

**DETERMINANTS OF HOSPITAL DELIVERY IN THE  
CONTEXT OF CONDITIONAL CASH TRANSFER FOR  
PREGNANT WOMEN IN DEDZA DISTRICT OF MALAWI**

**BY**

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REQUIREMENT OF THE DEGREE OF MASTER OF SCIENCE  
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UNIVERSITY**

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**DECLARATION**

**Declaration by student:**

This Thesis is my original work and has not been presented for a degree or any other award in any other university

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**DEDICATION**

This work is dedicated to my wife Sarah, my children Janet, Ryan, Watipaso and Mutinta Walinase whose sacrifices, which were realized by our loss of precious time together, were for me the most painful and humbling of all. Of all the pain and gladness is the birth of my daughter Mutinta Walinase in my absence.

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DISTRICT OF MALAWI**

**ABSTRACT**

**Introduction:** A World Health Organization study conducted in 2016 revealed that hospital delivery was a key determinant in reduction of maternal morbidity and mortality. In Dedza District, Malawi, wide variation in proportion of hospital births exist among health facilities implementing Conditional Cash Transfers (CCT) for reimbursement of transport and hospital stay during childbirth to motivate women to deliver in health facility.

**Objectives:** The study set out to identify socioeconomic and demographic characteristics determining hospital utilization in CCT context; determine proportion of hospital births attributed to CCT; explore perceptions of women towards intrapartum care in the context of CCT; and explain factors influencing home deliveries in the context of CCT.

**Methods:** A cross-sectional survey was conducted at eight health facilities providing CCT to women for delivering in a health facility, with sample size of 369. Participants were selected using systematic sampling and a structured questionnaire was used to collect data from women attending Maternal Newborn and Child Health services. Three Focus Group Discussions (FGD) were conducted among CCT beneficiaries, none beneficiaries and those who delivered at home. Besides descriptive statistics, Chi-square test and multiple logistic binary regression was carried out.

**Results:** A total 338 (91.6%) delivered at hospital. From univariate analysis, age at first pregnancy, number of antenatal care (ANC) visits and time of CCT awareness were associated with hospital delivery (Crude  $P < 0.05$ ). In multivariate regression model, the odds of delivering at hospital for women who were aware of CCT program early was 11.97 ( $p < 0.001$ ) and those who attended four or more ANC visits was 2.74. Themes from FGDs reveal several barriers for hospital delivery, namely transport; hospital stay cost and attitude of care providers. Majority (86.5%) of women were satisfied with care in CCT facilities and were likely to return in future.

**Conclusion:** Significant factors determining hospital delivery were number of antenatal visits and time of CCT program awareness. Cost of transport and hospital stay, previous hospital experience and attitude of health care providers are described by qualitative findings.

**Recommendations:** Encouraging early CCT program awareness, incentivizing number of ANC visits, establishing mechanism allowing mother to travel to hospital without incurring personal cost and health system to focus on improving attitude of care providers are key measures for ensuring hospital delivery.

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## OPERATIONAL DEFINITION OF TERMS

**Born Before Arrival:** Giving birth before arriving at hospital, after leaving home

**Conditional Cash Transfers:** Money given to mothers who have given birth in hospital after satisfying stipulated conditions

**Health Behavior:** The action a mother takes to promote health during pregnancy intrapartum and postnatal.

**Home delivery:** Giving birth away from hospital (including at home or Traditional birth attendants)

**Hospital delivery or Institutional delivery:** Giving birth within the hospital or health centre

**Maternity Facility:** A hospital where mothers are taken care of during pregnancy, delivery and up to six weeks after delivery.

**Maternal Mortality Rate:** The number of maternal deaths per 1000 live birth

**Poor household:** Households whose consumption of food and non-food items is between 31 to 49 USD per capita

**Postnatal Mother:** A mother who has delivered

**Skilled Health Worker:** a person who has undergone prescribed training, certified to attend to women during delivery as doctors, Midwives, Nurses and clinical officers, and has been

**Skilled Personnel:** A person who has undergone prescribed training and certified to attend to women during delivery as doctors, Midwives, Nurses and clinical officers

**Ultra-poor household:** Households whose consumption of food and non-food items is less than 31 USD per capita.

**Utilization:** The use of health centres and hospitals during labour and delivery by pregnant women

**Waiting for labour and delivery:** The act of staying in a hospital or maternity waiting home before and until onset of labour.

## **ABBREVIATIONS AND ACRONYMS**

<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>CCT</b>	Conditional Cash Transfer
<b>CEmONC</b>	Comprehensive Emergency Obstetric and Newborn care
<b>DHMT</b>	District Health Management Team
<b>DHO</b>	District Health Office
<b>FGDs</b>	Focus Group Discussions
<b>HC</b>	Health Centre
<b>HIV</b>	Human Immunodeficiency Virus
<b>HMIS</b>	Health Management Information System
<b>HSSP</b>	Health Sector Strategic Plan
<b>IREC</b>	Institutional Research and Ethics Committee
<b>MDHS</b>	Malawi Demographic and Health Survey
<b>MMR</b>	Maternal Mortality Ratio
<b>MOH</b>	Ministry of Health
<b>RB4MNH</b>	Results Based Financing for Maternal and Newborn Health
<b>SBA</b>	Skilled birth Attendant
<b>SDGs</b>	Sustainable Development Goals
<b>SES</b>	Socioeconomic Status
<b>SPSS</b>	Statistical Package for Social Scientists
<b>TBA</b>	Traditional Birth Attendant
<b>UN</b>	United Nations
<b>UNFPA</b>	United Nation Population Fund
<b>UNICEF</b>	United Nations International Children's Emergency Fund
<b>WHO</b>	World Health Organization

## CHAPTER ONE

### 1.1 Introduction and Background

During childbirth is a period of greatest risk of mortality and morbidity for both mother and newborn. Globally, 216 maternal deaths per 100 000 live births occur for the 183 United Nations member states. In 2015, 303 000 women died of complications during pregnancy or childbirth. Every day, approximately 830 women die from preventable causes related to pregnancy and childbirth. Ninety nine percent (99%) of all maternal deaths occur in low and middle income countries. In general, maternal mortality is higher in women living in rural areas and among poorer communities (WHO, 2015).

Utilization of hospital during childbirth is key to achieving Sustainable Development Goal (SDGs) target 3.1 (WHO, 2016). Despite steady improvement in skilled birth attendance (SBA) globally, millions of births still occur outside hospitals. Maternal mortality is strongly associated with skilled birth attendance and place of delivery. Maternal mortality is high in regions and countries where SBA is low. Globally, 73% of birth were conducted by skilled personnel in 2013 (WHO, 2016), with global mortality of 216 Maternal deaths per 100,000 live births. The global picture looks relatively better, but situation in low and middle income countries is pathetic. While SBA is almost 100% in high income countries, in low and middle income countries more than 40% of births are still attended by unskilled personnel, and occur outside health institutions. Africa has the lowest hospital utilization during childbirth at 54% and highest maternal mortality, 542 per 100,000 live births. In contrast to High Income countries, few women are dying during pregnancy and period surrounding childbirth. In Europe and America only 16 and 52 women per 100, 000 live births die during pregnancy, labour and childbirth, respectively (WHO, 2015). Sub-Saharan Africa has the worst maternal mortality, contributing 66% of global deaths. Among the 99% maternal deaths occurring in low and middle income countries, more than half (66%) of the deaths occur in sub-Saharan Africa. The high number of maternal deaths in some areas of the world reflects inequalities in access to health services, and highlights the gap between the rich and poor.

Women in low and middle income countries have on average many more pregnancies than women in developed countries, and their lifetime risk of death due to pregnancy

is higher, 1 in 36 women in sub-Saharan Africa, which is far below the global lifetime risk of maternal mortality of 1 in 180, and in sharp contrast 1 in 4900 in high income countries (WHO, 2015).

Institutional delivery ensures high-quality childbirth care by a skilled health provider, which is paramount in preventing maternal and newborn deaths. Timely management of complications saves lives for both mother and baby, and this is ensured when labour and child birth occur with assistance of trained personnel in a hospital. Countries in the world are geared to reducing maternal mortality to less than 70 per 100,000 live births by 2030, of which Malawi is among them.

Malawi is one of countries with very high maternal mortality with a point estimate of 634 maternal deaths per 100,000 live birth and a life time risk of 1 in 29 (WHO, 2015). In sharp contrast, institutional birth attendance is 87.4%, relatively higher than countries like Mozambique, Zambia, Tanzania, and Kenya whose maternal mortality much lower. From 1990 to 2015, there is 33.8% change in maternal mortality, with no progress to achieve MDG 5. The Malawi Demographic Health survey 2010 revealed that 675 maternal deaths per 100,000 live births died during pregnancy and child birth (National Statistical Office (NSO) and ICF Macro, 2011). National data from Multiple Indicator Cluster Survey shows a slight decline, with 574 maternal deaths per 100,000 live births in 2014.

Hospital utilization varies across the three regions of the country, with higher rates in the Northern region followed by southern and Central region at the bottom (National Statistical Office, 2015). Dedza District is in the central region of Malawi, with 60% deliveries occurring in hospital (Ministry of Health, 2015). Disparities in hospital utilization during childbirth reflect disparities in socioeconomic status. Low hospital utilization is particularly pronounced in areas with low socioeconomic status. Among the most disadvantaged groups coverage is below 50% (WHO, 2016) . Women die because of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy and delivery. Other complications may exist before pregnancy but are worsened during pregnancy. Most maternal deaths are preventable, as the health-care solutions to prevent or manage complications are well known. All women need access to antenatal care in pregnancy, skilled care during

childbirth, and care and support in the postnatal period. It is particularly important that all births occur in hospital with attendance by skilled health professionals, as timely management and treatment can make the difference between life and death. This is the most critical intervention for making motherhood safe (Starrs, 2006). Due to this fact, the proportion of births attended by skilled health personnel is used as one of the important indicators to monitor progress towards the achievement of SDGs (WHO, 2016).

Most low and middle income countries are still struggling to increase institutional deliveries. WHO states that factors that prevent women from receiving or seeking care during pregnancy and childbirth include poverty, distance to health facilities, and lack of information, inadequate services, and cultural practices among others (UN, 2016). Up to an 80 percentage point difference in the proportion of births attended by skilled health personnel between the richest and poorest groups within countries (UN, 2016) which is attributed to socioeconomic status. As a result, countries are employing different strategies to increase deliveries attended to by skilled personnel. Examples include, India's Janani Suraksha Yojana (JSY) (Randive, Diwan, & De Costa, 2013), Nigeria's SURE-P MCH programme, Rwanda's Approche Contractuelle, (Witter, Fretheim, Fl, & Ak, 2012) among others. All of these have a component addressing demand side economic barriers to utilization of health services by pregnant women.

Among several MNCH strategies Malawi is implementing there is Result Based Financing for Maternal and Neonatal Health (RBF4MNH).

## **1.2 Problem statement**

Hospital utilization during childbirth has remained relatively low in Dedza District for long time despite different efforts to increase access and utilization of health institutions during birth. Among the strategies is the CCT, a demand side monetary incentive, for pregnant women who deliver in the hospital. With a baseline of 58% in 2013, deliveries in health institutions implementing CCT rose to 63% in 2014 (Options UK, 2015). EMONC assessment conducted by the Ministry of health revealed that 60% of birth occurs in the health facilities in Dedza District (Ministry of Health, 2015). While Health Management Information (HMIS) data from May 2015 to April 2016 shows only 64% births took place in health institutions. Though there is

progress, it has been slow. Furthermore, there is a wide variation in institutional deliveries among health facilities, including those implementing CCT strategy. Among CCT facilities institutional deliveries range from 29% (Mtakatika Health Centre) to 122% (Golomoti Health centre). In addition, preliminary findings from a study evaluating impact of RBF4MNH in the four district implementing CCT reports that there is no measurable effect on delivery service utilization (De Allegri et al., 2016)

The CCT intervention promotes first trimester ANC booking directly and indirectly, at least attendance of four focused antenatal care (FANC) visits, and awaiting labour at the hospital when pregnancy is term by making these as conditions for a woman to qualify for the money. However, first trimester ANC has also remained low at 12%, despite ANC coverage of 99% (National Statistical Office, 2015). This background gives an impetus to determine the factors that influence utilization of services in context where monetary incentives are available for women.

Government of Malawi with support from different development partners is putting efforts in ensuring skilled birth attendance for every mother by, among other strategies, incentivizing hospital delivery. However, variations among CCT facilities may indicate other factors influencing hospital utilization during childbirth. Therefore, these factors need to be explored in order to maximize government's efforts and achieve the intended goal of skilled birth attendance for every mother and towards zero maternal deaths. This study intends to identify factors influencing hospital utilization in the context where monetary incentive for pregnant women delivering in hospital is given.

### **1.3 Justification**

Utilization of health facility during childbirth is still low among most facilities implementing conditional cash transfer (CCT) program and this can be worrisome. Cost associated with health services is said to be the major factor that leads to inequity of access and utilization of health services among the poor (WHO, 2016), therefore relatively high percentage of hospital birth is expected in CCT facilities. Furthermore, variation in utilization among facilities implementing CCT necessitates need to explore the factors contributing to this. Identifying these factors is necessary for ensuring skilled birth attendance and achieving SDG 3.1 by 2030.

Findings will help inform policy and in designing or redesigning strategies for improving maternal health service utilization.



The findings will also add to a body of knowledge about monetary incentives for maternal and newborn health programs, especially in Sub-Saharan Africa since there are limited studies in this area (Garcia & Moore, 2012).

### **1.5 Research questions**

1. What proportion of women giving birth in health facilities is attributed to CCT program?
2. What are the socio-demographic factors that determine utilization of hospital during delivery in CCT facilities?
3. What are the factors influencing home deliveries in the presence of CCT
4. What are the perceptions of women towards intrapartum care in CCT facilities?

### **1.6 Objectives of the Study:**

The main objective was to explore the determinants of hospital utilization in CCT health facilities in Dedza District of Malawi

#### **1.6.1 Specific Objectives**

1. To determine proportion of hospital births attributed to CCT in Dedza District of Malawi.
2. To identify socioeconomic and demographic characteristics determining hospital utilization in CCT context
3. To explain factors influencing home deliveries in the context of CCT.
4. To explore perceptions of women towards intrapartum care in CCT facilities.

### **1.7 Study Significance**

Looking beyond the importance of reducing maternal morbidity and mortality by place of delivery, it is essential to investigate what motivates mothers to reach a particular decision about where to give birth, particularly in context of conditional cash transfer (CCT). In Dedza district, the proportion of births in health institutions implementing CCT increased slightly from 58% in 2013 to 64% in 2015, despite conditional cash transfers being open to all women, and wide variation in proportion of hospital births exist among facilities implementing CCT. According to Saad (2011) it is important to determine how the characteristics of the clients and health providers influence use of delivery services as to seek appropriate interventions to ensure that these facilities are more available and quality focused, and better able to meet the needs of clients.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Introduction**

This chapter review factors that determine where women choose to seek childbirth services. Factors influencing hospital utilization in low and middle income countries are more complex due to cultural differences, which include different health behavior and socio-demographic characteristics (al-Doghaither, Abdelrhman, Saeed, & Magzoub, 2003). The conceptual framework is also described which aims to explain the determinants of maternal health service utilization during childbirth.

#### **2.2 Hospital Delivery and Attendance by Skilled Personnel during birth**

Proportion of skilled care during childbirth is generally acknowledged as a priority approach for reducing maternal and neonatal mortality. Percentage of skilled attendance at birth was used as the target indicator to measure progress toward the Fifth Millennium Development Goal (MDG 5) of improving maternal health. Globally, 73% per cent of births are attended by skilled health personnel. However, substantial disparities within regions still exist. More than 40% of births in the African Region and South-East Asia Region were not attended by a skilled health provider at birth. Declines in maternal mortality rates between 1990 and 2015 correlates with increase in the proportion of deliveries attended by skilled health personnel. For example, there is a substantial increase in skilled attendance and birth in South-East Asia, with significant decreases in maternal mortality rates. On the other hand, in African Region where the greatest number of maternal deaths occurred in 2015, there has been only modest progress-as just over 50% of births are attended by skilled health personnel (WHO, 2016). Evidence shows that delivery care has improved significantly in all regions, apart from Sub-Saharan Africa (UN, 2015).

Hospital birth is considered significant since it exposes mothers and their newborns to a safe environment with supervision of skilled birth attendants and other personnel. The advantage attached to this indicator is that emergency obstetric complications are immediately attended to; contraction of diseases and infections (especially HIV) at the time of birth is greatly reduced with care

provided by a skilled health worker. Elimination of Mother to Child Transmission of HIV by 2020 can also become a reality if all mothers deliver in hospital or are attended by skilled personnel.

High maternal and neonatal mortality in low and middle income countries is attributed to inadequate maternal care during pregnancy and childbirth. About three quarters of all maternal deaths occur during delivery and in the immediate postpartum period. This makes skilled attendance at birth the most critical intervention to ensure that onset of a complication is immediately noted and attended to (WHO, 2016). Nevertheless, questions still remains for low and middle income countries on how to make mothers deliver with the skilled health care provider or in the health institutions; and how to strengthen the interventions already in place to be more effective.

### **2.3. Result Based Financing for Maternal and Newborn Health and Conditional Cash Transfer for Pregnant Women**

#### **2.3.1 Conditional Cash Transfer and cost of Hospital Delivery**

Low socioeconomic status has been shown to impede delivery utilization (Anyait, Mukanga, Oundo, & Nuwaha, 2012; Sialubanje, Massar, Hamer, & Ruiters, 2015; Sialubanje, Massar, van der Pijl, et al., 2015). Health care services are associated with both direct and indirect costs. Direct costs include user fees, while indirect costs include transportation, cost related to food, and other items necessary for hospital stay including visits by relatives. Research has shown that user fees are associated with a reduction in antenatal service utilization, with abolition of the fees tending to increase utilization (Dzakpasu, Powell-Jackson, & Campbell, 2014). In contrast, the same authors reports about Seventeen studies that demonstrated decrease in facility deliveries with the introduction of fees and increase following the removal of fees. These demonstrate that cost of health services can be a barrier to utilization. However, another study in the Cambodian hospital, increasing facility delivery was observed following fee introduction and quality of care improvements. In Afghanistan, following the national fee ban, visits for curative care increased significantly but institutional deliveries did not (Steinhardt et al., 2011).

Cash transfer programs are increasingly common across low and middle income countries. Conditional cash transfers (CCT) are one type of demand-side program that has been used to overcome cost barriers. CCT programs have been implemented across the world, of which most are broad, aiming to alleviate poverty and increase human capital through transfers conditioned on school enrollment and attendance, utilization of child health services, immunization, and nutritional supplements. Mexico's Oportunidades, Colombia's Familias en Accion, Nicaragua's Red de Proteccion Social, Honduras' PRAF, Turkey's SRMP, among others are the examples of broad CCT programs that do not focus on specific services (Glassman et al., 2013). CCT programs that target specific services becoming more common; for example, India's Janani Suraksha Yojana (JSY) and Nepal's Safe Delivery Incentive Program (Glassman et al., 2013); Nigeria's SURE-P MCH conditional cash transfer.

The impact of poverty/low socioeconomic status on health service utilization is stronger and the CCTs are expected to greatly contribute to utilization (Sarah Baird, McIntosh, & Özler, 2011).

In India, Janani Suraksha Yojana (JSY), the world largest cash transfer program, introduced in 2005 to promote institutional deliveries by aiming at reducing financial barriers (Devadasan, Elias, John, Grahacharya, & Ralte, 2008). They showed some evidence suggesting an increase in institutional deliveries by the JSY but they were unable to neither quantify it nor attribute it to the JSY. Another study on JSY showed that proportion of hospital births increased from a pre-programme average of 20% to 49% in 5 years (Randive et al., 2013). There is also contrasting findings by different researchers on the same data in the Mexico program. Their independent analysis of the same data, reported different results (Lagarde, Haines, & Palmer, 2007). Using data from the District Level Health Survey, another researcher found that the programme raised the likelihood of all eligible women delivering in a health facility by 4 percentages. The study further asserts that the effects of the programme took some time to emerge, with small effects appearing in the first two years, with an increase of 7.2% in hospital delivery in the following two years (Debnath, 2016). Though results from various CCT programs on maternal health care indicate success, there are also differing views that there has been little response on the targeted poor households as regard to delivering in institutions.

The Malawi pilot project to increase uptake of human immunodeficiency virus results found that monetary incentive increased the percentage of individuals collecting results by an average of 27% after distance is controlled for (Thornton, 2008). There was also a positive linear effect with the level of incentive. Each extra dollar increased the collection of human immunodeficiency virus results by a mean of 9%. Another pilot study in Kenya that studied the feasibility of using short message services (SMS) reminders and mobile phone-based CCTs to reach parents in rural Western Kenya demonstrated that CCT can be an effective strategy in increasing coverage and timelines of the vaccination.

Another study in Malawi, gives a randomized experimental evidence of impact of conditionality in cash transfer programs among adolescents girls in Malawi. They claim that Unconditional cash transfers have strong effects on schooling rates, with payments on condition having limited effects. On the other hand, CCT in Latin America have demonstrated a positive I impact (Sarah; Baird, Ozler, & McIntosh, 2010).

### **2.3.2 The Malawi Result Based Financing for Maternal and Newborn Health and Conditional Cash Transfer for Pregnant Women**

Result Based Financing for Maternal and Neonatal Health (RBF4MNH) and Conditional Cash Transfer to pregnant women are some of the new strategies used to increase hospital delivery in some countries including Malawi. The Malawi RBF4MNH Initiative is divided into three major components: a) minor infrastructure and rehabilitation improvements to bring the buildings and equipment up to a minimum standard; b) a Supply-side Problem Based Financing (PBF) intervention consisting of quality-based performance agreements between the Reproductive Health Directorate (RHD) and targeted facilities and District Health Management Teams (DHMT). The number of services provided, and the quality of those services, are monitored and provision of high quality services is rewarded with financial payments disbursed direct to the facility; and c) a demand-side CCT intervention consisting of monetary incentives to pregnant women for the recovery of expenses directly related to accessing and staying at target facilities during and at least 48 hours after childbirth. Women who deliver in a facility and remain there for 48 hours after having

their baby are given cash to pay for transport or other costs of delivering in a health facility (Brenner et al., 2014; Options UK, 2015).

For a woman to qualify, she has to meet the following conditions:

1. Started antenatal care clinic in the first trimester, or at least before 27 weeks gestation;
2. At least attended three antenatal visits;
3. Await labour at the hospital;
4. Monitored in labour
5. Give birth in the hospital.

The goal is for more women, particularly from poor rural areas, to deliver in health facilities, and for those facilities to be offering high quality maternal and neonatal services.

Initially four districts in Malawi were enrolled in the program in 2013. These include Mchinji, Dedza, Ntcheu and Balaka with 18 health facilities (4 CEmONC and 14 Health Centres). Dedza started with four Health facilities, which has been increased to eleven facilities by 2016.

Performance and progress is assessed by the following:

#### **DHMT Performance Indicators**

1. Sum of all institutional deliveries across the district meets or exceeds number in previous performance period
2. At least one month supply of essential MNH drugs and commodities available at all facilities in the district
3. On the day of verification a list of essential equipment (agreed with MOH) is in operating condition in RBF facilities
4. Complete HMIS reports are transmitted to Central MOH in time

### **Supply Side Core Indicators and Targets for Health centres**

1. Total number of facility based deliveries and number of referrals to CEmONC due to complications at the time of delivery increases by 5 percent from baseline every 6 months.
2. 100% maternal and newborn deaths properly audited according to national guidelines.
3. 100% of pregnant women who arrive at the facility for delivery with unknown HIV status who are tested and treated for PMTCT provided HIV test kits and ART are available.
4. Accurately and completely filled HMIS reports submitted on time to the district health office.
5. Up to date and complete stock cards of essential MNH medicines and commodities on the date of verification
6. Accurate and complete RBF4MNH Initiative specific reports submitted to district health offices on time.

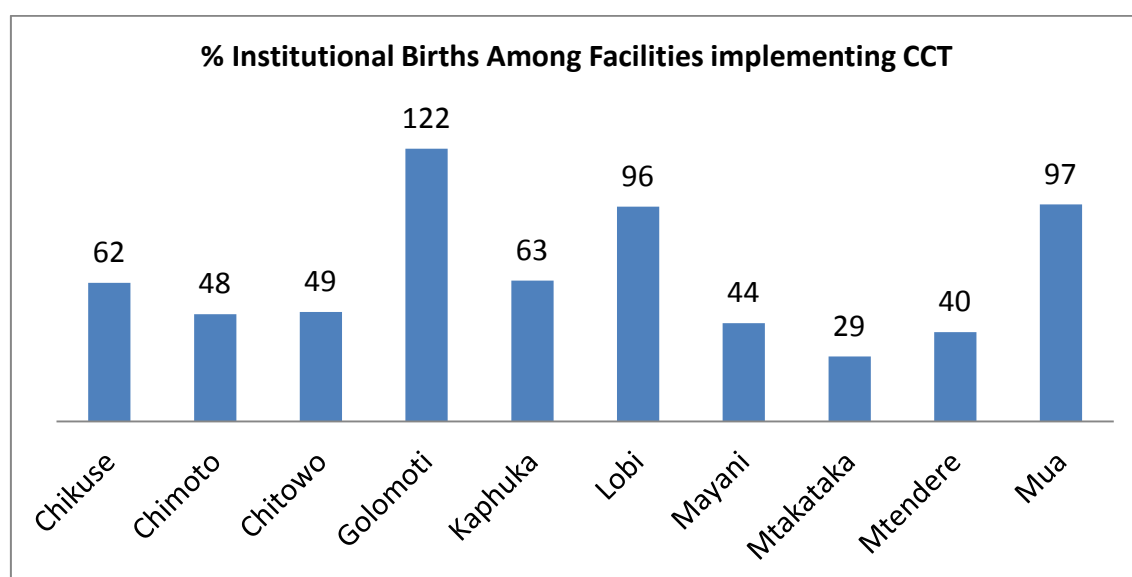
### **Quality Indicators for Health centres**

1. Completely and appropriately filled partographs according to national standards for all women who deliver in the facility
2. All pregnant women who arrive at the facility for delivery with unknown HIV status are tested and treated for PMTCT, if they are HIV positive.
3. Use of an uterotonic in third stage labor for all women who deliver in the facility
4. Use of magnesium sulphate for control of pre-eclampsia and eclampsia for all women who show signs of pre-eclampsia or eclampsia who deliver in the facility
5. Vitamin A administered to all newborns within 48 hours

Initially 4 districts were enrolled in the program (Mchinji, Dedza, Ntcheu and Balaka) with a total of 18 health facilities (4 CEmONC and 14 BEmONC sites) in 2013, increased to 28 facilities including four owned by the Christian Health Association of Malawi in 2015. Institutional delivery rates in participating facilities increased from 54 per cent in 2012/13 to 63 per cent in 2013/14, and 60,903 delivered in these facilities by March 2015, and 16,283 women received cash transfers.

In Dedza District, a wide variation in proportion of institutional deliveries has been observed among health facilities implementing Conditional Cash Transfer (CCT)

mode of motivation. Percentage of institutional deliveries ranges from as low as 29% to more than 100% in some facilities as shown by figure 1 below. This may indicate that some facilities attract more pregnant women than others. For instance, Golomoti Health conducts 22% additional deliveries, exceeding the expected number of births from its catchment area. This may indicate attracting pregnant women from areas outside its catchment area. On the other hand, facilities like Mtakataka, Mayani, Chikuse, Chimoto, Chitowo, Kaphuka are far from meeting the number of expected/target deliveries. Causes of such discrepancies need to be investigated.



**Figure 1: Institutional births as a percentage of expected deliveries in facilities implementing CCT in Dedza, Malawi, Source: Ministry of Health (Malawi), HMIS (DHIS2), May 2015 to April 2016**

#### **2.4. Factors determining Utilization of Health Facilities during Childbirth**

Studies suggests that utilization of health facilities for childbirth in low and middle income countries can be influenced by factors such as the socio-demographic characteristics of women; culture; and availability of facilities and medicine and supplies, accessibility of the services, perception of good care from providers, and antenatal attendance (Bhattacharyya, Srivastava, Roy, & Avan, 2016; Gan-Yadam et al., 2013; Kitui, Lewis, & Davey, 2013; Sarker et al., 2016). Another meta-analysis study report that key barriers to facility-based delivery include traditional and familial influences, distance to the facility, cost of delivery, and low perceived quality of care and fear of discrimination during facility-based delivery (Bohren et al., 2014).



Various studies state an association between factors such as income, education, ethnicity, religion, culture, age, marital status, parity, antenatal care attendance and woman's decision-making power to use health facility for childbirth. Most of the reviewed published literature were quantitative designs aiming to discover statistical associations between the factors and utilization of hospital for delivery; with focus on social cultural and economic accessibility variables and neglecting perceived benefits or need and physical accessibility (Anyait et al., 2012; Fekadu & Regassa, 2014; Gan-Yadam et al., 2013; Godha, Hotchkiss, & Gage, 2013; Kitui et al., 2013; Nakambale, Nzala, & Hazemba, 2014; Randive et al., 2013; Tarekegn, Lieberman, & Giedraitis, 2014; Tekelab, Yadecha, & Melka, 2015; Wilunda et al., 2015a)

#### **2.4.1 Socio-demographic Factors**

##### **Age**

Mother's age at the time of giving birth plays a big part in determining utilization of health facility for delivery (Bhattacharyya et al., 2016; Nakambale et al., 2014). Age might serve as a proxy for accumulated experience as regard to health service utilization. However, bivariate analyses in other studies demonstrate no association. Among studies indicating age has an effect, there are disagreements as well. Some claim there is higher utilization among young women than older ones and others argues that women from 25 years and above are more likely to utilize facility for childbirth than younger ones (Bhattacharyya et al., 2016). Others claim that young women are exposed to modern medicine and likely to use health services. Age is also significantly correlated with education and parity, and when controlled for, the significance of young age diminishes and older women are more likely to utilize hospital for childbirth (National Statistical Office (NSO) and ICF Macro, 2011). Older women are likely to be educated, with experience and generally knowledgeable about health care services. It is also more likely that older women have more confidence and have, to some extent, higher decision making power than younger women

## **Education**

Studies in low and middle income countries have consistently demonstrated that maternal education is the only individual-level variable that is consistently a significant predictor of service utilization (Babalola & Fatusi, 2009; Charupoonphol, 2015; Idris, Gwarzo, & Shehu, 2006; Mengesha, Biks, Ayele, Tessema, & Koye, 2013; Tarekegn et al., 2014). The higher a women's level of schooling the more likely she is to utilize Health facility for child birth. A number of studies have suggested that more educated women are better able to understand the importance of hospital birth and are more likely to know where to get it. Education is associated with level of knowledge about skilled birth attendance. A study in Myanmar found that The women who had a moderate to good level of knowledge utilized skilled Birth Attendants 2.7 times more than those who had a poor level of knowledge (Charupoonphol, 2015), with 7 times likely in Kenya (Kitui et al., 2013). Some researchers, however, question the strong independent effects of education on MNH service utilization. They argue that other factors such as place of residence, husband's educational level, socioeconomic level, ethnicity, community media saturation interact to dilute this strong association (Assfaw & Sebastian, 2010)

## **Parity and Birth Order**

Parity of mother has be shown to be strongly associated with utilization of health services (Anyait et al., 2012). First pregnancy is associated with uncertainties in women and they are more likely to use health institution for first order birth than subsequent. On the other hand, having a higher number of children may strain resources, and is reported to negatively associate with maternal health services utilization. A study in Uganda, found that those with less than four births are more likely to deliver in the hospital, and those with four or more birth, with more likelihood of home births (Anyait et al., 2012). A bigger family not only causes resource constraint but also place more demand on mothers' time hence restricting access to health services.

## **Socioeconomic status and Poverty**

Several reasons are behind the limited use of health services by the poor, which occurs both on the supply and demand sides. On the demand side, poverty is among the various reasons that limit access to care (Glassman & Duran, 2013). Numerous studies have observed large inequities in access for low-income populations regarding lack of access to a regular source of care, delays in obtaining needed care, and higher rates of morbidity, hospitalization, and mortality that could have been avoided with appropriate access to care. A study in Zambia claims that most women who had high intentions to give birth in a health facility under skilled birth attendance actually ended up giving birth at home due inability to acquire items necessary to use at the hospital (Sialubanje, Massar, van der Pijl, et al., 2015). Similarly, a study in Uganda showed that women with high socioeconomic status were 3 times likely to utilized hospital for child birth than those from low socioeconomic status (Anyait et al., 2012)

### **2.4.2 Quality and acceptability of health services**

On the supply side, poor quality provision of obstetric care, mistreatment or socio-cultural insensitivity, absence of a trained attendant at delivery, and absence of or poor linkages of health centers with communities are barriers to utilization (Ensor & Cooper, 2004). A study in India claims that there is no major difference in women experience of care between home and facility births (Bhattacharyya et al., 2016). This cross-section study recruited mothers who gave birth at home and health institutions. The author states the only difference in care being with regard to pain relief through medication in hospital birth and through massage and low cost for those having home births. Availability of medical drugs and supplies and perceived benefits for both mother and baby were the main predictors for hospital births. Quality of care involves structural, process and outcome aspects. Among the structural aspect of care, delivery bed cleanliness, pain medication, time taken by providers to attend to women of care is critical aspect. On the process indicators, some studies claim that privacy and information shared by birth attendants is viewed as critical for hospital birth. Service providers interpersonal behaviour, abuse, information sharing and out-of-pocket expenditure are the concerns for mothers (Ashraf, Ashraf, Rahman, & Khan, 2012; Chirdan et al., 2013; D'Ambruso, Abbey, & Hussein, 2005; McMahon et al., 2014). However, studies suggests that there is little difference on women experience

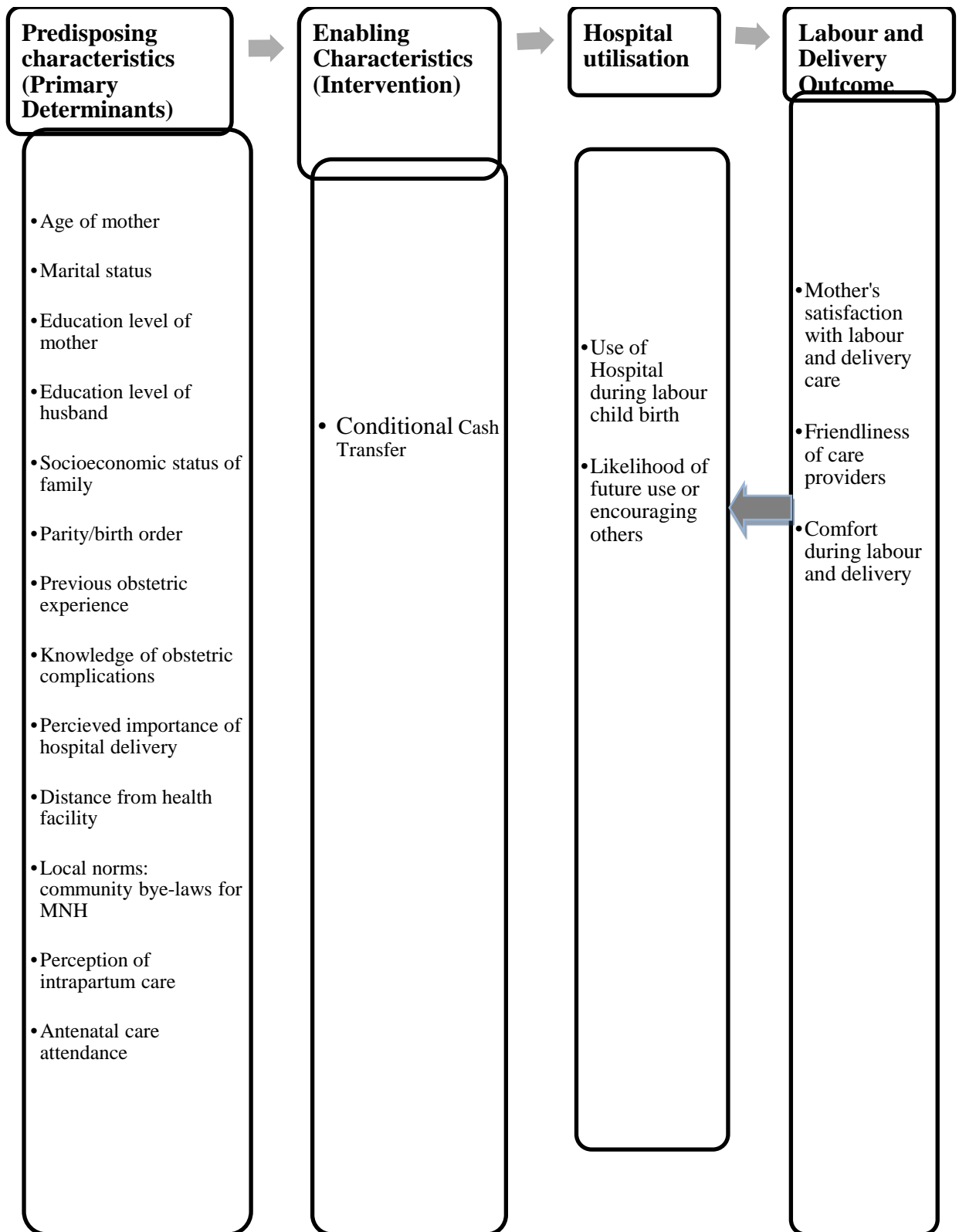
with privacy and information shared by birth attendant about the progression of labor and delivery procedures between facility and home births (Bhattacharyya, Issac, Rajbangshi, Srivastava, & Avan, 2015; Bhattacharyya et al., 2016). In Kenya, 20 percent of postnatal women discharged from hospital reported disrespectful and abuse, which included neglect or abandonment, Non- consensual care, physical abuse, and, detainment for non-payment of fees. Another significant aspect of quality is the outcome of care for both mother and baby, with some studies not finding the significant difference in out- come for both mother and newborn between home and facility deliveries. In Malawian study, the authors concluded that poor postnatal care, 48% of the recommended standards, is provided to postnatal mothers and babies in facilities providing EmONC services in Dedza District (Chimtembo, Maluwa, Chimwaza, Chirwa, & Pindani, 2013). Cost of care is another outcome variable, the cost of care for facility births is almost three times more than that of home births (Bhattacharyya et al., 2016). This means cost can be a barrier in hospital birth especially among the low socioeconomic status. Therefore, with conditional cash transfer for pregnant women, a significant increase in hospital delivery is anticipated since it directly offset the cost of hospital delivery and determining the missing component to motivate women for hospital delivery is worthy researching for.

### **2.4.3 Antenatal Care**

In an Ethiopian meta-analysis, the pooled analysis demonstrated that woman attending antenatal care had more than 7 times increased chance of delivering in a health facility (Berhan & Berhan, 2014). In a study, involving rural areas of four countries: Ghana, Kenya, Uganda and Tanzania., estimated that effect on utilization of hospital births is mediated by the range of services offered to women during antenatal care (Adjiwanou & LeGrand, 2013). The authors suggested that governments and NGOs should place more importance on the role of antenatal care providers and services they give, in efforts to promote hospital births. Attendance of at least four ANC visits was positively associated with wealth status.

## **2.5. Conceptual Model for Utilization of Health Services**

Utilization of health services can be considered as a type of individual behavior (R. Andersen & Newman, 2005). Several frameworks for analyzing utilization of health care services have been found in the literature. These include Rosenstock's health belief model, Young's choice-making model and Anderson's Behavioral model of health service utilization (Rebhan, 2008). Of all these models, only the latter analyses differences in health services utilization from a socio-demographic perspective. The Andersen model is also useful because of its flexibility in allowing researchers to choose independent variables related to their specific hypotheses. This is in line with the objectives of this study; hence, the model was applied, focusing on sociodemographic, obstetric characteristics, and local norms on maternal and newborn health, CCT awareness, and mothers' perception of intrapartum care as determinants for hospital delivery as shown in figure 2 below.



**Figure 2: Conceptual framework for hospital utilization during childbirth (Adapted from Andersen's Behavioral Model of Health Service Utilization)**

Andersen's Health Behavioral Model (Figure 2) assumes that certain characteristics influence or determine an individual's use of health services (Anderson, 1995). These

characteristics are divided into four categories, and he proposed that utilization of health services is dependent on Primary determinants that include: 1) Population characteristics, which include predisposing characteristics, enabling resources and perceived need, 2) Health care system 3) External environment. These will result in Health behavior, which includes personal health practices and use of health services. Utilization health services and health practices produces Health outcomes comprising consumer satisfaction, perceived or/and evaluated health status.

### **Population characteristic**

It is assumed that some people are more likely to utilize health services than others and this likelihood can be predicted by individual characteristics. Individuals that possess certain characteristics have been found to be more inclined towards use of health services, even though these characteristics are not directly responsible for the utilization. These characteristics include:

- a) **Predisposing characteristics** (demographic factors) such as age, sex, parity, past illness. Social structural factors, which reflect individuals' status in the community; is measured by characteristic such as educational level, occupation, ethnicity, family size, religion, residential area. Health beliefs that include attitudes, values, and knowledge that people have about health and health services influences their subsequent need perception of need and use of health services. Individuals who have stronger faith in the efficacy of treatment are more inclined towards healthcare utilization (R. Andersen & Newman, 2005; Rebhan, 2008).
- b) **Enabling characteristics.** Even though individuals may be predisposed to use health services, some means must be available for them to do so. In order individuals to utilize health services certain resources, both community and personal, need to be available. These are defined as enabling factors as they make health services available and accessible to the individual. Family resources which include income (economic status), a regular source of care, health insurance coverage, travel, extent and quality of social relationships (R. M. Andersen, 1995; R. Andersen & Newman, 2005; Anderson, 1995; Rebhan, 2008). Family income is an important enabling factor as it determines the amount of funds available to an individual to cover healthcare and related

costs, such as physician consultation, drugs, transportation costs, and other out of pocket expenditures. Community level resources also include the nature of the area where an individual resides such as region of the country, urban or rural area; local norms and values influence an individual's behaviour living in the community (R. Andersen & Newman, 2005).

### **Need-based characteristics**

Assuming the presence of predisposing and enabling conditions, the individual or her family must perceive illness or the probability of its occurrence for the use of health services to take place, including the need as evaluated by health care providers. A woman's need for care may be influenced by past pregnancy and childbirth experiences or personal preference. Perceived needs are prime determinants of service utilization. These can be measured by the number of perceived disability, and symptoms, diagnosis, and general state of health. Evaluated need include symptoms and diagnosis made by professionals (R. Andersen & Newman, 2005)

### **Health care system**

Health care system measures include resources and organization. Resources at the community level include the ratio of health facilities and health personnel to the population, kind of service providers, waiting time and price of health services. Low cost of services, a greater number of health facilities and personnel reduce waiting time and queuing-up for limited services leading to more use of services individuals.

### **External Environmental factors**

External environmental factors include political and economic influences of utilization and residence of the individual, urban or rural.

### **Consumer's satisfaction.**

Health status outcome and client satisfaction predicts future utilization of health services and health practices. These include perceived and evaluated health status during the previous visit or visits to the health facility. Health status outcome is particularly important for health policy and health reform (Anderson, 1995). Satisfaction with labour and delivery experience will lead to more utilization in



future, whereas dissatisfaction will reduce use. Perceived benefits of mothers and newborn health are critical to warrant utilization.

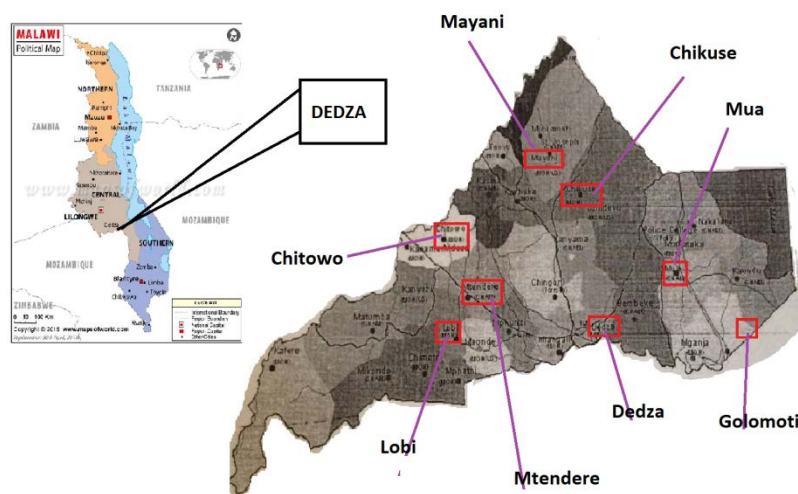
## CHAPTER THREE

### METHODOLOGY

#### 3.1 Study Setting

The study was conducted in Dedza District, in Malawi. Dedza District has a population of 735,411 (NSO 2015 Projections). The population for women within 15-49 years is 147,082 and with 36,770 annual expected number of deliveries. Dedza is in Central Region of Malawi, bordering Lilongwe to the north (87Km), Salima District in the East, Ntcheu District in the South and Mozambique in the West.

Dedza District has 28 Health facilities offering labour and delivery (Maternity) services, which include government facilities (15), private maternity unit (1), and Christian Health Association of Malawi (CHAM, 12). Among these, 11 facilities provide CCT to women these includes nine (9) government facilities (Dedza District Hospital, Golomoti, Mtakataka, Lobi, Chikuse, Chitowo, Kaphuka, and Mayani Health centres) and two (2) CHAM facilities (Mua Mission Hospital and Mtendere Community Hospital). Study facilities will include Dedza District Hospital, Mua Mission Hospital, Mtendere Community Hospital, Chikuse, Chitowo, Golomoti, Lobi and Mayani Health centres. The sites have been purposefully selected to include facilities that have been offering CCT for not less than a year at the time of study to allow women exposure to CCT before and or during pregnancy. Figure 3 below shows study sites.



**Figure 3: Map of Dedza (Malawi), showing study sites**

### 3.2 Study Population

The study population was postnatal mothers attending Maternal and Child Health Care (MCHC) services that include postnatal care, immunization and growth monitoring at Dedza District Hospital, Mua Mission Hospital, Mtendere Community Hospital, Chikuse, Chitowo, Golomoti, Lobi, Mayani Health centres. Only mothers who delivered within a period of three months from study time, irrespective of whether they delivered at home or in hospital formed a population. The period of three months was chosen to ensure mothers ability to recall their labour and delivery experience. This could be a problem with a longer period of time.

Mothers from 18 years and above, who gave birth within a period of 0-3 months participated either in structured interview or focus group discussion but not both. Focus group discussions enrolled mothers with a history of previous delivery to ensure a thorough discussion of previous birth experience as it may relate to the current decision of delivery place.

### 3.3 Study design

The study was a cross sectional survey with descriptive components. The design was chosen because it gives accurate measurements of population, characteristics and attributes. It was best suited to achieve the set objectives and data was successfully collected within a limited time since the information was collected at a point in time, hence this fitted in within a limited time period of a month. This descriptive design gives a representative subset of the entire population under study. The study utilized both qualitative and quantitative research techniques. Structured questionnaire (see appendix I and II) and Focus Group Discussions (see appendix III and IV) were used to collect quantitative and qualitative data.

### 3.4 Sample size determination

The study sample size was calculated according Fisher's formula since the population was more than ten thousand (Fisher *et al.*, 1998). Therefore the sample size was derived from relationship:

$$n = Z^2 (pq)/D^2$$

n= Sample Size

P= proportion of target population estimated to have a particular characteristic, hence was equal to 60% ( 0.60) mothers who were utilizing maternity facility for delivery in Dedza District of Malawi (MoH, 2015).

q= derived from a relationship, 1-0.60 which is equal 0.40

Z is the standard normal deviation set at 1.96 to correspond to 95% confidence limit.

D represents the level of precision (degree of accuracy) and is set at 5%

Hence,  $n = 1.96^2 * (0.60 * 0.40) / 0.05^2 = 3.84 (0.24) / 0.0025 = 368.64$

Therefore study sample was 369 respondents.

Sample size per facility was determined by proportion of facility's monthly average number of mothers with 0-3 months attending MCHC services (Postnatal care, growth monitoring and immunizations). Therefore, this is expressed by the relationship;

$$\frac{\text{Monthly facility number of mothers attending MCHC services}}{\text{Total number of mothers attending MCHC services in all sampled facilities}} \times \text{Total Sample size}$$

Hence, sample size per health facility was as per Table 1 below.

**Table 1: Proportionate Sample Size per facility**

<b>Health Facility</b>	<b>Average Number of Mothers with Children 0-3 Months old attending MCHC services per Month</b>	<b>Sample Proportion</b>	<b>Sample Size per Facility</b>
Dedza District Hospital	726	0.38	140
Mua Mission Hospital	176	0.09	33
Mtendere Community Hospital	220	0.11	41
Chikuse Health centre	154	0.08	30
Chitowo Health Centre	132	0.07	26
Golomoti Health Centre	176	0.09	33
Lobi Health Centre	198	0.1	37
Mayani Health centre	154	0.08	29
<b>TOTAL</b>	<b>1936</b>	<b>1.0</b>	<b>369</b>

### 3.5 Sampling procedure

Sampling procedure addresses how elements of the population are selected and how many elements are selected (Dattalo, 2008).

#### 3.5.1 Description of the procedure

Purposive sampling was used to select Dedza District hospital, Mua Hospital, Mtendere Community hospital, Chikuse, Chitowo, Golomoti, Lobi, and Lobi Health centres. Participants attending MCHC services were systematically sampled to participate in this study until the desired sample size was reached. To obtain the sampling interval ( $K^{\text{th}}$  number), the average monthly total number of mothers attending MCHC services, with children 0-3 months, at each facility was divided by proportionate sample size, then divided by number seen per day as shown in table 2 below.

**Table 2: Determination of  $K^{\text{th}}$  Number for Each Facility**

Health Facility	Monthly Number Mothers attending MCHC service , with children 0-3 months (N)	Sample Size (n)	N/n	Number Clients seen in a day	$K^{\text{th}}$ Number {Clients seen per day / (N/n)}
Dedza District Hospital	726	140	4.7	33	7
Mua Mission Hospital	176	33	4.8	8	1.7
Mtendere Community Hospital	220	41	4.9	10	2.0
Chikuse Health centre	154	30	4.8	7	1.5
Chitowo Health Centre	132	26	4.7	6	1.3
Golomoti Health Centre	176	33	4.8	8	1.7
Lobi Health Centre	198	37	4.8	9	1.9
Mayani Health centre	154	29	4.8	7	1.5

Therefore, at Dedza District Hospital every 7<sup>th</sup> mother was interviewed. Numbers one to seven were written, mixed and put in box. The first client was requested to pick any number from the box. After picking, the number was noted and then folded and returned to the box and mixed again before the second client could select. This was done to ensure that any time each client picked the number there were seven

numbers in the box. The client who picked number one the first time was the first to participate after consenting. If number was not picked the whole process was repeated. Starting with number one systematic sampling method was used whereby every 7<sup>th</sup> mother was interviewed after giving the consent, unless in the exclusion criteria. If the mother did not satisfy the criteria, the researcher moved to the next client as per systematic number.

For the other facilities alternate clients were sampled to achieve the desired sample sizes. Numbers one to three were written down and any mother picking a one was the first to be interviewed then mother picking a third number thereafter every alternate mother.

In Focus group discussion mothers, 18 years and above, with recent history of giving birth, within 0-3months period but not participated in structured questionnaire were recruited. Only mothers with a history of previous delivery participated in FGD. Face-to-face recruitment took place at the point of service. Participants were asked personally to participate either in FGD or interviews. A set date, time and venue was set and communicated to those who participated in FGDs and linked to community health workers for who did a follow up.

Three different FGDs were conducted; (1) one with mothers who delivered in a facility and received Cash Transfers, (2) those who delivered in health facility but did not receive money and (3) the third group included those who delivered at home (outside the health facility).

The three FGDs comprised participants from all participating health facilities except Mayani HC and were held at Thete Teachers Development Centre (TDC), which was a central place and for making it easier for participants to reach the venue as well as being a neutral place (away from hospital) for free discussions. At least one participant from each facility participated. Transport for participants, to and from Dedza Boma, was catered for by the researcher and arranged in advance in collaboration with research assistants at respective health facilities. FGDs were held at a central place due to resource constraints to hold three FGDs at each facility, which could have been the ideal.

### **3.6 Eligibility criteria**

#### **3.6.1 Inclusion criteria**

All postnatal mothers attending Maternal and Child Health services in the selected facilities, and had delivered within three months from study date, irrespective of the place of delivery formed the target population. Respondents were mothers, age 18 and above who have recently given birth within a period of 0-3 months, and are residents of catchment areas of health facilities offering CCT and have lived in the area during pregnancy and for not less than a year. This ensured that the mothers were exposed to CCT program and ability to discuss their birth experiences. Satisfaction with labour and delivery care in the hospital was only rated by those mothers who had delivered in health facilities.

In FGDs, in addition to above criteria, mothers with a previous delivery were recruited.

#### **3.6.2 Exclusion criteria**

Postnatal Mothers attending Maternal and Child Health services who relocated to catchment areas of CCT facilities after giving birth. A filter question was used to determine those eligible and not.

### **3.7 Variables for the Study**

#### **3.7.1 Dependent variable**

A categorical dependent variable was created based on the location of the most recent live birth. It was categorized as 'home' if the mother reported that the most recent live birth occurred at home or away from health facility; CCT facility if the mother reports that she delivered at a facility offering CCT, 'non CCT health facility' if birth occurred in a facility not offering CCT but she is from with the CCT facility's catchment area.

Other dependent variables to assess CCT effect on included antenatal care regardless of number of visits, first trimester ANC booking if the mother started her ANC within the first three months of pregnancy, second trimester if the mother started her ANC between 16-26 weeks gestation, and third trimester if ANC was started at more than 26 weeks gestation. Waiting for delivery at hospital was categorized as 'No waiting'

for those who reported while in labour at the hospital, and ‘Waited’ for those who came before onset of labour at the hospital.

Another dependent variable in was level of satisfaction with labour and delivery care. This will be a categorical variable indicating either ‘satisfied’ or ‘not satisfied’, and continuous variable based on the score on the Likert Scale.

### **3.7.2 Independent variables**

The predisposing variables included in the model were birth order of the baby for which care was sought, socio-demographics of the mother and father (marital status, maternal age, parity, birth order, maternal and paternal education, religion, and tribe). Maternal age was categorized into five level categorical variables (less than 20 years, 20 – 24 years, 25-30, 31-35 and more than 35 years). To assess effect of parity on utilization, it was categorized into ‘one’, ‘two to four’, and ‘five or more’ depending on the number the mother had ever given birth; and birth order for the last child was categorized as ‘first’, ‘second’, ‘third’, ‘fourth’, ‘fifth’ etc.

Previous obstetric experience with obstetric complications was another independent variable. This was categorized as ‘yes’ or ‘No’ if the woman had experienced obstetric complication before or not.

The mother's and father's education was categorized into four levels ‘none’ if did not attend formal education, ‘primary’ if only had primary education, ‘Secondary’ if highest education was secondary school, and “College or Tertiary’ if beyond secondary school.

Religion was coded into five categories, ‘Christian’, ‘Muslim’, ‘Traditional’ ‘None’ and others. To assess the effect of tribe on health services utilization, – 4 variables classifying the population into ‘Yao’, ‘Chewa’, ‘Ngoni’ and ‘Other’ were used.

Socioeconomic status was assessed based on approximated monthly consumption in Malawi kwacha and categorized into three categories: ‘less than MK23000’ (ultra-poor, <32USD), ‘23000-37000’ (poor, 32-52 USD) and ‘more than MK37000’ (more 52 USD) (National Statistical Office, 2012). Occupation was categorized as; ‘Housewife’ if not engaged in any form of occupation, ‘Household agricultural activities’ if the woman/husband does low scale farming, ‘Household business’ if



engaged in business, 'Casual work' if engaged in part time labour, 'Employed' if employed for salary and 'Others' which were specified.

Prior knowledge of CCT of CCT was categorized into 'Yes' or 'No' if the mother had or was not aware of CCT before delivery respectively. Prior knowledge was further categorized onto; 'Aware before pregnancy', 'Aware during pregnancy'

Knowledge of complications during pregnancy, labour and delivery and postnatal including newborn was also assessed, to determine the impact of these on hospital utilization for childbirth. These are critical in determining need for hospital use.

The enabling variables were exposure to monetary incentives (CCT/RBF4MNH), distance to health facility, and local norms such as community by-laws. Exposure to CCT was categorized as 'CCT Facility' if the woman lives or during pregnancy she lived in a catchment area of a health facility offering CCT, and 'None CCT' if a woman lives in a catchment of a health facility not offering CCT. Table 3 below shows a summary of study variables.

**Table 3: Summary of Study Variables**

	<b>Independent Variables</b>	<b>Dependent Variable</b>
1.	Birth Order	Delivery place
2.	Age of Mother	
3.	Parity	
4.	Marital status	
5.	Education	
6.	Religion	
7.	Tribe	
8.	Socio-economic status	
9.	Local norms for maternal and newborn health	
10.	Previous Obstetric complication	
11.	Prior knowledge of CCT	
12.	Knowledge of pregnancy complications	
13.	Perception of intrapartum care	
14.	Antenatal care attendance	
15.	Gestation at antenatal care booking visit	
16.	Number of Antenatal care visits	

### **3.8 Data collection instruments**

Data was collected through interviewer administered questionnaire (see Appendix I and II). A structured questionnaire composing of both close and open ended questions was used. The questionnaire featured both closed and open-ended questions. This combination of qualitative and quantitative data collection was used in order to obtain determinants of utilization of hospital for child birth. Quantitative data give facts and opinions of individuals, which give most accurate and realistic picture of factors that motivate or de-motivate pregnant women to utilize hospital delivery services.

Focus group discussions were conducted to explore beliefs, attitudes and opinions towards child birth and hospital delivery. This was necessary to elicit more information as regard to hospital utilization and CCT. A focus group discussion guide (see Appendix III and IV) was used.

### **Instrument Measurement**

#### ***Validity***

The study adapted approved and established questionnaires. These include the CSQ-8 for assessing consumers satisfaction with health services (Larsen, Attkisson, Hargreaves, & Nguyen, n.d.; Sawyer et al., 2013); wealth index measure (MEASURE DHS ICF International, 2013; National Statistical Office (NSO) and ICF Macro, 2011)

#### ***Reliability***

The use of a structured questionnaire ensured that same data is collected from each participant. Data cleaning was done to correct any errors associated with data entry.

Data collectors were health workers and were trained, and the questionnaire was pre-tested at Mtakataka HC (one of the health facilities providing CCT) to test for clarity, validity and reliability of the questions. Data was entered and analyzed on SPSS for windows version 20. Internal consistency of the 5 point Likert questions, on satisfaction with care, was measured by Cronbach's alpha. The Cronbach's alpha was 0.71. Minor revisions to the tool were made before final use. This ensured that required information was collected hence increasing reliability of the results.

### **3.9 Limitations of the study**

The study was conducted in a few health facilities and in a specific district hence the results may not be generalized. However, the sample size of 369 is large enough to provide the results that could ensure external validity. Therefore, the findings generated useful information that can be considered in general.

Other limitations include time and financial resources. The need to employ research assistants for data collection was important to ensure the study is done within specified time and adequate financial resources were necessary for the study. Financial resource limited the number of focus group discussions to be conducted,

which may fail to achieve saturation of data. However, qualitative information enhanced or complemented quantitative data hence increasing reliability.

### **3.10 Ethical Consideration**

The investigator sought for approval to conduct the study from Institute of Research and Ethics Committee (IREC) of Moi University, College of Health Sciences (see Appendix VII), and Malawi National Commission for Science and Technology (NCST) (see Appendix VIII),.

Written permission was sought from Dedza District Health Office and specific facility in-charges were notified before the study (See Appendix IX).

The purpose of the study was explained clearly to all potential participants who were recruited voluntarily after giving consent and signing the consent form. Privacy and confidentiality was assured to participants. Their identities were kept confidential, no names were obtained or entered on the questionnaire and the information is used for study purposes only. In order to enhance response the participants were assured that the interview was not a test of intelligence but a study and therefore they should answer the question without fear. To ensure privacy interviews were conducted on a one-to-one basis and information given was treated confidentially. The FGDs were held in a place and room that ensured privacy to maintain confidentiality. A place where participants felt free to express their views was chosen. This place was away from hospital. Since FGDs were held at one central place, mothers who participated were reimbursed transport to and from their respective health facilities and lunch was provided.

Participants were informed that there was no direct benefit for them participating in the study. However, there are long term community benefits since the outcome could inform policy, assisting health planners in setting up interventions to eliminate barriers in utilization of health facilities for childbirth.

### 3.11 Data Management and analysis

Survey questionnaire were administered by the researcher and research assistants at each facility. The researcher recruited eight research assistants. Interviewers submitted completed instruments to the investigator at the end of each working day. The hard copies were then kept under lock and key. Data cleaning was done by both the investigator and the research assistants, cross checking the data for accuracy, consistency and completeness.

#### 3.11.1 Quantitative data analysis

All questionnaires were kept in a central location. A database was created, and each questionnaire was entered into the data base (SPSS for windows). All inaccuracies were reviewed and corrected using the original questionnaire.

Data was analyzed using of SPSS for windows version 20. Descriptive Statistics of frequencies and percentages was calculated to check the typical characteristics of the data.

Inferential statistics was done; Pearson's Chi-square was used to assess the strength of association between individual predictor variable and the outcome variables (place of delivery). The factors which had a small p-value  $<0.05$  significance level were entered into logistic regression model. Then binary logistic regression was conducted to determine the effect of each independent variable that predicts place of delivery while controlling for the confounding factor.

#### 3.11.2 Qualitative data analysis

The qualitative data from the focus group discussions was transcribed, translated, and analyzed thematically. Emerging themes were identified and a summary was written. The results from FGDs were collaborated with the results from structured questionnaire. Similarities and disparities have been described.

**Table 4: Interpretation of the p-value**

<b>P-Value</b>	<b>Interpretation</b>
<0.01	Strong association between the independent and dependent variables
0.01-0.05	There is an association between the independent and dependent variables
0.05-0.1	There is a weak association between the independent and dependent variables
>0.1	There is no association between the independent and dependent variables

## CHAPTER FOUR

### FINDINGS

#### 4.0 Summary of Descriptive Statistics

A total of 369 women attending participated in structured interview at Dedza District Hospital, Mua Mission Hospital, Mtendere Community Hospital, Chikuse, Chitowo, Golomoti, Lobi, and Mayani Health centre as per Table 5e below: 42 women participated in Focus group discussions, 9 in Home deliveries group, 11 in None CCT beneficiaries group and 12 in CCT beneficiaries. Focus group discussions were held at Thete Teachers Development Centre. Period for discussions ranged from 1 hour 40 minutes to 1 hour 50 minutes.

**Table 5: Number of respondents per Facility**

<b>Number of respondents per Facility</b>	<b>Freq</b>	<b>%</b>	<b>Cumulative %</b>
Mua Mission Hospital	33	8.9	8.9
Golomoti HC	33	8.9	17.9
Dedza District Hospital	135	36.6	54.5
Lobi HC	43	11.7	66.1
Mtendere HC	40	10.8	77.0
Chitowo HC	26	7.0	84.0
Mayani HC	30	8.1	92.1
Chikuse HC	29	7.9	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	

**Table 6: Summary of Descriptive Statistics -Sociodemographic factors**

<b>Variables</b>	<b>Freq</b>	<b>%</b>	<b>Cumulative %</b>
<b>Participant's age in years</b>			
Years <20	47	12.7	12.7
Years 20-24	136	36.9	49.6
Years 25-29	98	26.6	76.2
Years 30-35	67	18.2	94.3
Years 36 years and above	21	5.7	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Participant's Religion</b>			
Moslem	49	13.3	13.3
Christian	315	85.4	98.6
Traditional	4	1.1	99.7
Others	1	.3	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Participant's Tribe</b>			
Chewa	195	52.8	52.8
Yao	49	13.3	66.1
Ngoni	114	30.9	97.0
Others	11	3.0	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Participants Educational level</b>			
No education	52	14.1	14.1
Primary	253	68.6	82.7
Secondary	55	14.9	97.6
College/Tertiary	9	2.4	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Participants occupation</b>			
House wife	164	44.4	44.4
Employed (salaried)	7	1.9	46.3
Casual laborer	12	3.3	49.6
Household Business	29	7.9	57.5
Household Agricultural Activities	153	41.5	98.9
Others	4	1.1	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Marital status</b>			
Single	10	2.7	2.7
Married	337	91.3	94.0
Separated	11	3.0	97.0
Divorced	10	2.7	99.7
Widowed	1	.3	100.0
Total	<b>369</b>	<b>100.0</b>	
<b>Usual Mode of Transport to Health Facility</b>			
Walking	211	57.2	57.2
Bicycle	80	21.7	78.9
Motorcycle	13	3.5	82.4
Vehicle	65	17.6	100.0
Total	<b>369</b>	<b>100.0</b>	

**Table 7: Summary of Descriptive Statistics – Obstetric factors and CCT Program awareness**

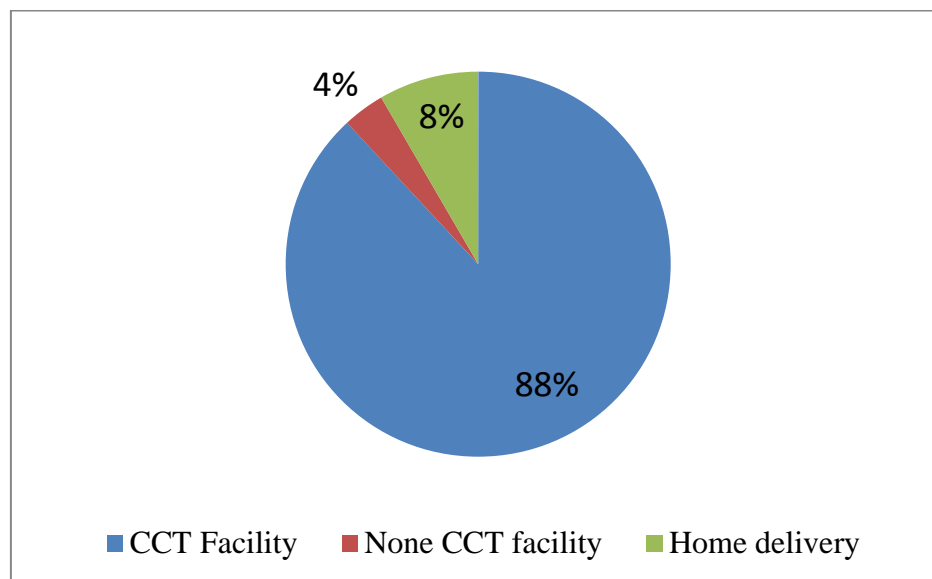
<b>Variables</b>	<b>Freq</b>	<b>%</b>	<b>Cumulative %</b>
<b>Age at first pregnancy</b>			
less than 20 years	221	59.9	59.9
20 years and above	148	40.1	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	
<b>Attendance of Antenatal Care During Pregnancy of the Last Child</b>			
Yes	368	99.7	99.7
No	1	.3	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	
<b>Number of ANC Visits During last Pregnancy</b>			
One	14	3.8	3.8
Two	43	11.7	15.4
Three	98	26.6	42.0
Four or more	214	58.0	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	
<b>Awareness of CCT program by respondents before delivery</b>			
Aware	322	87.3	87.3
Not aware	47	12.7	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	
<b>Knowledge of CCT Criteria among those aware about CCT program</b>			
Yes	179	55.6	55.6
No	143	44.4	100.0
<b>Total</b>	<b>322</b>	<b>100.0</b>	
<b>CCT Awareness period</b>			
End of Third trimester	34	10.6	10.6
During ANC care	192	59.6	70.2
Before starting ANC	56	17.4	87.6
Before pregnancy	39	12.1	99.7
Not sure	1	.3	100.0
<b>Total</b>	<b>322</b>	<b>100.0</b>	
<b>Socioeconomic status (based on monthly consumption)</b>			
Ultra-Poor	264	71.5	71.5
Poor	36	9.8	81.3
Not Poor	69	18.7	100.0
<b>Total</b>	<b>369</b>	<b>100.0</b>	



#### 4.1 Objective 1: Proportion of hospital deliveries attributed to conditional cash transfer

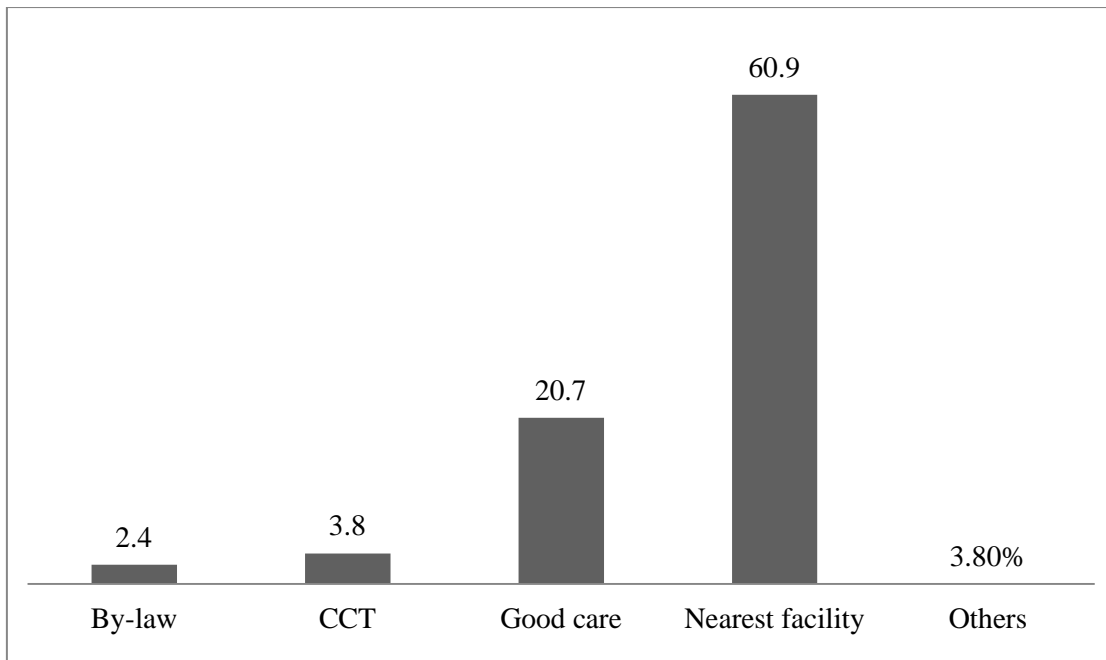
##### 4.1.1 Distribution of respondents by place of delivery

Proportion of the mothers who delivered in hospital refers to mothers who gave birth in hospital whether in a CCT or none CCT health facility, which was assessed through obstetric history. Figure 4.1 below show that majority of the mothers 338 (91.6%) delivered in hospital while 31 (8.4%) delivered away from the facility (Fig 4.1). When hospital delivery is further categorized on facility type, 325 (88.1%) delivered in CCT facilities, 13 (3.5%) in none CCT facilities.



**Figure 4: Place of delivery of last child**

There were various reasons attributing to the use of CCT facilities during delivery, the majority (60.9%) indicated being the nearest facility, 20.7% indicated good care provided in CCT facility, 2.4% indicated social norms (community by-laws) banning home deliveries and only 3.8% indicated CCT as a major reason as shown in figure 4 below.



**Figure 5: Proportion of deliveries attributed to Conditional Cash transfer**

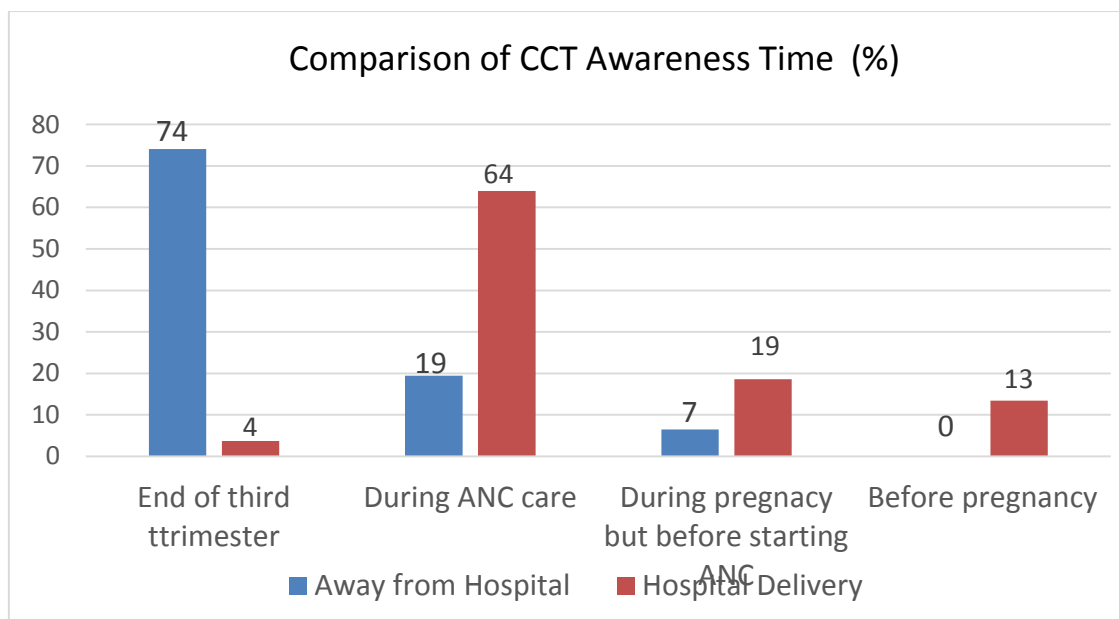
#### **4.1.2 Knowledge of Conditional cash transfer (CCT) program**

Three hundred and twenty two (87.3% of all respondent) were aware that the hospital gives money to women delivering in the facility, all (100%) women who gave birth at home and 291 (78.9%) among hospital deliveries were also aware of CCT program availability. Result from chi-square test show that there is an association between CCT awareness and place of delivery, p-value 0.026 as per table 5 below. When time of CCT awareness is factored in, strength of association is increased, with p-value <0.001 (strong association). On the other hand, there is no association between knowledge of eligibility criteria and place of delivery, p-value 0.541.

**Table 8: Knowledge of Conditional cash transfer program and eligibility criteria**

Factor	Place of delivery		Total , n (%)
	Home	Facility	
<b>Awareness of CCT</b>			
1) Yes	31 (100)	291 (86)	322 (87.3%)
2) No	0 (0.0)	47 (14)	47 (12.7%)
	$(\chi^2= 4.940, df =, p\text{-value} = \mathbf{0.026^*})$		
<b>Time of CCT awareness</b>			
1)Before pregnancy	0 (0)	39 (13.4)	39 (12.1%)
2)Before starting ANC	2 (6.4)	54 (18.6)	56 (17.4%)
3)During ANC	6 (19.4)	186 (64)	192 (59.6%)
Third trimester	23 (74.2)	12 (4.0)	35 (10.9%)
	$(\chi^2= 146.985, df = 4, p\text{-value} = \mathbf{0.000^{**}})$		
<b>Knowledge of criteria</b>			
1) Yes	19 (10.6)	160 (89.4)	
2) No	12 (8.6)	128 (91.4)	
	$(\chi^2= 0.374, df = 2, p\text{-value} = 0.541)$		

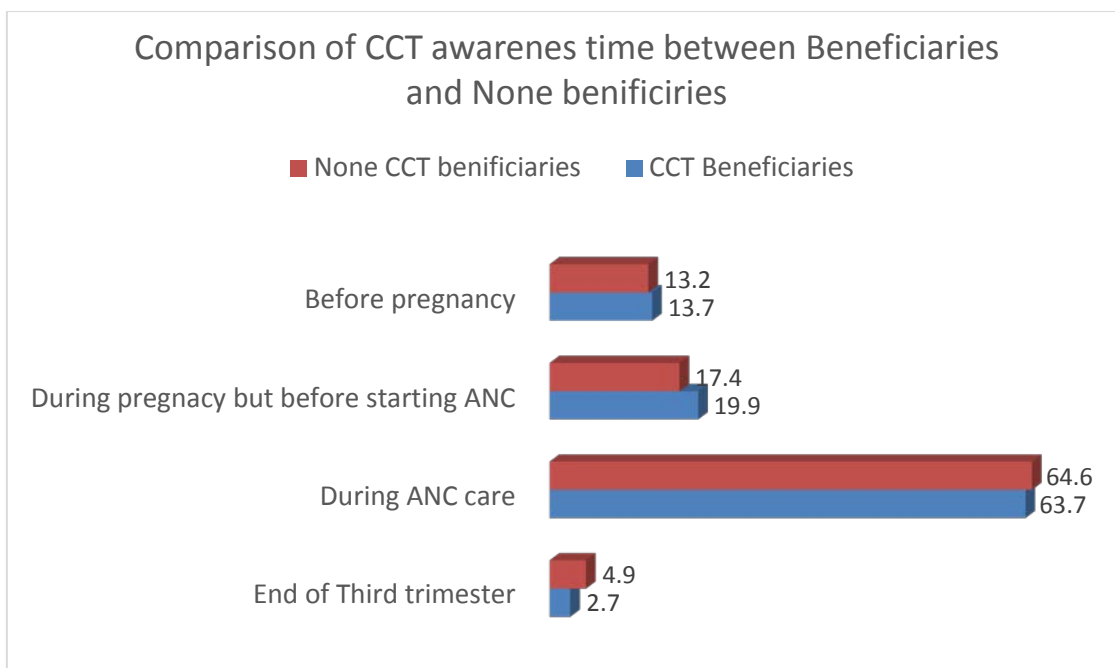
Awareness of CCT program was further explored to determine period of awareness. The majority (74%) of home deliveries knew about CCT in the third trimester and 186 (64%) of hospital deliveries knew in first and second trimester (during antenatal care) as per figure 5.



**Figure 6: Comparison of time of CCT awareness between hospital and home deliveries**

Among those who delivered in CCT facilities, 149 (45.45%) received money and among these, the median expected and received amount of money were MK5600 (5300, 6000) and MK5400 (5300, 5600) respectively. Among these CCT beneficiaries, 144 (96.6%) were aware about CCT as compared to 137 (77.8%) of none beneficiaries.

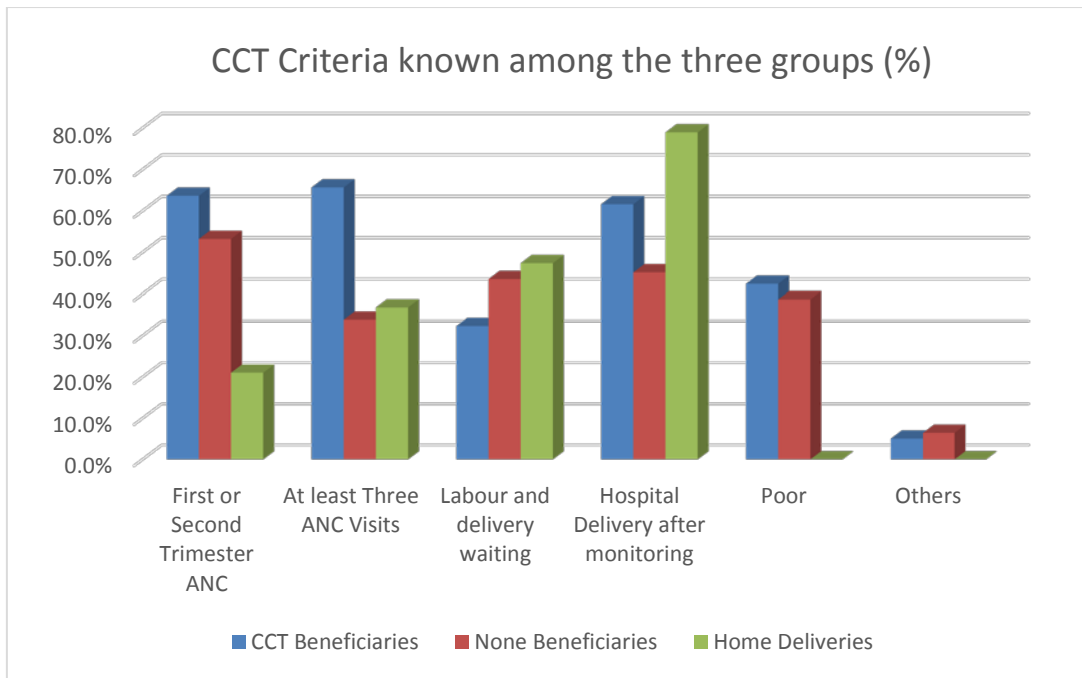
Further comparison of time of CCT awareness between CCT beneficiaries and none beneficiaries shows a narrow difference, with the majority in both groups being aware during antenatal care 93 (64.6 %) and 93 (63.7%) respectively as shown in figure 6.



**Figure 7: Comparison of CCT awareness time between Beneficiaries and None beneficiaries**

#### 4.1.2.1 Knowledge of CCT criteria to qualify to receive money

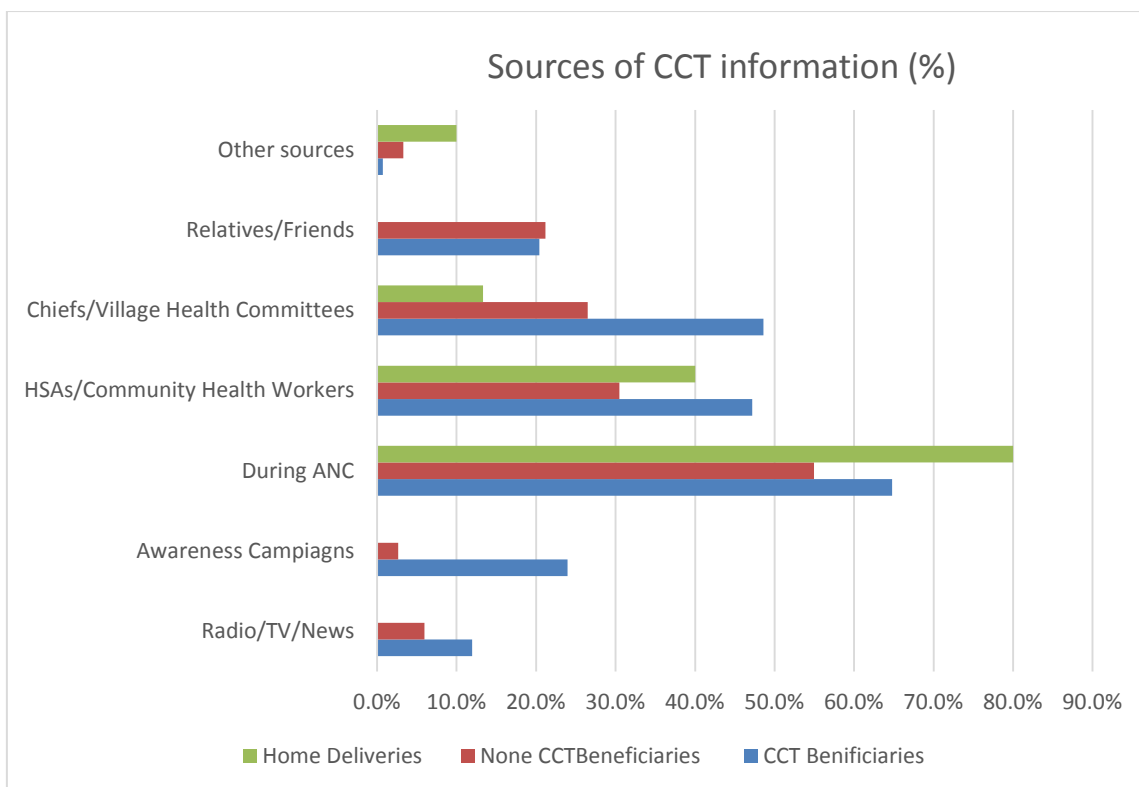
One hundred and sixty (51.52%) of hospital deliveries and 19 (61.3%) of home deliveries were aware about the criteria for receiving the money. Among CCT beneficiaries 99 (66.4%), 62 (32.8%) of none beneficiaries and 30 (96.8%) of home deliveries were able to mention at least one criteria as per fig 4.15 below. of which 62(63.3%) reported attending ANC at least 3 times, 61(62.9%) delivering in the hospital after being monitored during labour while 58 (59.8%) stated that starting ANC in first or 2<sup>nd</sup> trimester as in figure 7



**Figure 8: CCT criteria to qualify to receive money known by respondents**

#### 4.1.2.2 Sources of CCT information

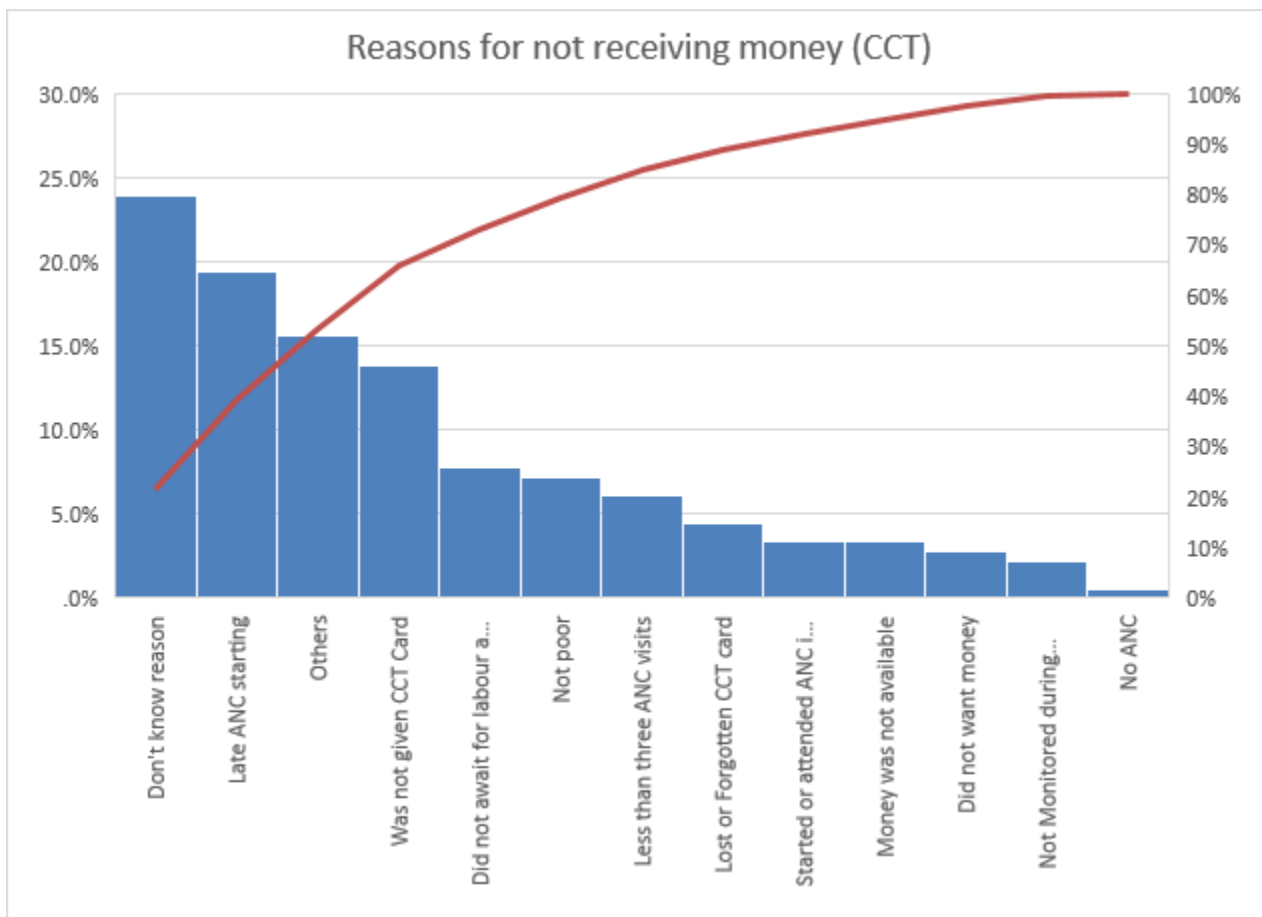
More than half of the women, 92 (64.8%) of CCT beneficiaries, 83 (55%) of none CCT beneficiaries and 24 (55.8%) of home deliveries got the information of CCT program during antenatal (ANC), followed by community health workers 67 (47.2%) of CCT beneficiaries, 46 (30.5) of none CCT beneficiaries, and 12 (40.0% of home deliveries as per figure 8.



**Figure 9: Sources of CCT information**

#### **4.1.2.3 Reasons for failure to receive money among those who gave birth in CCT facilities**

Among those who delivered in CCT facilities, 180 (56.4%) did not receive money and of these 43 (23.9%) did not know the reason, 35 (19.4%) started antenatal care late, 25 (13.9%) were not given CCT card, 6 (3.3%) money was not available, and 4 (2.2%) arrived at hospital in second stage of labour (not monitored during labour) as per fig 9.



**Figure 10: Reasons for not receiving CCT among those who gave birth in CCT facilities**

## **4.2 Objective 2: Socioeconomic, demographic and obstetric characteristics determining hospital utilization in CCT context**

### **4.2.1 Socioeconomic and demographic characteristics**

On duration of stay within the catchment area of the hospital, overall the majority of the mothers have stayed for more than two years 94.1% and majority of these 86% delivered in hospital. Comparing duration of stay and place of delivery there is no significant difference between the groups,  $p$ -value 0.904, Table 6.

The majority of women were between 20-35 years old 81.7%, of these 2.4% (9) delivered away from hospital and 34.4% (127) delivered at hospital. Comparing age and place of delivery it showed that there is no significant difference in place of delivery between age groups,  $p$ -value 0.790.



On ethnicity, majority of mothers were Chewa 52.8%, followed by Ngoni 30.9%. The majority of those who delivered in hospital as well away from hospital were Chewa tribe, 47.4% and 5.4% respectively. Comparison of the Chewa and other tribes on place of delivery showed no significant differences,  $p$ -value 0.7450 as table 4.3 shows.

As regard to education status, the majority 85.9% had attended school at one point in their life while 14.1% had never attended school.  $\chi^2$  test **indicate** some differences in place of delivery between those have been to school and those have,  $\chi^2= 6.240$ ,  $df=1$ ,  $p$ -value = 0.012, which entails having some education may influence place of delivery. On educational level, the majority 68.6% reached primary level. It was interesting to note that 11.7% with no education delivered at hospital more than those who have attended school (6.0%) and delivered at home.  $\chi^2$  test indicate there is a reduction in significance differences among mothers of different education level,  $p$ -value 0.026. Considering education of respondents' partners, majority of 59.7% had primary education, followed by 27.1% secondary education. There was no association between partner education level and place of delivery,  $p$ -value =0.345.

**Table 9: Percentage distribution of mothers by Duration of stay in the CCT hospital's catchment area, Age, Tribe and Education**

	Place of delivery		n (%)
	Home	Hospital	
<b>Respondents' duration of Stay in CCT hospital's catchment area</b>			
1-2 years	2 (0.5%)	20 (5.4%)	22 (5.9%)
More than 2 years	29 (7.9%)	318 (86.2%)	<b>347 (94.1%)</b>
	$\chi^2 = 0.14$ , df =, p-value =0.904		
<b>Respondents age (in years)</b>			
<20	4 (1.1%)	43 (11.7%)	47 (12.7%)
20-24	9 (2.4%)	127 (34.4%)	136 (36.9%)
25-29	10 (2.7%)	88 (23.8%)	98 (26.6%)
30-35	7 (1.9%)	60 (16.3%)	67 (18.2%)
36 and above	1 (3.2%)	20 (5.4%)	21 (5.7%)
	$\chi^2 = 1.703$ , df= 4, p- value 0.790		
<b>Percent Distribution of Respondents by Tribe</b>			
Chewa	20 (5.4%)	175 (47.4%)	195 (52.8%)
Yao	4 (1.1%)	45 (12.2%)	49 (13.3%)
<b>Ngoni</b>	7 (1.9%)	107 (29.0%)	114 (30.9%)
<b>Others</b>	0	11 (3.0%)	11 (3.0%)
	$\chi^2 = 2.642$ , df= 3, p- value 0.7450		
<b>Respondent Education status</b>			
None	9 (2.4%)	43 (11.7%)	52 (14.1%)s
Attended	22 (6.0%)	295 (79.9%)	317 (85.9%)
	$(\chi^2 = 6.240$ , df =1, p-value = <b>0.012*</b> )		
<b>Respondent Education level</b>			
No education	9 (2.4%)	43 (11.7%)	52 (14.1%)
Primary	21 (5.7%)	232 (62.9%)	253 (68.6%)
Secondary	1 (0.3%)	54 (14.6%)	55 (14.9%)
College/Tertiary	0	9 (2.4%)	9 (2.4%)
	$\chi^2 = 9.286$ , df =3, p-value = <b>0.026*</b>		
<b>Partner Education level</b>			
No education	4 (1.2%)	28 (8.2%)	32 (9.4%)
Primary	20 (5.9%)	183 (53.8)	203 (59.7%)
Secondary	4 (1.2%3)	88 (25.9%)	92 (27.1%)
College/Tertiary	0 (0.0)	12 (3.5%)	12 (3.5%)
Others	0 (0.0)	1 (0.3%)	1 (0.3%)
	$(\chi^2 = 4.479$ , df =, p-value =0.345)		

**Table 10: Percent Distribution of Respondents by other socioeconomic and demographic characteristics**

Factor	Place of delivery		Total n (%)
	Home	Facility	
<b>Religion</b>			
Muslim	4(8.2%)	45(91.8%)	49 (13.3%)
Christian	27(8.6%)	288(91.4%)	315 (85.4%)
Traditional	0 (0%)	4(100%)	4 (1.1%)
Others	0(0%)	1 (100%)	1 (0.3%)
$\chi^2= 0.474, df = 3, p\text{-value} =0.925$			
<b>Respondent Occupation</b>			
1) House wife	14 (3.8%)	150 (40.7%)	164 (44.4)%
2) Employed (salaried)	0 (0.0)	7 (1.9%)	7 (1.9%)
3) Casual labour	0 (0.0)	12 (3.3%)	12 (3.3%)
4) Household business	1 (3.4%)	28 (7.6%)	29 (7.9%)
5) Household	16 (10.5%)	137 (37.1%)	153 (41.5%)
Agricultural activities	0 (0.0%)	3 (0.8%)	3 (0.8%)
6) Student	0 (0.0%)	1 (0.3%)	1 (0.3%)
$(\chi^2= 3.879, df = 6, p\text{-value} =0.693)$			
<b>Marital status</b>			
Single	4(12.5%)	28(87.5%)	32 (8.7%)
Married	27(8.0%)	310(92.0%)	337 (91.3%)
$(\chi^2= 0.765, df =1, p\text{-value} =0.382)$			
<b>Partner's Occupation</b>			
1) Household agricultural activities	21 (10.9%)	172 (89.1%)	193 (56.1%)
2) Employed (salaried)	1 (2.3%)	43 (97.7%)	44 (12.8%)
3) Casual labour)	2 (6.9%)	27 (93.1%)	29 (8.4%)
4) Household business	3 (4.3%)	67 (95.7%)	70 (19.0%)
5) Others	1 (14.3%)	6 (85.7%)	7 (2.0%)
6) Student	0 (0.0%)	1 (100.0%)	1 (0.3%)
$(\chi^2= 5.858, df = 5, p\text{-value} =0.320)$			
<b>Size of house</b>			
Bedsitter	4(21.1%)	15(78.9%)	19(5.1%)
One room	8(7.1%)	105(9.2%)	113(30.6%)
Two rooms	9 (6.2%)	135(93.8%)	144(39.0%)
3 or more rooms	10(10.8%)	83(89.2%)	93(25.2%)
$(\chi^2= 5.743, df = 3, p\text{-value} =0.125)$			

Factor	Place of delivery		
	Home	Facility	Total n (%)
<b>Usual Mode of transport to facility</b>			
Walking	21 (10.0%)	190 (90.0%)	211 (57.2%)
Bicycle	5 (6.2%)	75 (93.8%)	80 (21.7%)
Motorcycle	0 (0.0%)	13 (100.0%)	13 (3.5%)
Vehicles	5 (7.7%)	60 (92.3%)	65 (17.6%)
	$(\chi^2= 2.376, df = 3, p\text{-value} =0.498)$		
<b>Duration travelling to facility</b>			
<30 mins	7(7.3%)	89 (92.7%)	96 (26.0%)
30-60 mins	8(5.7%)	133(94.3%)	141(38.2%)
>1-2 hours	9(11.4%)	70(88.6%)	79 (21.4%)
>2 hours	7(13.2%)	46(88.6%)	53 (14.4%)
	$(\chi^2= 4.026, df = 3, p\text{-value} =0.259)$		
<b>Median Household consumption (IQR) Monthly consumption</b>	\$14 (\$7, \$31.5)	\$18 (\$14, \$42)	\$17 (14, 42)
	$(\chi^2= 1.329, p\text{-value} =0.185)$		
<b>Household Monthly Consumption</b>			
Ultra-poor (<32 USD)	25 (9.5%)	239 (90.5%)	264 (71.5%)
Poor (32 USD-52 USD)	3 (8.3%)	33 (91.7%)	36 (9.8%)
Others (>52 USD)	3 (4.3%)	66 (95.7%)	69 (18.7%)
	$(\chi^2= 1.8865, p\text{-value} =0.394)$		
<b>Median Number of people living in the house</b>	4 (3, 6)	4(3, 6)	4 (3, 6)
	$(\chi^2= 0.314, p\text{-value} =0.746)$		

#### 4.2.2 Obstetric characteristics

The median age in years (Interquartile range) at first pregnancy was 19 (18, 20). There is a significant association between place of delivery and age at first pregnancy,  $p$ -value = 0.023 as in table 4.9. The median number of pregnancies and live births (IQR) ever had were 2 (1, 4). Hundred and twelve (30.4%) of the deliveries were first birth order children, 97 (26.3%) second birth order while 58 (15.7%). There is no significant association between birth order and place of delivery,  $p$ -value 0.181.

Majority of the mothers 368 (99.7%) attended ANC of which 214 (58.0%) attended 4 or more ANC visits. The results of chi-square test show that there is no significant association between antenatal care attendance and place of delivery,  $p$ -value 0.762. However, there is a strong association between number of visits and place of delivery,  $p$ -value 0.003. A strong association also exists between gestation age at start of antenatal care and place of delivery,  $p$ -value 0.031.

Majority of the mothers, 303 (82.1%) were aware about danger signs during pregnancy and delivery of which 262 (86.2%) reported vaginal bleeding, 113 (30.6%) convulsions/Fits while 121 (39.8%) swelling of hands/face. As shown in table 4.9 below, there is no association between knowledge of dangers signs and place of delivery,  $p$ -value 0.468. Eighty-three (22.5%) of the mothers reported to have had complications during pregnancy of the current child while 50 (13.6%) during pregnancy of previous child/children. The results further show no association between history of obstetric complication and place of delivery. Table 4.3 below summarizes obstetric factors.

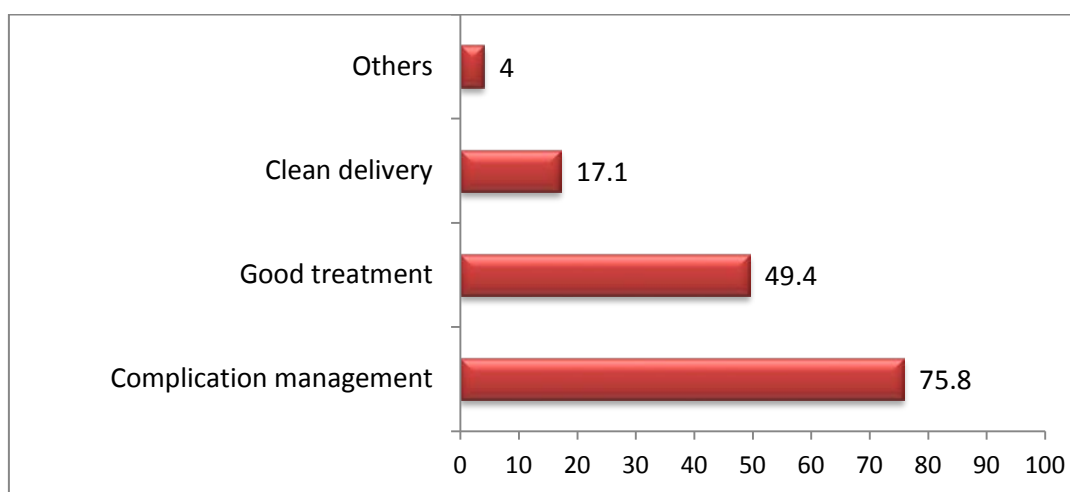
**Table 11: Percent Distribution of Respondents' Obstetric characteristics and place of delivery**

Factor	Place of delivery		Total, n (%)
	Home	Facility	
<b>Birth order of last delivery</b>			
1) First	5 (18.5%)	79 (28.6%)	84 (27.7%)
2) Second	5 (18.5%)	79 (28.6%)	84 (27.7%)
3) Third	6 (22.2%)	46 (16.7%)	52 (17.2%)
4) Fourth	5 (18.5)	36 (11.9%)	36 (11.9%)
5) Fifth or more	6 (22.2%)	47 (15.5%)	47 (15.5%)
$(\chi^2 = 4.214, df = 4, p\text{-value} = 0.378)$			
<b>Knowledge of danger signs during pregnancy/delivery</b>			
1) Yes	27 (8.9)	276(91.1)	
2) No	4 (6.2)	61 (93.8)	
$(\chi^2 = 0.527, df =, p\text{-value} = 0.468)$			
<b>Age in years at 1<sup>st</sup> pregnancy (Median)</b>	18 (17, 20)	19 (18, 20)	19 (18, 20).
	$(\chi^2 = 2.287, df =, p\text{-value} = \mathbf{0.023^*})$		
<b>Pregnancies ever had (Median)</b>	3 (1, 4)	2 (1,4)	2 (1, 4)
	$(\chi^2 = 1.288, p\text{-value} = 0.208)$		
<b>Attendance of ANC</b>			
1) Yes	31 (8.4%)	337 (91.6%)	368 (99.7%)
2) No	0 (0%)	1 (0.3%)	1 (0.3%)
$(\chi^2 = 0.92, df = 1, p\text{-value} = 0.762)$			
<b>Number of ANC visits attended</b>			
1) One	1 (7.1)	13 (92.9)	14 (3.8%)
2) Two	8 (18.6)	35 (81.4)	43 (11.7%)
3) Three	13 (13.3)	85 (86.7)	98 (26.6%)
4) Four or more	9 (4.2)	205 (95.8)	214 (58.0%)
$(\chi^2 = 13.755, df = 3, p\text{-value} = \mathbf{0.003^*})$			

Factor	Place of delivery		Total n (%)
	Home	Facility	
<b>Gestation at start of ANC during pregnancy of last child</b>			
1) First trimester	7 (4.4)	152 (95.6)	152 (45.0%)
2) Second trimester	17 (9.9)	154 (90.1)	154 (45.6%)
3) Third trimester	7 (18.4)	31 (81.6)	31 (9.2%)
4) Don't know	0 (0.0)	1 (100.0)	1 (0.3%)
(χ <sup>2</sup> = 8.880, df = 3, p-value = <b>0.031*</b> )			
<b>Knowledge of Danger Signs During Pregnancy and Delivery</b>			
1) Yes	27 (8.8)	276 (91.1)	303 (82.3%)
2) No	4 (6.2)	61 (93.8)	65 (17.7%)
(χ <sup>2</sup> = 0.527, df = 1, p-value = 0.468)			
<b>Previous child delivery place</b>			
1) Away	2 (0.7%)	18 (6.6%)	20 (7.3%)
2) Hospital	23 (8.5)	228 (90.8)	251 (92.6%)
(χ <sup>2</sup> = 0.015, df = 1, p-value = 0.901)			
<b>Obstetric Complications During Pregnancy of Previous Child/children</b>			
1) Yes	2 (3.6)	53 (94.4)	55 (20.3)
2) No	22 (10,2)	194 (89.8)	216 (79.7)
(χ <sup>2</sup> = 2.329, df = 1, p-value = 0.127)			
<b>Knowledge of Importance of Hospital Delivery</b>			
1) Yes	29 (8.3)	322 (91.7)	351 (95.4)
2) No	2 (11.8)	15 (88.2)	17 (4.6%)
(χ <sup>2</sup> = 0.258, df = 1, p-value = 0.612)			

#### 4.2.1 Knowledge of importance of Hospital delivery

Majority of the mothers 351(95.1%) had ever heard about importance of hospital delivery of which 266(75.5%) reported complication management, 174(49.6%) good treatment while 60 (17.1%) clean delivery as shown fig 10 below.



**Figure 11: Importance of hospital delivery**

#### **4.2.2 Importance of Hospital delivery from qualitative results**

The study further attempted to establish a detailed understanding of the factors influencing choice of delivery place from mothers' perspectives through FGDs. Mothers were recruited into three groups of eleven to twelve participants each and the following themes/issues emerged during the FGDs

##### **4.2.2.1. Complication management**

In FGDs mother indicated that the most important for hospital delivery was complication management. *“You can decide to give birth at home but what if you lost a lot of blood! By the time you will be reaching hospital you are in critical condition. However, if you give birth at hospital and you happen to lose blood, some have the expertise to help you.”*

*“Others can start draining liquor. They are able to help you at the hospital. You can start draining liquor before months [gestation] or before time [of delivery].*

*“...It can happen that the baby is in bad position [malposition] and at home you cannot manage to deliver well but doctors can be able to see and make a decision...”*

##### **4.2.2.2 Comprehensive care**

Participants also indicated that at hospital you receive comprehensive as compare to traditional birth attendants. *“When you feel pain, you rush to hospital to give birth. They care for you... Unlike at traditional birth attendant”*



### 4.2.3 Binary Logistic Regression of significant factors associated with hospital delivery

Factors associated with place of delivery were assessed with  $\chi^2$  at 0.05 significance level. A logistic regression was performed on factors that were significant with  $p$ -value less than 0.05 to ascertain the effects of education status, age at first pregnancy, gestation at first ANC visit, number of ANC visits, and Time of CCT awareness on the likelihood that participant delivers at hospital. The logistic regression model was statistically significant,  $\chi^2 (4) = 55.605$ ,  $p < .001$ . The model explained 31.9% (Nagelkerke R<sup>2</sup>) of the variance in place of delivery and correctly classified 91.6% of cases. Time of CCT awareness ( $p = <0.001$ ) and Number of ANC visits ( $p = 0.030$ ) added significantly to the model/prediction, but age at first pregnancy ( $p = .160$ ), Gestation at first ANC visit ( $p = 0.305$ ) and education status ( $p = 0.415$ ) did not add significantly to the model.

**Table 12: Factors associated with hospital delivery-Binary Logistic Regression**

Variables	B	S.E.	Wald	d f	Sig .	Exp( B)	95% C.I. for EXP(B)	
							Lower	Upper
Time of CCT Awareness	2.483	.448	30.64 9	1	.00 0	11.97 2	4.971	28.83 1
Number of ANC Visits	1.009	.465	4.720	1	.03 0	2.744	1.104	6.822
Age at first pregnancy	.683	.486	1.978	1	.16 0	1.980	.764	5.132
Gestation at first ANC visit	.517	.504	1.052	1	.30 5	1.676	.624	4.500
Education Status	.404	.496	.664	1	.41 5	1.498	.567	3.960
Constant	-.148	.470	.099	1	.75 3	.862		

The above table shows that holding other things constant, the odds of delivering at hospital for women who were aware of CCT before and during first trimester (early pregnancy), over the women who were not aware is 11.97 ( $p < 0.001$ ). Hence, suggesting that CCT awareness significantly predict facility delivery. Furthermore,

women who attended four or more ANC visits are likely to deliver at hospital (odds 2.74) than the ones who had less than four ANC visit.

#### **4.1.3 Factors attributing to utilization of CCT facility from Focus group discussions**

In both CCT and none CCT beneficiary focus group discussions, participants explained a number of reasons for choosing the health facility for delivery. Emerging themes included professional advice, local norms, obstetric complications, limitation of traditional birth attendants,

#### **Theme 1: Awareness and Understanding of CCT program**

Subtheme 1.1 Delivered in hospital but had no clear information about how to qualify for CCT

*I did not know the reason... I went and awaited [for labour and delivery]... I was not given [CCT] card.*

*“the message was heard indeed, that there is free money at hospital, but for me I got details when I was pregnant and after starting antenatal care. But I started late and because of that I was not even given the [CCT] card...”*

Subtheme 1.2: Did not anticipate CCT but delivered in hospital anyway

Some participants went for hospital delivery despite knowing that they will not receive money.

*“...some of us were told you have started antenatal care late. Therefore, they did not give us cards. If we knew we could have gone earlier...”*

#### **Subtheme 1.1: Professional advice and education during antenatal care**

Some participants attributed their coming to hospital for childbirth as following advice and education they received during antenatal care from health care providers.

*“Nurses always advise us to prepare for delivery. They even ask you where will you give birth...then shouldn't you come to hospital” (CCT recipient)*

### **Theme 2: Local/Community Maternal and new-born health norms (by-laws)**

Some mothers indicated that they went to hospital to avoid paying penalties to chiefs for giving birth at home.

*“Safe motherhood has brought bad things of paying penalties if you give birth at home....”Where could one get a goat (for paying the penalty of home delivery)?... we just have to give birth in hospital” (none CCT recipient).*

### **Theme 3: Fear of obstetric complications and perceived Traditional Birth Attendants (TBA) limitations**

Some respondents indicated fear of complications and incompetence of traditional birth attendants to manage complications made them utilize the hospital during delivery.

*“Sometimes you can give birth without problems (at TBA) but it might be that the baby is asphyxiated. At home, the TBA cannot manage to treat birth asphyxia unlike at hospital, they take that child and place on oxygen as the result the baby survive and will be with you (will be alive)” (CCT Recipient)*

*“... sometimes when you are giving birth, it is possible to have inadequate blood [anaemia]... so at TBA they can't manage to give you blood unlike at hospital you are given blood...” (CCT recipient).*

*“... I can think of giving birth at home...Maybe I need an operation...The TBA cannot do operation.... We start off and go to hospital”*

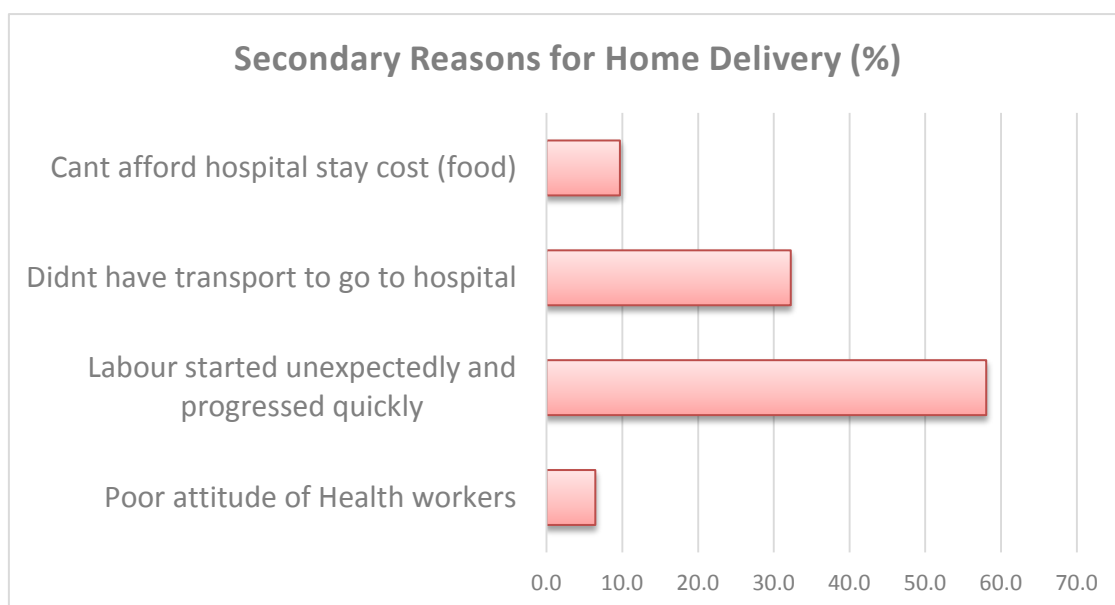
*“... it is possible to give birth at TBA, then BP (Blood pressure) rises, will it be possible to do the job [labour and delivery] very well?. It is a very big problem when you deliver at home or TBA....We just run to hospital”*

### 4.3 Objective 3: Factors influencing home deliveries in the context of Conditional Cash transfer.

Factors influencing home deliveries were solicited from participants who gave birth at home in structured interviews as well as Focus group discussions as follows:

#### 4.3.2 Factors influencing home deliveries findings from structured interviews

Thirty (96.8%) of those delivered at home at one point planned to give birth in the hospital. Eighteen (58.1%) cited starting and quick progression of labour as the reason for changing initial plan, 10 (32.3) did not have transport and 2 (6.5%) poor attitude of health care workers and 3 (9.7%) indicated could not afford cost for hospital stay as per fig 11.



**Figure 12: Reasons for home delivery**

Among those who gave birth at home, 20 (64.5%) wished to go to hospital during delivery. Among these, 14 (45.2%) wanted to receive professional care, 4 (12.9) had complications, and 2 (6.5%) did not receive good care. 29 (94.6%) were aware of importance of hospital delivery.

### **4.3.2 Factors influencing home deliveries from qualitative results (FGDs)**

FGDs explained a number of client factors influencing home deliveries. A number of themes emerged from FGDs. Themes include socio-economic status, previous hospital experience, Knowledge and Belief about Conditional Cash transfer, and distance to health facility influenced the decision of where to give birth. These included the following:

#### **Theme 1: Socio-economic status**

Low socioeconomic status led to home delivery for some participants as shown by below sub-themes.

##### **Sub-theme 1.1: Lack of transport (money) to go to hospital explained below:**

*P1: “You know, going to hospital requires transport,...I did not have transport to go hospital... So what could I have done...Even my husband manganyu (casual labour) did not work. It is difficult.... Even if they say waiting, in dry season where could we get the food”*

##### **Sub-theme 1.2: Hospital stay cost**

Cost associated with hospital stay, especially lack of food, to await for labour and delivery was a barrier among the mothers as explained by P1: “... *It is difficult.... Even if they say waiting, in lean season where could we get the food... I thought about it, if I go at 8 months where could I get the food. People stay there [hospital] for a month or even beyond”*

#### **Theme 2: Distance to hospital**

Distance to health facilities also influenced home delivery as shown by below sub-themes:

##### **Subtheme 2.1 Long distance to hospital**

Lack of transport is compounded by the distance as some participants felt distance to hospital was also a barrier.

*P2 “some of us where we are coming from is far, far for you to reach the hospital, the distance is long for you to reach hospital”*

### **Subtheme 2.2 Lack of means to travel to health facility quickly**

*P2: ...what is required is you to leave your home and reach the hospital to give birth in a good place. For you to travel it is difficult, you walk, you are not using a bicycle, you are walking...we don't have money to board [a vehicle] to reach trading centre then to hospital"*

Another participant collaborated. P6: *"...even if you have money, in my place there are no vehicles, no motorcycles even those operating bicycles...so how do you go to hospital!"*

### **Theme 3: Previous hospital experience during labour and delivery**

Participants explained the condition they gave birth in during previous pregnancies that led to shunning of hospital for delivery.

#### **Sub-theme 3.1: Negligence by Midwives and other care providers**

Incidence of negative hospital experiences during previous births were also cited. P3: *"..you meet uncaring doctor [Midwives] while you are in pain... that time instead of caring for you, the doctor [Midwives] is busy doing own things...we experience complications because some doctors [Midwives] neglect us. They do other things while it is your time to give birth... Most of the days people experience complications there... Some doctors are cruel. Things happen there [Hospital]"*.

Another participant, concurring with P3, explained that care providers have different attitude. You give birth unattended to by care provider.

Another participant (P5) explained her previous hospital experience, *"During my first delivery I had retained [retained products of conception]...the doctor just took care of the baby and I was told to wake to dress though I had retained...It took time for me to be assisted, I stayed for long suffering [pain]*

#### **Sub-theme 3.2: Poor attitude of Midwives and other care providers**

*P4: "Doctors are different, you meet those with positive attitude and some are not. Some are just cruel. You feel that this is your time and he keep telling you to wait first...The time you are giving birth he is somewhere walking around,... he comes and*

*scold you... 'just this time you have already given birth'...There are different things happening there [Hospital]''*

Some participants took effort to give birth at hospital but labour started at a time they didn't expect, progressed quickly and ended up delivering at home “...*but the devil prevented us from receiving that money [CCT]. I was given [CCT] card but the devil stood firm, and I failed to receive the money [because of failing to give birth at hospital]...*”

#### **Theme 4: Understanding of Conditional Cash Transfer**

Some participants different understanding of and brief about CCT as shown below

##### **Sub-theme 4.1: Poor understanding of Conditional Cash transfer program**

Some participants expressed lack of proper understanding of Conditional Cash transfer program

*P7 “There is a lot being said about this money [CCT]. The exact truth is not known... This is big issue. [CCT]...”*

##### **Subtheme 4.2 CCT Program awareness strategies and late awareness of the program**

Participants in FGDs indicated poor understanding and late awareness of the CCT program, as they were only made aware during antenatal care.

*P10: “...some of us were told you have started antenatal care late. Therefore, they did not give us cards. If we knew we could have gone earlier...”*

##### **Sub-theme 4.2 Briefs, Myths and misconceptions about CCT program**

FGD participants who delivered in hospitals also raised a number of issues are cited as encouraging home deliveries. There are myths and misconceptions about CCT. Some mothers alluded to that they were being discouraged to give birth in hospital as they will be selling their wombs (uterus) in exchange of the money (CCT).

*P8: “There are others who are discouraging friends, they say the money [CCT money],.. they sell your womb and what you are given (money) is just a portion of that*

*money... This issue, we need to discuss seriously so that, may be, this practice should be stopped because it's disturbing a lot"*

This was collaborated by other participants in other groups who delivered in hospital.

*"Especially those who don't go to hospital, who gives birth at home are the ones speaking this"*

*...Yes!, that we have exchanged, they take our womb and we get 5000 ([Malawi Kwacha])"*

*"That is what is said. This is bigger issue about money [CCT]"*

*"For me they said, after giving birth a little time would pass then they come to squeeze on the abdomen after that you discharge things [blood clots] tight! Yeah! They say they take those things..."*

#### **4.4. Objective 4: Perception towards intrapartum care and future intentions to deliver at CCT facility**

##### **4.4.1 Perception towards intrapartum care**

Mothers perception or rating of intrapartum care in the hospital was assessed only among mothers who had given birth in the hospital. Mothers were asked a set of five questions to rate their satisfaction with care, friendliness of care providers, comfort of giving birth at the facility, likelihood of delivering in the facility in future and likelihood of encouraging others to deliver in hospital on a 5-point Likert scale. The Likert scores were further categorized into two categories during analysis. Others included what they liked most and did not like during intrapartum care. Two hundred eighty one (86.5%) mothers were satisfied with care, 260 (80.0%) indicated health care providers were friendly, 289 (88.9%) were comfortable giving birth in the facility, 271 (83.4%) were likely come again to the facility in future, 267 (82.2%) were likely to encourage others to give birth at the facility. Care and treatment was liked most by 195 (60.0%), followed by warm attitude of care providers 58 (17.8%). Among what respondents did not like, 48 (14.8%) indicated care and treatment and 28 (8.6%) indicated poor attitude (harsh) of care providers as per Table 10 below.



**Table 13: Perception towards intrapartum care in CCT facilities and future intentions to deliver at health facility**

	<b>Perception / future intention</b>	<b>n (%)</b>
<b>A</b>	<b>Satisfaction with care</b>	
	1) Not satisfied	46 (14.1%)
	2) Satisfied	279 (85.8%)
	<b>Satisfaction with care (5 Point Scale)</b>	
	1) Very unsatisfied	2(0.6%)
	2) Unsatisfied	12(3.7%)
	3) Somewhat satisfied	30(9.2%)
	4) Satisfied	153(47.1%)
	5) Very satisfied	128(39.4%)
<b>B</b>	<b>Health care providers friendliness during labour and delivery care</b>	
	1) Unfriendly	65(20.0%)
	2) Friendly	260 (80.0%)
	<b>Health care providers friendliness during labour and delivery care (5 Point Scale)</b>	
	1) Very unfriendly	2 (0.6%)
	2) Unfriendly	10 (3.1%)
	3) Somewhat friendly	53 (16.3%)
	4) Friendly	134 (41.2%)
	5) Very friendly	126 (38.8%)
<b>C</b>	<b>Comfort to give birth at facility</b>	
	1) Not Comfortable	36 (11.1%)
	2) Comfortable	289(88.9%)
	<b>Comfort to give birth at facility (5 Point Scale)</b>	
	1) Very uncomfortable	1 (0.3%)
	2) Not comfortable	13 (4.0%)
	3) Somewhat comfort	29 (8.9%)
	4) Comfortable	156 (48.0%)
5) Very comfortable	126 (38.8)%	
<b>D</b>	<b>Liked something most during labor &amp; Delivery care</b>	
	1) Yes	302 (92.9%)
	2) No	23 (7.1%)
	<b>Liked most during labor &amp; Delivery care</b>	
	1) Privacy and Confidentiality	21 (6.0%)
	2) Warm attitude of caretakers	58 (17.8%)
	3) Care and treatment received	195 (60.0%)

	4) Received money (CCT)	8 (2.5%)
	5) Other	8(2.5%)
	6) Nothing	23 (7.1%)
<b>C</b>	<b>Respondents did not like something During labour and delivery care</b>	
	1) Yes	94 (28.9%)
	2) No	231 (71.1%)
	<b>Did not like during labour &amp;delivery</b>	
	1) Lack of privacy and confidentiality	10 (3.1%)
	2) Poor attitude (harsh)	28 (8.6%)
	3) Poor care and treatment	48 (14.8%)
	4) Did not receive CCT	5 (1.5%)
	5) Water problem and hygiene	4 (1.2%)
	6) Nothing (Liked everything)	231 (71.1%)
<b>D</b>	<b>Likelihood of giving birth in this hospital in future</b>	
	1) Likely	271 (83.4%)
	2) Unlikely	54 (16.6%)
	<b>Likelihood of giving birth in this hospital in future</b>	
	1) Very unlikely	10 (3.1%)
	2) Unlikely	11 (3.4%)
	3) Not sure	33 (10.2%)
	4) Likely	146 (44.9%)
	5) Very likely	125 (38.5%)
	<b>E</b>	<b>Likelihood of encouraging others to deliver in this hospital</b>
1) Unlikely		267 (82.2%)
2) Unlikely		58 (17.8%)
<b>Likelihood of encouraging others to deliver in this hospital</b>		
1) Very unlikely		11 (3.4%)
2) Unlikely		31 (9.5%)
3) Not sure		16 (4.9%)
4) Likely		159 (48.9%)
5) Very likely		108 (33.2%)
<b>F</b>		<b>Preference of delivery place for future pregnancies</b>
	1) This hospital	287 (88.3%)
	2) Another Hospital	37 (11.4%)
	3) Home/TBA	1 (0.3%)

#### 4.4.2 Perception towards intrapartum care from Focus Group Discussions

Perception towards intrapartum care and future intentions to deliver at CCT facility was also discussed in FGDs. Participants had different perception towards intrapartum care. , with the majority indicating hospitals provide good care though there are some challenges in general. The following themes emerged from both CCT beneficiaries and non-beneficiaries groups:

##### **Theme 1: Care and treatment**

Different subthemes emerged about care and treatment in CCT facilities as presented below:

##### **Subtheme 1.1: Dedicated and committed care providers**

*“... they said there are two but they are not in good position. I was told to sign [consent] to go to theatre. ... they took a drip [intravenous fluids] and fixed it on me. ...they tried so that I give birth [spontaneously]. This baby came first but was not in good position, buttocks came first [breech presentation]. Then I waited for second child to come.... However, the way they welcomed me! I was able to appreciate based on what I saw. While other people do complain of not being helped [cared for]. However, for myself, ...they helped [cared for] me a lot. From that day I take them [care providers] as my relatives. May be I could have lost my life because of that. So most of the time I encourage others that we should not undermine going to hospital. However, one child died because was like sick somehow...”* (None CCT Recipient).

##### **Subtheme 1.2: Good standard of care**

*“ I was very happy, I came back with a live baby. They cared for me according to how the hospital is supposed to care for a person. I appreciated a lot...”*(CCT Recipient)

*“...I delivered in the hospital,...the care was surely good. They did everything accordingly until time of discharge.... I was very satisfied, with no problem with doctors. In addition they gave us a date to come back [for review]. We came ...to*

*show the umbilicus. They gave us vaccines. Isn't that the care!... That is safe motherhood care.... Could safe motherhood be beyond this!' (None CCT Recipient).*

*"... I didn't find any problem with health care workers. They assisted me well, so I'm just praying that they should continue caring like that" (None CCT Recipient).*

### **Subtheme 1.3: Positive attitude, warm welcome and continuous presence of Midwives during labour and delivery**

Mothers valued the warm welcoming and continuous presence of the midwife during intrapartum care.

*"I also delivered well... When I went to hospital, the nurse welcomed and assisted me very well. I was never left alone till time of delivery" (CCT Recipient).*

*"...when I reached ... [Health centre] I was told to wait....passage [cervix ] was still closed. ..At 6 o'clock they examined me again .... It was still the same [no cervical dilatation]. But my doctor did not leave me. We were together... from Sunday to Monday..... I gave birth on Tuesday at 4 o'clock...e birth while they were still there... The nurse [Midwife] reached a point of helping me but the thing [baby] was not descending. Then at that time they put a drip [infusion fluids] on me, saying 'No. you , you are not going to Dedza [referral facility], but surely you will give birth right here. So I appreciate from deep down my heart. Even when we meet I appreciate that [she/he] is a powerful doctor [Midwife]" (none CCT recipient).*

### **Subtheme 1.4: Poor attitude and negligence by care providers**

Some FGD participants felt the attitude of care providers was not good and they were neglected during delivery.

*"...Myself, I gave birth on my own [without care provider]. They examined me and told me it's not yet time. Then I told them how I was feeling [labour pains] ... I remained there in hospital [labour room] and when I called them, they kept telling me it is not time, until I delivered on my own... The time they [care providers] were coming I was already done". (None CCT recipient).*

Respondents also identified areas that they were not happy with during intrapartum care. The included untimely response by care providers.

*“ I wasn’t pleased ...my baby [fetus] stayed for long time before I was assisted by the nurse...the baby [fetus] stayed for long [prolonged first stage of labour]. .... this did not please me but the rest was okay’’. [CCT recipient]*

*“...instead of holding my baby... they were busy talking...my mother in-law was scolded. Then after that... they provided care [to baby] then they placed [it] on bed nicely. I said within myself, better this way”*

*..”My friend complained to me... she stayed for long time till membranes ruptured...whenever she went to labour room, she was being told to go back until membranes ruptured while she was alone. They started like attending to her when they saw the membranes have ruptured...” (CCT Recipient) .*

*“.... When I arrived they [care providers] did not attend to me. They behaved as if they have just seen a normal [not in labour] person. They didn’t even care that I was in pain...” (CCT Recipient).*

## **Theme 2. Staffing levels of Midwives and other care providers**

### **Subtheme 2.1 Insufficient Midwives, Heavy workload and overburden**

Some participants felt the care was good but due to high volume of clients they couldn’t provide comprehensive care and they suggested possible solutions and recommendations.

*“...about doctors [Midwives]... I can say...doctors seem to be inadequate. May be if they add some, maybe’. (None CCT Recipient).*

*“...I’m thinking may be just to advise them that they should be working well... They should be helping people when they come [at hospital], though sometimes the nurse [Midwife] is alone” (None CCT Recipient).*

#### 4.2.3. Preferred delivery place for future pregnancies and reasons

During FGDs mothers were asked about their preferred delivery place in future given the chance to choose. Most mothers indicated they could choose the same hospital so that they receive good care. Some indicated they could go to another hospital, with a few stating they could not go to hospital but traditional birth attendant because of health care workers attitude.

“ I can choose hospital so that so that the doctor should see me ”. (CCT Recipient).

*“at hospital and TBA, they are different. I’m saying, hospital and at TBA they are surely different...I could go to hospital to receive good care”* (None CCT Recipient).

*“I have to give birth at hospital because I see the goodness than at TBA. At home you can as well get cruelty more than the doctors...”* (CCT Recipient).

*“I can give birth at the hospital because of the law [by-laws against home deliveries]... Otherwise I cannot go there [Hospital]. I can’t...”* (CCT Recipient).

## CHAPTER FIVE

### DISCUSSION

#### **5.1. Proportion of mothers delivering in CCT health facility attributed to CCT program**

Hospital birth is considered significant since it exposes mothers and their newborns to a safe environment with supervision of skilled birth attendants and other personnel. In this study, the majority of the mothers had delivered in hospital. Considering that this study was conducted in hospitals, those who had delivered there were likely to come back for postnatal checkup and immunization. This could explain why there were a small proportion of home deliveries. However, similar findings are reported in the Malawi demographic and health survey, with 91.9% and 91.4% hospital delivery for Dedza and Malawi respectively (NSO & ICF, 2017). This survey being conducted across the district including the remotest areas and catchment areas of hospitals not providing CCT. The general expectation is hospital delivery would be much higher in facilities providing CCT. Therefore, the findings in this study suggest that there is no difference from the rest of 28 Districts of Malawi. However, among the four Districts implementing CCT program, Dedza had the lowest hospital delivery in comparison to Mchinji (94.2%), Ntcheu (94.1%) and Balaka (93.7) as per the 2015-2016 Malawi Demographic and Health Survey (NSO & ICF, 2017).

The study findings show increase in hospital delivery but only a small proportion of women giving birth in hospital attributed it to CCT program. This is in consistent with India's Janani Suraksha Yojana (JSY) where evidence showed increase in proportion of hospital births from a pre-programme average of 20% to 49% in 5 years but they were unable to neither quantify it nor attribute it to the JSY (Randive et al., 2013). However, in this study, when awareness of the program including time of awareness is factored in, early CCT awareness significantly predicts hospital delivery. This indicates the significant role CCT program is playing in wooing mothers to give birth in hospital. But caution need to be exercised as results from other studies also show contrasting findings by different researchers. For example, on the Mexico CCT program, using data from the District Level Health Survey, the results showed the likelihood of all eligible women delivering in a health facility was raised by 4

percentage in first two years and further asserts that the effects of the programme took some time to emerge, with only an increase of 7.2% in hospital delivery in the following two years (Debnath, 2016).

## **5.2 Social and Demographic factors determining hospital delivery**

### **5.2.1 Socio-economic and demographic factors**

The highest percentage of women in this study were within the recommended child bearing age bracket of 20-35 years, however the mean age at first pregnancy indicates most mothers started child bearing outside the recommended age bracket. Therefore increasing the risk for obstetric complications. This study has also found that some socio-demographic factors did not appear to influence place of delivery. These included duration of stay in the hospital catchment area, age, marital status, household monthly consumption, tribe, and religion, partner education, occupation, size of household, and distance to hospital. This is in sharp contrast to studies to several studies that have reported significant association.

Only mother education status had association with place of delivery. Education increases understanding of the importance of skilled birth attendance at birth, hence this could be an explanation for the finding. This agrees with a study by Belda and Gebremariam( 2016) where they report a strong association (p-value <0.01). However, logistic regression shows education had no significance in predicting hospital delivery. In contrast, various studies state an association between factors such as income, education, ethnicity, religion, culture, age, and marital status to use health facility for childbirth. Emelumadu et al., (2014) reports significant association between age ( $\chi^2 = 14.8, P < 0.01$ ), marital status ( $\chi^2 = 12.2, P < 0.01$ ), educational status ( $\chi^2 = 32.6, P < 0.001$ ) and parity ( $\chi^2 = 11.5, P = 0.02$ )

Most women did not have formal employment and the majority had a monthly consumption NSO (2012) categorizes as ultra-poor. This is not surprising as the results in this study shows that the majority had primary level of education therefore reducing the chances of securing formal employment. Other studies have also indicated low education attainment and high level of poverty in Dedza District of



Malawi as compared to other districts (Ministry of Health, 2015; National Statistical Office & ICF, 2017).

The quantitative aspect of this study shows no association between socioeconomic status and utilization of labour and delivery services. However, qualitative findings reveals that women failed to report to hospital due to lack of money for transport and food for hospital stay. Similar qualitative findings are reported by other studies in Uganda (Wilunda et al., 2014), where poverty and lack of food at home and health facilities were the main barriers to utilization of maternal health services. This may also indicate that either the CCT program has an effect in promoting utilization though there is no direct significance association in this study. Qualitative results also show that mothers fail to go to await labour and delivery at hospital if they do not have money for food and with further lack of transport at onset of labour contributing to home deliveries. This could likely be the case, as with CCT program, mothers are only given money to cater for food during postnatal period and not during the awaiting time (for labour and delivery). While on the other hand the study shows 63% of mothers who awaited for labour and delivery, stayed for more than a week before onset of labour. Challenges in Maternity waiting homes have been reported in some studies. Tiruneh et al., (2016) in Ethiopia and Lori, Wadsworth, Munro, & Rominski, (2013) in Liberia reports that mothers face several challenges including food problems and lengthy prenatal stay.

The FGDs have described and gave an insight of the contributing factors influencing mothers' utilization of hospital for childbirth. These included positive attitude of Health workers and complications during labor and delivery. The preference for a hospital delivery was mainly due to the understanding that hospital was the only place where complications could be managed, if occurred either during labour or delivery. The qualitative findings are similar to a study in Ethiopia by Belay and Sendo (2016)

On distance to health facility, most mothers took less than an hour to get to hospital, with walking being the most means of getting to hospital. Walking to hospital could either be due to short distance, unavailability of transport or low socioeconomic.

### **5.2.2 Obstetric Characteristics determining hospital utilization**

The median age at first pregnancy shows that mothers start childbearing at a tender age. This finding is not different from findings in many African countries as reported by UNICEF (2017). The findings show that age at first pregnancy is an important factor in determining place of delivery. Those getting pregnancy at 19 years or older are more likely to utilize hospital during childbirth compared to younger ones. This finding is similar to a study by Pradhan, Bhattarai, Paudel, Gaurav, and Pokharel (2013) in Nepal where age at first pregnancy was significantly associated with place of delivery. In the same study, maternal education was found to significantly (p-value <0.1) affect the ANC visit and place of delivery. Education tend to delay marriage age, as well as age at first pregnancy including increase in understanding the importance of skilled birth attendance at birth, hence this could be an explanation for the finding. In this study education level is the only socio-demographic factor showing association with place of delivery.

The median gestation for antenatal booking was far from the gestation of less than 12 weeks recommended by WHO, with only 45% of mothers starting ANC in the first trimester. Therefore it is not surprising that only 58% attended up to four antenatal visits, meeting the previous WHO recommendation of minimum ANC visits. This might mean meeting the new WHO recommended eight antenatal visits will be a bigger challenge. WHO (2016) states that evidence indicates that a higher frequency of antenatal contacts by women and adolescent girls with the health system is associated with a reduced likelihood of stillbirths. This is because of the increased opportunities to detect and manage potential problems. A minimum of eight contacts for antenatal care can reduce perinatal deaths by up to 8 per 1000 births when compared to a minimum of four visits.

Overall, almost every mother attended antenatal care, which is slightly higher than finding reported by NSO & ICF (2017) where they found 96.9% and 94.8% ANC attendance for Dedza district and the country respectively. However, The results reported here suggested that regarding place of delivery, number of antenatal care visits is the main predictor before and after adjusting for other variables. Pregnant women with more antenatal visits are more likely to give birth in the hospital as compared to those

with less than four visits. Similar findings are reported by Feyissa & Genemo (2014) were four or more antenatal care visits are strong predictors of hospital delivery (AOR (95% CI)= 2.914 (1.105-7.682), and Birmeta, Dibaba, & Woldeyohannes (2013); Wilunda et al., (2015) describes similar association. It is can be explained by frequency of exposure to antenatal health education and professional advice as explained by qualitative findings.

Findings show that the likelihood of delivering in hospital declines with late starting of antenatal care. This can be explained by the fact that those starting ANC late already have planned to deliver at home but just want to know the state of pregnancy. Other studies have reported that most mothers attend antenatal clinic for confirmation of pregnancy wellness (Kisuule et al., 2013) and also to get a health booklet so that in case of complications during delivery they can be admitted in the hospital without any problem (Kabue, 2014). Complication management is also the major cited importance for hospital delivery in this study.

### **5.3 Perception of intrapartum care in CCT facilities**

Perception towards intrapartum care which was assessed through rating on satisfaction with care (in general), friendliness of care providers, comfort of giving birth in the facility, and likelihood of utilizing the hospital for childbirth again in future. Majority of mothers were satisfied with care and felt care providers were friendly. Other studies done in Malawi show similar results, 97.3% satisfied with care at Queen Elizabeth central Hospital and was mainly due to frequent review by Doctors and Nurses (Changole et al., 2010). However, in this study, above half of participants indicated care and treatment as what they liked most during labour and delivery, with a smaller proportion indicating warm attitude of care provider.

Anderson (1995) state health status outcome is particularly important. He postulates that satisfaction will lead to more utilization in future, whereas dissatisfaction will reduce use. This was assessed in this study by finding out the likelihood of future utilization and encouraging others to use the facility. In this study, the majority indicated satisfaction with care and almost the same proportion, said are likely to use the current health facility in future pregnancies and likely to recommend or encourage

others to give birth in the current facility. This shows satisfaction with care can predict future hospital delivery. Similar findings are reported by Paudel et al., (2015) in Nepal, that overall satisfaction with maternity care has strong ( $p$ -value,  $<0.001$ ) association with willingness to return to facility in future.

#### **5.4 Factors influencing home deliveries in the context of CCT**

The study showed a small proportion of mothers delivered at home and among these, the majority, at one point, planned to deliver in hospital. The majority gave birth at home because labour started and progressed quickly which is compounded by lack of transport to go hospital. Similar findings are also reported by Kumbani, Bjune, Chirwa, et al., (2013), in southern Malawi district of Chiradzulu. They reported that onset of labor at night, rainy season, and rapid labor was related to the women delivering at home. Another study in Zambia found that lack of money for transport and food while staying at the hospital were the main reasons for home delivery (Sialubanje, Massar, Hamer, et al., 2015). The finding is unexpected as transport cost is a component of CCT program and possibly could be explained by inadequate knowledge of CCT eligibility criteria among mothers who delivered at home. However, this was explored further in FGDs and transport cost to health facility is one of the main issues. Participants stated that transport is not given on arrival, but only given after delivery hence it does not necessarily solve transport problem to hospital. Similar findings are reported by Tappis, Koblinsky, Doocy, Warren, & Peters (2016) that distance and transport barriers are the most common reasons for home birth.

The unexpected finding in this study was that all women who gave birth at home were aware about CCT. However, the findings show mothers who are aware about CCT program earlier (either before pregnancy or during the early stage of pregnancy) are more likely to give birth in hospital. This may be explained by increase in level of understanding of CCT program and eligibility criteria due to early exposure. The findings show that CCT recipients were more knowledgeable about eligibility criteria than non CCT recipients and home deliveries. It may be likely that mothers who delivered at home do not have a clear understanding of the program and have myths and misconceptions as revealed in FGDs hence significantly lowering the likelihood of hospital delivery. Antenatal care is the most common source of CCT information

and mothers who delivered at home started ANC late. Therefore, it was difficult for these mothers to meet the set conditions.

Myths and misconceptions about CCT that were unearthed in FGDs could also be an explanation for a small proportion of mothers that indicated they didn't receive CCT because they didn't want the money. This could likely be due to inadequate information regarding CCT among women in general hence some fears among some women as the money has been associated with Satanism (selling of wombs).

## **CHAPTER SIX**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Conclusion**

This study set out to explore factors that determine hospital delivery among women attending maternal and child health care services (postnatal and immunization clinic) in Dedza District of Malawi. The proportion of hospital delivery was found to be relatively higher with very high antenatal attendance.

Higher proportion of deliveries took place in CCT facilities, with a small proportion attributing hospital delivery to conditional cash transfer (Money).

Significant factors determining hospital delivery were number of antenatal visits and time of CCT program awareness. Transport, cost of hospital stay (waiting), previous hospital experience and attitude of health care providers are described by qualitative findings.

Clients had generally positive perception of intrapartum care in CCT facilities. Majority were satisfied with care and more likely to return in future for hospital delivery.

#### **6.2 Recommendations**

##### **6.2.1 Recommendations for CCT Program**

Early awareness of CCT program shows to predicts hospital delivery. Therefore program to promote awareness of the program before pregnancy are highly recommended. Efforts should also be directed to promote understanding of CCT program including eligibility criteria. This information should focus on increasing awareness before pregnancy. Community structures can be used to disseminate information about CCT program. In the context of Malawi, these may include Community Health Workers, Community Development Committees, and chiefs in their routine meetings.

Consideration can also be made in terms of incentivizing number of ANC visits. This could be structured within the already existing CCT components. Therefore in

addition to transport, delivery related and postnatal stay cost, a portion for antenatal visits could be included. However, to avoid diverting from the goal of promoting institutional deliveries, ANC visit incentives can be paid at the last visit or upon arrival at hospital for delivery. This will increase number of ANC visits and the likelihood of delivering in hospital.

It is also recommended that reimbursing ANC transport costs could have more bearing on mothers that are poor or ultra-poor. Mechanism may be recommended too to reward those starting antenatal care in the first trimester. However, measures are also needed on part of the health care to be able to diagnose every pregnancy during first trimester. This could reduce incidence of failure to diagnose pregnancy by clinically which makes some pregnant women report back at an advance gestation.

There is a potential to have every pregnant mother give birth in hospital if factors contributing to home deliveries can be taken into consideration in the context of CCT program for hospital delivery. Program consideration may be a necessity especially for those mothers who cannot raise funds for transport to hospital. This may include issuing of transport vouchers to women, in particular the ultra-poor, so that transport barrier is taken care of. The transport can be claimed after the woman's arrival at the hospital for delivery.

### **6.2.2 Recommendations for Midwifery Practice**

Incidences of disrespectful care are common. Though fewer women reported poor attitude of health care providers in this study, qualitative findings show a concern on attitude. On the other hand, local (community) maternal and new-born health norms reinforced by chiefs punishes home deliveries. This might be a right issue among women as they are forced to go to hospital, which may need to be balanced with quality of care as well as positive attitude of health care workers. Therefore, warm reception and friendliness to pregnant women is recommended. The health care system to do their part in working on areas that are raised by women.

### **6.2.2 Recommendations for Midwifery and Health Systems Research**

Research is needed in understanding cost implication of maternity waiting homes on women and families to find out why women wouldn't come for waiting if they don't have food despite that there is food provision by respective hospitals to waiting mothers.

Further research study is required to explore Myths and misconceptions about CCT program and general effect on hospital utilization.



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## APPENDICES

### Appendix I: Questionnaire

Consent Given:..... Health Facility Code.....

Interviewer Signature..... Serial  
number.....Date.....

**Instructions:** Circle the response of the mother. Write appropriate responses in the space provided if necessary.

**Q1:** How long have you stayed in the catchment area of your health facility [1] 1 to 2 years [2] More than 2 years (*Only proceed if respondent falls in above categories*)

#### Section 1. Socio-Economic and Demographic Characteristics of Respondents

**SED101.** What is your age?

[1] 15-19 years

[2] 20-24 years

[3] 25-29 years

[4] 30-35 years

[5] 36 years and above

**SED102.** What is your tribe? [1] Chewa [2] Yao [3] Ngoni [4] Others,  
Specify.....

**SED103.** What is your religion?

[1] Moslem [2] Christian [3] Traditional [4] None [5] Others, specify.....

**SED104.** What level of education have you completed

[1] No education [2] Primary [3] Secondary [4] College/ Tertiary [5] Others,  
specify.....

**SED105.** What is your occupation?

[1] Housewife [2] Employed [3] Casual laborer [4] Household Business [5]  
Household Agricultural activities [6] Others, specify.....

**SED106.** Marital status

[1] Single [2] Married [3] Separated [4] Divorced [5] Widowed [6] Others,  
specify.....

**SED107.** **If married,** What level of education your partner completed?

[1] No education [2] Primary [3] Secondary [4] College and Tertiary [5] Others,  
specify.....

- SED108.** What is your partner's occupation?  
 [1] Household Agricultural activities [2] Employed [3] Casual laborer [4] Household Business [5] Others, specify.....
- SED109.** What is your estimated Household income per month  
 MK...../month
- SED110.** What is the number of people living in your household?  
 [1]..... Males [2]..... Females
- SED111.** How big is the house you live in?  
 [1] Bedsitter [2] One room [3] Two rooms [4] Three or more rooms [5]Others, specify.....
- SED112.** What mode of transport do you usually use to come to this facility?  
 [1] Walking [2] Bicycle [3] Motorcycle [4] Vehicle [5] Others, specify.....
- SED113.** How long does it take to travel to this facility on average?  
 [1] Less than 30 min [2] 30-60min [3] >1-2 hours [4] More than 2 hours

## **Section 2. Obstetric Characteristics of Participants**

- OBS201.** What is your age at first pregnancy? ..... Years
- OBS202.** How many pregnancies have you ever had?  
 [1]Pregnancy..... [2] Abortions..... [3]live births..... [4]Still births.....
- OBS203.** How old is your last child? ..... Months
- OBS204.** What is the birth order of your last delivery?  
 [1]First [2]Second [3] Third [4]Fourth [5]Fifth or more
- OBS205.** Did you attend ANC for the last child? [1]Yes  
 [2]No....*skip to 208*
- OBS206.** **If yes,** How many ANC visits did you attend? [1] One [2] Two  
 [3]Three [4]Four and above
- OBS207.** At what gestation did you start your antenatal care?  
 [1] Below 16 weeks [2] 16-27 weeks [3]28 weeks and above
- OBS208.** Where did you give birth to your last born?  
 [1]Home/TBA .....*skip to 212*  
 [2]Before Arrival at hospital.....*skip to 212*  
 [3] This Facility  
 [4]Another CCT Facility [5]Another facility -Non CCT

**OBS209.** Did you await for delivery at this hospital? [1] Yes [2]No

...*skip to 211*

**OBS210.** If Yes, for how many days?

[1] less than a week [2] one-two weeks [3] three-four weeks [4] more than 4 weeks

**OBS211.** If did not await labour at hospital, How long did you report at hospital after labour pain onset?

[1] Less than 2 hours [2] Two to three hours [3] Four to five hours [4] More than five hours

**OBS212.** Where did previous birth preceding last child take place?

[1] Home/TBA [2] On way to hospital [3] Health Facility  
[4] Others, specify.....

**OBS213.** Do you know any danger signs during pregnancy and delivery?

[1] Yes [2] No..... *skip to 215*

**OBS214.** If yes to question 209, can you mention some? .....

[1] Vaginal bleeding [2] Severe Headache [3] Severe Abdominal pains  
[4] Swelling of face/Swelling of Hands [5]Convulsions/Fits [6] Persistent vomiting [7] fever [8]Others, specify.....

**OBS215.** Have you had any complications during pregnancy of current child?

[1] Yes [2] No

**OBS216.** Have you had any complications during pregnancy of previous child/children?

[1] Yes [2] No [3] Not applicable

**Section 3. Client factors that may determine utilization of hospital delivery**

**CFHD301.** Have you ever heard about importance hospital delivery?

[1] Yes [2] No .....*skip to 305*

**CFHD302.** What is importance of Hospital Delivery? ....

[1] Clean delivery [2] Complication management  
[3] Good treatment [4] Others, specify.....

**CFHD303.** Why did you choose the facility you gave birth at, among other facilities?

[1] It is the nearest facility [2] They give money [CCT]  
[3] They give good care [4] Others, specify.....  
[5] Because of by-laws against home delivery

**CFHD304.** Where do you here about importance hospital delivery? **Multiple response**

- [1] Hospital            [2] Radio/TV   [3] HSAs/Community Worker
- [4] Family/Relatives/Friends      [5]Others, specify.....

**HTBA305.** **If client delivered at home/TBA, why you preferred to deliver at home/TBA?**

- [1] Labour was going on well      [2] I feel more comfortable at home/TBA
- [3] Close attention from relatives and family      [4] It is my usual practice
- [5] Previous bad experience from hospital      [6]Cannot afford cost for hospital
- [7] Did not have transport      [8]My husband decision      [9] Others, specify.....
- [11] Labour started and progressed more quickly

**HTBA306.** During delivery did you at any time wish you would have gone to the hospital

- [1] Yes
- [2] No Explain.....

**HTBA307.** If Yes what made you wish you could have gone to the hospital?  
.....

**HTBA308.** Had you at any one time planned to deliver in the hospital

- [ 1] Yes
- [ 2] No

**HTBA309.** If yes, What made you change your mind to deliver at home?  
Explain.....

*Skip to Section 7 to continue with questions*

**Section 4. Perception toward intrapartum care and future intentions to deliver at hospital (To be answered by those who delivered in hospital)**

**PTIC401.** How satisfied were you with the care provided at the health Facility during labour and delivery? **Use the clock for rating, from 1-5**

- [1] Very unsatisfied
- [2] Unsatisfied
- [3] Somewhat satisfied
- [4] Satisfied
- [5] Very satisfied

**PTIC402.** How do you view health care providers during labour and delivery? Use the clock for rating, from 1-5

- [1] Very unfriendly
- [2] Not friendly
- [3] Somewhat friendly
- [4] Friendly
- [5] Very Friendly

**PTIC403.** Based on your experience, how would you rate your comfort to give birth in this hospital? Use the clock for rating, from 1-5

- [1] Very uncomfortable
- [2] Somewhat comfortable
- [3] Not comfortable
- [4] Comfortable
- [5] Very Comfortable

**PTIC404.** How likely would you come to this hospital for delivery if you become pregnant again?

- [1] Very unlikely
- [2] Unlikely
- [3] Not sure
- [4] Likely
- [5] Very likely

**PTIC405.** How likely would you encourage someone to give birth in this hospital?

- [1] Very unlikely
- [2] Unlikely
- [3] Not sure
- [4] Likely
- [5] Very likely

**PTIC406.** What did you like most during labour and delivery care?

- [1] Privacy
- [2] Confidentiality
- [3] Warm attitude of Care givers
- [4] Care and treatment received
- [5] Others, specify.....

- PTIC407.** What did you not like during labour and delivery care?
- [1] Lack of privacy
  - [2] Lack of confidentiality
  - [3] Poor attitude (harsh providers)
  - [4] Poor care and treatment
  - [5] Others, specify.....
  - [6] Nothing
  - [7] Water problem/Hygiene
  - [8] Giving birth without attendant
  - [9] Late attendance
  - [10] Did not receive money
  - [11] Being sent for ambulation

- PTIC408.** Where would you want to deliver if you become pregnant again?
- [1] This Hospital
  - [2] Another Hospital
  - [3] Home/TBA

**Section 5. Mothers Attributing Hospital delivery to CCT and Disqualifiers for CCT**

**CCTHD501.** Did you receive any money from the hospital for delivering at the hospital?

- [1] Yes
- [2] No.....*Skip to 504*

**CCTHD502.** If yes, How much money were you expecting to receive?  
.....MK

**CCTHD503.** How much did you receive? .....MK

**CCTHD504.** Were you aware that Hospital is giving money to women delivering in hospital?

- [1] Yes
- [2] No

**CCTHD505.** If yes, when did you know you will receive money at hospital?

- [1] While already in hospital
- [2] During Antenatal care
- [3] During pregnancy but before starting ANC
- [4] Before pregnancy

**CCTHD506.** Where did you get the information? **Multiple responses possible**

- [1] Radio/News/TV
- [2] Awareness campaign
- [3] During ANC care
- [4] From Community Health Worker [HSA]
- [5] Chief/Village Health Committee
- [6] Friends and Relatives

[7] Others, specify.....

**CCTHD507.** Were you aware about the criteria for receiving the money?

[1] No            [2] No.....*skip to Section 6*

**CCTHD508.** What were some of the criteria you knew for one to qualify receiving money? **Multiple responses possible**

[1] Starting ANC in first or second trimester [ $<27$  weeks gestation

[2] Attendance of ANC at least 3 times

[3] Waiting for delivery in hospital

[4] Delivering in hospital after being monitored during labour

[5] Being poor/poverty

[6] Others, specify.....

**\*\*END HERE FOR THOSE WHO RECEIVED CCT\*\***

**Section 6.      Disqualifiers for CCT (For Mothers who did not receive money but delivered in a hospital)**

**NCCT601.** Were you aware that Hospital is giving money to women delivering in hospital?

[1] Yes                            [2] No

**NCCT602.** When did you know about money given in hospital?

[1] While already in hospital for delivery

[2] During Antenatal care

[3] During pregnancy but before starting ANC

[4] Before pregnancy

**NCCT603.** Were you aware about the criteria for receiving the money?

[1] Yes            [2] No

**NCCT604.** **If yes,** What were some of the criteria you knew for one to qualify receiving money? **Multiple responses possible**

[1] Starting ANC in first or second trimester [ $<27$  weeks gestation

[2] Attendance of ANC at least 3 times

[3] Waiting for delivery in hospital

[4] Delivering in hospital after being monitored during labour

[5] Being poor/poverty

[7] Others, specify.....



**NCCT605.** What were the reasons making you not to receive money?

- |  |                                     |
|--|-------------------------------------|
| [1] Did not attend ANC                 | [8] Started ANC in another facility |
| [2] Started ANC late                   | [9] Not given CCT card              |
| [3] Had less than 3 ANC visits         | [10] Lost or forgotten CCT card     |
| [4] Did not await labour at hospital   | [11] Money was not available        |
| [5] Did not fall in categories of poor | [12] Did not want the money         |
| [6] Not monitored during labour        | [13] Others.....                    |
| [7] I don't know reason                |                                     |

**NCCT606.** Where did you get the information about CCT? **Multiple responses possible**

- [1] Radio/News/TV
- [2] Awareness campaign
- [3] During ANC care
- [4] From Community Health Worker [HSA]
- [5] Chief/Village Health Committee
- [6] Friends and Relatives
- [7] Others, specify.....

**Section 7. Awareness of CCT by those who delivered at Home (Outside Hospital)**

**HomeDel701.** Were you aware that Hospital is giving money to women delivering in hospital?

- [1] Yes                      [2] No

**HomeDel702.** When did you know about money given in hospital?

- [1] While already in hospital for delivery
- [2] During Antenatal care
- [3] During pregnancy but before starting ANC
- [4] Before pregnancy

**HomeDel703.** Were you aware about the criteria for receiving the money?

- [1] Yes                      [2] No

**HomeDel704. If yes, What were some of the criteria you knew for one to qualify receiving money? Multiple responses possible**

- [1] Starting ANC in first or second trimester [ $<27$  weeks gestation]
- [2] Attendance of ANC at least 3 times
- [3] Waiting for delivery in hospital
- [4] Delivering in hospital after being monitored during labour
- [5] Being poor/poverty
- [7] Others, specify.....

**HomeDel705. Where did you get the information about CCT? Multiple responses possible**

- [1] Radio/News/TV
- [2] Awareness campaign
- [3] During ANC care -
- [4] From Community Health Worker [HSA]
- [5] Chief/Village Health Committee
- [6] Friends and Relatives
- [7] Others, specify.....

**END OF QUESTIONS**  
**Thank Respondent**

**Appendix II: Chichewa Questionnaire**

Chilolezo Chapekedwa (Chongani):..... Nambala ya Chipatala (Code) .....

Signature..... Serial number..... TSIKU.....

**Malangizo:** Zungulizani yankho la amayi. Lembani mayankho oyenera mmalo omwe aperekedwa.

**Q1:** Mwakhala zaka zingati m'dera la chipatala chinocho? [1] 1 to 2 years [2] More than 2 years (*Only proceed if respondent falls in above categories*)

**Section 1. Moyo wa chuma komanso mbiri ya moyo wanu**

**SED101.** Zaka zanu ndi zingati ?

[1] 15-19 [2] 20-24 [3] 25-29 [4] 30-35 [5] 36 kapena kupitilira apo

**SED102.** Ndinu a mtundu wanji? [1] Chewa [2] Yao [3] Ngoni [4] zina, tchulani.....

**SED103.** Ndinu a chipembezo chanji?

[1] chisilamu [2] chikhirisitu [3] chikunja [4] [5] zina tchulani.....

**SED104.** Maphunziro anu munafika pati?

[1] sindinapiteko ku sukulu [2] pulayimale [4] sekondale [4] koleji [5] zina tchulani.....

**SED105.** Mumagwira ntchito yanji?

[1] mayi wapakhomo chabe [2] ndimagwira ntchito yolembedwa [3] ndimachita maganyu [4] bizinezi [5] ulimi [6] zina tchulani.....

**SED106.** Mbiri ya banja yanu

[1] sindinikwatiwepo [2] ndili pabanja [3] Tinalekana kaye [4] banja linatha [5] amuna anamwalira [6] zina tchulani.....

**SED107.** Ngati ndinu okwati wa, a bambo maphunziro anafika nawo pati?

[1] sanapiteko ku sukulu [2] pulayimale [3] sekondale [4] koleji [5]. Zina tchulani.....

**SED108.** Amuna anu amagwira ntchito yanji?

[1] ulimi [2] ntchito ya pamwezi [3] maganyu [4] bizinezi [5] zina tchulani.....

**SED109.** Mumapeza ndalama zingati pa mwezi? **Funsani ayelekze**

**atawonkhesa zolowa zosiyana monga zogulitsa, malipiro a pa mwezi ndi zina Cholowa MK.....**

**SED110.** Mnyumba mwanu mumakhala anthu angati?

[1] amuna..... [2] akazi.....

**SED111.** Nyumba yanu ndiyayikulu bwanji? nyumba yomwe mumakhalandi yayikulu bwanji?

[1] ilibe chipinda [2] yachipinda chimodzi [2] yazipinda ziwiri [3] zipinda zitatu kapena kuposera apo [4] zina tchulani.....

**SED112.** Mumayenda bwanji pobwera kuchipatala?

[1] timayenda wapansi [2] timakwera njinga [3] timakwera njinga ya moto [4] timakwera galimoto [5] zina tchulani.....

**SED113.** Mumatenga nthawi yaitali bwanji kuzafika kuchipatala?

[1] mphindi zochepera 30 [2] mphindi 30-60 [3] kupitilira ola limodzi mpaka awiri [4] kudutsa ma ola awiri

**Section 2. Mmbiri ya uchembere wanu (wotenga mbali mu kafukufukuyu)**

**OBS201.** Mmene munali ndi mimba yoyamba munali ndi zingati?

zaka.....

**OBS202.** Mwakhalapo ndi mimba zingati?

[1] mimba..... [2] mimba zotayika..... [3] ana a moyo..... [4] Ana obadwa atamwalira.....

**OBS203.** Mwana wanu omaliza ali miyezi ingati? Miyezi.....

**OBS204.** Mwana wanu omaliza ndiwa chingati?

[1] Oyamba [2] Wachiwiri [3] Wachitatu [4] Wachinayi [5] Wachisanu kapena kupitilira

**OBS205.** Mwana omalizayu munayendelapo sikelo ya mimba

[1] Eya [2] ayi ..*skip to 224.*

**OBS206.** Ngati eya, munapita maulendo angati ku sikelo? [1] kamodzi [2]

kawiri [3] katatu [4] kanayi kapena kuposera apo

**OBS207.** Munayamba sikelo ya mimba muli ndi miyezi ingati?

[1] yochepera masabata 16 [2] masabata 16-27 [3] masabata 28 kapena kuposera apo

**OBS208.** Mwana omaliza munachilira kuti?

[1] kunyumba kapena kwa azamba .....*Skip to 228*

[2] mu njira tisanafike ku chipatala .....*Skip to 227*

[3] ku chipatala chinocho

[4] chipatala china chomwe chili ndi ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatala

[5] chipatala china chomwe chilibe ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatala

**OBS209.** Munabwera kuchidikiliro kuchipatala kuno? [1] Eya [2] Ayi  
...*Skip to 227*

**OBS210.** **Ngati eya,** munadikira nthawi yaitali bwanji?

[1] kochepera sabata imodzi [2] sabata imodzi mpaka ziwiri [3] masabata atatu mpaka anayi [4] kuposera masabata anayi

**OBS211.** **Ngati simunadzachite chidikiriro ku chipatala,** Munatenga nthawi yayitali bwanji kuti mufike ku chipatala matenda atayamba?

[1] osadutsa maola awiri [2] ma ola awiri kapena atatu [3] maola anayi mpaka asanu [4] kudutsa maola asanu

**OBS212.** Mwana osatana ndi omaliza munachilira kuti? [1] kunyumba kapena kwa azamba [2] mu njira popita ku chipatala [3] kuchipatala [4] zina fotokozani.....

**OBS213.** Mukudziwapo za zizindikiro zoopsya nthawi yoyembekezera kapena yochira? [1] eya [2] ayi..... *Skip to 231?*

**OBS214.** **Ngati eya,** tchulani zizindikiro zomwe mukuziwa.?

[1] kusamba/kutaya magazi uli ndi mimba [2] kupweteka kwambiri kwa mutu [3] kupweteka kwambiri kwa m'mimba [4]kutupa manja komanso nkhope [5] kuchita khunyu/ kukomoka [6] kusanza sanza [7] kutentha thupi [8] zina tchulani.....

**OBS215.** Munakumanako ndi vuto lilironse muli ndi pakati pa mwana omaliza?

[1] Eya [2] Ayi

**OBS216.** Munakumanako ndi vuto lilironse muli ndi pakati pa mwana/ana am'mbuyomu?

[1] Eya [2] Ayi

**Section 3. Zifukwa zimene Zimapangitsa kuti azimayi azichilira ku chipatala**

**CFHD301.** Munamvako za kufunikira/ubwino wochilira ku chipatala?

[1] Eya [2] Ayi ....*skip to 308*

**CFHD302.** Ngati eya, kufunikira/ubwino wake ndi otani?

- [1] umasamalidwa mwa ukhondo ukamachira
- [2] amakuthandiza moyenera zoopsa/zovuta zikakuchitikira nthawi yochira
- [3] amakusamalira bwino
- [4] zina tchulani.....

**CFHD303.** Munasankha kudzachilira chipatala chino mwa zipatala zonse chifukwa chiyani?

- [1] ndichakufupi ndi kwathu
- [2] kuli ndondomeko yopereka ndalama kwa azimayi
- [3] amasamalira bwino [4] zina tchulani.....

**CFHD304.** Munamva kuchokera kuti za ubwino woberekeru ku chipatala?

**Chingani/Lembani mayankho onse opelekedwa ndi amayi**

- [1] kuchipatala [2] wayilesi kapena pa kanema
- [3] alangizi a zaumoyo kapena ogwira ntchito za umoyo a mdera lathu
- [4] achibale kapena azanga [5] zina tchulani.....

**HTBA301.** Ngati anachilira kunyumba kapena kwa azamba, Ndi chifukwa chani munachilira malo amenewa? *If Hospital delivery skip to Section 4 (401)*

- [1] matenda anga amayenda bwino
- [2] ndimamasuka kuchilira kunyumba kapena kwa azamba
- [3] ndimalandira chisamaliro chokwanira kuchokera kwa achibale kapena azanga
- [4] ndikumene ndakhala ndikuchilirako uchembere wa mmbuyomu
- [5] sanandilandire bwino ulendo womalix
- [6] ndinalibe ndalama zolipira kapena kukhalira kuchipatala
- [7] ndinalibe ndalama yolipira ulendo/mayendedwe
- [8] Chiganizo cha amuna anga
- [9] Zina tchulani

**HTBA302.** Nthawi yochira munaganizako kapena kulingalira zoti mukanachilira ku chipatala?

[1] Eya

[2] Ayi Chifukwa chani?.....

**HTBA303.** Ngati eya, chinakupangitsani nchani kulakalaka mutapita kuchipatala?

**HTBA304.** Munapangapo chilinganizo choza chilira kuchipatala muli ndi pakati?

[ 1] Eya

[ 2] Ayi

**HTBA305.** **Ngati inde,** Chinakupangitsani kusintha maganizo anu ndi

chiyanichani kuti muchilire kunyumbakapena kwa azamba

fotokozani.....

...

**Section 4. Perception toward intrapartum care and future intentions to deliver at hospital (To be answered by those who delivered in hospital)**

**PTIC401.** Munakhutitsidwa motani ndi chisamaliro chomwe munalandira nthawi yodzabereka kuchipatalachi? **Use the clock for rating, from 1-5**

[1] sindinakhutitsidwe ata

[2] sindinakhutitsidwe

[3] ndinakhutitsidwa pang'ono

[4] ndinakhutitsidwa

[5] ndinakhutitsidwa kwambiri

**PTIC402.** Nthawi yomwe mumakachira, anamwino ndi madotolo munawaona bwanji? **Use the clock for rating, from 1-5**

[1] opanda msangala ata pang'ono

[2] opanda msangala

[3] asangala pang'ono

[4] asangala

[5] Asangala zedi/kwambiri

**PTIC403.** Kutengera ndi mmene munalandiridwilira nthawi yomwe munkadzachira munganene bwanji zakumasuka kwanu kuchilira mchiptalachi?

**Use the clock for rating, from 1-5**

[1] Omangika zedi

[2] omangika

[3] sindikudziwa kunena kwake

- [4] Omasuka  
[5] Omasuka kwambiri
- PTIC404.** Mtakhala ndi Mimba ina, pali kuthekera kotani kuzachilira chipatala chino?
- [1] Zosatheka ata  
[2] zosatheka  
[3] sindikudziwa kunena kwake  
[4] Zotheka  
[5] Zotheka kwambiri
- PTIC405.** Pali kuthekera kotani kuwalimikitsa anzanu kuzachilira chipatala chino?
- [1] Zosatheka ata  
[2] zosatheka  
[3] sindikudziwa kunena kwake  
[4] Zotheka  
[5] Zotheka kwambiri
- PTIC406.** Chomwe munakondwera nacho kwambiri nthawi yomwe mumadzachira ku chipatalachi ndi chiyani?
- [1] kusungira ulemu  
[2] kusunga chinsinsi  
[3] khalidwe labwino la a chipatala  
[4] chithandizo chabwino  
[5] zina tchulani.....
- PTIC407.** Chomwe simunakondwere nacho nthawi yomwe mumadzachira ndi chiyani
- [1] kusapereka ulemu  
[2] kusasunga chinsinsi  
[3] khalidwe loipa la anthu a chipatala  
[4] chithandizo chosakwanira bwino  
[5] zina tchulani.....
- PTIC408.** Mungakondwe kuzachilira kuti mtakhala ndi mimba ina?
- [1] chipatala chino  
[2] chipatala china



[3] kunyumba kapena kwa azamba

**Section 5. Mothers Attributing Hospital delivery to CCT and Disqualifiers for CCT (Zowayenereza ndi zosawayenereza azimayi omwe achilira ku chipatala kulandira ndalama)**

**CCTHD501.** Munalandirako ndalama mutaberekera kuchipatala?

[1] Eya [2] Ayi.....*skip to 506*

**CCTHD502.** **Ngati eya,** Mumayembekezera kulandira ndalama zingati?  
..... MK

**CCTHD503.** Nanga Munalandira zingati? .....MK

**CCTHD504.** Kodi mumadziwa kuti Chipatala chikupeleka ndalama kwa azimayi omwe achilira kuchipatala?

[1] Eya [2] Ayi

**CCTHD505.** **Ngati eya,** munadziwa liti kuti mudzalandira ndalama?

[1] ndili kale ku chipatala [2] ndikuchita sikelo ya mimba

[3] ndili ndi mimba ndisanayambe sikelo ya mimba [4] ndiliba mimba

**CCTHD506.** Munadziwa kuchokera kuti za ndondomeko ya ndalama zopelekedwa kwa amayi amene achilira kuchipatala? **Mayankho ata kukhala ambiri**

[1] wayilesi/kanena/mapepala [2] msonkhano wa ndondomekoyi

[3] kusikelo ya mimba [4] kwa alangizi a za umoyo a mdera lathu

[5] kwa a mfumu kapena kwa a komiti ya zaumoyo ya m'mudzi wathu

[6] amzanga ndi achibale [7] kwina tchulani.....

**CCTHD507.** Kodi munali mukudziwa kale zomuyenereza munthu kuti alandira ndalama zimenezi? [1] Eya [2] Ayi .....*Skip to section 6*

**CCTHD508.** Ndi zoyenereza ziti zomwe munkazidziwa (**Mayankho ata kukhala ochuluka**)

[1] kuyamba sikelo ya mimba masabata 12 oyambirira komanso isanakwane miyezi isanu ndi umodzi

[2] kuyendera sikelo kosachepera katatu

[3] kukadikira matenda ku chipatala

[4] kuchilira ku chipatala utayang'aniridwa bwino nthawi yobereka ku chipatala

[5] wosauka

[6] zina tchulani.....

**Section 6. Disqualifiers for CCT (For Mothers who did not receive money but delivered in a hospital) Zosawayenereza azimayi kukhala nawo mu ndondomeko yolandira ndalama akachilira ku chipatala [kwa azimayi amene sanalandire nawo ndalama koma anachilira ku chipatala]**

**NCCT601.** Kodi munkadziwa kale kuti kuli ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatala?

- [1] Eya [2] Ayi..... *Skip to 605*

**NCCT602.** Ngati Eya, munadziwa liti za zimenezi

- [1] ndili kale ku chipatala kodzachira [2]ndikupanga sikelo ya mimba  
[3] ndili ndi mimba ndisanayambe sikelo ya mimba [4] ndilibe mimba

**NCCT603.** Kodi mumadziwa kale zomuyeneleza mzimayi kulandira ndalama?

- [1] Eya [2]Ayi [3] sindikudziwa bwino... *skip to 605*

**NCCT604.** Ngati eya, ndi zinthu ziti zimamuyenereza mzimayi kulandira ndalama zimenezi **Ngati inde**, Kodi zoyeneleza zomwe mmaziwa ndi ziti? **Mayankho ata kukhala ochuluka**

- [1] kuyamba sikelo ya mimba masabata 12 oyambirira komanso isanakwane miyezi isanu ndi umodzi  
[2] kuyendera sikelo kosachepera katatu  
[3] kukadikira matenda ku chipatala  
[4] kuchilira ku chipatala utayang' aniridwa bwino nthawi yobereka ku chipatala  
[5] wosauka  
[6] zina tchulani.....

**NCCT605.** Mukuganiza kuti ndi chifukwa chiyani simunalandire nawo ndalama zimenezi

- [1] sindinapange nawo sikelo ya mimba [2] ndinayamba sikelo mochedwa  
[3] ndinayendera sikelo maulendo atatu osakwana  
[4] sindinadzadikilire matenda kuchipatala  
[5] sananditenge ngati m' modzi mwa anthu wosauka  
[6] zina tchulani.....

**NCCT606.** Munadziwa kuchokera kuti za ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatalayi? **Mayankho atha kukhala ochuluka**

- [1] wayilesi/kanena/mapepala [2] msonkhano wa ndondomekoyi  
[3] kusikelo ya mimba [4] kwa alangizi a za umoyo a mdera lathu  
[5] kwa a mfumu kapena kwa a komiti ya zaumoyo ya m' mudzi wathu  
[6] amzanga ndi achibale [7] ena tchulani.....

**Section 7. Awareness of CCT by those who delivered at Home (Outside Hospital)**

**HomeDel701.** Kodi munkadziwa kale kuti kuli ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatala?

- [1] Eya [2] Ayi..... *Skip to 605*

**HomeDel702.** Ngati Eya, munadziwa liti za zimenezi

- [1] ndili kale ku chipatala kodzachira [2] ndikupanga sikelo ya mimba  
[3] ndili ndi mimba ndisanayambe sikelo ya mimba [4] ndiliba mimba

**HomeDel703.** Kodi mumadziwa kale zomuyeneleza mzimayi kulandira ndalama?

- [1] Eya [2] Ayi [3] sindikudziwa bwinobwino ...*skip to 605*

**HomeDel704.** Ngati eya, ndi zinthu ziti zimamuyenereza mzimayi kulandira ndalama zimenezi **Ngati inde**, Kodi zoyeneleza zomwe mmaziwa ndi ziti? **Mayankho ata kukhala ochuluka**

- [1] kuyamba sikelo ya mimba masabata 12 oyambirira komanso isanakwane miyezi isanu ndi umodzi  
[2] kuyendera sikelo kosachepera katatu  
[3] kukadikira matenda ku chipatala  
[4] kuchilira ku chipatala utayang' aniridwa bwino nthawi yobereka ku chipatala  
[5] wosauka  
[6] zina tchulani.....

**HomeDel705.** Munadziwa kuchokera kuti za ndondomeko yopereka ndalama kwa azimayi ochilira ku chipatalayi? **Mayankho atha kukhala ochuluka**

- [1] wayilesi/kanena/mapepala [2] msonkhano wa ndondomekoyi  
[3] kusikelo ya mimba [4] kwa alangizi a za umoyo a mdera lathu  
[5] kwa a mfumu kapena kwa a komiti ya zaumoyo ya m'mudzi wathu  
[6] amzanga ndi achibale [7] ena tchulani.....

**Mafunso athera apa**

### **Appendix III: Focus Group Discussion Guide**

**Introduction:** *The facilitator provides a brief introduction to the purpose of the study and explains the confidentiality rules for the session.*

#### **Opening Question**

1. Tell us how you reacted when you were asked to participate in this discussion?

#### **Introductory Question**

2. A lot of reports in Malawi indicate that safe motherhood an issue for women.

What do you think about that? (Do you think it is true?).

#### **Transition Questions**

3. If you asked your friends about Safe Motherhood, what would they say?
4. Would you say that safe motherhood is practiced your community? Can you give specific examples?

#### **Key Questions**

1. What made you choose the place where you gave birth at?
2. What are your views about intrapartum care?
3. How satisfied are you about care you received during labour and delivery?
4. What is your view about health care providers during labour and delivery?
5. Based on your experience, how would you explain your comfort to give birth in hospital?
6. Is there anything that you liked most during labour and delivery care?
7. What about things you liked least or did not like during labour and delivery care?
8. Given a choice, where would you want to deliver if you become pregnant again?
9. Do we have any views about CCT? Do we know about it?
10. Where did we get information about CCT?
11. Some received and others didn't. Do we know any reasons why?
12. Any additional comments that you may have?

END OF DISCUSSION

**Appendix IV: Focus Group Discussion Guide (Chichewa Version)**

**Zoyambirira:** *wotsogolera zokambirana aperaka mwachidule cholinga cha kafukufuku komanso afotokoza bwino za malamulo a chinsinsi zimene zidzatsatidwe nthawi ya zokambiranazi.*

**Funso lotsegulira**

1. Fotokozani mmene munamvera mutamva kuti mwafusidwa kupanga nawo zokambiranazi

**Fuso loyambirira**

2. Malipoti ambiri asonyeza kuti nkhani za uchembere wabwino ndiyofunika kwa amayi. Maganizo anu akuti bwanji? ( mukuganiza kuti izi ndi zoonaz?).

**Mafunso owolokera**

3. Mutati mwawafunsa anzanu za uchemebre wabwino, mukuganiza kuti anganene chiyani?
4. Munganene kuti uchembere wabwino ukuchitika m' midzi ndi m' madera mwathu? Perekani zitsanzo?

**Mafunso otsogolera**

5. Ndi zinthu ziti zimachititsa/pangitsa amayi oyembekera kuchilira ku chipatala
6. Maganizo anu ndi otani pa chisamaliro chimene chimapereka kwa amayi pa nthawi yochila
7. Ndinu wokhutitsidwa bwanji ndi chisamaliro chimene munalandira nthawi yomwe mumakachira ku chipatala
8. Maganizo anu ndi wotani kukhudza wogwira ntchito amene amakusamalirani nthawi yochira
9. Kutengera chisamaliro chimene munalandirako kale, mungafotokoze bwanji za kumasuka kwanu nthawi yochira?
10. Pali chinthu chimene munachikonda kwambiri pa nthawi imene mumakachira?
11. Pali chinthu chimene simunasangalale nacho/simunachikonde nthawi imene mumakachira?
12. Mutapatsidwa mwayi osankha, muli ndi mimba ina, mungakachilire kuti?
13. Muli ndi maganizo ena aliwonse kapena kudziwapo chilichonse chokhudza ndondomeko yopereka ndalama kwa amayi amene achilira ku chipatala?
14. Munamva kuchokera kuti ndondomeko za imeneyi?
15. Ena analandira ndalama ena ayi, mungafotokoze chifukwa chimene zinthu zilili chonchi?
16. Muli ndi ndemanga kapena chilichonse chowonjezera pa nkhani takambiranazi?

**Kucheza kwathera apa**

## Appendix V: Participants consent

Determinants of Hospital Delivery in the context of Conditional Cash Transfer for pregnant women in Dedza District of Malawi

Good morning/afternoon, My name is....., I am working with Brave Tembo, a Masters student at Moi University. He is carrying out a study to assess why hospital delivery deliveries greatly varies and remain low in some facilities despite government strategy offering Conditional Cash transfer to women who gives birth in these facilities. The study has been approved by Moi University and permission given by National Research Council of Malawi and Dedza District Health Office.

Taking part in this study is voluntary. If you agree to participate I will ask you some questions about yourself. The interview will take about 20 minutes. There are no anticipated problems but in case some questions make you feel uncomfortable, you are free to express your discomfort and not to respond. There are no any consequences for you if you choose not to participate or withdraw.

There are no direct benefits to you for choosing to participate in this interview. However, you will be helping the government and others in future to develop better strategies and improve quality of labour and delivery care.

We will do our best to ensure that your personal information is kept private. No name will be recorded. Records will be kept secure and only used for the purposes of the study.

At this time, do you want to ask me anything about the study? Should you have any question, even after interview, feel free to ask. The phone contact of the principle investigator (0999364664 or +254717155183) is provided if you feel you will need more information about the study.

This consent has been read and explained to me and I have understood, and my questions have been addressed. I therefore willingly agree to take part in the study.

Signature/Thumb print of the participant.....

Name of Interviewer

.....Signature.....

Date.....

...

## Appendix VI: Participants Consent (Chichewa Version)

Mwadzuka / maswera bwanji, dzina langa ndine..... ndikunthandizana ndi Brave Tembo, yemwe akupanga maphunziro a kuchenjere ku University Moi yak u Kenya. Iyeyu akupanga kafukufuku okhuzana ndi zomwe zimangisa azimayi asankhe malo okabelekesera mwana pa nthawi yomwe ali ndi pathupi. Kafukufukuyu wavomelezedwa ndi sukulu ya ukachenjere ya Moi, komanso ndi bungwe loyang'anira kafukufuku mMalawi (Research Council of Malawi), ndi Oyang'anira za umoyo mu boma la Dedza.

Mukupemphedwa kutengapo nawo mbali mu kafukufukuyu. Chikalatachi chikofotokozera uthenga okhuza cholinga, phindu, komanso zovuta zomwe zingakhalepo kwa inu, ndi chomwe chikuyembekezeleka kwa inu pa nthawi pa nthawi ya kafukufukuyu. Ndikambirana nanu za uthengawu ndi kuyankha mafunso ena ali onse omwe mungakhale nawo. Pamapeto pa kukufotozerani za kafukufukuyi mwatsatanetsatane, mutha kupanga chiganizo choti mutenge nawo mbali kapena ayi. Mukamvetsetsa za kafukufukuyu, ndipo ngati mwavomera kutenga nawo mbali, mudzafunsidwa kusaina makalata awiri a chivomerezo kapena kuyika chindindo chanu pamaso pa mboni. Mudzapatsidwa imodzi mwa chikalata cha uthengachi komanso chikalata cha chivomerezo chimene musaine kuti mukasunge.

Ziwani kuti kutenga nawo mbali kwanu mu kafukufukuyu nkodzipereka nokha. Mukhoza kusankha kusatenga nawo mbali, kapena kusiyira pa njira kafukufukuyu pa nthawi iliyonse popanda chovuta chilichonse. Mfundo zones zokhuzana ndi uthenga wanu zidzatetezedwa ndi kusungidwa mwachinsinsi.

Mkasankha kutenga nawo mbali ndikuifunsani mafunso okhuzana ndi inu. Kucheza kwathu kutha kutenga mphindi makumi awiri (20). Palibe mavuto aliyonse omwe akuyembekezereka koma ngati pangakhale mafunso omwe simuli omasuka kuyankha, muli ndi ufulu kusatero. Palibe zotsatira zilizonse mkasankha kusatenga nawo mbali kapena kusiyira panjira.

Simungathe kepeza phindu lenileni kuchokera mu kafukufukuyu. Komabe, mukhoza kuthandiza boma ndi mabungwe ena kukhazikitsa ndondomeko zothandiza kutukura chisamaliro cha amayi ndi makanda mzipatala, makamaka pa nthawi yobereka.

Chinsinsi chanu chidzatetezedwa. Kufunsidwa mafunso kwanu kuchitikira pa malo oduka mphepo. Uthenga onse umene upelekedwe mukafukufuyu udzasungidwa mwachinsinsi molingana ndi lamulo, komanso kugwiritsidwa ntchito pa kafukufukuyu basi. Dzina lanu silifunsidwa kapena kulembedwa.

Panthawi imeneyi, mungafune kundifunsa chilichonse chokhuzana ndi kafukufukuyu? Ngati mungakhale ndi funso, ngakhale pambuyo pakuyankhulana kkalani omasuka kufunsa. Muthanso kuimba foni kwa mkulu wakafukufukuyu, 0999364664 kapena +254717155183.

Chilolezo ichi chawerengedwa ndi kulongoledwa mwatsatanetsane. Ndamvetsetsa, mafunso anga ayankhidwa. Ndikusankha ktenga nawo mbali ma ufulu.

Signature ya otenga nawo mbali/Chidindo cha Chala chachikulu .....

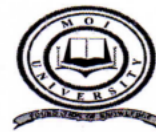
Dzina la ofunsa mafunsowo .....Signature .....

Tsiku.....

## Appendix VII: Research Proposal Approval by Moi University/Moi Teaching and Referral Hospital IREC



MOI TEACHING AND REFERRAL HOSPITAL  
P.O. BOX 3  
ELDORET  
Tel: 33471/1/2/3



### INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE (IREC)

MOI UNIVERSITY  
SCHOOL OF MEDICINE  
P.O. BOX 4606  
ELDORET

Reference: IREC/2016/199  
**Approval Number: 0001788**

13<sup>th</sup> October, 2016

Mr. Brave S. Tembo,  
Moi University,  
School of Nursing,  
P.O. Box 4606 -30100,  
**ELDORET-KENYA.**



Dear Mr. Tembo,

#### **RE: FORMAL APPROVAL**

The Institutional Research and Ethics Committee has reviewed your research proposal titled:-

***"Determinants of Hospital Delivery in the Context of Conditional Cash Transfer for Pregnant Women in Dedza District Malawi."***

Your proposal has been granted a Formal Approval Number: **FAN: IREC 1788** on 13<sup>th</sup> October, 2016. You are therefore permitted to begin your investigations.

Note that this approval is for 1 year; it will thus expire on 12<sup>th</sup> October, 2017. If it is necessary to continue with this research beyond the expiry date, a request for continuation should be made in writing to IREC Secretariat two months prior to the expiry date.

You are required to submit progress report(s) regularly as dictated by your proposal. Furthermore, you must notify the Committee of any proposal change (s) or amendment (s), serious or unexpected outcomes related to the conduct of the study, or study termination for any reason. The Committee expects to receive a final report at the end of the study.

Sincerely,

**PROF. E. WERE  
CHAIRMAN  
INSTITUTIONAL RESEARCH AND ETHICS COMMITTEE**

cc	CEO	-	MTRH	Dean	-	SOP	Dean	-	SOM
	Principal	-	CHS	Dean	-	SON	Dean	-	SOD



**Appendix VIII: Research Proposal Approval by The National Committee on Research in Health, Social Sciences and Humanities (NCRSH/Malawi),**



**NATIONAL COMMISSION FOR SCIENCE & TECHNOLOGY**

Lingadzi House  
Robert Mugabe Crescent  
P/Bag B303  
City Centre  
Lilongwe

Tel: +265 1 771 550  
+265 1 774 189  
+265 1 774 869  
Fax: +265 1772 431  
Email: [directorgeneral@ncst.mw](mailto:directorgeneral@ncst.mw)  
Website: <http://www.ncst.mw>

**All communication should be directed to the Director General**

Ref No: NCST/RTT/2/6

11<sup>th</sup> January, 2017

Mr Brave Tembo  
Dedza DHO  
P.O Box 136  
Dedza

Dear Mr Tembo,

**RE: RESEARCH ETHICS APPROVAL AND REGULATORY PERMIT OF PROTOCOL P12/16/146: DETERMINANTS OF HOSPITAL DELIVERY IN THE CONTEXT OF CONDITIONAL CASH TRANSFER FOR PREGNANT WOMEN IN DEDZA DISTRICT OF MALAWI**

Having satisfied all the ethical, scientific and regulatory requirements, procedures and guidelines for the conduct of research in the social sciences sector in Malawi, I am pleased to inform you that the above referred research study has officially been approved. You may now proceed with its implementation. Should there be any amendments to the approved protocol in the course of implementing it, you shall be required to seek approval of such amendments before implementation of the same.

This approval is valid for one year from the date of issuance of this letter. If the study goes beyond one year, an annual approval for continuation shall be required to be sought from the National Committee on Research in the Social Sciences and Humanities in a format that is available at the secretariat. Once the study is finished, you are required to furnish the Committee and the Commission with a final report of the study.

Wishing you a successful implementation of your study.

Yours Sincerely

Martina Chimzimu  
NCRSH ADMINISTRATOR AND RESEARCH OFFICER  
HEALTH, SOCIAL SCIENCES AND HUMANITIES  
For: CHAIRMAN OF NCRSH



**Appendix IX: Permission by Dedza District Health Officer**

From : District Hospital Dedza  
P.O. Box 136  
Dedza  
13<sup>th</sup> January, 2017

To : Brave Tembo  
Dedza District Hospital  
P.O. Box 136  
Dedza

Dear Sir,

**RE: REQUEST TO CONDUCT RESEARCH IN HEALTH FACILITIES**

Be informed that your request to conduct a research study titled "Determinants of Hospital delivery in the context of conductional cash transfer <sup>for</sup> pregnant woman in Dedza district of Malawi 'is accepted.

The hospital is looking forward to receiving the results of your study for local use.

  
DR. SOLOMON JERE

**DISTRICT HEALTH OFFICER**

