

# **FACTORS INFLUENCING LOW UTILIZATION OF HEALTH FACILITY DURING LABOR AND DELIVERY: THE CASE OF ETHIOPIA.**

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49<sup>th</sup> International Course in Health Development

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by

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Declaration:

Where other people's work has been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.

The thesis 'Factors Influencing Low Utilization of Health Facility During Labour and Delivery: The Case of Ethiopia' is my own work.

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## ABREVIATIONS

ANC	Antenatal Care
BEmONC	Basic Emergency Obstetric Care
CEmONC	Comprehensive Emergency Obstetric Care
CSA	Central Statistics Agency
EDHS	Ethiopia Demographic Health Survey
EmONC	Emergency Obstetric and Neonatal Care
FGM	Female Genital Mutilation
FMOE	Federal Ministry of Education
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
HDA	Health Development Army
HEP	Health Extension Program
HIV	Human Immunodeficiency Virus
HSDP	Health Sector Development Plan
HTP	Harmful Traditional Practice
ICHD	International Course in Health Development
KIT	Royal Tropical Institute
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOFED	Ministry of Finance and Economic Development
PHCU	Primary Health Care Unit PNC
PMTCT	Prevention of Mother to Child Transmission of HIV
PNC	Post Natal Care
SBA	Skilled Birth Attendant
SNNRP	Southern Nations and Nationalities People Region
TBA	Traditional Birth Attendant
TBA's	Traditional Birth Attendants
UNDP	United Nation Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
VU	Vrije Universiteit
WHO	World Health Organization

## Definition of Terms

**Maternal Mortality ratio** is the number maternal death during a given time period per 100,000 live births during the same period (WHO, 2009b).

**Maternal Death (ICD- 10 definition):** “is the death of women while pregnant or within 42 days of termination of pregnancy irrespective from the duration and the site of the pregnancy from any causes related to or aggravated by pregnancy or its management but not from accidental or incidental causes” (WHO, 2009c).

**Skilled Birth Attendant** “is an accredited health professional such as midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postpartum period, and in the identification management and referral or complications in women and newborn” (WHO, 2008).

**Traditional Birth Attendants (TBAs)** are only “traditional, independent (of the health system), none formally trained and community based providers of care during pregnancy, childbirth and the postpartum period. TBAs either trained or not, is excluded from the category of skilled health workers” (WHO, 2004).

**Skilled Care** “is a quality of care to the women during pregnancy, childbirth and postpartum period and her infant provided by a skilled personnel supported by an enabling environment (necessary equipment, supplies and medicines and infrastructure) and functional referral system” (WHO, 2012).

**Partograph** “is an underutilized tool for the prevention and management of prolonged or obstructed labor, a significant cause of reproductive morbidity and mortality “(Fistula care/EngenderHealth, 2012).

**Eclampsia** is “convulsions and coma, rarely coma alone, occurring in a pregnant or puerperal woman, and associated with hypertension, edema, and/or Proteinuria (Sounders, 2007).

## Abstract

**Background:** Ethiopia is one of the least developed countries in Sub-Saharan Africa and has low maternal health service utilization. About 90% of child birth took place outside health facilities, and without the help of skilled birth attendants. As a result 20,000 mothers die every year due to pregnancy- and child birth- complications that could have been prevented by these births having been attended at health facility with skilled birth attendants.

**Objective:** to explore factors influencing low utilization of health facilities during labour and delivery in Ethiopia, which is the key intervention for reduction of maternal and neonatal mortality, and to make feasible recommendations aimed to increase the number of births taking place in health facilities.

**Methods:** A literature review on skilled birth attendants/institutional delivery service utilization was undertaken. The frame-work social determinant of maternal health service utilization was used for analysis of the available literatures.

**Results:** All the following four levels of determinants were contributing to low utilization of health facility during child birth in Ethiopia: individual and family-related, health service-related, community-related, and governance and policy-related factors. Of these the following were the leading factors: lower education status of women and self-efficacy, influence from husbands or relatives, low acceptability of delivery care at health facility, low financial accessibility due to low enforcement of user fee abolition policy, multiple traditional and health beliefs, and deeply rooted gender biased decision making.

**Conclusion:** In Ethiopia, all interlinked individual, family, community, health service, governance, and policy level determinants influence the low level of health facility delivery service utilization. Low socio economic status and women disempowerment with multiple traditional and health beliefs were responsible for extremely low utilization of health facility for child birth. Failure to meet expectation of labouring mothers at health facilities was also an important finding in the majority of studies.

**Recommendations:** Exploring context specific barriers for utilization of health facility during childbirth, women empowerment, increasing awareness activities on the importance of skilled birth attendant at health facility to husbands and families, and health service quality improvement, are recommended.

**Key words:** Skilled birth attendant, institutional delivery, EmOC, Barriers, determinants, Home delivery, Normal labour, Ethiopia.

**Word count:** 12811



## Introduction

During my clinical work in Bati health center as a clinical health officer, I observed a lot of challenges for pregnant ladies in the utilization of delivery service. Predominantly, mothers turned to a health facility after trial of home birth with the help of traditional birth attendants or relatives, in the cases where the home birth was prolonged, obstructed or paired with severe bleeding during the immediate post-partum period. The problem was more severe when higher level care with emergency referral was needed, as a majority of rural dwellers were not able to afford the cost of contract transport to the nearest hospital due to lack of ambulance services in the district. This was happening beside the presence of high utilization of Antenatal care even in rural kebeles (the smallest administrative unit in Ethiopia). Beside the presence of 24 hour and 7 days delivery care service at the health center, I have observed a number of women living in Bati town delivering at home.

The Ethiopian government shows commitment to improve maternal health in the country by provision of clean and safe delivery at Health post level, skilled care and emergency obstetrics care at health centers and hospitals, provision of family planning at all levels of healthcare system. However, despite this commitment maternal mortality rate still did not have significant decrease, where it is supposed to be reduced to 267/100,000 live birth by the year 2015. This makes the country unlikely to achieve the Millennium Development target.

The low level of maternal health service utilization, including delivery care at health facility, was responsible for the majority of maternal death in the country. This is the reasons why I want to deal with the factors leading to low utilization of delivery care services at health facilities. I hope the recommendations of this thesis will help decision makers to increase the number of births attended in health facilities by skilled birth attendants, so that majority of maternal and neonatal deaths will be averted.

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## **CHAPTER ONE: BACK GROUND INFORMATION**

### **Geography**

Ethiopia is a landlocked country located in the north eastern part of Africa, with a total surface area of 1.1 million square kilometres, with great geographical diversity ranging from Ras Dashen at 4550 metres above sea level to Dalol at 110 metres below sea level. It borders on Eritrea, the Republic of Sudan, the Republic of South Sudan, Kenya, Djibouti and Somalia. Currently, the country has nine regional states; Tigray, Affar, Amhara, Oromiya, Somali, Benishangul-Gumuz, Southern Nations Nationalities and Peoples (SNNP), Gambela, and Harari, with two city administrations: Addis Ababa and Dire Dawa (CSA, 2012).

### **Demographic Data**

Ethiopia is the second most populous country among Sub-Saharan African (SSA) countries, with an estimated population of 84,320,987 in 2011/2012. This population number is based on a projection made from population and housing census of 2007, the annual population growth rate is 2.6% at the time of census (CSA, 2011). Of these, 50.5% are males and 49.5% are females. There is an uneven distribution of population between regions; only three regions namely Oromiya, Amhara and SNNP consist of more than 80% of population. The population is characterised by a dominant young age group; about half (47%) of the total population are children under the age of 15. The total fertility rate of 4.8 children per woman indicates the presence of a high fertility rate in the country (CSA, 2012). Women in the reproductive age group constitute 24% of the country's population (FMOH, 2010a).

### **Ethnicity and Religion**

Ethiopia is a home to more than 80 different ethnic groups with different religion and culture. According to population and housing census done in 2007, Oromo and Amhara ethnic groups are dominant, making up 34.5% and 26.9% of the population, respectively. Orthodox Christian and Islam are the most dominant religions as they constitute 43.9% and 33.9% of population respectively. Protestant, Catholic and traditional beliefs together constitute the remaining 22.2% (CSA, 2008).

### **Economy**

Ethiopia remains among the least urbanized countries, in which only 16% of total population live in urban areas. Ethiopia is also one of least developed countries, where a third of its population live below the poverty line, even though the poverty head index declined from 38.6% in 2004/2005 to 29.2% in 2010 (MOFED, 2012). Ethiopia's economy highly depends on the agricultural sector which accounts for 83.4% of the labour

force, about 43.2% of the Gross Domestic Product (GDP), and 80% of exports (FMOH, 2012a).

## **Education**

Educational indicators in Ethiopia still remain poor and lower than the Sub-Saharan average, despite the fact that some progress has been made. There were more than 1.8 million adolescent girls out of school in 2009 (UNESCO, 2012), Despite the gender ratio of the population being nearly equal (50%), this contributes to a great disparity in adult literacy rate between men and women; 65% and 38% respectively in 2011 (FMOH, 2012a). This high illiteracy rate of women contributed to the low utilization of health institution during labour and delivery (CSA, 2012). Poverty and cultural factors like early marriage, teenage pregnancy, gender-based violence, and social norms that give lower role and position to women in the society, are the major barriers to girl's and women's access to education (UNESCO, 2012).

## **Healthcare System**

There is a three-tire healthcare delivery system in the country; the first level (Woreda/ District health system) comprises a primary hospital, health centres and health posts, the second tier which has a General Hospital, and finally the third tier with a Specialized Hospital in which all the three tires are connected by a referral system (FMOH, 2012a). For the catchment population number see annex one.

Even though primary healthcare physical access reached 90%, there is still a low healthcare utilization rate of 0.36%, with some variation among programs due to socio-cultural, geographical and economic factors (FMOH, 2011). The density of health workers (physicians, nurses and midwives) per 1000 population is 0.7. This is much lower than the World Health Organization (WHO) recommendation (2.3 per 1000 population), making Ethiopian healthcare system face a serious challenge in shortage of health work force, which compromises quality of essential maternal health services, particularly in rural parts of the country (WB, 2011 & FMOH, 2012a). In addition to this, low density of healthcare providers, high attrition, poor skill mix and uneven distribution across regions, are also a major challenge of human resource for health in the country (FMOH, 2007a).

## **Health Status**

Though some progress has been made, the health status of the Ethiopian population is still relatively poor, and is characterised by high levels of mortality and morbidity due to preventable communicable disease like malaria, TB, diarrheal disease and nutritional disorders (FMOH, 2010a). According to Ethiopian Demographic and Health Survey of 2011, the percentages of women in the reproductive age group that have anaemia

or have a Body Mass Index (BMI) of less than 18.5 Kg/m<sup>2</sup> are 17% and 20% respectively. Infant and under five mortality rates are 59 and 88/1,000 live births, respectively. In the year 2011, the average life expectancy at birth was estimated to be 59 years (WB, 2013). The country is on course of achievement for most Millennium Development Goals (MDGS), except for MDG 3 and 5 which are gender equality and improving maternal health (MOFED, 2010).

### **Maternal Health**

Some decrement has been recorded in Maternal Mortality Ratio (MMR); from 871/100,000 in EDHS of 2000 to 673/100,000 births in 2005. Despite this fact it still remained unchanged in EDHS of 2011 as it was found to be 676/100,000 births (CSA, 2012). As a result Ethiopia is one of five countries that contribute to 50% of world's maternal death, together with India, Nigeria, Pakistan, Afghanistan, and the Democratic Republic of Congo (Hogan, Foreman et al.2010). 30% of all deaths in women of reproductive age group are related to pregnancy and childbirth complications (CSA, 2012). The major causes for this high level of maternal death are found to be haemorrhage, infection, obstructed labour, severe preeclampsia, and complication of unsafe abortion (CSA, 2012). In order to improve maternal health, the Ministry Of Health (MOH) started to implement training of mid-level health professionals to be able to give Basic Emergency Obstetric Care (BEOC), expansion of a health facility that provide BEOC, and implementing community-based Health Extension Program (HEP) (Globserver, 2012).

According to the performance report of Health Sector Development Plan (HSDP-IV) (2011/2012), there is slight increment in utilization of some maternal health services like ANC; at least one visit (From 82.2% to 89.1%), percentage of births attended by skilled birth attendants (16.6 to 20%), postnatal care service use (42.1% to 44.5%), and PMTCT service use (33.4% to 36.7%). Whereas other services showed a decline compared to the base line during the year; deliveries attended by Health Extension Workers (14.7% to 13.2%) and contraceptive acceptance rate (61.7 to 60.4%).

## **CHAPTER TWO: STATEMENT OF THE PROBLEM, OBJECTIVES AND METHODOLOGY**

### **Statement of the problem**

Reducing child mortality by two-third and maternal death by three-quarter by 2015 are the fourth and fifth MDGs (FMOH, 2011/2012). Both historical and contemporary evidence from different countries in the world like Egypt, Sri Lanka, Jordan, Thailand, China, Malaysia, Cuba, and Tunisia show that increasing the proportion of births attended by Skilled Birth Attendants resulted in a dramatic impact in reduction of maternal and neonatal mortality (UNFPA, 2012). As about 75% of all maternal death occurs during delivery and immediate post-partum period, having a skilled attendant at birth is a crucial intervention in reducing most of maternal and intra-partum related neonatal deaths (WHO, 2007). However, per year about 48 million mothers in the world give birth without the help of SBAs, of which more than two million give birth completely without the help of anyone in the world (Save the Children, 2011). The majority of these births not attended by qualified healthcare providers are in WHO African region, where births attended by SBAs remain below 50%, which is much lower than the global target (90%) to be reached by 2015 (WHO, 2013a). As a result more than half of world maternal death is occurring in SSA only (WHO, 2012a). Saving of the mother's live is also important in achieving MDG four, as the presence of high maternal mortality rate is directly related to high neonatal mortality rate, in which the majority of deaths could have been averted by making appropriate care at birth available (FMOH, 2006). Evidence of high infant mortality rates shows that there is more chance of infant deaths before their second birthday for those whose mothers died; opposed to infants whose mothers are alive (UNFPA, 2012).

Ethiopia is one of the countries with insufficient progress towards achieving MDG four and five (WHO, 2012b), as Ethiopia has the highest maternal and neonatal mortality with 676/100,000 and 37/1000 live births respectively (CSA, 2012). This MMR figure is much higher than the average of the developing world (290/100,000 live births) (WHO, 2012a). Despite the presence of many investments and initiatives by donors, 20,000 mothers are dying annually from preventable causes of pregnancy and childbirth complications, and more than 500,000 mothers suffer from pregnancy and childbirth related disabilities, including obstetric fistula, each year (FMOH, 2012 & UNFPA, 2009). The wide spread prevalence of violence against women and harmful traditional practices, like female genital mutilation (FGM) and early marriage, are found to be among major contributing factors to the high level of maternal mortality and disability in the country (WHO, 2009b). Only 10% of births were attended by SBAs in the health facilities. Some additional maternal health service indicators are shown annex two. Moreover, 30% of mothers who did not give birth at a health facility stated culture and belief as their reason and about 60% of

them said it is not necessary to go to a health facility for attending labour (CSA, 2012).

The main causes for this poor progress in utilization of health facility delivery care were the presence of shortage of midwives poor referral linkage between different level of health facilities, inadequate availability of Basic Emergency Obstetric and Neonatal Care and Comprehensive Emergency Obstetric and Neonatal Care, and additionally under financing of services both from the government and Non-Governmental Organizations (NGOs) were identified as supply side barriers. In regard to demand side barriers, financial inaccessibility, distance from health facility and cultural factors were recognised as the major causes (FMOH, 2012a). Even though births attended by SBAs are different from health facility deliveries, they are used interchangeably in this thesis as it is very uncommon in Ethiopia for SBAs to perform home deliveries.

### **Justification**

Annually about 15% of 2.6 million pregnant women giving birth in Ethiopia, are estimated to face potentially fatal complications during childbirth, which almost all are treatable with well-known cost-effective interventions, despite their occurrence being unpredictable (FMOH et al.2012). Therefore, having SBAs at the time of labour and delivery is important for all pregnant women in order to identify these life threatening complications as early as possible, to give appropriate interventions, and to manage or stabilize the conditions and refer the mother to the nearby higher level facility for emergency obstetrics care (UNFPA, 2012).

Institutional delivery service utilization, which is the most important predictor of maternal health and indicator to measure progress towards MDG five in Ethiopia, still remains among the lowest in the world (FMOH, 2012). In 2011 of EDHS only 10% of births took place at a health facility, which is showing insufficient progress compared to 6% in EDHS in 2005 (CSA, 2012). This figure indicates that the country is unlikely to attain the country's reproductive health strategy target for this indicator of MDG five, which is increasing the proportion of births assisted by SBAs to 60% by 2015 (FMOH, 2006); only two years remain until the deadline. 51% of births in urban areas were attended by SBAs, compared to only 4% of births in rural areas, where more than 80% of population live and women face more challenges during childbirth as a result of wide practices of early marriage and FGM that can increase the risks of pregnancy and childbirth complications (Akalu, 2013 & CSA, 2012). According to HSDP IV annual performance report of 2011/2012, wide regional disparity was also observed between different regions of the country ranging from 8.4% in Benishangul Gumuz to 66.4% in Addis Ababa and 67.1% in Harari.

Beside the presence of strong government commitment to improve maternal health by the expansion of health institutions giving delivery care with EmONC (Gloobserver, 2012), still there is great regional disparity in utilization of institutional delivery service as it was observed in analysis of 2011 EDHS data; women who live in Tigray, Affar, Amhara, Oromiya, Benishangul-Gumuz, and SNNP had lower utilization of health facility delivery care than those who live in Dire Dawa, Addis Ababa and Harari (Mehari, 2012).

Studies done to find factors influencing low utilization of institutional delivery service were rare up to recent past; currently it was given priority and there are a number of new studies done in different parts of the country to find out why mothers are not using a health facility at the time of childbirth. This motivated me to do a literature review on factors influencing low utilization of a health facility during labour and delivery in Ethiopia. Exploring of these factors will help to address the major challenges of improving facility delivery service utilization in order to save both the mother's and baby's lives. The results of this study will help MOH, Regional Health Bureaus (RHBs) and other stakeholders to make a plan for interventions that increase utilization of health facilities during labour and delivery.

## **Objectives**

### **General Objective**

The overall objective of this thesis is to explore factors influencing low utilization of a health facility during labour and delivery, which is the key intervention for reduction of maternal and neonatal mortality in Ethiopia, and to make feasible recommendations aimed to increase the number of births taking place in health facilities.

### **Specific Objectives**

- Identify individual and family related factors influencing utilization of a health facility during labour and delivery in Ethiopia.
- Explore community related factors affecting utilization of a health facility during labour and delivery in Ethiopia.
- Examine health facility related factors influencing institutional delivery service utilization in Ethiopia.
- Review policy and governance related factors affecting institutional delivery service utilization in Ethiopia.
- Using current literature from Ethiopia combined with selected and relevant information from other developing countries, to make recommendations in order to plan & implement feasible and effective interventions that increase utilization of a health facility during labour and delivery.



## **Methodology**

Literature review was carried out using peer reviewed journals, articles and unpublished documents, and annual performance reports that are related to delivery service utilization. A conceptual framework of social determinants of maternal health service utilization was used to guide the analysis of factors influencing low utilization of a health facility during labour and delivery in Ethiopia.

### **Search Strategy**

PubMed, Google, Google scholar search engine through VU library with the KIT library database (Scopus), MOH, UNFPA, WHO, and Women Deliver websites were used for the online search of documents used. The literature reviews include studies published in 2005 or later because since 2005 there are a number of programs that were given priority by the government and external support in order to improve maternal health. All literature reviewed was written in English.

### **Key Words**

Skilled birth attendant, maternal mortality, delivery service, reproductive health strategy, maternal health, culture, total health expenditure, home delivery, healthcare financing, availability, accessibility, cost of health service, perceived quality, acceptability, UNFPA, WHO, Women Deliver, gender based decision making, household income and women status were the key words used for searching literatures.

### **Limitations of the Study**

The majority of studies used were not carried out at national level which makes it difficult to generalize at national level. In addition, many of the studies were also qualitative in nature. Although they provide context specific information, the information is still limited to the areas where they derived from, which makes it difficult to inference as there is contextual difference from place to place within the country.

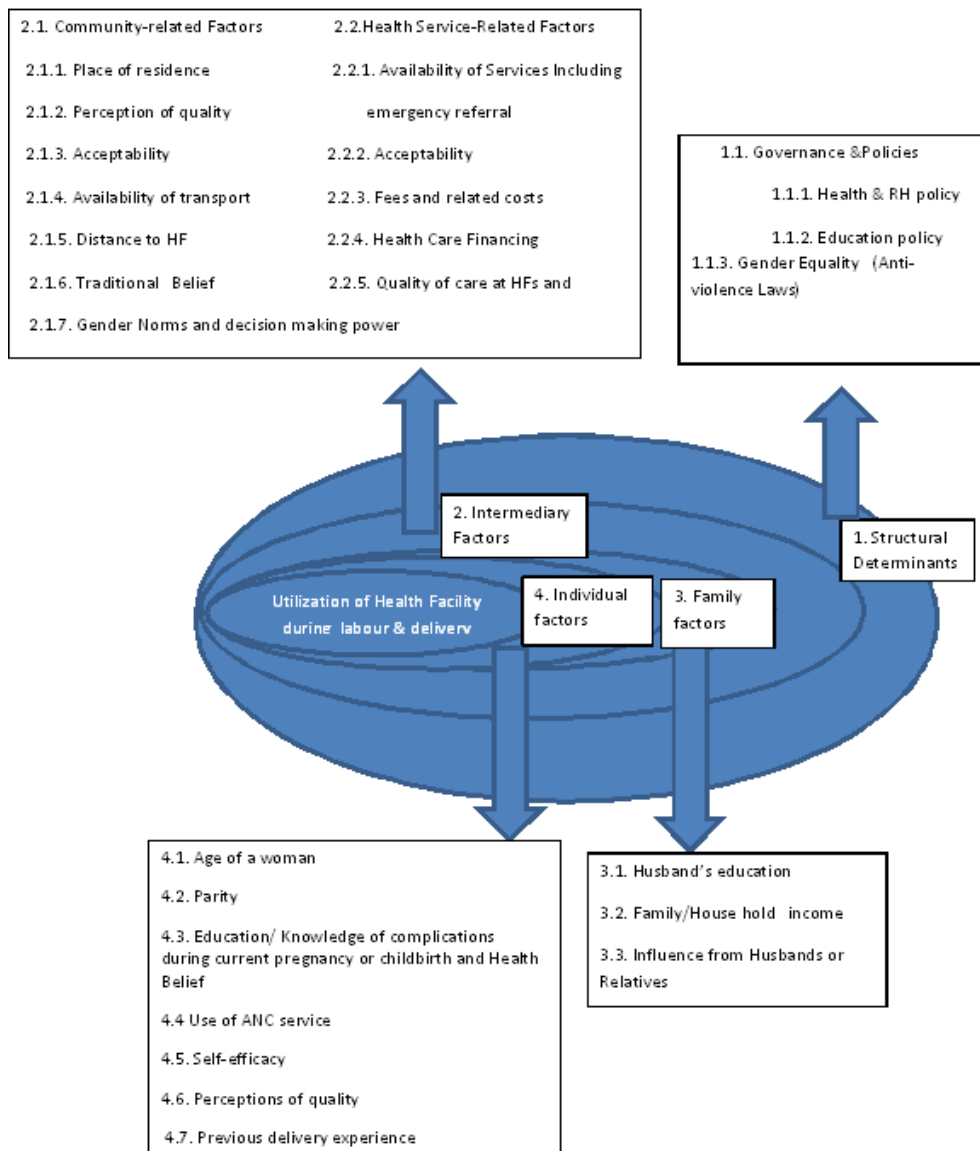
### **Conceptual Framework-The Social determinants of maternal health service utilization**

The Social determinants of health are defined by WHO as "the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of power, money and resources at global, national and local levels, and affected by policy choices at each of these levels."(WHO, 2013b).

Many of studies found on factors affecting maternal health service utilization have focused on individual factors, which are the immediate influencing factors that determine maternal utilization of health services, while the inter-linked underlying factors at various levels contribute significantly to low utilization of institutional delivery services in Ethiopia. As a result a comprehensive approach is needed to discuss, analyse and understand various level determinants in order to solve the problem accordingly. The United Nations Development Program (UNDP) social determinants' approach to maternal health (UNDP 2011) has been

adapted to exclude determinants not applicable, and to add to the ones that are found to be associated with facility childbirth in Ethiopia. Various determinants with a strong relationship to each other were grouped together to guide the analysis of findings in this thesis in the following ways:

1. Included in individual factors are: parity, education/knowledge, and perception of quality, use of ANC service, previous delivery experience, and occurrence of complications during current pregnancy and childbirth. While number of children is excluded as an individual factors. Included in family factor are: husband education and influence from husbands or relatives. While family structure, spousal communication, support networks and access to resources are all excluded as family factors. "Health beliefs" was moved under individual factors, from being placed under structural determinants in the original framework.
2. Social position, social capital and awareness of care are excluded as community related factors, whereas acceptability of services, traditional beliefs and availability of transport are added to community related factors. In addition, gender norms and decision making power are moved under this section from structural determinants of the original framework.
3. Social cohesion, reproductive health and rights, women status, religion, and social protection are excluded from the structural determinants of new conceptual framework.
4. Health care financing is moved from policy-related to health service-related factors and, and acceptability of services are also added to health service-related factors.
5. The final maternal health outcome is changed to utilization of a health facility during labour and delivery. In addition, some of the determinants were amended in the conceptual framework as listed below:
  - Family and peer influence factors to family-related factors
  - Skills and competencies of staffs to quality of care at Health facilities
  - Health finance and infrastructure to Health policy and Health care financing



**Figure1. The Social Determinants of Maternal Health Service Utilization. Adapted from UNDP**

### CHAPTER THREE: FINDINGS

This chapter will summarize information obtained from Ethiopia which is related to factors influencing institutional delivery service utilization. The findings are grouped according to the adapted conceptual framework: governance and policy-related, individual and family related, community-related and health service related factors. SBAs or institutional/ health facility delivery service use are applied interchangeably as having SBAs at home is rare in Ethiopia. Of 40 of documents used for this literature review, only 11 were national based studies. There was no literature found on four regions, and as for the remaining regions the 29 literatures were not evenly distributed with the majority of them from Amhara and Oromiya, the two largest regions of the country. The regional distribution of the 29 literatures is illustrated in the following figure.



Figure 2. Distribution of literatures found by regions of Ethiopia

#### Governance and policy related factors

##### Health and Reproductive health (RH) policy

The government of Ethiopia formulated the first health policy in 1993, aiming universal coverage of primary healthcare in the country. In order to achieve this goal, four consecutive phases of HSDPs were formulated,

namely HSDP I, II, III and IV. Maternal health is given priority by developing different strategies like Reproductive Health strategy (2006), Revised Abortion Law (2005), Adolescent and Youth Reproductive Health Strategy (2006), Making Pregnancy Safer (2000), and Road Map for Accelerating the Reduction of Maternal and Newborn Morbidity and Mortality in Ethiopia (2012). This strategy is aimed to by the year 2015 reduce MMR to 267/100,000 live births, teenage (10-19) pregnancy rate to 5%, and to increase the coverage of Focused Antenatal Care four or more times by skilled professionals (FMoH, 2012b). Female HEWs have been trained and deployed for community-based healthcare, including clean and safe delivery at health post level. Health officers (HOs) are trained in an MSc program in order to be equipped with Integrated Emergency Obstetric and Surgery (IEOS) skills (FMoH, 2010a). The government started to develop and implement Health Development Army (HDA), which is a one-to-five network that comprises both women and men together, as well as women exclusively, and is aimed to increase service utilization by effective implementation of health extension program (FMOH, 2011/2012).

The RH Strategy aimed to enhance coverage of comprehensive RH services in the social marketing sector and public Health facilities, as well as by providing comprehensive RH services like family planning, safe abortion service, and delivery and postnatal care (FMOH, 2006). The Adolescent and Youth Reproductive Health Strategy (2007) also formulated the aim to increase the RH and wellbeing of young people (aged 10-24), in order to empower them to access and utilize RH services based on their voluntarily informed choices over their RH lives, so that they are able to contribute in the country's development (FMOH, 2007b).

### **Education policy**

Women's participation in education is constrained by individual, familial, economic, socio-cultural, and school factors. Poverty was found to be one of the barriers in sending girl children to school, particularly for poorer people who reside far from schools. Gender-based division of labor at home is another factor that reduces a girl's success in education in addition to a high dropout rate, due to early marriage and marriage by abduction. The Ethiopian ministry of education designed a policy to address the gender gap in education at all levels of the education system by producing a gender sensitive curriculum to increase women's enrollment, retention and performance in government schools with affirmative action towards females (FMoE, 2010).

### **Gender equality (Anti-violence laws)**

The Ethiopian national penal and civil codes address issues which are related to abortion, rights within marriage, rights to physical integrity and

patient's rights. The 1994 Constitution and health policy of Ethiopia also discouraged Harmful traditional practices (HTPs) in order to guarantee women "... the right to protection by the state from harmful customs, laws and practices that oppress women or cause bodily or mental harm to them are prohibited." (FDRE, 1994: Article 35). The revised penal code has also taken considerable measures to prevent HTPs like abduction and marriage under the age of 18, which result in criminal prosecutions against the perpetrators. In addition to this, crimes like Female genital cutting (FGC), domestic violence, and perinatal harmful practices are also included with their detail punishment against perpetrators (FDRE, 2005: Articles 561 to 570). However, the implementation of these laws to protect Ethiopian women and girls against these crimes is constrained by lack of awareness by women and the general public, which results in low implementation capacity (FMoH, 2006).

### **Individual and family related factors**

A number of individual and family related factors were found to be associated with utilization of a health facility during childbirth in Ethiopia.

#### **Age of a woman**

A study done in Sekela district of Amhara region showed that the mother's age is one of the determinant factors to decide the place for delivery to be either at home or at health facility; younger mothers aged 15-24 are more likely to give birth at a health facility than those who are older than 35 years (Teferra et al. 2012). A similar finding was observed in a study done in Munisa district of Oromiya region, where mothers aged younger than 20 years were more likely to give birth at health facilities than those older than 35 years of age (Amano et al. 2012). These results were similar to finding obtained from studies done in Tigray region, rural Ethiopia, and Kembata-Tembaro area of Ethiopia (Tsegay et al. 2013, Mehari, 2012 & Shiferaw et al. 2013).

#### **Parity**

Birth order (Parity) of a woman was found to be another influencing factor in Ethiopia for selection of location during childbirth, as was demonstrated by multiple studies done in different parts of the country. First order births were more likely to be delivered at a health facility than fifth or higher than fifth order births (Amano et.al 2012 & Tsegay et al. 2013). A similar finding was also observed by studies done in North West Ethiopia and analysis of EDHS data of 2011, where prim gravid women (first pregnancies) were more likely to use a health facility during labour and delivery than any births following the first (Worku et al.2013a & Mehari, 2012). These findings were in line with a study done in the Afar region, the Tigray region and with a review among literatures from low and middle income countries (Mekonen et al. 2012, Asfaw, 2010 & Gabrysch and Campbell, 2009).

## Educational status/ Women's knowledge, complications arising during the current pregnancy and/or childbirth and Health Beliefs

A number of sources showed that the maternal education status influences the choice for place of delivery. Educated mothers are more likely to use a health facility during labour and delivery compared to those who are illiterate (CSA, 2012). In various studies done in Ethiopia a significant association was found between the educational status of woman and a health facility delivery service use, where maternal education level increases the likelihood of delivering at a health facility particularly for those who completed secondary education or above (Mekonen et al. 2012, Tsegay et al. 2013, Shiferaw et al. 2013, Mengesha et al. 2013, Worku et al. 2013a, Asfaw, 2010, Wado, Afewerk & Hindin, 2013). Illiteracy and lack of knowledge about the importance of skilled care at birth were found to be among major influencing factors for most mothers to prefer home delivery (Abebe et al. 2012 & Teferra et al. 2012).

Lack of knowledge about danger signs during pregnancy and childbirth were also shown to influence the timely seeking of skilled care. It was observed in a qualitative study conducted with participants from 11 regions in Ethiopia that in some places bleeding during a first birth is considered normal because of a belief that it relieves abdominal cramp after childbirth (Warren, 2010). In a community based qualitative study done among women in the Afar region, it was found that there is a traditional belief which associates prolonged labour with evil spirits. As a result they only want care for this problem from traditional healers or religious leaders (Yousuf, 2011).

Mothers who own a TV were more likely to get information or knowledge about the importance of skilled care at birth and where to get it. This was shown in a study in North West Ethiopia where mothers who had TV were more likely to use skilled care during childbirth compared to those without a TV (Mengesha et al. 2013). A similar result was observed in the Harari region where mothers who had exposure to media were more likely to deliver at a health facility (Muktar, 2009).

The presence of illness during pregnancy is also another determining factor for selection of a place during labour and delivery. A study done in Dodota district of Oromiya region and in South West Ethiopia showed that pregnant women who had illness during pregnancy were more likely to deliver at the health facility (Fikire & Demissie, 2012 & Wado, Afewerk & Hindin, 2013). An exploratory study conducted in 11 regions of Ethiopia showed that the presence of a known problem during pregnancy or premature labour, was among the major reasons why children were born in hospital (Warren, 2010). In the same study the decision makers decided only to take the labouring mother to a health facility if the Traditional Birth Attendant (TBA) failed to manage it at home in the case of the occurrence of severe complication. Absence of illness during

pregnancy was one of the reasons for preferring home delivery, as was concluded in a study done at Asayita and Dubti town of Afar region (Fenta, 2005).

Mothers usually tend to seek medical care for complications after the trial of home birth, which was observed in a qualitative study done in rural South Wollo zone of Amhara region, where 11 out of 14 mothers who delivered at health facilities came for delivery care due to complications, or failed to deliver at home (Bedford et al. 2012). A recent study done in North Gondar zone among women that delivered within one year preceding the study revealed that 28.5% of study participants reported some kind of complication during childbirth or the immediate postpartum period. Among these only nearly half got assistance from SBAs at health facilities (Worku et al.2013b).

The presence of different kinds of health beliefs was one of the deterring factors for mothers to give birth at HF. In a study done in Kembata-Tembaro among 909 women of the reproductive age group, and who had access to a health facility nearby, which gives EmOC and an emergency ambulance transportation system either for free or with minimal cost, only 16% of deliveries took place at health institutions. The major reasons why these women still prefer home delivery were beliefs that it is not necessary or not customary to go to a health facility for childbirth as they perceived childbirth is a normal process, accounting to statements of 42% and 36% of study participants respectively (Shiferaw et al. 2013). The same finding was observed in a qualitative study done in rural South Wollo of Amhara region, where most of study participants mentioned that home birth is their custom or habit, and that it is shameful for a lady to seek medical care for normal labour as a health facility is a place only to treat illness (Bedford et al. 2012). A verbal autopsy done in 2005, concerning 17 mothers who died during labour and delivery across eleven regions of Ethiopia, showed that 12 of them delivered at home with the help of relatives or TBA, because they perceived this the right way as a result of absence of illness during pregnancy (Warren & Mekibib, 2009).

A study done in Dodota district of Oromiya region also showed that home delivery is decided mostly by husbands and relatives because of the fear of stigma attached to a mother who give birth at HF, as well as her family, as the community considered them weak (Fikire & Demissie, 2012).

### Previous Delivery Experience

Previous negative experience with a health facility and poor quality of care were reported by mothers who delivered at home as their reasons why they preferred home birth over a health facility DC in a mixed method study done in Southern Ethiopia (Shiferaw et al. 2013). Negative attitude towards a health facility DC was mentioned as one of the reasons to prefer home birth in Harari region (Muktar 2009).



The experience of complications during labour and delivery increases the likelihood of using a health facility for the next delivery, as was observed in studies done in the Tigray and Oromiya regions of Ethiopia (Fikre & Demisse, 2012 & Tsegay et al. 2013). In another study done in Tigray, mothers who had history of obstructed labour were more likely to select a health facility for delivery care than those who had not (Asfaw, 2010). These findings were similar with a literature review done to assess determinants of delivery service use among studies done in low and middle income countries, which revealed that previous complicated labour is a strong predictor of institutional delivery care utilization (Gabrysch & Campbell, 2009).

### ANC service use

A strong association was found between ANC service utilization and Delivery at a health facility in various studies conducted in different parts of Ethiopia. Mothers who received ANC were more likely to select a health facility as a place for childbirth (Dagne, 2010, Asfaw, 2010, Mekonen et al. 2012, Birmeta et al. 2013 & Wado, Afewerk & Hindin, 2013). Four or more prenatal visits were a strong predictor of health facility utilization for childbirth in analysis of EDHS 2000 and 2005 data (Mehari, 2013). Information about the importance of skilled care at birth given during ANC visits increased health facility delivery, as was shown in findings of various studies (Mengesha et al. 2013, Tsegay et al. 2013, Amano et al. 2012 & Abay, 2007). Among mothers who even attended ANC visits, those who were properly informed were more likely to use a health facility during labour and delivery, as was observed in a study done in Woldiya town, where mothers who were informed about the place of delivery during ANC visit were more likely to deliver at health facilities than those who were not informed (Awoke et al. 2013). Delay in starting ANC was one of important predictors for home delivery, as was observed in a study done in Bahir Dar town, where mothers who started their prenatal visit late (after 24 weeks of gestation) were more likely to deliver at home (Abebe et al. 2012). Only one study did not show a positive association between ANC visits and health facility delivery in Dodota district of Oromiya region (Fikire & Demissie, 2012).

### Self-efficacy

Women's self-efficacy was found to have strong influence on women's choice for place of delivery. Analysis done from EDHS data of 2011 in order to assess determinant factors which affect maternal healthcare services utilization in rural Ethiopia, showed that mothers who had their own job and came from a female headed household were more likely to use both ANC and facility delivery services (Mehari, 2012). Women's employment also influences health seeking behaviour, as was shown in a facility based study done in Bahir Dar town, where unemployed mothers

had more delay in seeking EmOC than employed ones (Awoke & Seleshi, 2013) and in the Harari region where employed mothers were more likely to deliver in health facilities (Muktar, 2009).

### **Perception of quality**

A qualitative study done in the Amhara and Oromiya regions of Ethiopia showed that disrespect and abuse of labouring woman at the health facility was found to be major barrier to health facility delivery service use, even among HIV positive women despite their recognition of the importance of health facility delivery in order to deliver an HIV-negative baby (Ramsey, 2012). In a study done in Southern Ethiopia participants mentioned as their reason to prefer home birth, the presence of strong belief that TBAs has better knowledge to attend labour at home than SBAs, and lack of confidence in health workers' skills at health facilities (Shiferaw et al. 2013). The same result was observed in rural Tanzania where women who live in villages, whose majority of inhabitants have strong perception on TBAs, and feel as they have good skills to manage labour at home were more likely to deliver at home (Kruk et al. 2010b). That perceived quality has an influence on health seeking behaviour is demonstrated by the fact that women who can afford the cost of healthcare go to social marketing centres, private hospitals and clinics for delivery care, due to quality perception, as majority of highly qualified staffs are concentrated in private sectors (personal experience).

### **Husband's education**

The same association was found between facility delivery and the husband's educational status. Mothers who had educated husbands were more likely to use the health facility for delivery compared to mothers with uneducated husbands (Mehari, 2012 & Mezmur, 2011). In a study done in Munisa district this was the case particularly with husbands with a secondary level education or higher (Amano et al.2013). Similar findings were shown in an analysis of EDHS 2005 data where mothers with partners having secondary or higher education level were more likely to use SBAs during child-birth, than those who had illiterate partners (Dagne, 2010).

### **Family/Household Income**

In Ethiopia, the financial resource level of the household was found to be one of the determinants for timely seeking skilled care attendants during child-birth (Warren, 2010). Mothers from low income households were less likely to deliver at a health facility with the help of SBAs than mothers from higher wealth index households (Mehari, 2012, Worku et al. 2013b, Birmeta et al. 2013 & Mehari, 2013). A facility based study done in Bahir Dar town showed that mothers whose monthly income was below 1000.00 ETB were more likely to delay to go to higher level health facilities for

EmOC services after being referred from Primary healthcare, than those whose monthly income was 2000.00 and above (Awoke & Seleshi, 2013).

#### **Influence from husband or relatives**

The presence of educated family members is another factor influencing choice for place of delivery. A study done in Samre Saharti District of Tigray region showed that mothers who had educated family members were more likely to deliver at a health facility. This association was found to be strong especially for those women who had family members with at least secondary school level education (Asfaw, 2010). Opinions of husbands and relatives also influence the decision about where to deliver, as was shown in a study carried out in Jimma town, Oromiya region where women who had a husband or relatives who preferred skilled delivery care at birth, were more likely to deliver in a health facility (Ayele, 2005).

The place of delivery usually is 'most' often decided by husbands or elderly relatives, as was shown in a study done in Dodota district in the Oromiya region (Fikire & Demissie, 2012). The same result was observed in an explorative study in 11 different regions of Ethiopia and Southern Ethiopia (Warren, 2010 & Shiferaw et al. 2013). In the same studies the decision makers only decide to take the labouring mother to a health facility if TBAs failed to manage it at home, which is when severe complication occurs.

### **Community related factors**

Multiple community related factors were found to have an effect in selection of delivery place and include determinants as gender norms, decision making power, and traditional belief.

#### **Rural/Urban residence**

Place of residence is found to be the main determinant factor in selecting a place for childbirth, according to various studies done in Ethiopia. Mothers from urban residence were more likely to use a health facility during childbirth than rural residence mothers (Wado, Afewerk & Hindin, 2013, Mengesha et al.2013, Abebe et al.2012 & Amano et.al, 2012).

#### **Distance to facilities**

Long distance to the health facility was one of the reasons mentioned by women as to why they still continue to give birth at home despite their knowledge of the risks of home delivery (Warren, 2010). About half of study participants in a study done at Haramaya district of Ethiopia gave long distance to the health facility, which has delivery care service, as their reason for selection of home delivery (Mezmur, 2011). A study done in South West Ethiopia showed that women who need to travel more than one hour to reach a health facility were less likely to use a health facility

during childbirth, than those who need less than an hour of travelling time (Wado, Afewerk & Hindin, 2013).

#### **Availability of transport from home to a health facility**

Availability of transport to a health facility for labouring mothers is another factor influencing the choice of facility delivery, as was shown in a study done in Dodota district of Oromiya region, where "gari"<sup>1</sup> is a common means of transportation, One of the reasons given for delivering at home was absence of a comfortable means of transport for the labouring mother (Fikre & Demissie, 2012). A literature review containing 84 articles from Ethiopia and a recent study done in Southern Ethiopia revealed that unavailability of transport was mentioned by most of the women as a barrier for not seeking SBA (Koblinsky et al. 2010 & Shiferaw et al.2013). In a facility based study done to assess the causes of maternal delay in Bahir Dar town, 31.7% of study participants mentioned that they walked a minimum of three hours to reach health facilities because of absence of transportation, and 18% of labouring mothers were carried by wooden stretcher (Awoke & Seleshi, 2013). Lack of transport particularly during night time was mentioned by mothers as a barrier to attend labour at a health facility in a study done in South Wollo of Amhara region, as public transport is not available during night time when labour usually starts (Bedford et al. 2012).

Lack of access to all weather roads was one of the reasons for absence of transportation, particularly in the rainy season, as only 33% of the more than 80 million rural population of the country had access to all weather roads within 5 Km distance (Worku, 2011).

#### **Acceptability of delivery services**

Despite the fact that ANC utilization is increasing over time in Ethiopia, as mentioned earlier, utilization of DC service remained extremely low. Low acceptability was found to be among the major determinants. A study done at Ayssaita and Dubti towns of Afar region showed that only 6.3% of study participants delivered their latest babies at a health facility, due to the presence of more trust on TBAs over health professionals, lack of privacy, and the presence of male skilled birth attendant at a health facility (Fenta, 2005). An explorative study done among participants came from 11 regions of Ethiopia, showed that many women prefer to deliver at home due to most health facilities not allowing close friends or relatives to get in with the labouring mother to the delivery unit, despite that the woman needs their psychological support (Warren, 2010). In the same study, some of the study participants stated that health workers not giving the usual specific foods to the delivered mother after delivery, and not recognizing cultural ceremonies to protect from evil spirits, as their reason to prefer home delivery. The same finding was observed in another qualitative study done in Rural South Wollo zone of Amhara region, where

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<sup>1</sup> "Gari": is a cart pulled by horse/ donkey which is not convenient to transport labouring mother.

mothers gave as their reason to prefer home delivery over a health facility DC that health facilities don't allow neighbours or relatives to accompany a labouring mother into the delivery unit, and also they don't allow the usual position of home birth (kneeling down) at the time of childbirth (Bedford et al. 2012). In another study done in southern Ethiopia on why women opt for TBAs instead of going to a health facility during labour, some of the study participants mentioned that TBAs meet the expectations of labouring mothers and their close relatives (they do abdominal massage and allow to bury the placenta around the home), while the modern health facility does not (Shiferaw et al. 2013). In the same study, lack of privacy, little respect and psychological support from the health workers at health facilities were also mentioned as barriers in seeking SBAs. One study done in Chilga district of Amhara region revealed that women's privacy and having immediate families on their side during delivery, were some of the reasons why women prefer home delivery (Kebede et al. 2013).

#### **Perceived Quality**

Poor quality of health services as a result of lack of accountability, commitment and professional competence among the healthcare providers, were some of the reasons that led the community to develop a negative attitude towards a health facility DC, as was shown in a study done in Shebedino district of SNNRP region (Forsido, 2010).

#### **Traditional Beliefs and Beliefs about Pregnancy/childbirth**

In a qualitative study done among Afar women in the Afar region, traditional belief was one of the main reasons to prefer home delivery or delayed referral, due to fear of male midwives as it is impolite for Afar women to expose their reproductive organ to a person other than their husband (Yousuf et al. 2011). Similar finding were also shown in another study done in South Wollo of Amhara region, where mothers prefer home delivery due to the fact that they don't want to expose their body to people (health workers) who don't know them, except in the case of complicated labour (Bedford et al. 2012). A qualitative study done among participants from eleven regions of Ethiopia has shown that the first response to obstetric complication of mothers labouring at home was prayers for both followers of Christianity and Islam. It is only when these prayers fail, that they start to seek skilled care at a health facility (Warren, 2010).

The presence of belief that pregnancy and childbirth is a natural process that does not require special attention was also one of the barriers to seek SBA at health facilities in some communities, as was shown by studies done in South Wollo Zone and Southern Ethiopia (Bedford et al. 2012 & Shiferaw et al.2013).

### **Gender Norms and decision making power**

Analysis of the 2005 DHS of Ethiopia and Eritrea showed that women who disagree with wife beating were more likely to deliver at health facilities compared to women who justified wife beating (Woldemicael, 2010). In the same analysis, women from households where the woman is the sole decision maker in large household purchases, were more likely to use health facility delivery care, than women from households where this decision is made by husbands or someone else in both countries.

Decision making power of women was found to be an important predictor for choice of delivery place according to various studies done in Ethiopia. A study done in Bahir Dar town that assessed maternal delays showed that women who were influenced by their husbands were more likely to delay in seeking EmOC, than women who decide by themselves (Awoke & Seleshi). In another study done in Jimma town it was shown that women who were able to decide their place of delivery by themselves were more likely to deliver at HF, than those who did not have decision making power in the household (Ayele, 2005). Little role in decision making was one of the reasons mentioned why most women deliver at home, according to a mixed study done on women of childbearing age in southern Ethiopia, even in the case where women want to deliver at a health facility and husbands reported that their decision depends on the recommendations of TBAs in the community. (Shiferaw et al.2013). A similar finding was observed in a study done in Samri Saharti district of Tigray region, where women with low socio-economic and educational status were unable to decide for themselves about their health including their place of delivery, and as a result they were more likely to deliver at home (Asfaw, 2010).

### **Health service related factors**

Several health services related factors influence the utilization of health facilities for childbirth. Health care financing, under policy and governance related factors in the original framework, is addressed in this section because of its direct relation to fees for services.

#### **Availability of Services Including emergency referral**

According to the 2008 National assessment of EmOC, only 51% of hospitals were giving comprehensive EmONC (FMOH, 2008). In a qualitative study carried out in Southern Ethiopia, unavailability of health workers especially during weekends was mentioned by some participants why they select the home as a place of childbirth (Shiferaw et al. 2013).

Shortage of human resource for maternal health services like midwives and doctors is another challenge. The ratio of physicians and nurses to the population was only 0.02 and 0.24 per 1,000 respectively in 2010 (WB & MSH, 2011). Even though the number of midwives has been increased from 1,275 in 2008 to 4,725 in 2012, the midwife to population ratio (1:17,989) is still much lower than the recommended ratio by WHO, which

is 1:5,000 (FMoH et al. 2012). Not only their scarcity, but also these health staff's uneven distribution over the country was found to be another challenge the country is facing, as a majority of the available midwives and doctors reside in the urban areas, where less than 20% of population live (WB & MSH, 2011 & FMoH et al. 2012). A study done in 19 private and public hospitals of Addis Ababa showed that the ratio of human resource for health in public hospitals per the amount of service they provide was much lower than the private ones (Nadew, 2007).

Little availability of space for before and after labour in the health facilities was the major reason why newly delivered women were sent home immediately after delivery even if the woman wanted to stay, which is in contradiction with the recommended six hour stay in (Ramsey, 2012).

Lack of functional emergency referral system was one of the barriers which hinder mothers to go for EmOC at higher level facility, was shown in a study done in Southern Ethiopia (Forsido, 2010).

### **Fees, related costs and healthcare financing**

#### **Fees/Direct costs**

Affordability is also another major determinant using a health facility for delivery services according to a facility and population based study done in North West Ethiopia, where utilization of a health facility during labour was reduced by 47% in health facilities who had payment requirements for delivery care compared to health facilities without payment requirement (Worku et al. 2013a). In a mixed study done in Southern Ethiopia, about a quarter of study participants mentioned high costs at the health facility as the reason why they prefer home birth over health facility delivery (Shiferaw et al. 2013). The same finding was also observed in a qualitative study that was carried out with participants from 11 different regions of Ethiopia, in which home delivery was the choice of decision makers (husbands or relatives) because of the payment required at the health facilities. In most cases this money was not available in cash at the time when the labour started (Warren, 2010).

In another study done in 2008 in order to examine the cost and type of user fees of national EmONC in 751 public and private health facilities, it was found that 68% of them charged a fee for service of attending normal delivery, and 65% of health centres charged for some drugs and supplies, even though the healthcare financing proclamation declare maternity services should be exempted from charge at primary healthcare level (Pearson et al. 2011). In the same study it was also observed that 54% of health facilities require fee for card before giving EmOC services and about 20% of these health facilities require advance payment for EmOC. In addition, the average costs for caesarean and normal delivery were US \$51.80 and US \$ 7.70 respectively.

### **Indirect/Related Costs**

Failure to cover indirect cost of services, including the transportation and lodging expenses of taking labouring mothers, was one of the determinant factors to stay at home during childbirth, even if obstetric complications occurred and the mothers needed to be referred to the next level of care, as it was observed in a study done in Southern Ethiopia (Shiferaw et al.2013). In another study done in Samre-Saharti district, Tigray region, the cost for accommodation of accompanying people and food was another barrier to transporting the labouring mother to a health facility (Asfaw, 2010).

### **Health Care Financing**

The share of public health expenditure for health in Ethiopia is nearly 5% which is only a third of the commitment of African countries in Abudja declaration characterizing the health system as under-financed with a shortage of work forces (FMoH, 2010b).

Health facilities in Ethiopia are implementing exemption for payments for selected services as immunization, Antenatal care (ANC), Delivery Care (DC) and Post Natal Care (PNC) at primary health care units (PHCU), in order to reduce financial barriers and increase service utilization. However, shortage of drugs and medical supplies, lack of clear guidelines on the implementation of exemption services, and inadequate support from the government and NGOs are among the major problems facing health facilities while implementing this exemption mechanism (USAID, 2012).

### **Quality of care at health facilities**

The quality of care at health facilities is mainly influenced by the skills and competencies of the health workers and is a major reason for the choice of place of delivery. One study on women from South West Ethiopia revealed that most women tend to prefer a facility with doctor healthcare provider over a health center with HEW as birth attendants, for their future child birth (Kruk et al. 2010). In a study carried out in Southern Ethiopia, unavailability of drugs and supplies in health facilities was mentioned by some of study participants among factors that discourage them to seek SBAs at health facilities (Shiferaw et al.2013).

A qualitative study done in the Amhara and Oromiya regions of Ethiopia showed that the administrative processes when presenting at the health facility are a reasons for labouring women to prefer to deliver at home. They cited the need to hand over ANC cards and reported that some labouring women were sent back home if they had lost their ANC cards (Ramsey, 2012).

In a cross-sectional study done in Addis Ababa in order to assess quality of RH services among ten private for-profit health facilities, it was observed that only one a health facility was using partograph to follow labouring mothers (G/Egziabher & Melkamu, 2008), in contrast to the



WHO requirement that say health facilities that give DC services must have clearly articulated protocols that synchronize with the partograph (EngenderHealth, 2012).

## **CHAPTER FOUR: DISCUSSION**

Low utilization of delivery services in health facilities in Ethiopia are generally influenced by a number of factors which act at various levels. In addition they influence each other though they don't have linear relationship, as is illustrated in the diagram of the framework. The determinants are grouped for discussion for analysis of the findings in chapter three as follows: governance and policy related factors, cross cutting factors, health service related factors, and individual factors. Many of these factors are not specific to Ethiopia and are found in many other low-resource countries.

### **Governance and Policy-related factors**

Maternal health indicators in the EDHS of 2011 report showed disparity from the HSDP-IV performance report of 2011/2012, for example: percentage of births attended by SBAs was only 10% in EDHS of 2011 while it was 20.4% in the performance report of 2011/2012 (CSA, 2012 & FMOH, 2011/2012). This could be due to the difference of time period for data collection, as it was preceding the survey for EDHS by five years, and only one year for the performance report. However, it could also be due to the sources of data difference, as EDHS uses household survey and HSDP-IV performance report uses only health facility reports, which is usually characterised by incompleteness which makes the EDHS report more reliable. As a result the Federal Ministry of Health (FMOH) is currently using the EDHS report for policy making, planning, and monitoring of interventions (FMOH, 2011/2012). This is due to the presence of bad quality in recording and data management system, as well as the absence of vital statistics in the country.

The number of policies in Ethiopia relating to the improvement of maternal health shows that it is a priority issue for the government.

Education for girls improves women's status in society, which is generally low, and impacts greatly on improving maternal health, as it is linked to the prevention of early marriage and to the delay of first childbirth, which reduces poor pregnancy outcomes. Educated girls are more likely to utilize Reproductive Health services, including delivery services. Although the Ministry of Education (MOE) is working towards increasing girls' enrolment in school, the number of girls attending school is still much lower than the number of boys. Keeping girls in school is still a challenge; the number of girl drop-outs is high and could be due to insufficient encouragement on continuing their education by teachers, families and the community.

## Individual Factors

Age and birth order are factors that influence utilization of health facilities in Ethiopia. Many studies have shown that young women and primigravidas are more likely to seek care at use health facilities during pregnancy and childbirth, compared to older, multiparous women. This relationship was inter alia found in Afghanistan, Kenya, Bangladesh, and Rwanda (Mayhew et al. 2008, Eijk et al. 2006, Kamal, 2009 & Umurungi, 2010). This could be due to the fact that the younger age group are among lower para, and may be more educated or might have better information about the importance of SBAs. In contrast, the older and multiparous women may think that they are experienced and familiar with childbirth, so that they do not anticipate or prepare for complications, which could account for the high number of maternal deaths amongst multiparous women. Another contributing issue in multiparous women could be the large size of the family and the role of the mother as caretaker, making it difficult to access services without having someone to take her place in her absence.

In Ethiopia, education (for both women and men) has a strong positive association with utilization of health facilities during childbirth particularly when the level of education is secondary or above. The same was found in Bangladesh, India and Tanzania (Kamal, 2009 & Dalal et al. 2012, Nair et al.2012 & Samson, 2012). Possible explanations for this could be that educated couples have better financial access to healthcare, that educated women have more freedom in decision making about their health, including their place of delivery, or lastly that women have a better understanding of the importance of having skilled care at birth. Some of the factors that contribute to low educated women delivering at home might be: absence of decision making power, need of permission from husbands (as they are the one who control over household resources), and lack of awareness about the risks of home delivery.

There is conclusive evidence in this review that antenatal care services (ANC), especially with at least four visits (as recommended by WHO) (Linceto, ND), have a strong positive association with health facility delivery. The same was found in other countries including India and Bangladesh (Begum et al. 2012 & Nair et al.2012). This could be due to information on birth preparedness given by healthcare providers during the ANC visits, or it might be that women were satisfied with healthcare provision they received at the health facility.

One reported study in Ethiopia on the Dodota district did not show this association. This may have been a result of the researchers not considering the effect of the frequency of the prenatal visits or other socio-cultural factors among study participants.

An important driving factor in the choice of facility maternal care is having the experience of complications during labour and/or delivery, which is leading to referral and or/and poor health outcomes. It is possible that the experience of receiving needed (life-saving) treatment results in behaviour change and the realization that pregnancy and childbirth is not always a natural process, and that timely presentation at the facility is essential.

### **Cross cutting Factors**

A number of grouped cross cutting determinants that influence each other at the individual, family and/or community level are discussed in this section.

#### **Distance and availability of transport**

Evidence from different regions of the country has shown that women who need to travel long distances to reach health facilities that are providing delivery services were more likely to deliver at home. Similar findings are seen in Tanzania (Maxwell Scientific Organization, 2012), Namibia and Uganda (Ngula, 2005 & Anthony, 2010). This could be due to transportation issues related to lack of all-weather roads, or due to not being able to afford the costs of transport, especially that of contract services when there is no public transport. The cooperation of neighbours or relatives is needed to carry the labouring mother with a wooden stretcher. This has an influence on the decision of home as delivery place, at both individual and household level. Lack of transportation was found to be a strong predictor of home delivery in Nigeria, rural Gambia and Namibia (Iyaniwura & Yussuf, 2009, Cham et al. 2005 & Ngula, 2005). The involvement of the community in road construction and rehabilitation will partly resolve this problem.

Evidences from Ethiopia have shown that mothers from poor households were more likely to choose home delivery. Similar results were obtained from studies done in other countries, like Bangladesh and Afghanistan (Dalal et al. 2012 & Mayhew et al. 2008). This financial inaccessibility was among main deterring factors for seeking skilled care timely even after complication was detected. The possible explanation for this could be that there might not be readily available cash at hand for the service charges needed at health facilities, or to cover other indirect costs relating to taking a labouring mother to a health facility.

#### **Health beliefs and knowledge**

Existing societal health beliefs can also influence the choice of place of delivery in Ethiopia. There is a deep rooted belief in the society that childbirth is a natural process that should take place at home. In some places women who choose to deliver in health facilities are labelled as weak by the society. The absence of illness during pregnancy and/or

having an uncomplicated labour and delivery previously seems to give a false sense of security that subsequent pregnancies and births will be normal as well. This could be caused by lack of knowledge about the risks of complications during pregnancy and childbirth; especially the risks associated with higher order births, and can lead to late recognition of danger signs during pregnancy and childbirth by non-skilled birth attendants.

### **Traditional Beliefs and beliefs about pregnancy and childbirth**

In Ethiopia, even in areas where there are available and affordable health services, traditional (and religious) beliefs and values are strong influencing factors that contribute to the choice for home delivery and are barriers to timely seeking care even in cases when complications occur. Some obstetric complications are associated with evil spirits requiring treatment from traditional healers or religious leaders (prayers). In Kano, Nigeria, women with eclampsia were not taken to modern healthcare as there is a belief which associates the cause with spirit and they believe there is no treatment for it (Thomas, n.d). These beliefs are possibly related to lack of education and lack of knowledge about the actual medical cause of obstetric complications, and therefore need to be addressed through health education and behavioural change communication approaches. Another study in rural Tanzania showed that the presence of belief that associates prolonged labour with extramarital affairs during pregnancy, deterred women to seek SBAs at health facilities as they wanted to keep the prolonged labour prolonged secret (Mrisho et al. 2007).

### **Perceptions of quality and acceptability of service**

Studies throughout the world and in Ethiopia have shown that poor quality of care as perceived by individuals and community strongly influences the choice for facility delivery. Perceptions of poor quality in the public sector in Nigeria were reasons women delivered at home or in the private sector (Iyaniwura & Yussuf, 2009). Poor quality care includes disrespect towards and abuse of labouring mothers by health workers in Ghana (Abbey, 2008) and Namibia (Ngula, 2005). In rural Tanzania, women who live in villages, where the majority of inhabitants feels that TBAs have good skills to manage labour at home, were more likely to deliver at home (Kruk et al. 2010b).

Studies in Ethiopia show that the health services do not always meet the expectations of childbearing women (and their families), which makes the services unacceptable. This leads to perceptions of poor quality and less satisfaction with and utilization of services. Issues like traditional disposal

of the placenta, kneeling birth position and not allowing relatives or TBAs in the delivery units were reported. The value of matching service users' expectations with services delivery through community interaction has been shown in other low-resource countries (Thomas, ND & Liz et al. 2002), and could be an approach for Ethiopia to increase facility delivery.

Other issues mentioned that are more related to the organization of health care provision include lack of privacy and male providers. The latter has been documented in various countries including Afghanistan (Myhew et al. 2008) as a reason for not utilizing maternal health services.

This perception of quality is linked to the actual quality of maternal health services at health facilities and is including health system factors of which especially knowledge, skills and attitudes of health providers. This is discussed below in the section on Health Service Related Factors even though information which shows this association was not found.

### **Gender Norms and decision making power**

The low social status of women in the country is most likely related to poor maternal health outcomes. Girls face challenges due to harmful traditional practices like early marriage and FGM, which both increase risks in pregnancy and childbirth. In addition, they are also forced to discontinue their formal education and are more likely not to utilize health facilities, as discussed previously in the section on individual factors. Acceptance by women of wife beating practices is also associated with home delivery and moreover indicates a deep rooted gender inequality and lack of awareness in the country.

In Ethiopia, the place of delivery is most often decided by the husband, elderly relatives or TBAs illustrating the low decision making power of women, even when it concerns her own health and well-being. This is also seen in other countries including Tanzania (Magoma et al. 2010). It is often the case that husbands control resources and therefore give permission to utilize health services, an exception to this is the case where women have their own income. A shift in decision making powers will need changes in women's self-efficacy, more education for men and women, and more gender awareness.

### **Health Service related factors**

The availability of qualified staff, drugs, supplies, and treatment guidelines, and the absence of long waiting times are factors mentioned that influence the selection of place for delivery care in Ethiopia. In Uganda availability of comprehensive obstetrics care, drugs and supplies were found to be influencing factor for selection of delivery place (Anthony, 2010). Evidence from Ethiopia showed that women prefer

facilities with qualified staffing, sufficient availability of drugs and supplies. If possible they will pay more to access these facilities. This suggests that improving the quality of care relating to these factors will improve facility utilization.

There were no studies or assessments found on the actual technical quality of maternal health providers, and only one study referred to the low use of partographs in private for-profit health facilities, indicating non-optimal quality as the partograph is considered the main tool to detect and take timely action when the labour is not progressing (EngenderHealth, 2012). It is not certain if this is caused by lack of time due to the workload of health providers, or the lack of knowledge and skills required in using the partograph.

As reported by women, others factors relating to poor quality of care include provider specific communication skills and attitudes (see section above on quality of care). There was no information available about these issues from the provider side, but it is possible that this is related to gaps in training, low motivation and job satisfaction or lack of accountability by health workers. Better supervision and support to health workers could be an approach to deal with this issue.

As discussed in the section above on quality of care, there is a need to match the expectations of users of care with the actual care that can be provided, which is dependent on the type of expectations and the organization of health services. There was no literature found about the willingness of health workers to work on quality issues as defined by users of care in Ethiopia. From personal experience, it is evident that dialogue is needed in order to match the demand side needs with the supply side realities. One example of this interaction is the demand for having family and relatives present at birth, for which currently there is often only one delivery space, which could infringe on the privacy of other labouring women who need to share the space.

The costs of delivery services are mentioned as a deterring factor for facility birth in Ethiopia. In line with this, in Afghanistan the presence of user fees has resulted in decreased utilization of delivery services (Mayhew et al, 2008). Out of pocket payment for delivery care at health facilities was among the major factors influencing mothers to deliver at home in Bangladesh (Khan et al. 2009).

Even though the healthcare financing proclamation declared free maternal healthcare at PHCU in the country, users report that some health facilities still demand payments for delivery services, and some of them even request payment before giving services. In a country where one third of the population are living under the poverty line, this is a large problem. From my experience, I have observed that though mothers are not paying for services at health centres level, out of pocket payments for cost of

supplies, drugs, and fuel for ambulance were among the major problems mothers faced in having skilled care at birth.

In some cases the indirect costs associated with maternal health care, especially related to emergency services, are a large barrier to accessing care. This might partly explain why abolition of user fees at primary healthcare has not significantly resulted in an increase of utilization of health facilities for delivery. In Rwanda 90% of ambulance costs for emergency transfer to referral facilities is covered by community-based insurance, which has resulted in a significant reduction of financial barriers for EmOC (ODI, 2012).

The experience in Sierra Leone has shown that abolition of user fees brought unintended negative consequences, like weakening of health system due to overburdening of health workers and shortage of drugs and supplies, following the increased demand for services. However, in Ghana abolition of user fee for delivery services resulted in increased utilization of health facilities for birth and a decrease in births attended by TBAs (Bosu et al. 2007). These examples illustrate the need for careful planning when increasing the level of funding to the health system (IPA, 2011).

In Rwanda, compulsory community-based insurance, which is performance based payment for healthcare with fiscal decentralization, has contributed to the country's success in increasing facility based delivery from 28% in 2005 to 69% in 2010 (Sekabaraga, ND). In Ethiopia, there is no universal health insurance system, except private insurance which holds a very small segment of population until the recent past (FMoH, 2010). As a result the government is currently introducing a both social and community based health insurance system (FMoH, 2011/2012). The presence of "Edir"<sup>2</sup> in Ethiopia might indicate that community based financial schemes for facility birth and/or emergency obstetric care could be investigated as an option to improve facility utilization for maternal healthcare. A study in 40 different villages of Amhara and Oromiya region showed that there is high willingness; about 90% of participants agreed to participate in Edir-based schemes for health expenditure and in some place they already started to use it for healthcare, weddings and for losses in addition to funding for funeral ceremonies (H.Mariyam, 2003).

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<sup>2</sup> "Edir" is a traditional organization in Ethiopia by which members assist each other during mourning which is financed by monthly contribution of members. The main purpose for such arrangement is to help cover funeral and other expenses associated with deaths.

## **CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

The low utilization of facility births delivery care at health facilities is influenced by a number of inter-linked factors acting at various levels. Although there is a potential in increasing facility birth by the provision of free healthcare, this has not yet reached its full potential because of the socio-economic, gender norms, traditional belief, and values of the society. Given the current situation, having good policy, good investments in expansion of health services in the country, strengthening community level interventions, are going to be crucial in order to change perceptions of the community towards health facility child birth.

### **Governance and Policy-related factors**

Despite the presence of various policies for improving maternal health in Ethiopia, there has been a minimal decrease in MMR since 2000 as a result of insignificant change in utilization of health facilities during labour and childbirth. The low level of demand as a result of low perceived quality, individual and community health beliefs, and traditional beliefs and values, takes a large share of responsibility for this poor progress. However, the current introduction of the Health Development Army is a promising approach in changing health seeking behaviour of the society, as they are community members who are trained on the importance of facility delivery in order to reduce the unacceptable number of maternal deaths in Ethiopia.

Although it has been constrained by proper implementation, the education policies to increase girls' enrolment and retention at schools, protection of girls against THPs and violence against women, will result in improvement of women's status in the society, which in turn increases utilization of modern health services for better maternal health status.

### **Individual Factors**

Individual characteristics negatively influence the utilization of facility based delivery in Ethiopia. Among these the major deterring factors were older aged mothers, unemployment, lack of education, higher parity, lack of adequate ANC visits, previous uncomplicated home delivery experience and poor wealth quintiles. Whereas, exposure to media, previous complicated labour/delivery experience and higher wealth quintiles had positive association with facility birth. The presence of high illiteracy rate



and unemployment among women seems responsible for low utilization of health facilities during childbirth.

### **Cross cutting Factors**

A number of cross cutting factors have been identified that affect the opinions and decision making of individuals, families and community members regarding the best place for delivery. Among these, long distance to health facilities and lack of transportation from home to health facilities, low acceptability of modern health service, traditional beliefs and belief about pregnancy, gender norms and women's lack of decision making power were highly associated with a choice for home delivery. The low socio-economic status of women has resulted in a high level of disempowerment, which makes them not able to decide for themselves as well as dependent on the opinions of others. This is also the case for decisions concerning the place of delivery. Despite the removal of some financial barriers, there are still low acceptability of health services and perceptions of poor quality of care by users of care and the community at large. There appears to be a gap in matching the expectations of users of care with the actual provision of care. This is an area for further investigation and action.

### **Health service-related factors**

Health service-related factors influencing the use of facilities for delivery include management and organizational issues, like sufficient numbers of qualified staff, availability of drugs and supplies, privacy, and openings and waiting times of facilities. Although technical capability of health providers is an important quality issue, there was too little information found to draw conclusions. Areas of improvement are the communication skills and attitudes of health workers needed to ensure respectful and women-centered services. In service training and close supervision of health workers may address these issues.

## **Recommendations**

The following activities are recommended in order to increase the number of births attended in health facilities.

At policy and governance level

1. Clear guidelines for implementation of free delivery care and sustainable financing of health system are needed in order to reduce financial barriers and secure adequate supplies of drugs and qualified staff to health facilities.
2. Girls' enrolment and retention at school should be increased to empower women, which will increase maternal health service utilization.
3. Collaboration with road rehabilitation sectors to improve road conditions on the major referral routes in order to decrease the time needed for transportation to referral facilities.

#### At Health service level

4. Appropriate retention and motivation mechanisms for maternal health workers and the newly trained health officers is needed particularly in rural area in order to address the inequitable distribution of health workers in the country.
5. In-service training of health workers on quality issues as determined by the users of care such as communication skills, privacy issues and attitudes towards childbearing women to ensure labouring mothers to insure respectful (birth) practices.
6. Enforcement and regulation of free delivery care services should be strengthened with preparation of health systems to have adequate supply of drugs, staffing and equipment to meet the high demand of services.

#### For family and community level

7. More research is needed to better understand the contextual and specific barriers of the acceptability of delivery services at health facilities in order to feedback to facilities to ensure client centred care.
8. Involvement of husbands and families in birth preparedness information and planning during ANC visits and awareness creation activities using community and religious leaders in order to help change traditional beliefs on pregnancy/child birth.
9. Mass campaign in awareness creation activities on gender equality of decision making at household level to improve the low status and decision making powers of women
10. Strengthening of community-based insurance (Edir-Based) or other schemes in order to remove financial barriers for maternal health services not covered by the government policy of free maternal health care.

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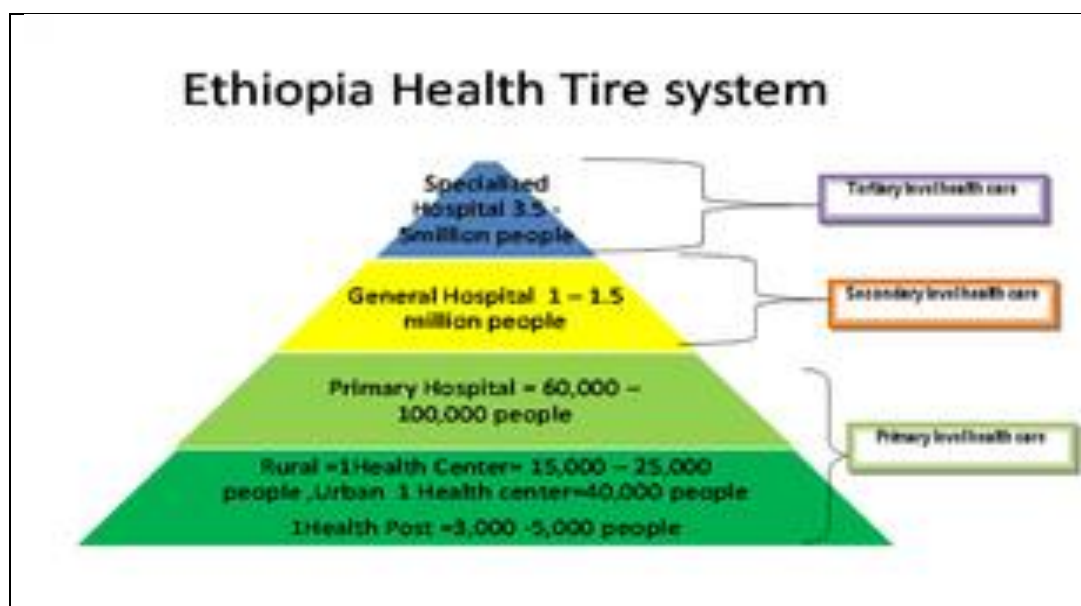
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## Annexes

### Annex One: Ethiopian three tire healthcare system



Source: Retrieved on 15 July 2013 from

[http://www.aho.afro.who.int/profiles\\_information/index.php/Ethiopia:Analytical\\_summary\\_-\\_Service\\_delivery](http://www.aho.afro.who.int/profiles_information/index.php/Ethiopia:Analytical_summary_-_Service_delivery)

### Annex Two: Comparison of maternal health Indicators between EDHS of 2005 and 2011 report.

Maternal Health service Indicator	EDHS 2005	EDHS 2011
Antenatal care from skilled provider for at least one visit	28%	42.6%
Antenatal care from skilled provider four or more visits	12%	19.1%
Neonatal tetanus protection	32%	48%
Births attended by SBAs	5.7%	10%
Postnatal care	5%	7%
Contraceptive prevalence rate	15%	28.6%
Unmet need for Family Planning	34%	25.3%

Source: Ethiopian Demographic Health survey reports of 2005 and 2011