One of the participants also said that implementation of EHP has helped to promote equity of access to health care services by ensuring that health care resources are distributed equally

> *"Yes, because I think when distributing health care resources, they take into account equity issues. The EHP is also able to reach out to many people..."* (Community Nurse Midwife # 7, urban health center).

On the contrary some key informants observed that access to EHP services was better in urban areas compared to rural areas. They explained that people in urban areas were most likely to seek and use health care services than their counterparts in rural areas because they have access to requisite health information and positive health care seeking behavior. In addition, they said that in most rural areas the distance between rural communities and health facilities is long and that the roads are poor and in some cases inaccessible.

> *"There are some differences between urban and rural areas... for instance people in urban area X will have different health seeking behaviors as compared to people in rural area Y and their utilization of health care services is different. Basically the health seeking behavior is different between people in rural and urban areas and that affects access to the EHP. People in urban areas are more likely to seek care than people in rural areas... people in rural areas stay very far from health facilities and*

some of the roads are not accessible" (Policy maker # 1, Ministry of Health Headquarters).

Few participants noted that there has been a decline in rural and urban disparities in health care access since EHP implementation. They were however quick to mention that there is still a need for more effort in order to promote universal access to health care services. One of the participants was quoted as follow:

> *"I think it is improving equity of access to health services, but we are not yet there because....we have talked about rural and urban differences... some of those are actually declining...I know we're not there yet because people still have limited access to services..."* (Policy maker # 4, Ministry of Health Headquarters).

Some participants however expressed concern over the emphasis EHP (e.g. through strategies such as safe motherhood and SLAs) is placing on maternal and child health services leaving out other services. The participant said that it is important that men, women and children should have equal opportunity to benefit from health care services:

> *"The EHP is emphasizing more on promoting maternal and child health services while other services are suffering. I think men, women, children should all benefit equally from public health care services"* (Nurse Midwife # 14, rural health center).

9.5 EHP Policy Enforcement Mechanism and Monitoring Systems

Lack of EHP policy enforcement mechanism was identified as another challenge that hinders EHP implementation. The participants observed that due to lack of policy direction there is no clear separation between EHP and non EHP services during delivery of care.

> *"...We talk about EHP as a list of priority conditions and cost effective interventions, but we don't put that into practice. If I suffer from a condition that is outside the EHP or I need an intervention that's not part of EHP, and I go to a public health facility, will I be turned away?...now if you look at that scenario, you will see that there is a problem in terms of policy direction...there is nothing to separate EHP and non-EHP services. It's problematic... Whether EHP services are available or not there is nothing deliberate to indicate that this is an EHP or non-EHP service"* (Policy maker # 4, Ministry of Health Headquarters).

In addition, lack of effective monitoring systems was also identified as a factor that negatively affects EHP implementation. Participants noted that monitoring is based on reports from the DHOs which, in most cases, they argued, are not reliable. Consequently, they said it is difficult to evaluate the progress and impact of EHP.

> *"In terms of the number of facilities that are able to deliver full EHP package, we are unable to come up with an exact number. We use reports from DHOs. So when we*

say for instance 95% of facilities are able to deliver full EHP package, we know that there may be some issues with that... in fact we need to do a proper assessment to find out exactly what the situation is like....We are still very far away from doing this." (Policy maker #1, Ministry of Health).

Furthermore, participants noted that in some health facilities planning for health activities is not being done properly. They emphasized on the need to promote evidence based planning, for instance when preparing DIPs to ensure proper allocation of resources and effective delivery of the EHP:

"...good planning helps to promote EHP services delivery....Proper resource allocation depends on quality of the plan ...in the first place you have to define your priorities and conduct a situation analysis...evidence based planning is key to ensuring effective delivery of EHP services..." (Policy maker # 4, Ministry of Health Headquarters).

9.6 Successes of EHP Implementation in Malawi

Key informants cited the following as some of the successes of EHP implementation in Malawi; improved health care coverage and access, improved population health and health systems strengthening, as illustrated below:

- **Improved Health Care Coverage and Access**

Most of the participants indicated that EHP has helped to improve coverage and access to essential health care services. They noted that the introduction of SLAs has helped to improve coverage and access to essential health care services, especially to women, children and the poor:

"I think the EHP has improved coverage of essential health services" (Policy maker # 1, Ministry of Health Headquarters).

"I think access to health care services has increased over time as a result of EHP... the introduction of SLAs has helped to improve access to EHP services... a lot of mothers and children are able to access the health care services for free than before... so that's an important success story" (Policy maker # 4, Ministry of Health Headquarters).

- **Improved Population Health**

The key informants also stated that EHP has helped improve health of the general population in Malawi. They observed that since the introduction of EHP in this country there has been a reduction in maternal, child and infant mortality. They however noted that it is difficult to attribute this reduction entirely to implementation of the EHP as other determinants or

confounding factors might have contributed to the reduction. They said that the national DHS data shows that indeed there has been an improvement in maternal and child health:

> *"The EHP has improved health of Malawians ... In general it has helped improve the health status of Malawians"* (Sister In-Charge # 6, urban health center).

> *"There has been a reduction in maternal, child and infant mortality.... whether it's the EHP itself which has contributed towards that or whether there are other determinants that have influenced that, I don't know... I mean is it because people went early to the hospital or is it because the road was built there, or is it because there is adequate transport available ... It's hard to figure out whether EHP service delivery has impacted on this or whether it's something else... look at the DHS over the years and you will see what the patterns are looking like to show that there has been an improvement in maternal and child health"* (Policy maker # 1, Ministry of Health Headquarters).

- **Health System Strengthening**

The participants further observed that EHP has greatly contributed towards health systems strengthening in Malawi. They said due to the EHP, there have been a number of different strategies which have deliberately been introduced to promote effective delivery of EHP. These strategies include introduction of SLAs, SWAp approach to improve financial management in the public health sector, improved availability of essential drugs, efforts to improve the functioning of the health care workforce and services delivery, among others:

> "*EHP has helped in health system strengthening...*" (Policy maker # 4, Ministry of Health Headquarters).

> "*EHP is very helpful and useful for both CHAM and government health facilities because we used to run out of drugs and supplies, but with the introduction of EHP there has been improved supply and availability of essential drugs in government health facilities*" (Health Center In-Charge # 13, CHAM health center).

Additionally, the key informants mentioned that EHP has helped to promote resource mobilization, planning and prioritization of health conditions and interventions. It has also assisted in attracting donor funding:

> *"...EHP has helped in resource mobilization....So I think that's another success story"* (Policy maker # 4, Ministry of Health Headquarters).

> *"I think it has helped us to get more donors because they have developed trust in the way it is being implemented"* (Sister In-Charge # 6, urban health center).

Furthermore, participants noted that implementation of EHP in Malawi has helped to improve availability of availability of essential drugs in public health facilities:

> *"The government is trying its best. Unlike in the past, we are now receiving a lot of essential drugs which help us in services delivery..."* (Health Center In-Charge # 9, urban health facility).

In order to promote implementation of the EHP, participants recommended strengthening of health systems research and monitoring:

> *"...we have to improve in health systems research and monitoring, to be able to detect new challenges and to find appropriate interventions to such challenges...I think we are not doing well on research and monitoring..."* (Policy maker # 4, Ministry of Health Headquarters).

9.7 EHP Implementation Failures in Malawi

- **Inadequate Provision of Resources**

Participants said that one of the things that EHP implementation has failed address is the problem of inadequacy of resources in health care facilities. They asserted that it is difficult to effectively implement the EHP when basic resources are not enough (such as essential drugs, supplies, and equipment). They also stated that due to resource limitation, some important interventions that are cost effective are left out or are not being implemented. The participants cited an example of HPV vaccine for prevention of cervical cancer which they said is cost effective and yet it took so long for the public health system in Malawi to start administering it because of lack of resources. HPV vaccine has now been introduced at pilot scale in two districts namely Rumphi and Zomba.

> *"I think in a country where you have limited resources it is difficult to implement the EHP because you leave out some interventions that are actually cost effective....because you can't manage them. I can give an example HPV, a vaccine for cervical cancer which is very cost effective. I think it has now been introduced in some health facilities... but it took as so long to introduce it in government hospitals in Malawi... so that's another challenge...inadequacy of resources remains a challenge to really fully implement the EHP"* (Policy maker # 4, Ministry of Health Headquarters).

- **Failure to separate delivery of EHP and non-EHP Services**

Participants noted that the government is providing EHP services together with non-EHP services. They observed that it is practically difficult to separate EHP from non EHP services. They attributed this problem to luck of policy direction and politics:

"...you cannot separate EHP from other services but only on paper or policy... EHP has failed to be implemented according to plan. There is too much politics" (Health manager # 2, Ministry of Health).

It was further observed that the procurement of medicines and other supplies for EHP or non EHP services is not done separately and hence difficult to isolate their usage. It is therefore difficult to ascertain cost-effectiveness in such a scenario.

"We have always delivered services regardless whether it was called EHP or not.... They are still buying medications and other things that are non-EHP. And they will continue to do so. I am personally very skeptical about the EHP and the way it talks about cost-effectiveness of interventions. It is business as usual" (Policy maker # 1, Ministry of Health Headquarters).

- **Failure to create wide EHP awareness**

Participants also said that implementation of the EHP has failed to create wide awareness among all stakeholders:

"EHP implementation has failed to create awareness on EHP" (Health Center In-Charge # 10, rural health center).

- **Failure to significantly reduce high maternal mortality**

Participants said that EHP has failed to significantly reduce high maternal mortality rate in Malawi. They observed that some people still have limited access to essential health care services:

"Maternal mortality is still very high in Malawi" (Health Center In-Charge # 10, rural health center).

"We are not there yet because people still have limited access to services; some people still have to travel long distances to get to a health facility" (Policy maker # 4, Ministry of Health).

- **Failure to achieve universal access to health care services**

Some few participants also said that EHP has failed to achieve universal access to health care services. One of the participants was quoted as follow:

"We are longing for universal access, and the EHP has failed to achieve universal access...for instance if we can talk about family planning... we still have the unmet need which is high and about 26% (Policy Maker # 5, Reproductive Health Unit).

9.8 Discussion of Findings

Since 2000, the World Health Organisation has recommended the provision of Essential Health Package (EHP) services in developing countries as one of the key strategies to achieving universal health coverage (WHO, 2001). The EHP is often promoted as an effective and efficient way for increasing health service delivery, improving equity of access to health services and strengthening performance of the health systems (Gupta et al., 2014; Waddington, 2013, WHO, 2008; Rodney and Hill, 2014). The issue of promoting access to essential health services becomes critical for policy makers not only to achieve universal coverage of health care but also to ensure social justice (Gupta et al., 2014). Following WHO's recommendation, the EHP has so far been widely adopted in many developing countries worldwide (WHO, 2008). Malawi adopted the EHP in 2002 with the aim to promote equity of access to health services, reduce disease burden and improve efficiency of the health system. However, since the introduction of EHP services in Malawi and most countries, very few studies have been conducted to assess its implementation and effectiveness in improving access to health services (Bennet et al., 2008). It is worth noting that, whilst a study conducted recently in Malawi by Mueller et al., (2011) was focused on identifying health systems constraints to delivering EHP services, this study was aimed at documenting key informants views on implementation of the EHP.

As a first step to understanding the views of key informants on how EHP is implemented in Malawi, the study investigated if the participants were aware of the existence of EHP. Results show that only few participants knew about EHP and they were able to explain it in basic terms. These results are consistent with findings of a study by Mueller et al., (2011) which found that few health managers knew about EHP and could explain it in basic terms. Furthermore, results of this study show that knowledge and understanding of EHP is limited among participants in rural areas, CHAM facilities and those based at community level as compared to those in urban settings and those working at national and district levels. This problem of lack of adequate knowledge about EHP among participants is attributed to limited access to information regarding EHP, especially among low-level health personnel staff and those in rural settings. In most cases training and meetings on EHP target middle and senior health personnel. According to Mueller et al., (2011) the trainings on EHP appear to be ineffective and that evaluations of the impact of these training are not systematically pursued. This calls for the need to review in-service training plans on EHP and more emphasis should be placed on improving the knowledge of low-level health personnel and health care workers. at rural health centres (MoH, 2012).

Lack of knowledge on EHP among key stakeholders emerged as one of the major challenges affecting EHP implementation in Malawi. Several studies confirm that lack of knowledge and understanding of health policy guidelines are key barriers to policy implementation in both low and high income countries (Francke et al., 2008; Travis et al., 2004; Ward et al., 2002). Evidence shows that effective interventions exist for many priority health problems in low income countries such as Malawi. However the main challenge is to get the existing and emerging knowledge about such key strategies into practice (Travis et al., 2004; Ward et al.,

2002). Key informants argued that since EHP is a key health strategy for the Ministry of Health, there is a need to create extensive EHP awareness about it amongst all stakeholders as opposed to the current situation where awareness is limited to few stakeholders.

The study also identified availability of health care resources as another major factor that affects implementation of the EHP in Malawi. Participants reported that EHP implementation in this country is fraught with lack of resources such as essential drugs, health workers and finances, among others. Studies done previously in Malawi have also reported lack of resources as a constraint to implementation of the EHP (Mueller et al., 2011; Bowie and Mwase, 2011; Chirwa et al., 2013; Gwatkin et al., 2006; Abiiro et al., 2014). In Bangladesh barriers such as inadequate resources and others also affected delivery and access to EHP services (Bennet et al., 2008). Bowie and Mwase (2011) observed that EHP provision in Malawi was weak and they attributed this problem to under-funding. Indeed evidence shows that Malawi is experiencing shortage of funds to support delivery of EHP services (MoH, 2012; Mwase, 2010; Carlson et al., 2008). The per capita spending on health in Malawi falls critically short of the US$54 recommended by WHO in 2010 for EHP interventions (MoH, 2012). Health financing and EHP implementation in Malawi depends highly on aid. About 60% of health funding in Malawi comes from donors. This situation makes the country's health system one of the most donor dependent health systems in the world, signifying that it is highly unsustainable in the event of a sudden withdrawal of or unpredicted shift in donor funding (MoH, 2012). The insufficient health funding undermines the government's effort to promote universal health care coverage to EHP services and also prevents the achievement of an efficient and equitable health system. Another challenge is the unreliable flow of funds within districts, especially to rural health centers. This calls for the need to explore the possibility of the direct transfer of funds to rural facilities (MoH, 2011).

The study also found that shortage of medicines and equipment, inadequate health workers and health facilities are some of the major barriers to accessing the EHP in Malawi. This collaborates with findings of other studies previously done in Malawi (Abiiro et al., 2014; Mueller et al., 2011). A study by Abiiro et al., (2014) found that most health facilities especially in rural areas experience frequent drug stock outs. The shortage of drugs was attributed to misuse and inadequate supplies from the national drug provision system. The staffing levels of health workers are too low to ensure effective delivery of EHP services (Mueller et al., 2011; Mangham, 2007; McAuliffe et al., 2009). The availability of health workers is very low in both health centers and hospitals, with 82% and 87% respectively unfilled positions (Mueller et al., 2011). The increased number of trainings and meetings within the health system constrains more the already insufficient health workers staffing levels. Health infrastructure is insufficient to meet the increasing demand for essential services in Malawi. Waddington (2013), argues that the availability of a well-functioning health infrastructure and resources to effectively deliver an EHP is key to achieving universal coverage. He emphasised that that effective implementation of the EHP has implications for support systems such as human resources and essential drug supplies. For example he cited that in Sierra Leone, the essential health package document included details of the diagnostic services, drugs and equipment required to support the package, whilst in Swaziland, the

national referral system document, the National Standard Treatment Guidelines and the Essential Medicines List were all launched to support EHP implementation. The World Health Organisation (2008) recommends that effective delivery of the EHP requires availability of adequate resources. Furthermore it recommends that effective EHP implementation requires attracting new resources or shifting of resources from some existing interventions and programs. The resources include health workforce, essential drugs, equipment and infrastructure. This implies that implementation of EHP requires to be "plugged into" resource allocation decisions and budgeting (WHO, 2008). For example, implementation of the EHP in Mexico was closely linked to major financial reforms. Key informants suggested that government should increase allocation of financial and other resources to the health sector and should develop a good financial management mechanism system to enforce accountability and effective use of financial resources. This they said would help to ensure adequate availability of resources and hence improve access to EHP. Additionally, participants recognized the importance of motivating health workers in promoting EHP services delivery and urged government to improve the working and living conditions of health workers with the view to attract and retain them.

Lack of EHP policy direction and enforcement mechanism was also identified as another factor affecting implementation of the EHP in Malawi. The findings revealed that due to lack of policy direction there is no clear separation between EHP and non EHP services when delivering health care services, hence defeating the purpose of having a prioritized and cost-effective list of interventions for EHP. This finding corroborates with the observation made by Mwase (2010). He observed that both EHP and non-EHP services continue to be purchased by the public sector despite clearly defining the EHP and costing it, thus further increasing the resource gap rendering the efforts of defining an EHP irrelevant. Experience from other countries show that EHPs do involve fees (or co-payments in insurance systems) for example in Egypt and Afghanistan (WHO, 2008). However, the challenge in such countries is to design fee structures and exemptions which do not deter utilization by vulnerable groups. Participants attributed the problem of lack of EHP policy enforcement to politics. A study conducted in Ghana found that various complex issues including politics are critical in influencing decision making on policies and the resultant degree of success or failure in achieving the original objectives (Agyepong and Adjei, 2008). In Malawi there is currently no specific policy and guidelines for EHP. However, the EHP is outlined in the HSSP. The findings of this study suggest the need to develop a specifically dedicated EHP policy and clear guidelines to ensure policy enforcement.

The study also found that lack of proper monitoring systems makes it difficult to evaluate the progress and impact of EHP in Malawi. Even though the Ministry of Health has been implementing a comprehensive Health Management Information System (HMIS) since the inception of EHP in 2002, different challenges exist which impact on its effective functioning (Ministry of Health, 2011). The challenges include inadequate staffing and funding, disaggregated data, occasional stock-outs of HMIS forms, inadequate support for ICT at district and lower levels: untimely submission of data by districts, and low data quality due to

infrequent data validation exercises (Ministry of Health, 2011). Participants recommended strengthening of health systems research to promote monitoring and evaluation of the EHP.

The study findings reveal that since introduction of EHP in Malawi in 2002 there have been some improvements, such as increased health care coverage and access, improved availability of health care resources and health outcomes. Different studies previously done in Malawi confirm these findings (Chirwa et al., 2013 ; NSO and ICF Macro, 2014; Carlson et al., 2008). For example, the most recent MDG Endline survey report shows that there has been a reduction in maternal mortality rate from 1120/100,000 in 2000 to 574/100,000 in 2014 (NSO and ICF Macro, 2014). The report also shows that neonatal mortality rate has reduced from 42/1,000 in 2000 to 21/1,000 in 2014. In addition, the government budget allocation to the health sector increased from 11.1% in 2005 to 13.6% in 2008/9 before falling back to 12.4% in 2009/10 during EHP implementation (Ministry of Health, 2011). Furthermore, since the implementation of a six-year Emergency Human Resource Plan under the PoW, the human resource situation within the health sector improved significantly, whereby the total number of professional health care workers increased by 53% from 2004 to 2010 (Ministry of Health, 2011). Key informants recommended the need to strengthen the health system through research and monitoring.

9.9 Summary of the Chapter

The EHP in Malawi is designed to provide basic essential health services to all Malawians. In general the findings of this study show that implementation of EHP has a positive impact in Malawi, despite the many challenges being faced. Key informants cited improved health care coverage, access, population health and health systems strengthening as some of the achievements of EHP implementation in Malawi. It is however worth noting that these improvements could be due to other factors as well and not just as a result of EHP implementation. The study has identified that the following factors negatively impact on EHP implementation: lack of awareness on EHP among key stakeholders, shortage of essential drugs and equipment, inadequate funding, shortage of health workers, insufficient infrastructure, lack of EHP policy enforcement mechanism and effective monitoring systems. These findings reveal bottlenecks in the supply side of the health system. This therefore calls for the need to strengthen the supply side of the health system by addressing these constraints to promote effective and successful implementation of the EHP. More emphasis should be placed on ensuring availability of adequate resources and implementation of EHP should be actively monitored to ensure that it is achieving its intended objectives.

CHAPTER 10

INTERGRATED DISCUSSION OF FINDINGS FROM QUANTITATIVE AND QUALITATIVE STUDY DESIGNS

10.1 Introduction

This study was conducted to assess equity of access to the EHP services in Malawi, particularly focusing on uptake of maternal health services. It had five objectives namely, to: 1) examine utilization of maternal health services in relation to age, marital status, residence, educational status, work status, household wealth, ethnicity and religion, in order to identify the determinants of utilisation of such services; 2) measure the extent/magnitude of inequalities in utilization of maternal health services by residence, education and wealth status; 3) document factors that influence women's utilisation of maternal health services; 4) document factors that influence delivery of maternal health services in order to determine access to EHP services; and 5) understand key informants' perspectives on EHP implementation in Malawi.

To achieve these objectives, the study employed a "mixed-methods" research design whereby both quantitative and qualitative methods were applied. The quantitative study was used to: determine patterns and determinants of maternal health services utilisation; assess inequalities in utilization of maternal health services in order to determine equity of access to EHP. Qualitative studies were used get insight on factors influencing health seeking behaviors, delivery and use of maternal health services. In addition, qualitative inquiries were used to get insight on how the EHP is being implemented in Malawi. According to this researcher's knowledge and based on evidence of the literature review, this is the first robust mixed methods research that has been conducted in Malawi assessing equity of access to maternal health services in the context of the EHP.

The subsequent sections present integrated discussion of findings from the quantitative and qualitative study designs as follows: utilisation pattern of maternal health services; determinants of maternal health care use; socio-economic inequalities in use of maternal health services; and insights on implementation of EHP services. This chapter also discusses these findings in light of Rawls' theory of justice and Andersen's health care utilization model (refer chapter 4).

10.2 Patterns of Maternal Health Care Utilisation

This study found that utilization of skilled antenatal care services is very high in Lilongwe, as previously reported in other studies (NSO and UNICEF, 2006; Kongnyuy et al., 2009). However, moving along the continuum of care, utilization of skilled maternal health care strikingly drops off during childbirth and postnatal period. Furthermore, both the quantitative and qualitative study findings demonstrated that most women do not complete the recommended four antenatal visits and that antenatal care is usually sought late. These

findings render support to studies previously done in Malawi and elsewhere which have demonstrated that antenatal care is usually sought late and underused (Katenga-Kaunda, 2010; Agus and Horiuchi, 2012; Ntambue et al., 2012; Mpembeni et al., 2007; Ochako et al., 2011; Anyait et al., 2012; Babalola and Adesegun, 2009). These results reflect critical gaps in universal coverage and access to quality maternal health care services. According to WHO (2009) continuum and quality of maternal health care is very critical to promoting health and survival of the mother and her newborn. Neal et al., (2015) emphasizes that ensuring universal access to quality maternal health care requires the provision of a continuum of care during pregnancy, delivery and after birth provided by a skilled health care provider. Thus the findings of this study should reinforce the call for efforts to improve coverage and provision of continuum of maternal health care in order to promote universal health care access to quality services to reap optimal benefits of maternal health interventions. There is also a need for to create community awareness on benefits of comprehensive and timely care seeking.

Gupta et al., (2014) argues that promoting access to essential health services such as maternal health care becomes critical for policy makers not only to achieve universal coverage of health care but also to ensure social justice. In order to promote social justice and women's health, it is recommended that governments should promote formulation of socially inclusive health policies in all programs and delivery of quality health services that are accessible to everyone without discrimination (United Nations, 1995; United Nations, 1948; Office of the High Commissioner for Human Rights, 2000; Amnesty International, 2011). Thus, the precepts of social justice form an integral part of health policy and planning (Lawn et al., 2008). Based on the findings of this study, it is imperative that there is a need to assess all maternal health policies in Malawi to determine the degree to which social inclusion and human rights feature in the policies in order to promote universal health care. This can be done using the Equiframe. This framework can be used to support the systematic review of the health policy content and can facilitate greater social inclusion and human rights in the revision of existing policies (Mannan et al., 2011). As noted earlier in chapter 2, in Malawi there are several policies that guide implementation of maternal health services. These include the National Sexual and Reproductive Health and Rights (SRHR) policy, National Road Map for accelerating the reduction of maternal and newborn mortality Safe Motherhood policy among others. To the researcher's knowledge, the SRHR policy has been analyzed already using the Equiframe and results show that the quality is low. There still a need to analyze other policies that guide implementation of maternal health services in the country.

Universal access to maternal health care is recognized as a social justice and human rights issue (WHO, 1946; United Nations, 1948; Amnesty International, 2011). The Alma-Ata declaration for primary health care as its central means toward good and fair global health was underpinned by the concept of social justice and identified the principles of equity and social justice as key to achieving "health for all" (WHO, 1978; Lawn et al., 2008). The United Nations (1948) affirms that everyone has the right to the highest attainable standard of health and the right to quality health care. This entails that, every society is morally obligated to provide universal access to quality health care (Henneberger, 2011; Daniels, 2001). Based on this understanding, we can therefore conclude that universal access to health care is

necessary for justice. Rawls's theory of justice affirms that a just society must assure people of equal access to social benefits and opportunities to ensure well-being of the society (Rawls 1971). The Commission on the Social Determinants of Health, (2007, p. 3) argued that "the function of a just society is to do more than simply open the way for individuals to make use of their benefits and opportunities, it is to organize in such a way that, where people are deprived of social benefits or opportunities, such effects should be detected and changed". Rawls's theory is grounded in the ethical principle of distributive social justice, equality of opportunities and core human rights principles and thus can be extended to health care (Daniels, 2001; Braveman and Gruskin, 2003).

As indicated earlier in the above section, Rawls' theory of justice as fairness entails a moral obligation to provide universal access to health care (Henneberger, 2011; Daniels, 2001). The government of Malawi demonstrates its moral obligation to providing universal health care through delivery of the EHP. Rawls's social contract theory underscores the importance of having a hypothetical contractual agreement between the state and individuals under which the state has legitimate authority to ensure fair distribution of and equal access to benefits and opportunities of a social cooperation such as public health care services for the benefit of the society as a whole (Freeman, 2007; Hampton 1986; Rawls 1971). Thus, based on the social contract theory, individuals in the original position should assent to principles of justice which require that their given society provide access to health care for all (Henneberger, 2011).

According to Rawls's theory, social justice as fairness is also about allocating a fair share of basic benefits to the least advantaged members of the society (Rawls, 1971). Rawls difference principle of justice states that all people should have access to the same socio-economic opportunities and be able to take advantage of them; and they are to be the greatest benefit of the least-advantaged of society. The EHP in Malawi is designed to promote access to basic essential health services particularly to disadvantaged populations such as women, children and the poor. Therefore, based on this we can conclude that the EHP services policy in Malawi affirms to Rawls conception of social justice. We can also conclude that the EHP is a form of a contractual agreement such as that which Rawls is referring to in his theory of justice whereby the government through the Ministry of Health has the obligation to ensure universal access to basic essential health services including maternal health care to all people in Malawi (MoH, 2011). The assertions of various key informants (policy makers, health managers and health care providers) in this study give a sense that EHP is indeed a contractual agreement and indicate that they assent to principles of justice that guarantee universal access to health care, including maternal health care services.

In his social contract theory, Rawls argued that individuals in the original position behind the veil of ignorance are unaware of their own actual situation but assent to principles of justice which determine a fair division of social benefits regardless of their real endowments (Rawls 1999, Henneberger, 2011). This means that individuals in the original position agree to accept as just whatever contractual agreement that follows from it (Daniels, 2001; Henneberger, 2011). They noted that in most cases universal health care among other social programs are

formulated in this way. In reality, individuals who are best endowed are most likely to have better access to social benefits, whilst the least advantaged will benefit less (Henneberger, 2011). The implication of this is that some individuals will have access to services that others will not have, and this violates the principle of justice as fairness (Daniels, 2001). Quantitative findings of this study provide evidence that indeed health care is not being accessed by all people in Malawi, despite the government providing free health services to all people. Based on Rawls account of justice as fairness, we can therefore conclude that the health system in Malawi is not just. In order to be just, the government should ensure provision and access to basic essential health care services to all the people in Malawi.

10.3 Determinants of Maternal Health Services Utilisation

The study identified various demand and supply side factors that influence health care seeking behavior and utilisation of maternal health services. This section discusses integrated findings for both the demand and supply sides determinants. Please note that the discussion on demand side determinants will only focus on factors that were found to be significantly associated with use of maternal health services.

10.3.1 Demand Side Determinants of Maternal Health Services Utilisation

The quantitative study explored demand side factors that are significantly associated with use of skilled maternal health services in Lilongwe. Multivariate logistic regression analysis results identified women's education status, residence and wealth status as independent predictors for utilisation of continuum of maternal health care services. These factors were confirmed by the qualitative study. In general, these findings are consistent with results of studies previously done in Malawi and elsewhere (Katenga-Kaunda, 2010; Kumbani, et al., 2012; Lunan at al, 2011; Muchabaiwa et al., 2012; Wang et al., 2011; Ye et al., 2010; ; Muchabaiwa et al., 2012; Anyait et al., 2012; Khanal et al., 2014; Ntambue et al., 2012; Dhakal et al., 2007; Ensor et al, 2014; Anya et al., 2008; Fotso et al., 2009; Ye et al., 2010; Tey and Lai, 2013). This level of agreement is noteworthy as it entails robustness of the findings and justifies appropriateness of using mixed methods.

However, it should be acknowledged that the qualitative and qualitative findings in this study show some divergence. Whilst the qualitative study found that religion had an effect on influencing health care seeking behaviour and utilisation of maternal health services, regression analysis results did not find any significant association between religion and use of skilled maternal health services. The differences in findings may be explained in terms of two reasons mainly related to methodological differences between the two study designs. Firstly, the qualitative inquaries focused on a wider range of factors that influence use of maternal health care hence greater likelihood of capturing information on religious beliafs and practices. Secondly the FGDs may have helped to create an environment for free discussions with participants and the opportunity for the researcher to probe may have unearthed topical issues which lacked in quantitative data collection. It should be noted that

although results show that only few people in the qualitative cited religion as a factor that influence maternal health care use, the researcher is obliged to report the findings.

Quantitative results show that education was significantly associated with use of maternal health services. Precisely, results demonstrated that women with no education were less likely to receive a continuum of maternal health services from a skilled health attendant compared to educated women. Qualitative results support this finding. There appears to be noteworthy convergence of findings on the importance of education and women's knowledge about maternal health care in influencing their health seeking behavior and utilisation of maternal health services. Several other studies have also confirmed that education influence utilisation of maternal health care (Dhakal et al., 2007; Ensor et al., 2014; Anya et al, 2008; Fotso et al., 2009; Ye et al., 2010).

The relationship between education and health care utilisation is noteworthy. In Malawi a country with one of the lowest GDP in the world invest less in public education. Evidence shows that school attendance and literacy rates are low in Malawi especially among women and rural residents. This justifies the appropriateness of the principles of social justice for designing a social system to ensure fair equality of opportunity in access to social benefits such as public education (Daniels, 2001). Rawls's principles prohibit discriminatory barriers and require positive social measures to address them (Rawls, 1971). Based on the findings of this study, such measures should include promotion of universal education and programmes to advance girl child education and adult literacy. There is also a need to create extensive community awareness on service availability and their benefits for instance through provision of health education and use of mass media in order to improve knowledge about maternal health care and uptake of the services. Consistent with findings of other studies, the quantitative study found that women's residence was significantly associated with utilisation of maternal health services. This finding is supported by qualitative results and corroborates with findings of studies previously done in Malawi (Mueller et al., 2011; Kumbani et al., 2013; Katenga-Kaunda, 2010; Abiiro et al., 2014).

Evidence shows that the distribution of health care resources (e.g. health facilities, health workers and essential drugs) favors urban areas than rural areas (Mueller et al., 2011; Manafa et al., 2009; Lunan et al., 2012). This situation contradicts Rawls' principles of distributive justice that emphasizes on fairness in distribution of opportunities (such as health resources) among all members of the society (Rawls, 1999). Thus this finding should reinforce the call for the government to ensure fairness or equity in distribution of health resources among health facilities and different population groups in order to promote equity of access to maternal health care and other EHP services by. The government should also direct more effort on addressing access barriers in rural areas for instance by ensuring adequate availability of health facilities, health workers and essential drugs, as well as construction of better roads and provision of transportation in all health facilities.

Both quantitive and qualitative results show convergence that household wealth is linked with utilisation of maternal health services. Regression analysis found that women in the poorest

wealth quintile were less likely to receive a continuum of maternal health care from a skilled health attendant. Consistent with this, poverty or lack of finances was cited in the qualitative study as an important factor affecting access to maternal services. These findings corroborate with studies done in Malawi and elsewhere (Katenga-Kaunda, 2010; Muchabaiwa et al., 2012; Kalin et al, 2011; Arthur, 2012; Agha and Carton, 2011; Anyait et al, 2012; Babalola and Adesegun, 2009; Mpembeni et al., 2007; Muchabaiwa et al., 2012; Killewo et al., 2004; Mangham, 2006). Qualitative inquires with women and KII show convergence that the associated cost of care (e.g. cost of transport, food, drugs and materials for delivery) prevent some women from accessing maternal health care. The findings of this study suggest the need for government to develop strategies focused at poverty reduction and economic empowerment of women, families and communities in order to promote access and use of maternal health services. In addition, efforts to promote pro-poor coverage for maternal health care can help in reducing inequities while moving towards universal health care coverage (Neal et al., 2015).

10.3.2 Supply Side Determinants of Maternal Health Services Utilisation

Qualitative inquiries with health workers identified various supply side factors that influence maternal health utilisation. These factors included availability of services, health facilities, health workers, essential drugs and transport. Qualitative inquiries with women confirm and support these findings. The findings of this study collaborate with several other studies previously done in Malawi (Mueller et al., 2011; Ministry of Health, 2011; Mwase, 2010; Zere et al., 2010; Carlson et al., 2008; McAuliffe et al., 2009; Mangham, 2007). There appears to be noteworthy convergence of findings on supply-side factors influencing utilisation of maternal health services with health system factors posited by Andersen's health utilisation model (1995). In order to promote delivery of maternal health care services, the study findings suggest that deliberate effort must be directed towards construction of more health facilities, refurbishment of the existing health infrastructures, ensuring availability of adequate human, financial and material resources and provision of adequate ambulances to facilitate referral transportations. In general, the study recommends that greater attention needs to be given to the health system constraints to delivering health care. These constraints should be given priority to ensure effective delivery and uptake of maternal health care and other EHP services.

10.4 Socio-economic Inequalities in Use of Maternal Health Services

Both Gini coefficient and multivariate logistic analysis results show convergence by detecting the existence of socio-economic inequalities in use of maternal health services, thereby indicating inequalities in use of EHP services. Precisely results show that women in the lowest strata of education, wealth and residence are less likely to use maternal health care and other services. These findings corroborates with findings of other studies previously done in Malawi and elsewhere, which indicate socio-economic inequalities in access to maternal health services (Zere et al., 2007; USAID, 2007; Wabiri et al., 2013; Zere et al., 2011). As noted earlier in this chapter, qualitative results also confirm the findings. According to Rawls

theory of justice, a just society must ensure fair distribution of and access to opportunities and privileges to ensure well-being of the society (Rawls, 1971). Furthermore, he emphasizes that a fair share of benefits must be allocated to the least advantaged members of the society. The findings of this study seem to contradict Rawls's theory of justice. While the EHP is aimed at promoting access to essential health services to disadvantaged populations such as the poor, uneducated and rural residents, results show that it is the rich, educated and urban residents who have better and more access to health care services. Thus the findings indicate important areas for policy implications in order to address inequalities in access and use of maternal health care and other EHP services. More priority and efforts should be directed towards improving access for the poor, rural and uneducated women in Malawi by removing specific barriers that affect their access to health care services. The government should also put efforts to expand maternal health care services utilization by parallel investments in programs aimed at poverty reduction universal primary education and women empowerment.

10.5 Insights on EHP Implementation in Malawi

Both qualitative and quantitative studies have provided insight on EHP implementation in Malawi. In general, key informants indicated several factors are constraining the EHP implementation for instance lack of awareness on EHP among key stakeholders, shortage of essential drugs and equipment, inadequate funding, shortage of health workers, insufficient infrastructure, lack of EHP policy enforcement mechanism and effective monitoring systems These findings are consistent with findings of other studies done in Malawi (Mueller et al., 2011; Bowie and Mwase, 2011; Ministry of Health, 2012; Gwatkin et al., 2006; Mwase, 2010). These findings reveal bottlenecks in the supply side of the health system. On the other hand, the quantitative study has provided evidence on coverage and use of maternal health services, in reference to the EHP. Results have demonstrated low coverage and use of EHP services such as maternal health care, especially skilled delivery and postnatal care. It has also shown in equalities in use of the services. Thus these findings call for the need to strengthen the supply side of the health system by addressing these constraints to promote effective and successful implementation of the EHP. More emphasis should be placed on ensuring availability of adequate resources and implementation of EHP should be actively monitored to ensure that it is achieving its intended objectives.

10.6 Insight into application of Andersen's Health Care Utilisation Model to this Study

In retrospect, Andersen's health care utilisation model has provided a useful, systematic and comprehensive framework in this study to identify factors influencing utilization of maternal health services (EHP services). Evidently, the study has identified individual level factors (i.e. education, income and residence) as well as several other demand side determinants such knowledge about maternal health services, geographical accessibility, financial accessibility, women's decision making and power, perceptions of quality of care, socio-cultural and religious factors, as some of the factors that influence use of maternal health care.

According to Andersen's model, access and utilization of health care services is determined by both supply side (health delivery system) and demand side factors (individual, household and community level). The findings from the two study designs were able to identify and explain how various factors at health delivery system, individual, household and community levels influence health seeking behavior and utilization of EHP services in Malawi. The study found that supply side factors such as availability of services, health facilities, health workers, adequate funding, essential drugs and equipment, attitude of health workers and quality of services influence use of maternal health services. Andersen's model indicates that in a health system, the absence or presence of differences in accessing health services will result in either equity or inequities. These differences can be related to different social attributes such as, age, gender, urban-rural status, education and socio-economic status etc. The finding of this study has demonstrated that indeed differences in healthcare access result in inequalities.

However, it is worth noting that some factors that are indicated in the model as determinants of health services utilization (such as age, marital status, work status, religion and ethnicity) were not found to be significantly associated with utilization of health services in this study. Evidence shows that studies in other settings have found that these factors predict utilization of health services (Ochako et al., 2011; Muchabaiwa et al, 2012; Abor et al., 2011; De Allegri et al., 2011). For instance Muchabaiwa et al, (2012) found that age and religion predicted use of maternal health services. Mekkonnen and Mekkonnen (2003) found that marital status determined use of maternal health services. De Allegri (2011) and Abor et al., (2011) noted that ethnicity was positively associated with use of maternal services. In addition, the model was not useful in identifying and explaining characteristics of the population at risk (i.e. predisposing and need) in this study. This was the case because these aspects were not within the main focus of this study. Nonetheless, the findings of this study clearly demonstrate broadness, ability and strength of the model in determining contextual predictors of health services use utilization. The study therefore confirms the appropriateness of the model and suggests that it can be used in similar studies, irrespective of context.

Lastly, and most importantly, Andersen's model has helped to provide insight on some key barriers to implementation, delivery and use of EHP services in Malawi, as shown in the figure 10.1 below. These barriers indicate some of the key gaps for policy implications.

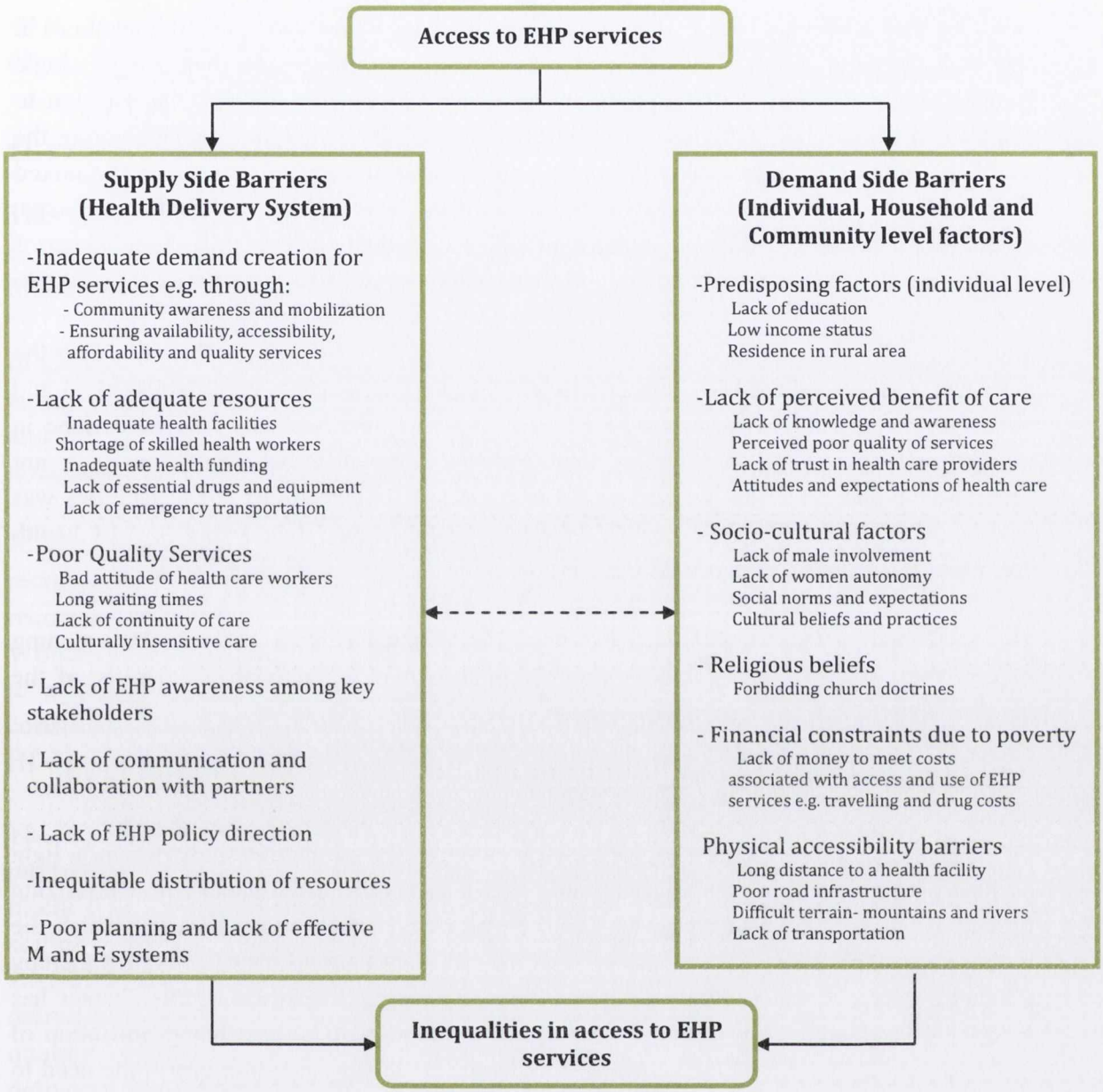


Figure 10.1: Barriers to implementation, delivery and use of EHP services in Malawi

10.7 Methodological Considerations and Challenges

The use of mixed methods research design represents a significant strength of this study because of its ability to provide a holistic view and an in depth understanding of the investigated phenomenon (Kelle, 2006). In addition, this design enables corroboration, enhancement and clarification of results from different methods (Johnson et al., 2007). For instance in this study, the quantitative research was used to identify determinants of maternal health care utilization (EHP services) and the qualitative inquiry was used to support the findings and to provide a better understanding of results. The use of mixed methods research design in this study has helped to provide a holistic view of factors that influence utilization to EHP services both at the demand and supply side of the health system.

However, this study confirms that combining quantitative and qualitative research methods in one study is more complex, rigorous and a challenging task to perform than using a single method (Johnson et al., 2007; Lowenthal and Leech, 2009). Nonetheless, the decision to employ this approach in this study was based on the researcher's careful consideration of the fact that each method is suitable to meet the specific objectives of this research. The mixed methods research approach acknowledges the fact that every method has positive attributes, limitations and biases; and that integration of different methods in a singular study increases the likelihood of obtaining richer, more meaningful and useful findings (Johnson et al, 2007)

The study setting included Lilongwe district only because of convenience since it is near the researcher, due to limited resources and time. However, the study setting depicts rural and urban health facilities which are areas of study interests. Although the study was done in Lilongwe district only, the findings on utilization of maternal health services are generalisable and consistent with results at national level. Selection of health facilities was done with the help of the DHO, whilst selection of women participants was done by health care providers to avoid researcher's biasness.

The researcher conducted systematic coding and thematic content analysis. Data coding process took longer than expected. This was due to high complexity and density of the qualitative data. This caused a delay in starting the dissertation write-up.

10.8 Summary of the Chapter

The chapter has discussed the findings from quantitative and qualitative study design in light of Rawls' theory of justice and Andersen's health care utilization model. In synthesizing findings from both study designs, this chapter has demonstrated many areas in which the findings agree. However, there are areas in which divergent findings have been noted thereby providing different perspectives of various areas of interest. In particular, this chapter has noted that both supply and demand side factors are important in influencing utilisation of maternal health care, thus EHP services. The broad implication therefore lies in the need to strengthen the health system to ensure availability and effective delivery of maternal health services at all times to make sure that women have access to them whenever in need, thereby enabling effective demand creation and use of the services. The chapter has also presented the methodological considerations and challenges in undertaking this PhD research.

CHAPTER 11

CONCLUSION AND POLICY RECOMMENDATIONS

11.1 Conclusions

This study sought to assess equity of access to EHP services in Malawi, especially focusing on uptake of maternal health services. Based on the findings presented in this thesis, the following are key conclusions:

In general, utilization of skilled ANC services is very high in Lilongwe. However, moving along the continuum of care, utilization of skilled care drops off strikingly during delivery and postnatal period. This finding confirms that receiving ANC from skilled professionals does not in itself guarantee that women will seek skilled delivery and postnatal care services.

Although there is high coverage of ANC services in Lilongwe, most women do not make the recommended four ANC visits and do not seek ANC during the first trimester, as recommended by WHO. These results reveal critical gaps in quality of ANC services. Women may not use ANC services as recommended due to lack of knowledge, long distance to a health facility, lack of empowerment in decision making, cultural barriers, financial constraints, perceived poor quality of care and the associated implications of compulsory HIV testing during ANC.

The coverage of deliveries assisted by skilled attendants was far below the national and international goals aimed at reducing maternal mortality. Based on this finding, it is very likely that Malawi will not meet the ICPD international target of 90% of births to have a skilled birth attendant by 2015. Low utilization of skilled birth attendants during delivery is attributed to several factors including lack of knowledge on the importance of skilled delivery, cultural and religious beliefs, poor interaction with health workers, perceived poor quality of care, lack of finances to pay for the cost associated with use of institutional delivery care and limited availability of skilled health providers especially in remote areas.

Despite the government's ban on TBAs and efforts to encourage women to deliver in health facilities with the assistance of skilled professionals, more women in Lilongwe and Malawi as a whole, continue to deliver at TBA facilities and home. This is so because TBAs stay within the communities; they treat women with respect and are trustworthy, traditional beliefs, onset of labor at night, financial limitations and difficulties to travel to a health facility during rainy season due to poor and inaccessible roads.

Findings show a very low utilization rate of skilled attendance for postnatal care during the first 24 hours and few days after birth, contrary to WHO recommendation. Low utilization of skilled postnatal care services is attributed to lack of awareness, cultural beliefs, and shortage of skilled health care providers.

Results show disparities in use of maternal health services, between women of different socio-economic groups. Multivariate regression analysis indicate that women residing in the rural area, with less or no education and low income status are less likely to receive and complete a continuum of skilled maternal health services. Furthermore, the Gini-coefficient analysis shows that pro-rich inequalities were the highest, especially during use of skilled ANC and delivery care services. This confirms that increasing high coverage of essential services and provision of free health services does not guarantee equitable access to health services. Evidence shows that inequalities in use of essential health services have increased over the past years, since the introduction of the EHP in Malawi (Zere et al., 2007; USAID, 2007). This suggests the need to develop strategies to address inequalities to promote universal access to EHP services.

Demand side factors play an important role in influencing health seeking behavior and use of maternal health services (EHP services). Several demand side factors prevent women from using maternal health services including lack of knowledge, perceived poor quality of services, fear of compulsory HIV testing during ANC, poor attitude of health workers, lack of women's autonomy, financial constraints due to poverty, cultural and religious beliefs/practices, women's old age and high parity, lack of male participation, long distance to a health facility, poor road infrastructure and lack of transportation..

The study found that supply side factors also play a very crucial role in determining access and use of maternal health services. Several factors were identified as constraints to delivery of maternal health services including inadequate health facilities, shortage of skilled health workers, inadequate funding, lack of essential drugs and equipment, insufficient emergency and non emergency transportation, lack of communication and collaboration with partners.
The findings show that implementation of the EHP is having a positive impact in Malawi, despite the many challenges being faced. Some of the achievements of EHP include improved health care coverage, access and population health as. In addition, EHP implementation in Malawi has contributed towards health systems strengthening. However, implementation of EHP is constrained by several factors including availability of inadequate resources, lack of awareness on EHP among key stakeholders, lack of EHP policy enforcement, poor planning and lack of effective monitoring and evaluation systems.

The findings clearly show that EHP is not being implemented as it is intended to be. Due to lack of policy direction there is no clear separation between EHP and non EHP services when delivering health care services, hence defeating the purpose of having a prioritized and cost-effective list of interventions for EHP. Besides that, the Ministry of Health has failed to create wide EHP awareness among its key stakeholders, thereby making implementation difficult and impossible in some cases. Additionally, EHP implementation has failed to significantly reduce high maternal mortality and inequalities in health care access.

It is imperative that identification of barriers to accessing EHP services and understanding of how these barriers influence utilization is essential to improving health outcomes and promoting use of EHP services. The subsequent section presents policy recommendations.

11.2 Recommendations and Policy Implications

Based on the findings of this study the following are recommendations for improvement and policy implications:

11.2.1 Recommendations for Maternal Health Policy

Promoting universal access to skilled health providers for maternal health care will contribute to sustained reduction in maternal and neonatal mortality, as well as will ensure achievement of MDG 4 and 5 targets. The observed low utilization rates of skilled delivery and postnatal care services in this study suggests the need for more effort to improve coverage and access to these services. In particular, policies and strategies should be directed towards addressing the following gaps and barriers:

i) Ensure availability of services and adequate resources: The government should ensure availability of maternal health services at all times so that women should be able to access them whenever in need. Policy should focus on strengthening SLA implementation to expand universal health care coverage (Chirwa et al., 2013). There is also a need to ensure that adequate skilled health attendants are trained, recruited and deployed in the public sector to provide all women with good quality maternal health services. Bearing in mind that the health delivery system in Malawi is generally underfunded and significant shortfalls have been noted in financing of maternal health care, it is crucial that funding for maternal health services is increased. The government should develop a national health insurance to enable raising of more funds for the health sector. There is also a need to allocate more resources (e.g. health workers, essential drugs, medical supplies, equipment, ambulances and infrastructure) for maternal health services delivery especially targeting rural health facilities and the disadvantaged populations. Furthermore, the Ministry of Health should develop or revise the resource allocation formula to ensure that health resources are allocated across all geographical areas according to population health needs. In addition, the Ministry should ensure delivery of integrated maternal health services to promote efficiency and synergies in the delivery of health services and efficient use of the limited available human, material and financial resources (Commission on the Status of Women, 2011).

ii) Promotion of health education, community awareness and mobilization to improve use of maternal health services: Policy should focus on promoting provision of health information and creating awareness among individuals, households and communities to improve knowledge about maternal health care and consequently use of maternal health services. Measures to promote health education and creation of community awareness should include use of mass media such as radio, television, newspapers, information leaflets or booklets among others. Additionally, application of community-based interventions would help to improve knowledge, understanding and use of maternal health services (Ensor et al., 2014). Effort should be directed towards

mobilizing members of the community to use maternal health services and enforce behavioral change practices. Community health workers (such as HSAs) and chiefs should mobilize their communities for maternal health. The government should encourage chiefs to establish bylaws which prohibit women from delivering at TBAs and instead encourage them to deliver at the health facility. The chiefs, should enforce compliance to such bylaws. Furthermore, there is need to ensure community participation in implementation of maternal health programs and activities for greater impact and sustainability.

iii) Improve quality and continuum of maternal health services: More efforts should be directed towards promoting quality and continuity of maternal health services to promote effectiveness and use of the services. This is imperative due to the fact that lack of appropriate and continuity of maternal health care at all levels is associated with poor maternal and newborn health outcomes. The Ministry of Health should ensure that national policies, protocols and guidelines related to pregnancy, childbirth and postnatal care are available and widely distributed to all skilled attendants and other health care providers offering maternal health services (WHO, 2006). In addition, the Ministry should encourage health workers to improve their performance and change their attitude towards clients. There is also a need to reinforce discipline in public health facilities and to closely monitor and supervise health workers on a regular basis to ensure quality of health care services

Measures to promote continuity of maternal health care should include provision of appropriate health information to all pregnant women and their families, implementation of a home visit program (WHO, 2009) and integration of maternal and child health programs with other levels of care (Kerber et al., 2007). A home visitation program is recommended in settings where skilled health workers are inadequate or not available for instance in rural and remote areas. In such cases community health workers are involved to provide care to mothers and newborns through home visits. In Indonesia, for example, community midwives conduct a substantial proportion of deliveries and they are mandated to provide maternal and newborn care through home visits, after appropriate training (WHO, 2009).

iv) Ensure voluntary HIV testing and counseling during initial ANC visit: The study has revealed that due to compulsory HIV testing, some women shun attending antenatal clinic for fear of being found HIV positive the resultant stigmatization. Policy should focus on promoting voluntary HIV testing and counseling in delivery of maternal health care to safeguard women's rights and ensure use of the services.

v) Promoting male involvement in maternal health care: The study identified lack of male involvement as an obstacle to utilization of maternal health services. Policy should focus on promoting mainstreaming of male participation in maternal health care. Since men are usually the key decision-makers in the home and often control household finances, they have an important role to play in promoting uptake of

maternal health services. Evidence shows that women are more likely to use maternal health services and have better outcomes when their husbands are directly involved in maternal health care (Kululanga et al., 2011). Couple based strategies are recommended to sustain male participation in maternal health care and implementation of long-term strategies targeting a whole generation in order to bring the desired behavior change in male involvement (Kululanga et al., 2011). Policy should also focus on measures to create community awareness emphasizing on men's role in maternal health services and the benefits of their involvement in pregnancy care and outcomes, as well as measures to address negative beliefs regarding men's involvement in maternal health care (Mangeni et al., 2013; Kabagenyi et al., 2014).

vi) Improve physical accessibility: The government should build more health facilities and construct better roads especially in rural areas. The government should provide ambulances to all health centers. If government cannot afford placing a conventional ambulance vehicle at each health centre, then it should consider providing bicycles to be used as ambulances. It is however worth noting that issues regarding construction of more health facilities, improving transportation system and maintenance of roads infrastructure are dependent on the long term-development of the economy and infrastructure (Kotter et al., 2006).

vii) Improve economic accessibility: The study noted that lack of finances is a barrier to use of maternal health services. Although maternal health services are provided free of charge by the public health sector, women still incur costs associated with use of the services. Evidence shows that household out-of-pocket payment has increased during implementation of EHP services due to shortage of essential drugs and supplies in public health facilities (MoH, 2011). As a result, out-of pocket payments act as a barrier to health care access for the poor people. Efforts to expand maternal health care services utilization can be accelerated by investments in programs aimed at poverty reduction and women's economic empowerment (Ahmed et al., 2010). Introduction of micro health insurance (MHI) schemes and cash payments for services would help to promote financial protection to the poor against expenses associated with ill health and accessibility to maternal health services when financial barriers exist (Schieber et al., 2006). For example, in Bangladesh, India, Nepal, Ghana and Tanzania they have MHI schemes. However it is worth nothing that despite the fact that MHI provide low cost health insurance schemes affordable to the poor people, it may exclude the poorest people who fail to contribute to the insurance scheme.

viii) Ensure provision of cultural sensitive and acceptable care: The study identified culture and religious beliefs as barriers to utilization of maternal health services. To address these challenges, government and key stakeholders should identify practical steps to improve maternal health while respecting cultural and religious values and concerns. Policy should focus on providing care that is acceptable to all women regardless of cultural and religious background (WHO, 2006a).

11.2.2 Recommendations for Health Systems Strengthening

In view of the WHO health systems framework (WHO, 2007b) health systems strengthening is directed towards enhancing the ability of the entire system to collect and spend the necessary finances to become sustainable and equitable, to deliver effective, appropriate, and equitable care, to generate the necessary resources (such as a trained workforce and essential drugs) and to provide the stewardship to ensure its effective governance (Balabanova et al, 2010). Based on the findings of this study, the following below are the recommendation and policy implications for health systems strengthening in Malawi:

i) Increase health budget allocation and develop strategies to raise more funds: The government should increase health budget allocation and introduce innovative ways to raise more health funds. Examples of financing strategies include collection of funds through national health insurance schemes, sin tax, currency transaction taxes, levy on fuel and mobile phone use (WHO, 2007; WHO, 2010). The government should also put in place a good financial management mechanism system to reduce misuse of financial resources (such as through theft and corruption) and enforce accountability. This would help to promote efficient use of the limited financial resources.

ii) Ensure a well performing health workforce: The study identified shortage and poor performance of health workers as barriers to access and utilization of EHP services. In view of these challenges, policy should focus on ensuring a well performing health workforce with sufficient, well trained and fairly distributed health staff; who are competent, responsive and productive (WHO, 2007b). It is however important to know that planning the human resources for health is a complex process and effectiveness of the interventions to address the human resources gaps for health will depend on a combination of different strategies- "a bundle of strategies".

This study noted that negative attitude of health workers was a significant barrier to effective utilisation of maternal health care services. Women reported that most often they are treated badly by nurses who lack respect and professionalism. It is therefore important that health workers should be trained on effective interpersonal relationship and communication skills to improve interaction between health workers and patients This can be done by providing in service education trainings such as on effective communication skills, interpersonal relationships, patient management, client centered care, professionalism and ethics in health care, patient safety and quality improvement There is also a need to strengthen supervision of health workers by health managers and respective professional regulatory bodies such as the Nurses and Midwives Council of Malawi and Medical Council of Malawi, to ensure good professional conduct and performance. Effort should be made to ensure that appropriate feedback is provided to health workers pertaining to outcome of supervisions.

iii) Ensure availability of adequate essential drugs, equipment and supplies in public health facilities: Shortage of essential drugs, equipment and supplies emerged as factor that is negatively affecting delivery and access to EHP services. Policy should focus on ensuring availability of essential drugs, equipment and supplies of assured quality, safety, efficacy and cost effectiveness at all times (WHO, 2007b). Effective measures should be put in place to strengthen drug procurement and supply systems, drug storage and drug auditing to detect and reduce drug pilferage in health facilities.

iv)Ensure delivery of effective, safe and quality health services: Policy should focus on delivering effective, safe and quality health services to those that need them, when and where needed with minimum waste of resources (WHO, 2007b). Emphasis should be put on improving distance to health facilities, strengthening referral systems between different levels of care, promotion of preventive health services and the role of the community in health promotion. Health systems and services performance should be monitored, with clear lines of accountability, and reforms should build on evidence of what works in what circumstances (Balabanova et al., 2010). There is also a need to promote in service trainings on effective patient management, patient safety and quality improvement in all health facilities to improve quality of health services delivery and performance of health workers.

v) Strengthen communication and collaboration with partners: Policy should focus on strengthening communication systems in the public health sector and collaboration with development partners. Measures to strengthen communication should include provision of computers and telephones especially in rural areas, conducting regular meetings and supervision. Development partners would impact health systems through support of global health partnerships (WHO, 2007b) to support health systems investments and help ensure the synergies between vertical and horizontal programs that are essential for effective functioning of health systems (Balabanova et al, 2010). Policy should also focus on promoting harmonization and alignment of their activities with national policies and existing health systems.

vii) Ensure effective leadership and governance: Effective leadership and governance is the cornerstone for successful health systems strengthening. Evidence shows that various factors negatively affect leadership and governance for health services delivery in Malawi (Mueller et al., 2011; Carlson et al., 2008). The factors include lack of leadership and management skills, lack of knowledge in health management, corruption and poor coordination. Therefore, health policy should focus on enhancing leadership and health management skills of health managers, accountability, coordination and ability to guide delivery of effective policies such as the EHP.

11.2.3 Recommendations to Promote Equitable Access to EHP services

Addressing inequities in use of EHP services should be viewed as a central policy goal together with achievement of MDG targets. The findings of this study show existence of

inequalities in access and use of EHP services in Malawi. In particular, the findings show that poor, uneducated and rural women are less likely to access and use EHP services. The findings demonstrate that free health services do not necessarily reach the poorest. Therefore based on these findings, the study recommends adoption of policies and intervention programs to improve access to EHP services particularly focusing on the poor, uneducated and rural residents. At the same time, efforts should be made to ensure equitable distribution of health care resources (such as health workers and essential drugs) especially between rural and urban health facilities. In addition, continuing efforts to monitor changes in inequalities are necessary. A multi-sectrol approach to eradicate poverty, promoting universal education and empower the poor would help to promote equitable access to EHP services. Zere et al., (2007) observed that the widening trend in inequities in utilization of EHP services is likely to jeopardize achievement of the MDG targets. They recommended that coverage for essential health services should be increased in poor communities through appropriate targeting mechanisms and effective service delivery strategies. In addition, they suggested the need to conduct more studies to identify which service delivery mechanisms are effective in the Malawian context.

11.2.4 Recommendations to Improve Implementation of the EHP

In order to improve implementation of EHP services in Malawi, the government should ensure provision of adequate health care resources and creation of extensive EHP awareness among all stakeholders. Recommended strategies to promote EHP awareness include promotion of access to EHP information through meetings, workshops, academic and in-service trainings, written documents and mass media. The government should also develop a specifically dedicated policy for EHP with clear guidelines for implementation and should ensure enforcement of the policy. The EHP policy should emphasize on prioritization and cost-effectiveness of EHP services, and user fees should be attached to non EHP services. Other proposed strategies to improve EHP implementation in Malawi include promotion of proper planning, strengthening of health systems research and monitoring.

11.2.5 Areas for Further Research

The following are possible areas for further research:

- Explore community perspectives on government's TBA ban in Malawi.
- Investigation on why inequalities in use of essential health services have increased in Malawi despite implementation of the EHP.
- Implementation study to promote continuum of maternal health care in Malawi
- Explore strategies on how to effectively deliver the EHP and address inequalities to promote universal access to essential health services.

11.3 Strengths and Limitations of this Study

Strengths

- According to my knowledge this is the first robust mixed methods study that has been conducted in Malawi to assess equity of access to EHP services.
- The use of mixed methods in this study makes the study unique and has helped to provide a holistic view and diverse perspective. It also helped to obtain richer and more meaningful findings.
- The study focuses on priority areas of both national and international interest (maternal health and universal access to health care).
- The DHS uses a rigorous procedure and results can be inferred at national level.
- The study setting depicts rural and urban settings in Malawi. The few studies that exist in Malawi are focused predominantly on rural areas.
- The results are specific for Malawi, but they can be applied in other settings especially in sub-Saharan African region and in other developing countries.

Limitations

- The study focused only on few EHP interventions.
- Study setting was limited to only one district due to limited resources and time.
- MDHS data set is fairly old (4 years).However, it was the latest available for nationally representative sample

11.4 Concluding Remarks

In conclusion, this study has demonstrated the existence of disparities in use of maternal health services among women of different socio-economic groups in Lilongwe, Malawi. This entails inequalities in EHP. People in the lowest strata of education, income and residential setting in Malawi are less likely to get access to EHP services. Despite increasing coverage of EHP services and delivering the services free of charge to all Malawians, various barriers exist within the health system which limit and prevent access to EHP services. This research confirms that increasing high coverage of essential services and provision of free health services does not in itself guarantee equitable access to essential health services. The study has also contributed knowledge on both supply and demand side determinants of and barriers to maternal health care services use and has further provided recommendations on how to address them. Various policy recommendations and implications have been identified to promote maternal health, health systems strengthening, equitable access to the EHP and overall implementation of the EHP in Malawi. The study has also identified possible areas for further research. I intend to publish the outcomes of this study and to disseminate findings through briefing meetings and conferences.

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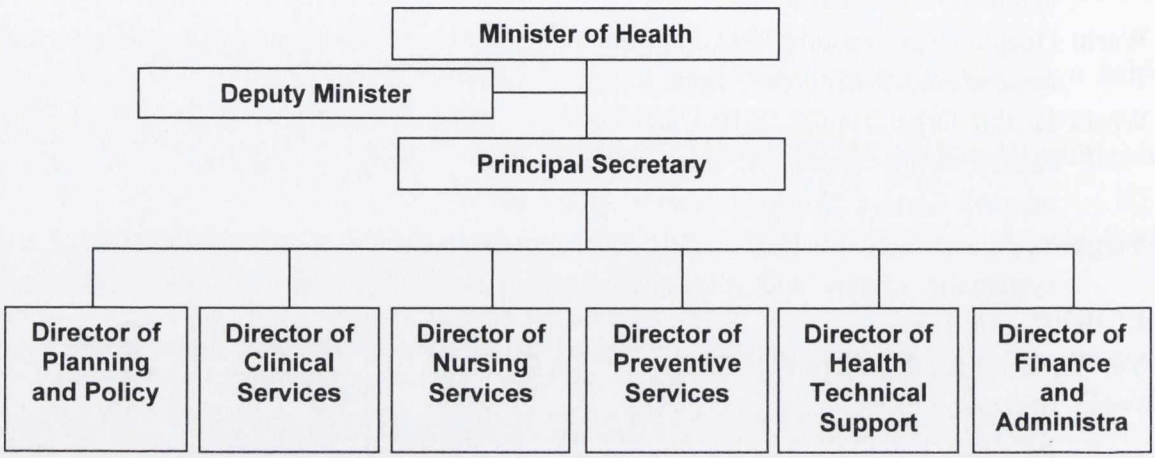
Annex 1: Organisational Structure for Ministry of Health Central Level



Ministry of Health, 2011

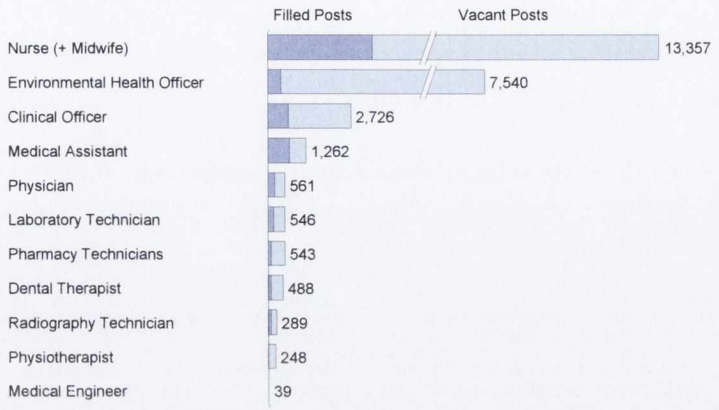
Annex 2: Ownership and Type of Health Facilities in 2011

Type	MoH	CHAM	MoH/ CHAM	MoH/ Local	LG*	Total
Central Hospital	4	0	0	0	0	4
District Hospital	28	0	0	0	0	28
Mental Hospital	1	1	0	0	0	2
Community /Rural Hospital	18	18	0	1	0	37
Hospital	1	20	0	0	0	21
Health Centre	258	109	1	45	10	423
Dispensary	54	12	0	4	7	77
Maternity	2	4	0	0	13	19
Rehabilitation Unit	0	1	0	0	1	2
Total	366	162	1	51	31	611

Note: *LG refers to Local Government

Ministry of Health, 2011

Annex 3: Workforce Size and Vacant Posts by Health Cadre, 2011



Source: NSO and ICF Macro, 2011

Annex 4: Malawian Registered Nurses who sought validation of their qualification from the Nurses and Midwives Council in 2002 to 2005

Stated destination	2002	2003	2004	Total 2002-2005
Australia	0	4	0	4
Botswana	3	1	1	5
Canada	1	0	0	1
New Zealand	5	1	1	7
South Africa	7	2	1	15
Uganda	0	0	1	1
UK	83	90	64	322
USA	3	10	9	28
Zimbabwe	1	0	1	3
Total	**103**	**108**	**79**	**386**

Sources: Nurses and Midwives Council of Malawi (2006)

Appendix 1: Informed Consent Form [English version]

PROJECT TITLE: A Study on Equity of Access to Essential Health Package in Malawi: A community Perspective on Uptake of Maternal Healthcare

PRINCIPAL INVESTIGATOR: Isabel Kazanga

BACKGROUND

Your participation in this study is voluntary and thus it is up to you to accept or refuse. If you choose not to participate, you will not be affected in any way. You are free to withdraw from participating in the study at anytime without any punishment. You will not be paid for participating. If you accept to participate, I promise that the information to be obtained will not be released to anyone, except the research team. All the information collected in this study will have no names and will be kept in a safe and secret place. No names will be recorded during the interview. At any point within the study, you can choose not to respond to any question which you may be not comfortable with. This study will involve individual interviews/ group discussions and will take about 60 minutes of your time. Feel free to ask any questions and seek clarification on what you do not understand. All the responses will be recorded on paper and tape. If you wish to access the records, please feel free to say and do so. The data will also be used for future studies and publications.

DECLARATION:

I have read, or had read to me, the information leaflet for this project and I understand the contents. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction. I freely and voluntarily agree to be part of this research study. I understand that I may discontinue from the study at any time and I have received a copy of this agreement.

PARTICIPANT'S NAME: .....

CONTACT DETAILS: .....

PARTICIPANT'S SIGNATURE: .....

WITNESS SIGNATURE.....

Date:.....

Statement of investigator's responsibility: I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions. I believe that the participant understands my explanation and has freely given informed consent.

INVESTIGATOR'S SIGNATURE:..... **Date:**.....

Appendix 2: Informed Consent [Translated in Chichewa Local Language]

CHILOLEZO KUCHOKERA KWA OTENGAMBALI

MUTU WA KAFUKUFUKU: Kafukufuku pa zaumwayi opeza chithandizo pa ntchito za umoyo m'malawi maka pa za uchembere wa bwino

DZINA LA WA MKULU OFUFUZA: Isabel Kazanga

NDODOMEKO:

Kafukufuku pa zaumwayi opeza chithandizo pa ntchito za umoyo m'malawi maka pa za uchembere wa bwino ncthito za umoyo ku Malawi komanso pa za momwe athu amamvetsera pa ncthito za uchembere wa bwino

Kutengapo mbali kwanu pa kafukufuku amaneyu ndi kosakakamiza ndipo muli ndi ufulu wovomera kapena kukana. Kutengapo gawo kwanu ndikofunikabe koma ngati simutero palibe vuto. Muli ndi ufulu osiya kutengapo mbali nthawi aliyonse yomwe inu mungafune. Palibe malipiro pantchitoyi. Tidzasunga chinsinsi pa zokambirana zathu nthawi zonse. Zokambirana zathu zizitenga mphindi zosapitilira ola limodzi. Zonse zomwe tidzakambirana zidzakhala za chinsinsi. Sitidzatchula dzina munthu wina aliyense. Musakakamizidwe kuyankha mafunso omwe sanakusangalatseni. Mudzakhala ndi ufulu wofunsa mafunso komanso kufotokozeredwa pamene simunamvetse. Zotsatila zakafukufuku ameneyu zizagwiritsidwanso ntchito mu kafukufuku wina mtsogolo muno.

KUVOMEREZA:
Nditapatsidwa ndondomeko yonse yakafukufuku ameneyu, ndikuvomereza ndi mtima wanga onse kutenga nawo gawo. Ndipo ganizoli lachoka kwa ine mwini. Ndadziwitsidwa kuti ndili ndi ufulu wosiya kutenga nawo mbali nthawi ina iliyonse yomwe ndingafune popanda vuto lililonse. Ndadziwitsidwanso kuti chilichonse chomwe tidzakambirana chidzakhala chachinsinsi komanso ndidzachita chilichonse mosafuna kupeza pindu.

PARTICIPANT'S NAME: .....

SIGNATURE: .....

WITNESS SIGNATURE.....

DATE: .....

Mau a wofufuza: Ndafotokoza za cholinga cha kafukufuku ameneyu, ndondomeko yake, komanso kuti palibe phindu kwa otenga mbali. Ndayankha mafunso onse ochoka kwa otenga mbali. Ndikhulupilira kuti otenga mbali amvetsetsa zomwe ndafotokoza ndipo kuti apereka chilolezo chotengapo mbali mwaiwo wokha popanda kuwumilizidwa.

INVESTIGATOR'S SIGNATURE:..... Date:.....

Appendix 3: Participant Information Leaflet [English Version]

Study Title: A study on Equity of Access to Essential Health Package in Malawi: A community Perspective on Uptake of Maternal Healthcare

Name of Investigator: Isabel Kazanga

Name of Supervisor: Dr Alister Munthali

This study is conducted in partial fulfilment of the International Doctorate in Global Health at Trinity College Dublin.

Research purpose and procedures: The purpose of this study is to assess equity of access to EHP services in Malawi, particularly focusing on utilisation of maternal health services, in order to contribute towards promotion of an equitable healthcare delivery system. You have been chosen as one of the participants for this study thus I seek your consent. Your decision to participate in this study is entirely your own. If you accept to participate, I guarantee that the information to be obtained will be kept anonymous and confidential. Your participation in this study will involve interviews/group discussions and will take about 60 minutes of your time. At any point within the study, you have the freedom not to respond to any question which you may be not comfortable with. You are also free to ask any questions and seek clarification on what you do not understand. All the responses will be recorded on paper and tape. If you wish to access the transcripts, please feel free to say and do so. Your participation in this study will be highly appreciated.

1. **Risks and discomforts**: This study is not potentially harmful, however in the event that safety consideration will appear necessary, our team will address each situation as it dictates. If anything bad will occur, such as mental suffering, arrangements will be made to get the required support. Mental suffering could happen for example if asked a question that makes you feel sad, angry or upset. If such event, occur we will contact a counselor to provide support and you will be referred accordingly to get the required support.

2. **Potential benefits**: The study will not be of direct benefit to you but will assist the Ministry of Health to improve equity of access to healthcare delivery system.

3. **Provisions for confidentiality:** Your right to privacy and secrecy will be observed throughout the study. A code number will be used to hide your personal identity. Any personal identifying information will not be recorded during the interview. No participant in this study will be identified by name in any publication or presentation arising from the study in the future.

4. **Voluntary participation and the right to discontinue participation without penalty:** Your participation in this study is voluntary and thus it is up to you to accept or refuse. However, your contribution to this important study is highly valued. If you choose not to participate, you will not be affected in any way. You are free to discontinue from participating in the study anytime without any punishment.

5. **Contacts for additional information: If you have any questions about the** research and research subject's right, please contact the principal Investigator, Isabel Kazanga at College of Medicine on 0999626889, email: isabelkazanga@yahoo.co.uk. And if you feel that you have been harmed in any way by participating in this study, please contact the Chairperson for COMREC, Professor Joseph Mfutso-Bengo, at University of Malawi College of Medicine on +2651874377 or email:mfutsobengo@medcol.mw.

6. **Termination of participation by the investigator:** The investigator may decide to stop your participation in the study at any point, if the researcher identifies any problem which requires termination of the study.

7. **Permissions:** The investigator has obtained permission to conduct the study from the Ministry of Health and CHAM. The study has also obtained ethical approval from the HPM-CGH Research Ethics Committee at Trinity College Dublin, as well as from the College of Medicine Research Ethics Committee (COMREC).

Appendix 4: Participant Infomation Leaflet [Translated in Chichewa Local Language]

Chidziwitso Kwa Otenga Mbali

Mutu wa Kafukufuku: Kafukufuku pa zaumwayi opeza chithandizo pa ntchito za umoyo m'malawi maka pa za uchembere wa bwino

Dzina la ofufuza: Isabel Kazanga

Dzina la oyakanira ofufuza: Dr Alister Munthali

Ndine wophunzira wa sukulu ya ukachenjede yomwe ili ku Ireland. Kuti ndi patside chiphasopamapeto asukuluyi ndi yenera kuchita kafukufuku pa thumba la ncthito za umoyo ku Malawi komanso pa za momwe athu amamvetsera pa ncthito za uchembere wa bwino.

Cholinga ndi ndondomeko ya kafukufuku

Kutengapo mbali kwanu pa kafukufuku amaneyu ndi kosakakamiza ndipo muli ndi ufulu wovomera kapena kukana. Kutengapo gawo kwanu ndikofunikabe koma ngati simutero palibe vuto. Muli ndi ufulu osiya kutengapo mbali nthawi aliyonse yomwe inu mungafune. Palibe malipiro pantchitoyi. Tidzasunga chinsinsi pa zokambirana zathu nthawi zonse,

Zokambirana zathu zizitenga mphindi zosapitilira ola limodzi. Zonse zomwe tidzakambirana zidzakhala za chinsinsi. Sitidzatchula dzina munthu wina aliyense. Musakakamizidwe kuyankha mafunso omwe sanakusangalatseni. Mudzakhala ndi ufulu wofunsa mafunso komanso kufotokozeredwa pamene simunamvetse. Kafukufuku amaneyu ndiwothandiza kwambiri ndipo athandiza boma kukonza bwino ncthito zake.

Ngati mungakhale ndi funso lokhudzana ndi kafukufukuyu komanso za ufulu wanu potengapo gawo, chonde lumikizanani ndi Isabel Kazanga, wa ku College ya Madotolo muno m'malawi. Iwowa mutha kuyankhula nawo pa nambala iyi 0999626889. Ngatimutakomana ndi zovuta zilizonse zokhudzana ndi kafukufuku amaneyu chifukwa chotengapo gawo dziwitsani bambo Joseph Mfutso-Bengo aku University ya Malawi.

Dziwani kuti eni akafukufukuyu ali ndi ufulu oimitsa kutengapo gawo kwanu mu kafukufukuyu ngati angaone chovuta chilichonse chokhudzana ndikatengedwe ka gawo lanu..

Chilolezo chopangitsa kafufufukuya chatengedwa ku likulu la za umoyo komanso la zipata za mishoni muno m'malawi. Chilolezo chaperekedwanso ndi oyang'anila za kafukufuku ku sukulu ya Trinity College Dublin, ku Irelanda ndi College of Medicine muno m'Malawi.

Appendix 5: A Guide for Women Interviews [English Version]

CODE No.....

A STUDY ON EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE IN MALAWI: A COMMUNITY PERSPECTIVE ON UPTAKE OF MATERNAL HEALTHCARE

Instructions

1. This focus group discussion will take about 40-60 minutes to be completed. All the responses will be recorded on paper and tape
2. Please feel free and open to share your views in this discussion, and to ask questions where you don't understand or you want clarification

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Questions

1. Tell me your experience of using maternal healthcare services (i.e. pregnancy delivery and postnatal care)? Tell me what it was like the last time you used it?
   Probe: How do you go there? Any travel costs involved?
   How did they receive you? Did you have to pay?
   Did you get the care you need? If not what did you do next?
   How satisfied were you with the services? Would you go there again?
   Would you recommend to a friend?
   What makes it easier for you to access the services?
   What challenges do you experience?

2. How do you perceive the local public health facility available in your community? Also tell me what you think of CHAM, private hospitals and TBAs?
   Probe: ask about reputation, trust, responsiveness, technical and professional competency.

3. What do you think are the key factors that prevent women in this community from seeking antenatal, delivery and postnatal healthcare services? Which, in your opinion, is most important? Are there any initiatives in this area addressing these challenges? What are they?
   Probe: ask about accessibility, acceptability, availability, adequacy and convenience.

4. Among men, women and children, who do you think access healthcare services easily and adequately? Please give reasons for your answer.

5. What should be done to address challenges affecting women in accessing maternal healthcare services?

Appendix 6: A Guide for Women Interviews [Chichewa Version]

KAFUKUFUKU PA ZAUMWAYI OPEZA CHITHANDIZO PA NTCHITO ZA UMOYO M'MALAWI MAKA PA ZA UCHEMBERE WA BWINO

Malangizo

1. Zokambiranazi ndizotenga mphindi makumi anayi kapena ola limodzi ndipo zizilembedwa pa pepala komanso zizijambulidwa pa kazitape
2. Chonde khalani womasuka pogawana nafe zomwe mulinazo komanso pofunsa mafunso pomwe simunamvetse

---

Mafunso

1. Tatiuzani zomwe mumakumana nazo mukamakalandira thandizo lokhudzana ndi uchembere mmalo osiyanasiyana panthawi zotsatirazi: panthawi yomwe muli oyembekezera, panthawi yochira, komanso mukachira. Munakumana ndizotani nthawi yomwe munapita komaliza kumalowa?

   Kalondolondo: "Munakwanitsa bwanji kufika kumalowa?"
   "Munalipila kalikonse pamayendedwe anu?"
   "Anakulandirani bwanji?"
   "Munalipira chinachilichonse?"
   "Munapeza thandizo loyenera?"
   "Ngati simunapeze thandizoli, munachita chani?"
   "Munakhutitsidwa ndi ntchito za umoyozo?"
   "Mukuona ngati mukhoza kudzapitanso kumalowa?"
   "Anzanu mungawalimbikitse kupita kumalowa?"
   "Ndichiyani chomwe chimakukopani kuti mudzidzalandila chithandizo kuno?"
   "Munakumana ndizovuta ziti?"

2. Kodi zipatala za mdela lanu mumaziona bwanji pa kagwiridwe kake kancthito? Tiuzeninso zamomwe zipatala za mipingo, zolipila, komanso za azamba zimagwirira ntchito?
   Kalondolondo: Funsani za chikhulupiliro chawo pa zipatalazi, changu chazipatalazi pothandiza wodwala, ukadaulo wa zipatalazi pa wodwala.

3. Kodi mukuganiza kuti ndi chani chomwe chimalepheretsa amayi a mdera lino kufikira kuzipatala nthawi yomwe ali oyembekezera, pochira komanso akachira? Pali njira zili zonse zomwe zikutsatidwa kuti muthetse mavutowa? Njirazi ndi ziti?
   Kalondolondo: Funsani ngati amapeza thandizoli mosavuta, ngati njira zomwe amathandizikirazo amazivomeleza, ngati zili zokwanira komanso zopezeka panthawi yake, komanso ngati ziri zabwino.

4. Pakati pa abambo, amayi ndi ana, mukuona ngati ndi gulu liti lomwe limathandizika mofulumira komanso mokwanira? Perekani zifukwa pa yankho lanu.

5. Kodi choyenera kuti chichitike ndi chiyani kuti mavuta womwe amayi amakumana nawo pankhani yauchembere wabwino athe?

Appendix 7: A Guide for Women FGDs [English Version]

CODE No.....

A STUDY ON EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE IN MALAWI: A COMMUNITY PERSPECTIVE ON UPTAKE OF MATERNAL HEALTHCARE

Instructions

1. This focus group discussion will take about 40-60 minutes to be completed. All the responses will be recorded on paper and tape
2. Please feel free and open to share your views in this discussion, and to ask questions where you don't understand or you want clarification

---

Questions

1. Where do women in this community seek healthcare when pregnant, during delivery and after birth?
   Probe: How do they choose where to go? Who decides where to go and why?
   Where do they prefer to go and why? (TBA, CHAM, private or public hospitals)
   Their expectations of maternal healthcare?

2. Tell me your experience of using maternal healthcare services (i.e. pregnancy delivery and postnatal care)?
   Probe: How do you get there? Any travel costs involved?
   How do they receive you? Do you have to pay?
   Do you get the care you need? If not what do you do next?
   How satisfied are you with the services? Would you go there again?
   Would you recommend to a friend?
   What makes it easier for you to access the services?
   What challenges do you experience?

3. How do you perceive the local public health facility available in your community? Also tell me what you think of CHAM, private hospitals and TBAs?
   Probe: ask about reputation, trust, responsiveness, technical and professional competency.

4. What do you think are the key factors that prevent women in this community from seeking antenatal, delivery and postnatal healthcare services? Which, in your opinion, is most important? Are there any initiatives in this area addressing these challenges? What are they?
   Probe: ask about accessibility, acceptability, availability, adequacy and convenience.

5. Among men, women and children, who do you think accesses healthcare services easily and adequately? Please give reasons for your answer.

6. What should be done to address challenges affecting women in accessing maternal healthcare services?

Appendix 8: A Guide for Women FGDs [Chichewa Version]

KAFUKUFUKU PA ZAUMWAYI OPEZA CHITHANDIZO PA NTCHITO ZA UMOYO M'MALAWI MAKA PA ZA UCHEMBERE WA BWINO
A Guide for Women FGDs

Malangizo

1. Zokambiranazi ndizotenga mphindi makumi anayi kapena ola limodzi ndipo zizilembedwa pa pepala komanso zizijambulidwa pa kazitape
2. Chonde khalani womasuka pogawana nafe zomwe mulinazo komanso pofunsa mafunso pomwe simunamvetse

---

Mafunso

1. Kodi ndikuti komwe amayi amapita mdera lino akafuna kulandila thandizo panthawi yomwe ali oyembekezera, pochira, komanso akakhala kuti achira?

   Kalondolondo: Amasankha bwanji malo oti apite?
   Amapereka ganizo lamalowa ndani ndipo amakhala ndi zifukwa zanji?
   Iwowa amakonda kupita kuzipatala ziti mwa izi ndipo pa zifukwa zanji? (za mpingo, za a zamba, zaboma, ndi zomwe sizaboma)
   Afunseni za chiyembekezo chawo mzipatatalazi pa nkhani za uchembere wabwino.

2. Tiuzeni zomwe mumakumana nazo mukamakalandira thandizo lokhudzana ndi uchembere mmalo osiyanasiyana panthawi zotsatirazi: panthawi yomwe muli oyembekezera, panthawi yochira, komanso mukachira.

   Kalondolondo: "Mumafika bwanji kumalowo?"
   "Kodi mumalipira pamayendedwe anu?"
   "Amakulandirani bwanji?"
   "Mumalipira mukapita kumalowa?"
   "Mukapita kumalowa, mumapeza thandizo la kumtima kwanu?"
   "Ngati sizilo choncho mumachita chani?"
   "Ndinu okhutira bwanji ndintchitozi?"
   "Mutha kudzapitanso kumalowa kukalandila thandizo?"
   "Mutha kutuntha anzanu kupita kumalowa?"
   "Chimachititsa kuti mukwanitse kupeza thandizoli mosavuta ndi chani?"
   "Ndi mavuto anji omwe mumakumana nawo?"

3. Kodi ntchito za umoyo mdera lanu zimayenda bwanji maka mzipatala za boma? Perekaninso maganizo anu pakagwiridwe kantchito ka zipatala za azamba ndi zampingo komanso zomwe siziri za boma

Kalondolondo: Funsani za machawi a zipatalazi pothandiza odwala, ukadaulo wa zipatalazi, chikhulupiliro chawo ndi zina zotero

4. Kodi mukukhulupilira kuti ndizinthu ziti zomwe zimalepheretsa amayi mdera lino kumapita mzipatala nthawi yomwe ali oyembekezera, pochira komanso nthawi yomwe ali ndi mwana wamng'ono? Vuto lalikula ndi liti? Pali njira zili zonse zomwe zikutsatidwa pothetsa mavutowa? Njirazo ndi ziti?

   Kalondolondo: Funsani za kuvomereza kwawo pa njirazi, ngati zimapezeka pa nthawi yake, ngati zili zokhutirika, komanso ngati ziri zabwino.
   .

5. Pakati pa amayi, abambo ndi ana, ndi gulu liti lomwe mukuona kuti limathandizidwa mwa changu ndi mosavuta? Perekani zifukwa pa yankho lanu.

6. Payenera kuchitika chani kuti mavuto omwe amalepheletsa amayi kupeza chithandizo pa uchembere wabwino kuti athe?

Appendix 9: Interview Guide for Key Informants [English Version]

CODE #.....

A STUDY ON EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE IN MALAWI: A COMMUNITY PERSPECTIVE ON UPTAKE OF MATERNAL HEALTHCARE

Instructions

1. This interview will take about 40-60 minutes to be completed. All the responses will be documented
2. Please feel free and open to share your views in this interview, and to ask questions where you don't understand or you want clarification

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Questions

1. What is your role in providing maternal healthcare?
   What kind of services do you provide?

2. Tell me your experience in providing maternal healthcare?
   Probe: How do you inform clients about your services?
   How do you create demand for services?
   Any user fee charges (official or unofficial)?
   If payment is required, how much and for what (e.g. service, drugs, bribe and gift)?
   Ask about sufficiency of funds and other resources (e.g. staff, drugs, medical supplies, infrastructure and technologies)?
   How do stakeholders communicate? What channels? How often?
   Any NGOs providing maternal services in this community, and what services?
   How effective or ineffective are your services?
   What makes it easier for you to deliver maternal care?
   What challenges do you experience?

3. Could you please explain to me your understanding of the EHP? Could you describe how the EHP is understood among key stakeholders?
   Probe: How did you know about the EHP?
   How would you describe the level of knowledge and awareness of EHP among stakeholders? Any measures to promote awareness for people to know and understand the EHP?

4. What are your thoughts on how the EHP is being implemented? Compare implementation between public and CHAM facilities? Also compare between urban and rural facilities? What are the reasons for the disparities, if any?
   Probe: ask about availability, accessibility, adequacy and responsiveness

5. In your view, what do you think are the key factors that prevent women from accessing maternal healthcare at community level?

Probe: Is there anything that is being done to address these factors? What mechanisms do you think can be put in place to mitigate those factors?

6. What do you think are the factors that promote and hinder delivery of EHP services in Malawi? Please explain

7. What do you think are the successes and failures of the EHP program in Malawi?

8. Explain if you think the EHP is helping to improve equity and access to maternal healthcare or not? Give suggestions on ways for improvement.

Appendix 10: Interview Guide for Key Informants [Chichewa Version]

KAFUKUFUKU PA ZAUMWAYI OPEZA CHITHANDIZO PA NTCHITO ZA UMOYO M'MALAWI MAKA PA ZA UCHEMBERE WA BWINO

Malangizo

1. Zokambiranazi ndizotenga mphindi makumi anayi kapena ola limodzi ndipo zizilembedwa pa pepala komanso zizijambulidwa pa kazitape
2. Chonde khalani womasuka pogawana nafe zomwe mulinazo komanso pofunsa mafunso pomwe simunamvetse

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Mafunso

1. Udindo wanu ndi wotani pa nkhani za uchembere wabwino?
   Ndi ncthito ziti zomwe mumagwira zokhudzana ndi nkhaniyi?

2. Kodi mumakumana ndi zotani mukamagwira ncthitoyi?
   Kalondolondo: "Kodi anthu omwe mumawapatsa thandizoli mumawadziwitsa bwanji za ntchito yanu?
   "Kodi mumawakopa bwanji anthuwa kuti azifuna thandizo kwa inu?"
   "Kodi mumawalipilitsa?"
   "Ngati pamafunika kulipira ndalama zake ndi zingati ndipo zimagwira ntchito yanji? (kugulira mankhwala, chiphuphu, kapena mphatso)
   Tawafunsani ngati amakhala ndi zipangizo zogwilira ntchito zokwanira kuphatikiza ndalama. Kodi mbali zonse zokhudzidwa zimagawana bwanji nkhani? Ndipo amagwiritsa ntchito njira zanji? Mbalizi zimalumikizana mowirikiza bwanji?
   Ndimabungwe ati omwe siali a boma omwe akugwiranso ncthito za uchembere wabwino ndipo ncthitozi ndi monga ziti?
   Ntchito zanu ndi zothandiza kapena ndi zosathandiza mwanjira ziti?
   Chimachititsa kuti muzigwira ntchitoyi mosavuta ndi chani?
   Mumakumana ndi mavuto anji?

3. Fotokozani kuti kodi mumamvetsa bwanji za thumba la ncthito za umoyo lomwe boma linakhazikitsa lomwe cholinga chake china ndi kupititsa patsogolo ncthito za uchembere? Kodi ncthitozi zimamvetseka bwanji ndi mbali zosiyanasiyana?

   Kalondolondo: "Kodi ncthitozi munazidziwa bwanji?"
   "Kodi ncthito zomwe zili mchithumbachi ndi zodziwika ndi anthu ambiri komanso mbali zosiyanasiyana?"
   "Pali njira zilizonse zomwe zikutsatidwa zopititsa patsogolo ntchitozi?"

4. Maganizo anu ndi wotani wokhudzana ndi ntchitozi? Kodi ncthitozi zikumagwiridwa bwanji mzipatala za boma ndi zamishoni? Fotokozaninso momwe ntchito za mchithumbachi zikugwirikira mzipatala za mmidzi mdi mmatauni. Ngati pali kusiyana pa kagwiridwe ka ncthitozi zifukwa zake ndi chiyani?

Kalondolondo: Funsani ngati amathandizika mosavuta ndi ntchito za mthumbali, komanso fufuzani ngati ntchitozi zikufikira kwa aliyense komanso mwachangu ndi mokwanira?

5. Mkuona kwanu inuyo, kodi ndi chani chomwe chimalepheletsa amayi mdela lino kumapita mzipatala kuti akalandire thandizo pankhani za uchembere wa bwino? Pali chilichonse chomwe chikuchitika kuti zolepheretsazi zithe? Ndinjira ziti makamaka zomwe mukukhulupilira kuti zingathandize pakuthana ndi mavutawa?

6. Kodi ndi zinthu ziti zomwe zikupititsa patsogolo ntchito zaumoyo zomwe zilimthumbali kapena zomwe zimabweza mìmbuyo ncthitozi? Fotozozani momveka bwino.

7. Kodi zofowoka ndi zipatso za ncthito za umoyozi mchithumbachi ndi ziti?

8. Fotokozani ngati ntchito zomwe zili mthumbali zikuthandiza kuti ncthito za uchembere wa bwino zifikire mayi wina aliyense mosavuta? Tchulani njira zomwe zingathandize kupititsa patsogolo ntchitozi.

Appendix 11: A Letter Addressed to the DHO, Lilongwe

University of Malawi
College of Medicine
Private Bag 306
Chichiri, Blantyre 3

Attention: The Research Officer
The District Health Officer
Kamuzu Central Hospital
P.O. Box 1274
Lilongwe 3

Through: The Research Supervisor

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY ON EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE IN MALAWI: A COMMUNITY PERSPECTIVE ON UPTAKE OF MATERNAL HEALTHCARE

I am a PhD student pursuing the International Doctorate in Global Health (Indigo) at Trinity College Dublin. In partial fulfillment for the award of the PhD, I am conducting a research study on "Equity of access to Essential Health Package in Malawi: A Community perspective on uptake of maternal healthcare. It is in this regard that I seek permission to conduct this study at Kawale Health Centre, Area 25 Health Centre, Chadza Health Center and Matapila Health Center and Mbwatalika Health Center. This study will be conducted through interviews and Focus Group Discussions (FGDs) with women users and non-users of maternal healthcare services. The study will also conduct in-depth interviews with key informants. I declare that all ethical issues will be taken into consideration during the study. The study has been granted ethics approval by COMREC and Trinity College Dublin, Ireland (see attachments).

The findings of this study will provide the Ministry of Health in Malawi with valuable information that will help to improve the delivery and use of EHP and promote equitable access to health services. The study results will also serve as a basis for policy decision making, for health care managers at different levels of Malawi's healthcare system.

Your cooperation will be greatly appreciated. Thanks in advance.

Yours faithfully,

ISABEL KAZANGA
PhD Student

Appendix 12: A Letter Addressed to CHAM Secretariate

University of Malawi
College of Medicine
Private Bag 306
Blantyre 3

Attention: The Research Officer
Christian Health Association of Malawi (CHAM)
P.O. Box 30378
Lilongwe 3

Through: The Research Supervisor

Dear Sir / Madam,

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH STUDY ON EQUITY OF ACCESS TO ESSENTIAL HEALTH PACKAGE IN MALAWI: A COMMUNITY PERSPECTIVE ON UPTAKE OF MATERNAL HEALTHCARE

I am a PhD student pursuing the International Doctorate in Global Health (INDIGO) at Trinity College Dublin. In partial fulfillment for the award of the PhD, I am conducting a research study on "Equity of access to Essential Health Package in Malawi: A Community perspective on uptake of maternal healthcare. This study will be conducted at Karate Health Centre, Area 25 Health Centre, Chadza Health Center, Matapila Health Center and Mbwatalika Health Center. It is in this regard that I seek permission to conduct my study at your institution. The study will conduct interviews and Focus Group Discussions (FGDs) with women users and non-users of maternal healthcare services. It will also conduct in-depth interviews with key informants. I declare that all ethical issues will be taken into consideration during the study. The study has been granted ethics approval by COMREC and Trinity College Dublin, Ireland (see attachments).

The findings of this study will provide the Ministry of Health in Malawi with valuable information that will help to improve the delivery and use of EHP and promote equitable access to health services. The study results will also serve as a basis for policy decision making, for health care managers at different levels of Malawi's healthcare system.

Your cooperation will be greatly appreciated. Thanks in advance.

Yours faithfully,

ISABEL KAZANGA
PhD Student

Appendix 13: Certificate of Ethics Approval Granted by COMREC

CERTIFICATE OF ETHICS APPROVAL

This is to certify that the College of Medicine Research and Ethics Committee (COMREC) has reviewed and approved a study entitled:

P.05/12/1220 – Equity of Access to Essential Health Package (EHP) in Malawi:Perspective on Uptake of Maternal Healthcare by Ms I. Kazanga

On 17th July 2012

As you proceed with the implementation of your study, we would like you to adhere to international ethical guidelines, national guidelines and all requirements by COMREC as indicated on the next page

Approved by College of Medicine 17 JUL 2012

Prof. J.M Mfutso-Bengo - Chairperson (COMREC)

(COMREC) Research and Ethics Committee

17th July 2012

Date

Appendix 14: Letter of Ethics Approval by HPM/CGH REC

COLÁISTE NA TRÍONÓIDE, BAILE ÁTHA CLIATH | TRINITY COLLEGE DUBLIN
Ollscoil Átha Cliath | The University of Dublin

Isabel Kazanga,
P.O. Box 1928,
Lilongwe,
Malawi

28th June 2012

Re: Equity of Access to Essential Health Package in Malawi: A Community Perspective on Uptake of Maternal Healthcare

Application 01/2012/04

Dear Isabel,

Thank you for your submission of the above proposal to the HPM/CGH REC.

The REC has given ethical approval to the proposed study.

Yours sincerely,

Prof Charles Normand
Chair of the HPM/CGH REC

An Coiste um Thaighde Eitice
An Lárionad Pholasaí agus Bhainistíocht Sláinte/Lárionad na Sláinte Domhanda
3-4 Plás Foster, Seomra 0.18,
Coláiste na Tríonóide,
Baile Átha Cliath 2, Éire

Research Ethics Committee
Centre for Health Policy and Management/Centre for Global Health
3-4 Foster Place, Room 0.18,
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