

**FACTORS INFLUENCING ACCESS TO QUALITY MATERNAL HEALTHCARE  
SERVICES IN GHANA: ANALYSIS OF THE LITERATURE**

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# **FACTORS INFLUENCING ACCESS TO QUALITY MATERNAL HEALTHCARE SERVICES IN GHANA: ANALYSIS OF THE LITERATURE**

A thesis submitted in partial fulfillment of the requirement for the degree of  
Master of International Health

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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 Access to Quality Maternal Healthcare Services in Ghana: Analysis of The Literature" is my own work.

**Signature:**



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Amsterdam, The Netherlands

## **DEDICATION**

This thesis is dedicated to

My dear wife; Miss Amina Zakaria,

My kids; Wuntuma and Hanbal

And

My best friend; Apostle George Apasera

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## Abbreviations

ANC	Antenatal Care
CHAG	Christian Health Association of Ghana
CHO	Community Health Officers
CHV	Community Health Volunteers
CHPS	Community-based Health Planning and Services
EmOC	Emergency Obstetric Care
FANC	Focused Antenatal Care
GDHS	Ghana Demographic Health Survey
GHS	Ghana Health Service
GOG	Government of Ghana
LMIC	Low and Middle-income Countries
MDGs	Millennium Development Goals
MHS	Maternal Health Service
MOH	Ministry of Health
NCDs	Non-Communicable Diseases
NHIS	National Health Insurance Scheme
PNC	Postnatal Care
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
TBA	Traditional Birth Attendants
TLTL	Too Little Too Late
UNDP	United Nations Development Program
WHO	World Health Organization
YLD	Years of Life lost due to Disability
YLL	Years of Life Lost



## **Abstract**

**Background:** Maternal mortality remains a global health challenge (303,000 deaths in 2015), with low and middle-income countries (LMIC), including Ghana, suffering the greatest burden (99%). Access to quality maternal health services (MHS) is of key importance, yet is still a challenge.

**Objective:** To identify and analyse factors influencing access to quality MHS including emergency obstetric care (EmOC) and safe abortion care (SAC) in Ghana, in order to make recommendations to improve access.

**Methodology:** The study undertook review and analysis of literature and a desk study. Levesque et al.'s (2013) access to health care conceptual framework was adopted to guide the review.

**Findings:** Inadequate health facilities and lack of skilled staff, low coverage of National Health Insurance Scheme (NHIS), insufficient medical supplies and poor provider attitude were identified as the major supply-side barriers for access to quality MHS. On the demand-side, main negative factors were socio-cultural barriers, long distance travel and low socio-economic status.

**Conclusion:** Accessing quality MHS, remains a challenge in the Ghana, due to both supply-side and demand-side factors. A number of effective interventions were identified, that potentially can address these barriers.

**Recommendations:** The government of Ghana (GOG) through the Ministry of Health need to increase financial commitment to health; expand health infrastructure, including a nationwide scale up of Community-based Health Planning Services; enforce the train and retain policy; redistribute health staff in favour of the underserved areas, review the free MHS policy under NHIS, to include all pregnant women and mothers regardless of their NHIS status, and include safe abortion care; and use community participatory interventions, such as women's participatory learning groups and volunteer peer counseling to provide health education and antenatal care services at the community level.

**Key words:** Maternal health services, quality, access, low and middle-income countries, and Ghana.

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## Introduction

Poor maternal health is a global health challenge especially in low and middle-income countries (LMIC). Globally, 830 women are estimated to die leaving many more with disabilities as a result of pregnancy or childbirth related complications most of which can be prevented or treated with LMIC suffers the greatest burden (99%) (WHO, 2016b). Ghana has significantly reduced its maternal mortality ratio (49%) between 1990 and 2015, however, it was still far less than the 75% target of the MDG 5 for the same period (Ninence, 2015; The World Bank, 2016). Access to quality MHS including emergency obstetric care (EmOC) during pregnancy, childbirth and days after delivery is the major solution to prevent or manage these complications (WHO, 2016b). However, despite the high burden of maternal mortality in LMIC, access to quality maternal health service has been low especially in SSA. Less than half (49%) of expectant mothers in SSA had at least four ANC visit and just above half (53%) of all births in the region were attended by skilled health providers in 2016 (Unicef, 2017; WHO, 2017a).

Ghana, like many other LMICs is faced with the challenge for access to quality maternal health service. For instance, ANC coverage has been stagnant over the past years (75.2%) in 2011 and (75.3%) in 2015 with skilled delivery (49.4% to 55.7%) and postnatal care (65.3% to 68.8%) saw slight increase over that same period (Ghana Health Service, 2015). Despite several interventions such as the Safe-Motherhood training initiative and the Post Abortion Care initiative in the 1990s (Odoi-agyarko, 2003), the implementation of CHPS program in 2000 (Nyonator *et al.*, 2005) and the free delivery policy in 2003 (Ofori-Adjei, 2007) to improve access to quality maternal health services in the country. Understanding factors that affect women's access maternal health services will help policy makers and program designers to design and implement interventions to improve access to maternal health services in Ghana.

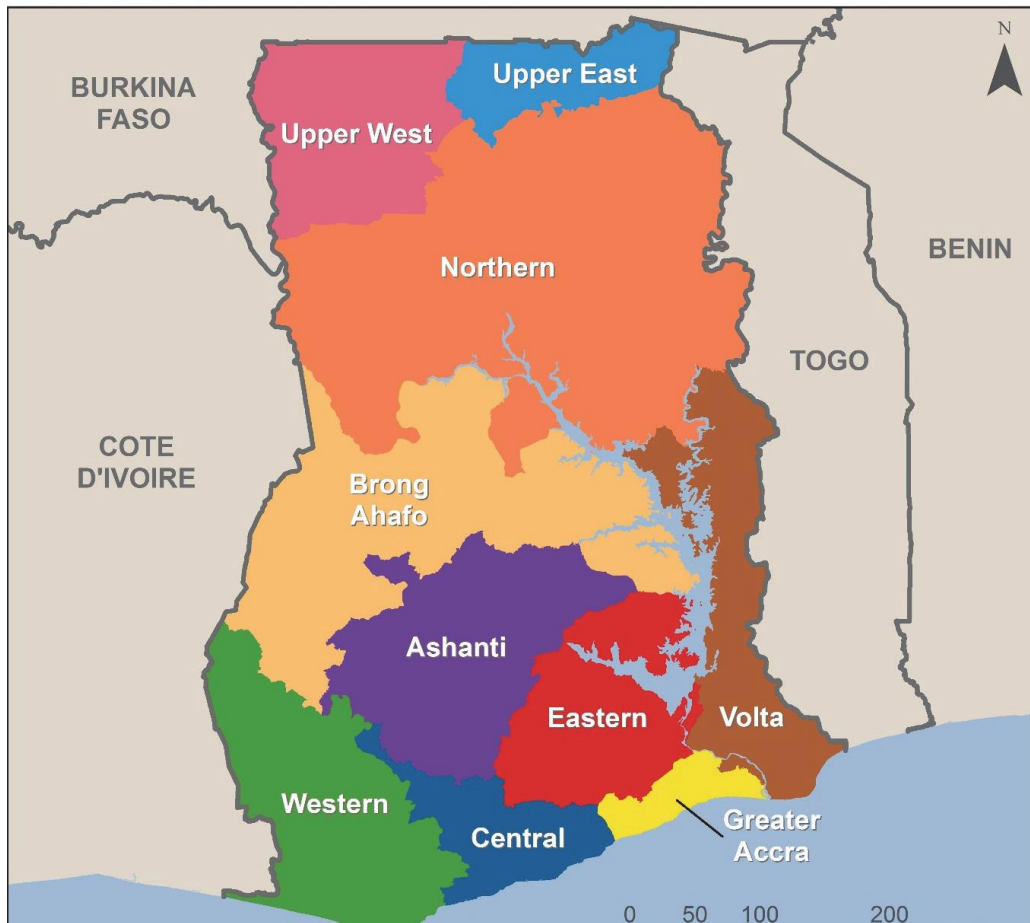
Prior to my study at KIT, I worked with Tamale Teaching Hospital and Saboba Medical centre as general nurse. These exposed me to the challenges women encounter on their quest to childbirth. I therefore chose this topic to understand the factors influencing women's access to quality maternal health services in Ghana and to identify evidence-based interventions that could improve access to these services in the country.

## Chapter One: Background Information of Ghana

### 1.1 Geography and Administration

The Republic of Ghana is located in West Africa bordering Togo to the east, Cote d'Ivoire to the west and Burkina Faso to the north, while to the south are the Gulf Guinea and the Atlantic Ocean. The country has a population of approximately 27.4 million people with an estimated population density of 114 per kilometre square (km<sup>2</sup>). Administratively, Ghana is divided into 10 regions with Accra being the capital as shown in figure 1 below. The regions are further subdivided into a total of 216 decentralized districts (Ghana Statistical Service, 2015; WHO, 2015).

**Figure 1 Map of Ghana Indicating the Administrative Regions of the Country**



Source: Ghana Statistical Service 2015

## **1.2 Demography and Education**

The country has a life expectancy of 60years for male and 63years for female. Children under 15years are the largest (38.3%) population group in the country and elderly above 65years are the smallest, representing 5% of the total population. The country sex ratio is 95 male per 100 females, with little over half (51%) of the population living in urban areas. The literacy rate among the population aged 15 years and above has been improving and was estimated to be 65% in 2010, with about 52% of females aged 25 and above having at least secondary education as compare to 68.5% of male with same age (Ghana Statistical Service, 2015; UNDP, 2016).

## **1.3 Socio-economic situation**

Ghana is a lower middle-income country with per capita GDP of 1,363 US dollars. Though majority of the population (45%) engages in agriculture, the service and the industrial sectors are now the major contributors to the country's economy. On wealth distribution, a greater proportion of the population in the urban areas (71%) were classified as being in the top two wealth quintiles in the 2014 GDHS as compare to only 10% of the rural population. Regionally, Greater Accra rates as the richest region in the country, with the three northern regions being the poorest (Ghana Statistical Service, 2015).

## **1.4 Socio-cultural and religious situation**

Ghana is a multi-cultural and ethnic country and comprises of 48% Ashanti-Akan, 17% Mole-Dagomba, 14% Ewe, 7% Ga-Dangme and other minor ethnic groups like the Gurma, Guang and the Grusi. Christianity (71%) and Islam (18%) are the major religious groups in the country. Only 6% of the population practices traditional religion and 5% have no affiliation to any religion (Ghana Statistical Service, 2015).

## **1.5 Current Health Situation in Ghana**

Ghana, like many other Low and Middle-Income Countries (LMIC), is currently faced with a double burden of communicable and non-communicable diseases (NCDs). Even though communicable diseases since long have been the major causes of disease burden in the country, non-communicable diseases are fast emerging and account for about 39% all deaths in the

country (IHME, 2013). Malaria was the leading cause of hospital admissions in 2016, with stroke being the leading cause of mortality among the admitted patients in the same period (Ghana Health Service, 2017). Table 1 and 2 show the top ten causes of hospital admissions and mortality in 2016 in Ghana. Maternal, Neonatal and Nutritional related conditions are the leading cause of years of life lost (YLL) due to premature deaths and years of healthy life lost due to disability (YLD); see appendix 1 for details (WHO, 2016a).

**Table 1 Top Ten Causes Hospital Admissions; 2015-2016**

	2015		2016	
1	Cyesis	328443	Malaria	164845
2	Encephalopathy	111371	Anaemia	49391
3	Arthritis	79218	Gastroenteritis	38390
4	Septicaemia	78690	Hypertension	33154
5	Jaundice	67008	Sepsis	31147
6	Bleeding	46376	Pneumonia	27802
7	Antepartum haemorrhage	37006	UTI	21119
8	Malaria	22462	RTI	16180
9	Wound	15907	Abortion	14349
10	Pneumothorax	13917	Septicaemia	14226
	All other Diseases	358676	All other Diseases	667815

Source: GHS 2016

**Table 2 Top Ten Causes of Mortality among Admitted Patients; 2015-2016**

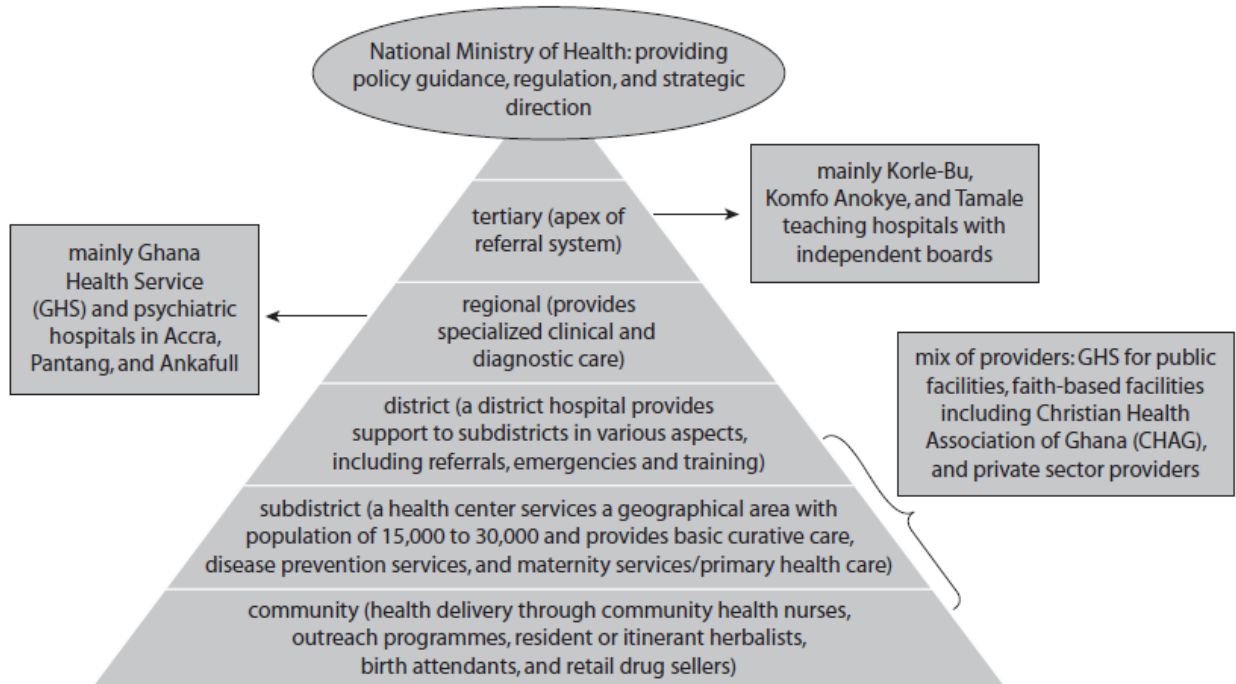
	2015		2016	
1	Pneumonia	1084	Cerebrovascular Accident	1440
2	Anaemia	909	Pneumonia	1354
3	HIV	786	Septicaemia shock	2025
4	Malaria	604	HIV	1042
5	Congestive Cardiac Failure	585	Anaemia	933
6	Sepsis	558	Congestive cardiac failure	679
7	Respiratory distress syndrome	518	Hypertension	588
8	Respiratory failure	518	Liver diseases	573
9	Liver diseases	459	Diabetes	429
10	Encephalopathy	302	Birth asphyxia	405
	All other Diseases	8358	All other Diseases	7885

Source: GHS 2016

## 1.6 Health System

Ghana has a universal healthcare system with the public health sector being coordinated by the Ministry of Health (MOH) of Ghana. On service delivery, Ghana Health Service (GHS) is the major provider of healthcare services in the country accounting for approximately 40% of the total service provision. The Teaching Hospitals, Christian Health Association of Ghana (CHAG) institutions and other private health institutions also play crucial role with regards to health service delivery in the country. The national healthcare system provides services in three levels: Community-based Health Planning and Services (CHPS), Health Post, Health Centres and Clinics which serves as a first line of contact and provide primary healthcare in the communities as the first level of health care in the country, the district and regional hospitals provide secondary care serves as the second level and the teaching hospitals provides tertiary care and serves as referral centres is the third level in the country illustrated in figure 2 below (Ghana Statistical Service, 2015).

**Figure 2 Ghana' Health Delivery System**



**Source:** (Schieber *et al.*, 2012)

## **1.7 Health Financing**

It was agreed on the Centre for Global Health Security 10<sup>th</sup> conference that governments of various countries should commit an average of 5% of its GDP on health (Chatham House Report, 2014; Mamaye, 2015). However, the government of Ghana only spent 3.6% of the nation's GDP on health in 2014 with just an increase of 0.5% since 1995 (World Bank Group, 2016). The government of Ghana in 2004 introduced the National Health Insurance Scheme (NHIS) aiming to achieve universal health coverage and to protect its citizens against the direct cost of health services expenditure. However, despite the implementation and operation of the NHIS, households and private still bear a heavy burden of paying for health services contributing about 47% due to low nationwide coverage of the NHIS (37% of out-of-pocket and other private risk-pooling system) of the total health spending while the NHIS contribute about 30% (Schieber *et al.*, 2012).

## **1.8 Human Resource for Health**

The national health workforce has improved over the past years especially the nursing staff. The current nurse-patient ratio including community health nurses is 1: 959, midwife-patient ratio is 1: 1,374 and doctor-patient ratio stands at 1: 9,043. However, there are uneven distributions of health staff in the country. For instance, a midwife in northern Ghana performs an average of 190 deliveries per year, 70% more as compared to a midwife in southern Ghana (110) (Ministry of Health, 2014a)

## **1.9 Maternal Healthcare Services in Ghana:**

The Ghanaian government through the MOH and GHS is the main provider of maternal healthcare services in the country. Most private health institutions as well as the Christian Health Association of Ghana (CHAG) institutions contribute enormously to the maternal healthcare system in Ghana. Each of the three components of the maternal health services (MHS) (ANC, deliveries and PNC) and other sexual and reproductive health services are provided in all of the three levels of the healthcare systems. MHS are free in all government health institutions, CHAG institutions and as well as some private health institutions across the country. Traditional Birth Attendants (TBAs) have a positive impact on access to MHS in the country. Though the focus on training TBAs to assist deliveries in the communities has now shift to training Community

Health Officers (CHOs) and Midwives in the country, TBAs contributed to approximately 30% of all deliveries in the country in 2014 (Ghana Health Service, 2014; Aryeetey *et al.*, 2015).

To reduce maternal mortality and promote maternal health, “Free delivery policy” was introduced in 2003 to curtail the financial difficulties associated in accessing maternal healthcare services in the country. With this policy, MHS such as antenatal care, childbirth, postnatal care and care for any complications that may arise as a result of pregnancy or childbirth are provided for free and clients do not need to pay for drugs, laboratory services, ultra-scan, among others (Ofori-Adjei, 2007). National Health Insurance Scheme (NHIS) was also introduced in 2004 by the Ghanaian government to ensure an increased access to universal healthcare services including MHS in the country and now the free MHS is under the authority of the NHIS (Ofori-Adjei, 2007).

Maternal healthcare provide services to expectant mothers in three levels namely; antenatal care (ANC), delivery (childbirth), and postnatal care (PNC). In Ghana, Focused Antenatal Care (FANC) is provided to expectant mothers where holistic healthcare service is given to individual mothers rather than identifying and classifying certain groups of women as being at high risk and therefore giving them maximum attention (Ghana Health Service, 2013). The gold standard for maternal healthcare services utilization in Ghana is based on former World Health Organization guidelines of a target of at least four antenatal visits with the first visit at week 12 of gestation, and subsequent visits week 26, 32, and 36-38 (Ghana Health Service, 2014). WHO has recently increased the number of ANC visits from four to eight with the first visit at week 12 of gestation, and thereafter in week 20, 26, 30 34, 36, 38 and 40 (WHO, 2016c), which Ghana is yet to adopt.



## **Chapter Two: Problem Statement, Justification, Objectives and Methodology.**

This chapter presents the problem statement, justification, main and specific objectives of the study. It also includes methodology and limitations of the study.

### **2.1 Problem Statement**

Maternal mortality is a global public health challenge which importance was acknowledged in the year 2000 when the United Nations drew up the Millennium Development Goals (MDGs) to reduce the burden of global diseases and extreme poverty with goal 5 aimed at reducing maternal mortality rate by 75% between the period of 1990 to 2015 (United Nations, 2006). The issue was further emphasised in the Sustainable Development Goals (SDGs) which aims at reducing the maternal mortality ratio to less than 70 deaths per 100,000 live births by 2030 (WHO, 2016b). Maternal mortality is said to be “the death of a woman whilst pregnant or within 42 days after delivery or termination of pregnancy, irrespective of the duration or the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes” pp-32 (UNAIDS, 2015)

Significant progress has been made in reducing maternal mortality since the MDGs target was set in the year 2000. This saw a global decline of maternal mortality ratio of about 44% from 385 per 100,000 live births in 1990 to 216 per 100,000 live births in 2015 (WHO, UNICEF, UNFPA, *et al.*, 2015). However, despite the consistent decline in maternal deaths, it still accounted for 303,000 deaths globally in 2015 (WHO, 2016b).

Direct obstetric complications such as haemorrhage, complication of unsafe abortion, hypertensive disorders, sepsis and obstructed labour have been identified to be the major factors causing maternal mortality globally. Most of these complications are preventable. Early identification and timely delivery, prompt emergency obstetric care interventions, clean deliveries, family planning, safe abortion services and appropriate treatment for hypertension, haemorrhage, HIV and malaria among others have been identified to be the major intervention to these complications (Care International, 2014; Koblinsky *et al.*, 2016). According to WHO,

access to quality MHS including emergency obstetric care (EmOC) during pregnancy, childbirth and days after delivery is the pathway through which these interventions can be achieved (WHO, 2016b). However, though ANC coverage has improved from 35% in 1990 to 52% in 2015 and skilled birth attendance also increased from 61% in 2000 to 78% in 2016 globally, it has not been as rapid as expected and also, not evenly distributed across the regions (Miller *et al.*, 2016; WHO, 2017b).

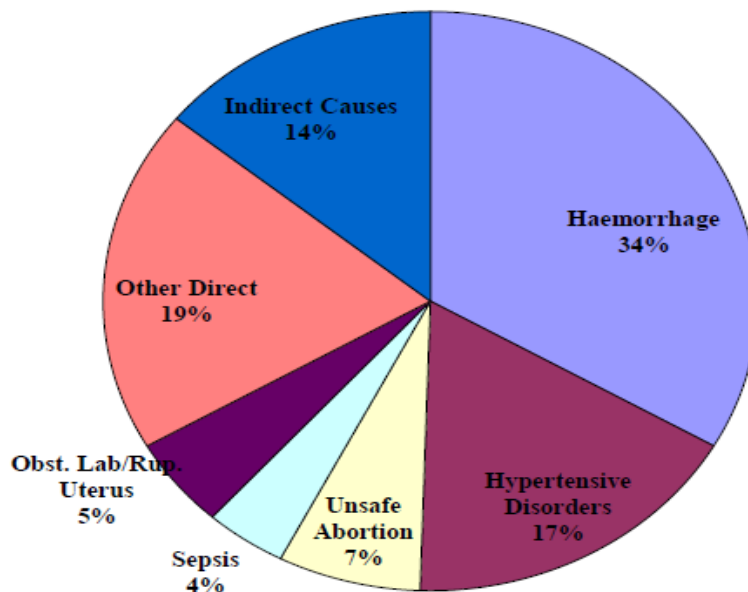
LMIC suffer the greatest burden of maternal mortality accounting for 99% of all maternal deaths in 2015, with Sub-Saharan Africa (SSA) alone contributing 66% of the total deaths (WHO, *et al.* 2015). Maternal mortality ratio stands at 239 per 100,000 live births (1 in 36 women) in LMIC as compared to 12 per 100,000 live births (1 in 4900 women) in high-income countries (WHO, 2016b). Despite the high burden of maternal mortality in LMIC, access to quality maternal health service has been low especially in SSA. Less than half (49%) of expectant mothers in SSA had at least four ANC visits and just above half (53%) of all births in the region were attended by skilled health providers in 2016 (Unicef, 2017; WHO, 2017a). Limited access to other services such as EmOC, modern contraceptive services, safe abortion care (SAC), among others, a situation described by Miller *et al.* (2016) as “Too Little Too Late” (TLTL) in addition to low economic status, low level of education and weak empowerment of women, labelled by Ahmed *et al.* (2010) as the 3Es, had been identified to be the determinants of access to quality MHS in LMIC .

Ghana has made a significant progress in reducing maternal mortality recording 319 deaths per 100,000 live births in 2015, a 49% decline since 1990 (The World Bank, 2016). Over the last five years, Ghana has recorded a high but stagnated ANC coverage of 75.2% in 2011 and 75.3% in 2015 with a slight increase of skilled delivery and PNC over the same period of 49.4% in 2011 to 55.7% in 2015 and 65.3% in 2011 to 68.8% in 2015 respectively (Ghana Health Service, 2015). Though Ghana is performing well in terms of maternal mortality as compared to most countries in the sub-region, it fell short of reaching the MDG 5 target (Ninence, 2015; The World Bank, 2016).

Direct obstetric complications account for about 86% of all maternal mortalities in the country with haemorrhage, hypertensive disorder, unsafe abortion and sepsis being the major causes of these deaths as illustrated in figure 3 below (Ghana Health Service, 2015). As stated earlier,

access to quality MHS is the major solution to these problem (WHO, 2016b). Masters *et al.*, (2013) explained that MHS is highly cost effective and that it provides contact between the woman and the healthcare providers which may promote the health seeking behaviour of the women especially during delivery and also provide opportunities for the women to access preventive and curative services including malaria and HIV/AIDS. Levesque *et al.* (2013) hypothesized that women’s access to quality MHS including EmOC and SAC in a given population is influenced by five inter-related dimensions of both health system (supply-side) and individual/population (demand-side) factors. Ghana has implemented several interventions related to these dimensions after the Nairobi’s International Conference on Safe-Motherhood Initiative in 1987 (Odoi-agyarko, 2003); the Safe-Motherhood training initiative and the Post Abortion Care initiative in the 1990s (Odoi-agyarko, 2003), the implementation of CHPS program in 2000 (Nyonator *et al.*, 2005) and the free delivery policy in 2003 (Ofori-Adjei, 2007).

**Figure 3 Causes of Maternal Deaths in Ghana, 2015**



**Source: Ghana Health Service 2015**

Also, capacity building of regional and district hospitals to provide comprehensive and basic emergency obstetric and neonatal care and the implementation of Prevention and Management of Postpartum Haemorrhage (PPH) program with the use of misoprostol as key component for the

PPH management are all interventions implemented by the Ghanaian government to improve access to quality maternal health services and EmOC and to reduce the high maternal mortality rate in the country (Ghana Health Service, 2017). However despite all these initiatives, the coverage and quality of essential MHS have not improved much over the years which explain why maternal mortality rate have not improved as expected in the country.

## **2.2 Justification**

Identifying factors associated with access to quality MHS including safe abortion care and EmOC services was the main interest of this paper. Evidence show that poor maternal health has enormous consequences on the health system and the general socio-economic situation, and that maternal mortality is just a fraction of the consequences of poor maternal health. Poor maternal has been observed to increased inequalities between populations and societies in a countries (Graham *et al.*, 2016).

Maternal and child health is identified to be one of the major indicators to predict the general economy of a country as proved in the MDGs (United Nations, 2006). WHO explains that the health of the mother is important to the survival and thrive of the child and has a direct effect to the general well-being of the society and that access to quality care is needed to ensure this (WHO, 2005).

Ghana fell short in meeting the MDG 5 target in 2015, and now, the world has shift to a new SDGs era which seeks to achieve maternal mortality ratio of 70/100,000 live births by 2030 globally (United Nations, 2015). The new SDGs sees maternal health as not just the prevention of maternal mortalities and morbidities, but also a human right issue (Graham *et al.*, 2016). This therefore makes access to quality maternal health services a very relevant issue, hence a study to identify factors influencing access to quality maternal health service in Ghana.

Having a deeper insight into reasons women access maternal health services will help policy makers and program designers to design and implement interventions to improve access to maternal health services in Ghana.

Prior to this study, a number of studies have been published on maternal healthcare service utilization in Ghana (Abor *et al.*, 2011; Arthur, 2012; Gething *et al.*, 2012; Apanga and Adam,

2015; Asante-Sarpong *et al.*, 2016b; Bonfrer, Breebaart and De Poel, 2016). However, most of these studies focused primarily on specific topics, while some targeted specific geographical locations. For instance, the Abor *et al.* (2011) study was only on socio-economic factors influencing maternal health service utilization whilst the Gething *et al.* (2012) study was on geographical access as barrier to health service utilization. This study focuses on identifying all relevant factors and presents information on both health systems (supply-side) factors and individual or population related (demand-side) factors associated with access to quality maternal health service in Ghana.

## **2.3 Objectives**

The aim of this study is to identify and analyse factors influencing access to quality maternal healthcare services in Ghana in order to make recommendations to stakeholders in health to implement evidenced-based interventions to improve access to quality maternal health services in the Ghana.

### **2.3.1 Specific objectives**

- To identify the individual and population (demand-side) related factors influencing access to quality maternal health services in Ghana.
- To explore the health system (supply-side) factors influencing access to quality maternal health services in Ghana.
- To identify and analyse evidence-based interventions in Ghana and other Low and Middle-income Countries to improve access to quality maternal health services in Ghana.
- To suggest recommendations to stakeholders in health to improve access to quality maternal health services in Ghana.

## **2.4 Methodology**

This is a descriptive and explorative study, the objective of which was achieved through review and analysis of literature and desk study. The main search engines used were PubMed and Google Scholar. The *amc* library was used as database through which literature that was not freely available was accessed using PubMed. For reports and grey literature, Google and websites of Ministry of Health (MOH) Ghana, Ghana Health Service and key global

developmental agencies such as WHO, UN, and UNICEF were also used. Only studies in English and studies published in LMIC 2005 to 2017 found to be relevant to the objectives of this study were used.

### 2.4.1 Search Technique

Key words used were maternal health services, accessibility, quality, safe abortion care, emergency obstetric care, approachability, acceptability, availability, accommodation, affordability, appropriateness, evidence-based interventions, low and middle-income countries, Sub-Saharan Africa and Ghana. Booleans operators such as AND, OR and NOT were used to combine search terms and to separate concepts to obtain relevant articles see table 3 for details. Snow balling technique was also employed in this study where data were obtained through the references of some of the reviewed articles and journals.

**Table 3 Key words used**

Issues		Factors		Context	
Maternal health services	A N D	Approachability OR Ability to perceive OR	A N D	Low and Middle-	
OR		Outreach OR Health literacy OR		income Countries	
Antenatal care		Health beliefs OR Information		OR	
OR		OR		Sub-Saharan	
Delivery		Acceptability OR Ability to seek OR		Africa	
OR		Professional values OR culture		OR	
Postnatal care		OR		Ghana	
OR		Gender OR autonomy OR			
Emergency obstetric care		Availability OR ability to reach OR			
OR		Accommodation OR geographic location			
safe abortion care	OR				
		Living environments OR Transportation			
		OR			
		Social support OR health insurance			
		OR			
		Affordability OR ability to pay OR			
		Direct costs OR Indirect costs			
		OR			

		<p style="text-align: center;">Opportunity costs OR income</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Appropriateness OR ability to engage</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Technical OR Interpersonal quality</p> <p style="text-align: center;">OR</p> <p style="text-align: center;">Client's empowerment</p>	
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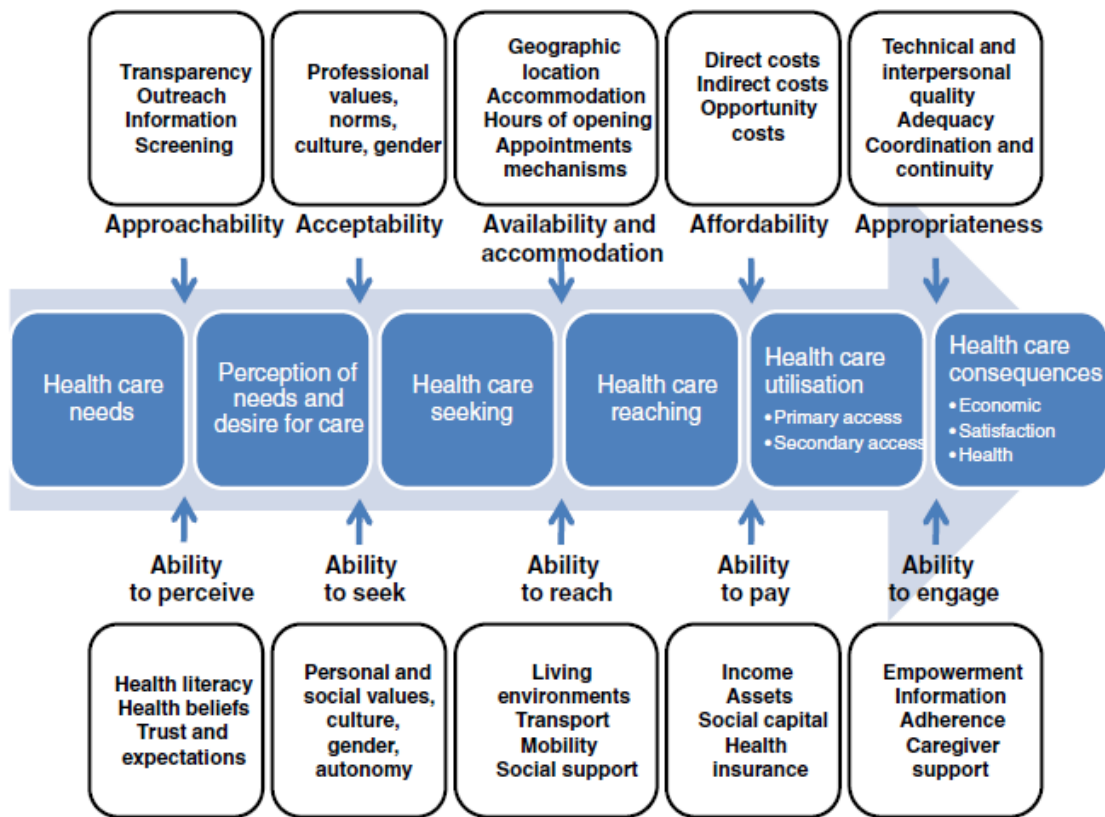
**2.4.2 Conceptual Framework**

Levesque et al.'s (2013) access to health care conceptual framework was adopted for this study. This model was adopted because it matches the objectives of the study and therefore used to guide the search and organized the search results.

The model identifies two sets of factors to be influencing an individual access to health care; the health system (supply-side) factors and individual or population related (demand-side) factors. It is based on the assumption that five sets of dimensions on each set of factors interact to influence an individual access to health services explained in detail below.

- ✓ **Supply-side factors:** these are the health system related factors also described as the five dimensions of accessibility to services that influence an individual accessibility to health services which include; approachability, acceptability, availability and accommodation, affordability and appropriateness of services (Levesque et al. 2013).
- ✓ **Demand-side factors:** these are the corresponding individual or population related factors to the five dimensions of the supply-side factors that influence an individual access to health service. It include the individual ability to perceive the need for care, ability to seek care, ability to reach the service delivery point, ability to pay for the services and the ability to engage care illustrated in figure 2 below (Levesque et al. 2013).

**Figure 4 Conceptual for Access to Health Services**



**Source: Levesque et al 2013**

### 2.4.3 Study Limitations

The study was based only on literature published in English. There might have been good literature in other languages such as French, especially from the French speaking countries in SSA which were not included in this study. Also, most of the literature reviewed was accessed online; this means, documents that was not available online but only as hard copy might have been left out. In addition, the study relied only on published literature and lack primary data, which limits its reflection on the real and current situation of the problem in the country.

It was also difficult to find literature on how provider’s values and norms, client’s assets and social capital affect women’s access to services.



## **Chapter Three: Factors Influencing Access to Quality Maternal Health Services in Ghana**

### **Introduction**

This chapter presents the findings regarding factors influencing access to quality maternal health services in Ghana, and is structured in accordance with Levesque et al.'s (2013) conceptual framework of access to health care. It discusses access to maternal health services based on both the health system (supply-side) perspective and individual/population (demand-side) perspective.

### **3.1 Approachability/Ability to perceive**

Making health services easily approachable by providing health information to the population through health education and outreach services (supply-side factors) and the population ability to identify their need for health care (demand-side factors) are key for access to quality health services including maternal health services in the country.

#### **3.1.1 Health Information, Outreach and Transparency**

Comprehensive and readily available health information is needed to guide women and the family to make informed health decisions and to easily approach health services. Health-related information can easily be created and shared globally in this new era of information and communication technology (ICT) (Braa *et al.*, 2007). Quality and credible health information is needed to ensure equal access to health information among the population (Custodio *et al.*, 2009). Health service providers in Ghana rely mainly on interpersonal communication (health provider to patient through hospital visit, outreach services, durbars and seminars), radio and television, print media, and now social media to disseminate health-related information (Ghana Health Service, 2015). Ghana health service provides outreach services to hard-to-reach communities through Community Health Workers, to be discussed later under service availability in this chapter. Health promotion services including health education, child, and women's health services are provided during this outreach services to improve on access to preventive services and health information in the country (GHS family health division 2015). However, a study by Sokey & Adisah-atta (2017) revealed that majority of rural dwellers in Ghana lack access to health-related information. The study noted that about 91.8% could not access health information due to lack of structured source of health information, 88.9%, 89.5%

and 81.3% cited language, lack of mobile phones and internet services and geographical location as barriers to access to health information.

### **3.1.2 Health Literacy, Beliefs and Trust**

Woman and family's knowledge on needs in relation to maternal health care and awareness of the service are important factors for access to quality maternal health services. A number of studies have reported that maternal and husband's level of education is positively linked with health literacy and the ability to perceive the need for maternal health care (Banke-thomas et al. 2017; Enuameh et al. 2016; Benedict Oppong Asamoah et al. 2014; Abor et al. 2011). This was confirmed in the 2014 GDHS reports which showed that women with secondary education or higher were more likely to access ANC (99.9%), skilled birth attendants (96.2%) and postnatal care (93.6%) as to compared women without education who showed service utilization rate of 94.1% ANC, 52.3% skilled birth attendants, 68.4% postnatal care (Ghana Statistical Service, 2015).

A study by Asante-Sarpong et al. (2016a) on free delivery and access to maternal health services in Central region revealed that women with sufficient knowledge on the full package of the service were more likely to access maternal health service than those without sufficient knowledge.

On emergency obstetric complication, Lori et al. (2015) reported insufficient knowledge of pregnancy danger signs among women in Ghana. The study noted that women could not comprehend information received during ANC which affect their ability to recognize danger signs in labour leading to delay in seeking care and consequently complications.

Similarly, Sundaram et al. (2012) reported that women who were aware of the legality of abortion services in Ghana were more likely to access safe abortion services (70%) as compared to those with insufficient knowledge (54%). Guttmacher Institute (2013) and Morhee & Morhee (2006) also reported an association of maternal and partner's education with access to safe abortion services in Ghana.

With regards to trust, Ganle et al. (2015) reported in their study done in northern Ghana that women are losing confidence in the public health sector. The study revealed that women

perceived the current health system to be operated by young nurses and midwives and that these young personnel only possessed book knowledge and lack the skills, competences and experiences to deliver quality services.

### **3.2 Acceptability and woman's ability to seek care**

This describes the socio-cultural factors that determine the woman's possibilities of accepting services and her ability to seek maternal health services.

#### **3.2.1 Cultural beliefs and value**

Religion and culture are deeply rooted in most Ghanaian communities which influence their beliefs and values (Webster 2013).

Several studies identified cultural beliefs and values to have an enormous effect on women's ability to access quality maternal health services in Ghana. A study by Ganle et al. (2015) revealed that an interaction of several cultural factors influences women's ability to access care from a skilled health provider. For instance, the practice of not announcing the pregnancy of a first-time pregnancy until after six months of pregnancy out of fear for evil-eye on both the baby and the mother in northern Ghana serves as a barrier for these women to access maternal health services. The same study also revealed that women deliver at home to demonstrate that they are faithful to their partners and to make their marriage a stable one. This is because, women who experience difficult labour or delivered at hospitals are perceived to have had extra marital sex and their moral conduct is questioned (Ganle *et al.*, 2015). Pre-marital sex and extra-marital sex are greatly frowned upon in many Ghanaian societies and pregnancies resulting from this are stigmatized. This affects the ability of women with such pregnancies to accept and seek maternal health services (Ganle *et al.*, 2015). This is confirmed by other studies, Enuameh et al. (2016) and Benedict O Asamoah et al. (2014) which found that marital status is strongly associated with access to maternal health services and that married women are more likely to access maternal health services (88.7%) as compared to unmarried women (11.2%).

Again the notion that only complicated pregnancies should be delivered at the health facilities and that hospital setting is unnatural for childbirth were also reported to be some of the socio-cultural factors influencing the women's possibility of accessing maternal health services in

Ghana (Ganle *et al.*, 2014; Sarkodie and Abubakari, 2014). Again, Moyer & Philip's study in rural northern Ghana found that though declining, the culture of consulting the gods or soothsayers to determine the woman's place of delivery still has a great effect on the women's ability to access quality maternal health services (Moyer and Philip, 2013).

Several studies have reported strong association between less access to maternal health services and Muslim women in Ghana (Sakeah *et al.* 2014; Abor *et al.* 2011 & Obeng *et al.* 2006). Ganle's (2016b) qualitative study on Muslim women and access to MHS revealed that Islamic religion enjoins women to preserve their bodies and that their bodies are sacred and shouldn't be exposed to other people especially to the other sex. But the structure of most health facilities in Ghana makes it difficult to maintain this privacy. And also, provider's insensitivity to Muslim beliefs and insufficient knowledge of providers about Islamic religion greatly affects Muslim women's possibility to accept and seek maternal health services. This confirms Ganle *et al.*'s (2014) qualitative study in northern Ghana which is dominated by Muslims that the presence of male midwife in health facilities serves as disincentives for women to access maternal health services. The study noted that women rather will prefer the services of TBAs than that of a skilled male midwife.

Hagman (2013) and Morhee & Morhee (2006) also reported a correlation of socio-cultural factors and access to safe abortion and noted the stigma attached to abortion as the reason for the rise of unsafe abortion in the country.

### **3.2.2 Gender and Autonomy**

Most Ghanaian societies are characterized by a patriarchal system where men are seen as the "decision making powers" and majority of the household heads are males (66.2%) (Ghana Statistical Service, 2015). This limits women's decision making ability even during emergencies in pregnancy, limiting access to quality maternal health services and the risk of maternal morbidity and mortality (Hagman, 2013). A study by Moyer & Philip (2013) reported that husbands, household heads, mother-in-laws and TBAs are most often those who determine if, when and where pregnant women access maternal health services in rural northern Ghana. A study done by Sarkodie & Abubakari (2014) in northern Ghana found that only 34% of women

make their own decision regarding the place to access maternal health services. Ayanore (2016) also reported similar findings on the study of focused maternal care in Ghana.

Level of maternal and husband's education again has a positive association with autonomy and health decision-making. Sarkodie & Abubakari (2014) stated that education gives the woman her autonomy and this influences her health seeking behaviour and the higher her educational status the more likely she will be able to make her own health decisions. They found in their study that women with no or less education were highly associated with the use of TBAs services unlike highly educated women. Women who are empowered through education and a high socio-economic status are more likely to access maternal health services (Ononokpono and Odimegwu, 2014).

On the side of maternal age and ability to seek care, young people particular young women require the permission and approval from their guardians (parents or spouses) in the context of Ghana to seek care. This limits their ability to access maternal health services. Enuameh et al. (2016) and Asamoah et al. (2014) reported that women aged 20 and above were more likely to access maternal health services than women who were below 20years. Similar findings were reported in the GDHS 2014. Again, women in their 20s were more likely to access safe abortion services than women aged less than 20 (Sundaram *et al.*, 2012; Guttmacher Institute, 2013).

### **3.3 Availability and Accommodation/Ability to Reach**

Availability of health services and accommodation of client needs, and the ability of the client to reach the services are important pillars for access to health care including maternal health services in the country. According to Peters et al. (2008), the distance between health user and the health facility has been recognized to be a major challenge for access to healthcare services. Inadequate health services and long distance travel to access maternal health services can serve as a disincentive for women to access the services in Ghana (Nesbitt *et al.*, 2016).

As discussed earlier, the government of Ghana initiated and implemented Community-based Health Planning Services (CHPS) program to improve access to basic health care including maternal health services in Ghana. This is reported to be successful in areas where the services are readily available (Ministry of Health, 2014b). A study done by Sakeah et al. (2014) in the

Upper East region (the region that benefited most from this initiative) reported evidence for an increased uptake (80%) of skilled birth attendance and this was as a result of the presence of the Community Health Officers and CHPS in those communities. However, nationwide coverage is inadequate as 2,580 CHPS compounds are currently functional when about 6,500 CHPS are required (Ministry of Health, 2014a). Also, lack of midwives to provide basic emergency obstetric care such as vacuum delivery and removal of retained placenta is reported to be one of the challenges for the CHPS program (Ministry of Health, 2014b; Sakeah *et al.*, 2014).

Government also expanded regional and districts health infrastructure to improve access to health services in the country. This, in addition to the efforts put by the faith-based and other private organizations, resulted in an increase in the number of health facilities in the country from 1 : 3,011 in 2007 to a total of 1 : 5,865 in 2015 (Ministry of Health, 2008, 2015). Both these improvements have had a positive effect on women's access to maternal health services in the country. The number of health workforce has also increased which led to the improvement of doctor and nurse/midwife to population ratio of 1 : 13,683 in 2007 to 1 : 9,043 in 2015 and 1 : 1,454 in 2007 to 1 : 959 in 2015 respectively, increasing women's ability to reach health providers for maternal health services (Ministry of Health, 2008, 2015). There are however great disparities in the distribution of health staff and health facilities in the country with the rural areas suffering the most. For instance about 70% of doctors work in only two regions in the country (Ashanti and Greater Accra) with only 30% working in the remaining 8 regions where a greater proportions of the population lives (Ministry of Health, 2015).

A study by Gething *et al.* (2012) on availability of maternal health services found that about 90% of all women in their reproductive age in Ghana are able to reach within 2 hours travel time to any regular maternal health service (ANC, delivery care and PNC) facility. However, only 55% are within 2 hours reach to Comprehensive-Emergency Obstetric and Neonatal Care (C-EmONC). Nesbitt *et al.* (2016) and Bosomprah *et al.* (2016) also reported similar findings in their respective studies. Table 1 below shows the regional variation for the availability of maternal healthcare services confirming the disparities of the distribution of health facilities in Ghana. Also, about 40% of all the district hospitals are not covered by the national ambulance services. As a result, emergency responses including emergency obstetric complications are poor in these districts.

A study by Masters *et al.* (2013) found that distance and travel time were very important factors that determines the mothers' decision to either use or not to use maternal health services. According to the same study, the chance of a mother accessing skilled delivery decreases by 24% with an increase in one hour traveling time and 12% in at least three times ANC visit. (Sarkodie and Abubakari, 2014) also reported similar findings in their study on maternal health services utilization and socio-economic status in northern Ghana. Asamoah, Agardh and Cromley (2014), Ganle *et al.* (2014) Sarkodie and Abubakari (2014) and Johnson *et al.* (2015) also reported an association of long travel distance and less access to maternal health services in Ghana. Distance and travel time is influenced by place of residence with women in rural areas suffering the most. Studies have found that rural women in LMIC including Ghana are less likely to access maternal health services as compared to women in the urban areas (Asante-Sarpong *et al.*, 2016a; Ayanore, 2016; Banke-thomas, Banke-thomas and Ameh, 2017).

Ghana's abortion policy only permits physician and midwives to provide abortion services. However, these professionals are inadequate and unevenly distributed in the country (Aniteye and Mayhew, 2013). This makes safe abortion care (SAC) generally to be inadequate and unevenly distributed with urban slums and rural communities suffering the most (Population Council 2015; Morhee & Morhee 2006). A study by Aboagye *et al.* (2007) in 90 health facilities in Ghana found that only 12 (13.3%) of the facilities offers safe abortion care. The same study revealed that about three-quarters of health facilities in Ghana lack medical supplies required for safe abortion care which affects women's access to the services. Similar findings were reported by Payne *et al.* (2013) on their study on why women die from unsafe abortion in Ghana.

**Table 4 Geographical Access to Three Levels of Facility-based Deliveries in Ghana by Regions**

Region	Travel time category	'ABC' facilities offering any care at birth	EmONC facilities (partial, basic or comprehensive)	EmONC facilities (comprehensive)
<b>NATIONAL</b> <i>Total = 6,205,703</i>	< 2 hrs	5,586,265 (90%)	4,099,329 (66%)	3,384,040 (55%)
	> 2 hrs	619,438 (10%)	2,106,374 (34%)	2,821,663 (46%)
	> 4 hrs	185,917 (3%)	1,091,760 (18%)	1,766,669 (29%)
<b>Ashanti</b> <i>Total = 1,796,118</i>	< 2 hrs	1,708,397 (95%)	1,315,565 (73%)	1,223,834 (68%)
	> 2 hrs	87,721 (5%)	480,553 (27%)	572,284 (32%)
	> 4 hrs	12,561 (1%)	197,955 (11%)	276,998 (15%)
<b>Brong Ahafo</b> <i>Total = 548,345</i>	< 2 hrs	479,302 (87%)	318,954 (58%)	269,541 (49%)
	> 2 hrs	69,043 (13%)	229,391 (42%)	278,803 (51%)
	> 4 hrs	11,851 (2%)	133,026 (24%)	189,944 (35%)
<b>Central</b> <i>Total = 496,948</i>	< 2 hrs	430,841 (87%)	297,882 (60%)	250,054 (50%)
	> 2 hrs	66,107 (13%)	199,066 (40%)	246,894 (50%)
	> 4 hrs	7,534 (2%)	106,144 (21%)	195,614 (39%)
<b>Eastern</b> <i>Total = 624,211</i>	< 2 hrs	600,380 (96%)	426,226 (68%)	394,962 (63%)
	> 2 hrs	23,831 (4%)	197,986 (32%)	229,249 (37%)
	> 4 hrs	8,000 (1%)	64,969 (10%)	110,305 (18%)
<b>Greater Accra</b> <i>Total = 785,183</i>	< 2 hrs	782,777 (99%)	736,523 (94%)	644,211 (82%)
	> 2 hrs	2,406 (1%)	48,660 (6%)	140,972 (18%)
	> 4 hrs	0 (0%)	19,734 (3%)	63,860 (8%)
<b>Northern</b> <i>Total = 551,093</i>	< 2 hrs	428,607 (78%)	205,709 (37%)	139,996 (25%)
	> 2 hrs	122,486 (22%)	345,383 (63%)	411,096 (75%)
	> 4 hrs	37,463 (7%)	228,182 (41%)	276,431 (50%)
<b>Upper East</b> <i>Total = 551,093</i>	< 2 hrs	230,331 (98%)	130,994 (56%)	122,261 (52%)
	> 2 hrs	4,245 (2%)	103,582 (44%)	112,314 (48%)
	> 4 hrs	43 (0%)	45,690 (20%)	82,763 (35%)
<b>Upper West</b> <i>Total = 160,357</i>	< 2 hrs	145,442 (91%)	94,318 (59%)	56,933 (36%)
	> 2 hrs	14,915 (9%)	66,039 (41%)	103,423 (65%)
	> 4 hrs	1,735 (1%)	38,352 (24%)	73,455 (46%)
<b>Volta</b> <i>Total = 472,916</i>	< 2 hrs	340,811 (72%)	273,282 (58%)	178,094 (38%)
	> 2 hrs	132,105 (28%)	199,634 (42%)	294,822 (62%)
	> 4 hrs	65,228 (14%)	114,732 (24%)	209,138 (44%)
<b>Western</b> <i>Total = 535,956</i>	< 2 hrs	439,376 (82%)	299,875 (56%)	104,152 (19%)
	> 2 hrs	96,580 (18%)	236,081 (44%)	431,804 (81%)
	> 4 hrs	41,502 (8%)	142,975 (27%)	288,162 (54%)

Source: Gething et al. (2012)



### **3.4 Affordability/Ability to Pay**

Financial access to health services relies on the country's health financing system and the individual's financial capacity; that is, the individual's ability and willingness to pay for the services (Murry and Evans, 2003). It includes both direct and indirect and opportunistic costs and is considered to be one of the major factors determining access to quality health services (Peters *et al.*, 2008).

#### **3.4.1 Cost of Accessing Services**

In Ghana, maternal health services such as antenatal care, deliveries, postnatal care, emergency obstetric care, spontaneous abortion (miscarriage or pregnancy loss before 20 weeks) care and post abortion care are fee exempted and covered by the National Health Insurance Scheme (NHIS). However, care for induced abortion (abortion performed at the request by the pregnant woman herself) is not included in this package (Ofori-Adjei, 2007). This was an initiative to abolish out-of-pocket payment for MHS, prevent clients and families from catastrophic expenditure on MHS and to improve access to maternal health services including emergency obstetric care. Women enrolment to the NHIS indeed is reported to have a positive impact on women's access to MHS. A study by Ameyaw *et al.* (2017) on access to MHS and being an active member of NHIS among different wealth quintile showed that NHIS influences women's access to SBAs in all the wealth quintiles. Women in the lowest wealth with NHIS were 14% (CI = 1.42 – 2.13) more likely to access SBAs than women who were not subscribers, 7% (CI = 1.00 – 2.10) in middle wealth quintile and 5% (CI = 1.01 – 3.18) in the highest wealth quintile. Several studies have also found that women covered by NHIS have better health seeking behaviour leading to higher uptake of MHS (Asante-Sarpong *et al.* 2016a; Brugiavini & Pace 2016; Enuameh *et al.* 2016; Bonfrer *et al.* (2016), Dixon *et al.* 2014; Owoo & Lambon-Quayefio 2013; Arthur 2012). However, nationwide coverage of the NHIS among women is currently low (34%) with a significant decreased in coverage over the past years as shown in table 2 below (Ministry of Health, 2014a). A cross-sectional study by (Kusi *et al.*, 2015) found that cost of annual contribution, registration difficulties, poor quality of care received by NHIS subscribers at the health facilities, lack of trust in the NHIS among others were the reasons for non-enrolment among those who were uninsured.

**Table 5 Proportion of Expected Pregnant Women Exempted under NHIS**

Year	Registered	Expected	Proportion
2011	1712,718	1,011,488	70%
2012	742,279	1,037,286	72%
2013	239,481	1,063,767	23%
2014	373,760	1,090,949	34%

**Source: Ministry of Health, Ghana – Holistic Assessment of 2014 Program Work**

Mamaye, (2015) reported that though maternal health services are free in the country under the NHIS, women under the scheme still sometimes pay for services such as ultrasound scan, drugs and laboratory services due to shortage and unavailability of such services in the public health facilities and they have to seek such services in private health facilities. These could be the reasons for lost in trust and low coverage of the NHIS.

### **3.4.2 Socio-economic status/wealth of the woman and family/insurance**

Family and women's ability to generate financial resources and ability to pay for health services without catastrophic expenditure and indebtedness is crucial for women's access to maternal health services (Levesque et al. 2013).

Low socio-economic status or poverty limits family and women's ability to access maternal health services in LMIC. A study by Finlayson & Downe (2013) showed that families and women with marginalized financial capacity will rather prefer to use their limited resources on basic needs such as food and shelter than maternal health services. The same study revealed that cost of transportation and opportunistic costs such as loss of income and, feeding while away from home deters poor women from accessing maternal health services, including care for emergency obstetric complications even if the services are free.

Several studies have found that high socio-economic status and being in high wealth quintile have a positive link with access to quality maternal health services in LMIC. For instance a study

by Banke-thomas et al. (2017) on adolescent mothers' utilization of maternal health services in LMIC revealed that high wealth quintile is strongly associated with women's access to maternal health services. Similarly, the 2014 Ghana demographic health survey showed that women in the highest wealth quintile had the highest access to maternal health services with ANC being (99.7%), skilled deliveries (96.4%) and postnatal care (95%) as compared to ANC of 94%, 46% of skilled deliveries and 64% postnatal care respectively for women in the lowest wealth quintile (Ghana Statistical Service, 2015). Enuameh et al. (2016), Ayanore( 2016), Asamoah et al. (2014), Owoo & Lambon-Quayefio (2013), Arthur (2012) and Abor et al. (2011) also reported similar findings in their studies.

Most women in Ghana are financially dependents especially adolescents and therefore face financial constraints in accessing safe abortion care since the services is not free in the country (Baiden, 2009). A study by Sundaram et al. (2012) on access to abortion services in Ghana, found that 71% of women in the highest wealth quintile has access to safe abortion care as compared to 38% of women in the lowest wealth quintile. Similar results were reported by Guttmacher Institute (2013) and Morhee & Morhee (2006).

### **3.5 Appropriateness/Ability to engage**

Technical and interpersonal quality of services provided and the family and client's ability to engage with the care determines the appropriateness of the services received by the client (Levesque et al. 2013).

#### **3.5.1 Technical Quality**

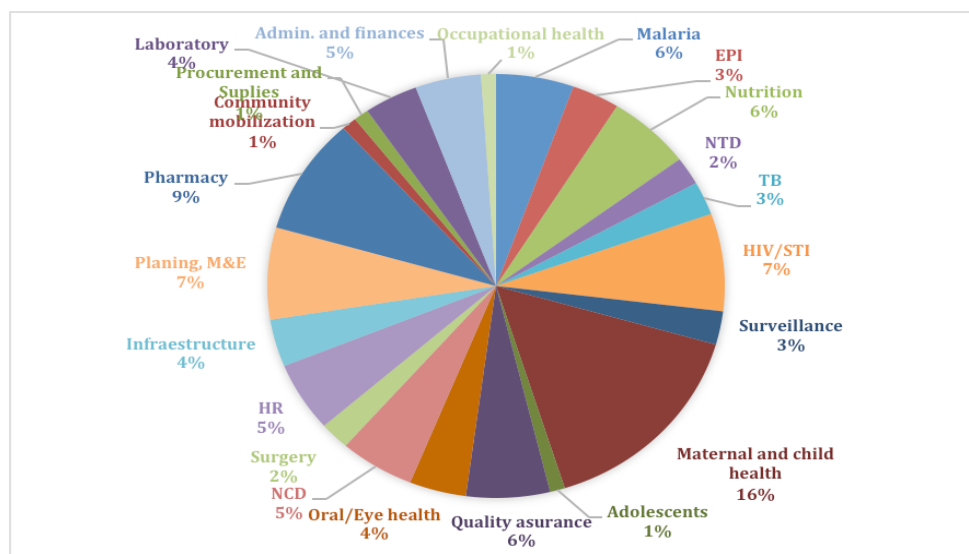
Healthcare quality remains a challenge in many LMIC mostly due inadequate logistics and human resource (Alhassan *et al.*, 2015). The government of Ghana has implemented a number of interventions some of which include infrastructure work, protocol development, training manual, training of health staff, monitoring and evaluation (M&E) policy development and incentives to health staff since 1988 to improve the quality of healthcare services in the country; see table 6 for detailed information of the interventions. Maternal and child health received the greatest attention (16%) of the interventions as shown in figure 5 below (Escribano-ferrer *et al.*, 2016).

**Table 6 Description of Health Interventions in Ghana**

Type of Interventions	Description
Regulations	Laws, standards and accreditation
Policies and strategies	Documents describing long terms goals and strategic lines
Protocols and guidelines	Describe steps to follow to guide practice
Training manuals	Development of training manuals
Technical assistance	Includes specialist outreach programs, telemedicine and external support to a particular task or post
Community mobilization	Interventions to increase community education, awareness and participation
Staff training	Mainly in-service training
Health information	Includes supervision and monitoring and evaluation
Proceses and continuous improvement	Projects dealing with change and addressing processes and systems
Equipment and infrastructures	Purchasing commodities, equipment and infrastructure supported by health partners during the period comprising 2014. Contributions from the government are not captured here.
Monetary incentives	Performance based financing

Source: Escribano-ferrer *et al.*, (2016)

**Figure 5 Interventions with the Main Purpose of Improving Quality of Care Ghana by Themes**



Source: Escribano-ferrer *et al.*, (2016)

However, a qualitative study conducted by Ganle *et al.* (2014) found that many public health facilities providing maternal health services in northern Ghana were challenged with quality

issues. Insufficient staffing, insufficient skilled staff, delays in service provisions, overcrowding in the wards and lack of privacy during delivery were observed in many facilities. The study noted that most women have lost confidence in the public health facilities and would rather prefer the service of either TBAs or private health facilities. Another study in the northern Ghana revealed logistics required for the prevention of postpartum bleeding and management of hypertensive disorders were sufficient (99% of women delivered received oxytocin) in most of the health facilities. However, basic requirements for assisted delivery (vacuum extractors or forceps) and management of obstructed labour were observed to be insufficient (Duysburgh *et al.*, 2014).

### **3.5.2 Interpersonal Quality**

The cadre of health professionals available and the attitude of the health providers have an impact on client's health outcome and client satisfaction (Levesque *et al.* 2013). However, a qualitative study by Banchani and Tenkorang, (2015) in Tamale metropolis reported limited knowledge on maternal health policies among these providers.

Studies in Ghana have identified that health provider's attitude can either serves as a deterrent or facilitator of women's access to quality maternal health services. A qualitative study conducted by Ganle *et al.* (2014) in Ghana revealed that women visit health facilities with the expectation to enter into good relationship with the health providers in order to understand their condition and that of their babies. However, they often experience the opposite Women receive authorizations and many forms of maltreatment from care providers especially during ANC and labour. According to Ganle *et al.* (2014), provider-client relationship is poor in Ghana and this has a negative effect on uptake of maternal health services in the country.

In another qualitative study, Yakubu *et al.* (2014) reported shouting, screaming, beating and ignoring women during labour as some of the forms of maltreatment by midwives in rural Ghana. According Yakubu *et al.* (2014), the midwives stated that they are accountable for the outcome of the pregnancy and that the maltreatment comes in when the "women in the second stage of labour refuse to push" which may have effect on both the mother and the baby. Nakua *et al.* (2015) also reported that negative attitude of health providers and maltreatment such as

insults and other forms of abuse by health staff were cited by women as the reason they prefer TBAs over skilled birth attendants in Ghana.

### **3.5.3 Ability to Engage**

Client's involvement in care is required for optimal service to the client and this is determined by the client's health literacy and willingness to participate in the care (Levesque et al., 2013). Clients are expected to be actively involved in their health decision-making and take responsibilities over their health. Health providers are in turn, responsible to provide the required health information for clients to make informed health decisions (Montori *et al.*, 2017).

As stated earlier under approachability, health information is mainly shared in Ghana through interpersonal communication (health provider to patient through hospital visit, outreach services, durbars and seminars), radio and television, print media, and now social media (Ghana Health Service, 2015).

## **Chapter Four: Evidence-based Interventions for Improving Access to Quality Maternal Health Services in Low and Middle-income Countries**

This chapter reviews evidence-based interventions that have proven to have positively influenced access to quality maternal health services in Ghana and other low and middle-income countries with much focus in SSA. From among multiple interventions identified, the interventions discussed below were selected based on the main barriers for access to MHS in Ghana, their relevance and adaptation feasibility for the Ghanaian health system. Levesque et al.'s (2013) model on patient-centred access to healthcare was used as a guide. The interventions reviewed aimed at improving services approachability/client's ability to perceive the need for care, acceptability/client's ability to seek care, availability/client's ability to reach, affordability/client's ability to pay and appropriateness/client's ability to engage in care identified in chapter 3.

### **4.1 Approachability/Ability to Perceive and Acceptability/Ability to seek care Related Interventions**

The main barriers for access to MHS in Ghana, in relation to the domain of approachability and acceptability, were low health literacy among women, and socio-cultural and religious barriers.

A systematic review by Lassi *et al.*, (2016) revealed that integration of home visiting, community mobilization and counselling services are the community-based interventions to improve client's ability to perceive and approach care, and to accept and seek care. In this approach, antenatal and postnatal services are provided through home visit by Community Health Worker. Women are educated on birth preparedness and how to identify pregnancy danger signs to prevent delay in seeking care and subsequently prevent pregnancy related complications (Elmusharaf, Byrne and Donovan, 2015). To improve on MHS approachability and acceptability in Malawi, the Ministry of Health for Malawi in collaboration with Partners In Health a project dubbed Healthy Mothers Healthy Communities in 2015. In the project, community members were chosen through the community leaders and trained for five days as community health workers CHW). These CHW were used to map and accompany pregnant women to health facilities for ANC, deliveries and PNC. Antenatal attendance was reported to increase 53% after 6months of the start of the project. However, impact of the project on

deliveries and PNC was not reported (Kachimanga *et al.*, 2016). Pakistan's government initiated Lady Health Workers (LHW) program which used the home-visit approach to collaborate with TBAs and CHVs to promote skilled deliveries, use of clean delivery kits and postnatal care (Bhutta *et al.*, 2011).

Women's participatory learning groups and volunteer peer counselling intervention in Mchini district in Malawi have been identified to be successful in improving women health literacy, health beliefs and positively affect their health seeking behaviour. In the project, literate local women were identified and trained for eleven days as facilitators and five days for peer counsellors. The women facilitators used manuals and participatory appraisal methods to guide women in group discussion. The peer counsellors identified pregnant women and made at least five home visits to these women to provide health education on MHS during pregnancy and after delivery. The group members identified and prioritized maternal health issues including emergency obstetric and safe abortion issues, identified strategies on how to overcome the health challenges in their discussions (Lewycka *et al.*, 2013). Similar intervention in Nepal was reported to be successful (Manandhar *et al.*, 2004).

In South Africa, abortion services are provided to women and adolescent girls on request with no mandatory consent from their guardians (spouse or parents) as a result of abortion law reforms in 1996. This gave the women and adolescent girls the autonomy to access safe abortion service as a results, abortion related mortality reduced significantly in the country (Benson, Andersen and Samandari, 2011). Also in Mozambique, Pathfinder International used a community engagement approach to overcome gender and socio-cultural barriers on access to safe abortion services. They trained and sensitized community leaders, men and women on safe abortion which led to an improvement on uptake of safe abortion services in health facilities in Mozambique (Pathfinder International 2010).

#### **4.2 Availability and accommodation/Ability to Reach**

Inadequate health facilities, inadequate health staff, long distance travel to reach health facilities and insufficient emergency transport were found to be the main barriers under availability/ability for women's access to MHS. Bright et al. (2017) reported in their systemic review that delivering



services close to the communities is the most beneficial intervention for improving access to services.

In Ghana, especially the rural communities have challenges in terms of health facilities and highly skilled health professional and therefore use community health workers/officers and health volunteers as health service providers. Many LMIC also face these challenges which led many of these countries to undertake training of and task-shifting to community health workers as skilled birth attendants to improve access to maternal health services, though at low quality. For example, nurse-aides were trained and tasks were shifted to them to perform low-risk deliveries in hospitals in rural Zimbabwe. The program was reported to be successful and effective. It was observed that maternal mortality was significantly reduced among deliveries conducted by the nurse-aides (Bhutta *et al.*, 2009).

Maternity Waiting Home (MWH) is another initiative used to improve access to maternal health services including emergency obstetric care in LMIC. It is a residence built close to a health facility providing emergency obstetric care where high-risk expectant women and women living at a long distance from the nearest health facility can stay in the weeks prior to delivery and days after delivery (Satt, McLaughlin and Seung, 2013). This initiative is reported to successful in many LMIC including Ethiopia, Zambia, Malawi, and Zimbabwe (Lonkhuijzen, Stekelenburg and Roosmalen, 2014). For example in Zimbabwe, MWH have reported that the use of MWH increased access to skilled deliveries about six times and reduced perinatal mortality among high risk mothers by 48% (adjusted RR = 0.52; 95% CI: 0.29 – 0.91; P < 0.05) (Bhutta *et al.*, 2009; Lonkhuijzen, Stekelenburg and Roosmalen, 2009). However, lack of proper local context assessment and consequent adjustment in MWH setup before implementation led to some challenges such as overcrowding, poor hygiene, water shortage and high cost of living in MWH. This led to failure of the initiative in some countries like Ghana, Nicaragua and Peru (Lonkhuijzen, Stekelenburg and Roosmalen, 2009).

Transportation is one of the major factors influencing client and family's ability to reach health services in low and middle-income countries. This has led to a number of innovations to provide locally appropriate means of transportation, especially for emergency obstetric situations such as the use of motor-bikes, pick-up trucks, tractors, motorboats and bicycles. These alternative modes of transportation have contributed to reducing the delay in reaching health facility in

many LMIC (Holmes and Kennedy, 2010). For instance, in Malawi some health centres have been equipped with motorcycle-ambulances, to support referral of women with obstetric complications to hospitals that provide emergency obstetric care. A study by Hofman *et al.*, (2008) revealed that the motorcycle-ambulance system was about 24% cheaper than the car ambulance system and reduced patient delay in reaching care by about 35%-76%. This motorcycle-ambulance initiative is feasible for Ghana. This will aid CHPS compounds, health centres and district hospitals without car ambulances to refer patients with complications including obstetric complications to referral facilities for further case management without delay.

Regarding the availability of safe abortion services, the government of South Africa in 1996 introduced abortion law reforms called the Choice on Termination of Pregnancy (CTOP) Act. This law enables women to access safe abortion services based on economic reasons and on request (Benson, Andersen and Samandari, 2011). Prior to this law, the only legal reasons for accessing safe abortion services was for therapeutic reasons related to health and wellbeing of the woman or the child. Such restrictive rule led to limited access to safe abortion services and high maternal mortality due to unsafe abortion. South Africa has also increased the number of health facilities that provide safe abortion care from 32% in 2000 to 62% in 2003. These led to an increased uptake in safe abortion services and a significant reduced unsafe abortion in the country (Benson *et al.*, 2011).

#### **4.3 Affordability/Ability to pay interventions**

These are financial interventions that aimed at reducing the financial barriers for access to maternal health services. It protect the families from catastrophic expenditure maternal health services including obstetric emergencies, empower and motivate women to access care (Elmusharaf, Byrne and Donovan, 2015). Some of these interventions include National Health Insurance, conditional cash transfers, voucher schemes and emergency loan/insurance fund for emergency obstetric care. Studies on Bolivia's Nationwide Social Insurance Scheme and Democratic Republic of Congo's Community-based Insurance Scheme also reported an increased in access to maternal health services (Bhutta *et al.*, 2009).

Conditional Cash Transfers are another approach used by many LMIC to empower clients and families to pay for health services and to improve access to care. This intervention involves providing clients and families with money which can be used for food or other basic needs, on

the condition that they make use pre-specified health services such as MHS (Borghi *et al.*, 2006). A systematic review on the impact of conditional cash transfers in LMIC by Lagarde *et al.* (2007) reported an improvement in health literacy and health seeking behaviour, particularly uptake of maternal health services among beneficiaries in Malawi, Brazil, Honduras, Mexico and Nicaragua.

A voucher scheme is a non-cash financial incentive also used to improve access to health services, including maternal health services. In this approach, clients and families purchase voucher(s) for specific health service at a subsidized cost with a health facility, to prevent direct and high out-of-pocket health expenditure (Bhutta *et al.*, 2009). Governments of Kenya, Tanzania, Uganda and India used this approach to improve access to maternal health services including emergency obstetric care in their countries, although no outcome data have been reported yet (Bhutta *et al.*, 2009; The Republic of Uganda, 2012; Watt *et al.*, 2015).

Emergency loans/insurances funds for emergency obstetric care are another financial interventions used to overcome financial barriers for access to maternal health services in emergency situations. This approach is used to pool and manage funds locally to assist clients and families to pay for emergency health services, transportation and any other indirect and opportunistic cost incurred in the process of care seeking. This can either be in the form of a loan or an insurance (Ensor and Ronoh, 2005). This type of financial intervention successfully operates in Sierra Leone, Democratic Republic of Congo and in some parts in Nigeria (Ekpoma clan in Nigeria) which is reported to have improve access to emergency obstetric care in these countries (Bhutta *et al.*, 2009).

To overcome the financial barriers for women's access to safe abortion services in South Africa, the government implemented fee exemption policy for abortion services in all state health facilities in the country in the mid-1990s (Benson, Andersen and Samandari, 2011).

#### **4.4 Appropriateness/Ability to Engage**

Interventions that target health system strengthening such as technical quality (infrastructure upgrading and provision of equipment and medical supplies) and interpersonal quality (health workers training) are very important for improving access to quality health services including maternal health services (Wekesah *et al.*, 2016).

The Nigerian government in collaboration with Rotary International and supported by the German Federal Ministry of Economic Cooperation and Development initiated and implemented a two-year (2008 - 2009) project on quality assurance in obstetric services in two states (Kano and Kaduna) in northern Nigeria. The project was based on three principles; upgrading and improving on the quality of health infrastructure, provision of medical supplies and equipment and staff training (Galadanci *et al.*, 2011). Prior to the project, access to quality obstetric services was extremely low and maternal mortality was excessively high. However, two years after the start of the project, reports showed increased knowledge, skills and competences of health workers, improved access to quality maternal health services, including emergency obstetric care, and a significant reduction in MMR from 1790/100,000 live births in 2008 to 940/100,000 in 2009 (Galadanci *et al.*, 2011). Other countries including Burkina Faso, South Africa, Mozambique and Uganda have used health system strengthening to improve access to quality maternal health services including emergency obstetric care in LMIC (Santos *et al.*, 2006; Richard, Ouédraogo and Brouwere, 2008; Brazier *et al.*, 2009; Doherty *et al.*, 2009; Galadanci *et al.*, 2011; Ediaou *et al.*, 2013).

## **Chapter 5: Discussion of Findings**

Access to maternal health services remains a significant challenge in Ghana. This study sought to explore and analyse the health system (supply-side) related factors and individual/population (demand-side) related factors that affect access to quality maternal health services, including safe abortion care in Ghana. It was found in chapter three that inadequate health information, insufficient knowledge of health providers on cultural and religious beliefs, inadequate health facilities, inadequate health staff and emergency transportation, low coverage of NHIS, insufficient medical supplies and poor provider's attitude were the main health system (supply-side) barriers for access to MHS in Ghana. Also, low health literacy among women, socio-cultural and religious barriers, long distance travel/place of residence and low socio-economic status or poverty were identified as the demand-side related barriers for access to MHS in the country. This chapter discusses the results of the study presented in chapter three and four, and it is structured based on the Levesque et al's. (2013) model on patient-centred access to healthcare.

**Usefulness of the Framework to this Study:** The framework was helpful in answering the study questions by laying out the factors the study sought to explore. It was very flexible and that enabled the study to explore the supply-side and demand-side factors that influence women's ability to access MHS including EmOC and safe abortion care. The framework however failed to address policies and macro-environment factors that could affect women's access to services.

### **5.1 Approachability/ability to perceive**

Access to comprehensive health information is very important in guiding families and client for informed health decisions. The findings show that women who were aware of the availability of a particular service had a better chance of accessing the service than those who did not have knowledge about that service. However, in Ghana especially in the rural communities, access to health information is very low leading to high health illiteracy among women and their families. This is because, the health system relies mainly on interpersonal communication (through outreach services or when client visit the hospital) or the media (TV, radio, print or social media) to disseminate health information. Unfortunately, health providers particularly, the CHOs who provide outreach services are insufficient in the country. This contributed to low access to health information and health services in the country making it difficult for women and families to

perceive their need for, and approach health services. Women's participatory learning groups and volunteer peer counselling interventions through home visit have proven to be successful in providing health information to the communities, improving on women's health literacy and thereby improving access to MHS. For instance, the woman facilitator led women's participatory learning group and the volunteer peer counselling intervention in Malawi can be adapted to provide health education and ANC services through home visiting in Ghana as it was proven to be successful.

## **5.2 Acceptability/ability to seek**

Culture and religion are deeply rooted in Ghana and guide most of the activities in many Ghanaian communities including decision to access health services. Women's access to MHS in Ghana especially in rural communities is influenced by interaction of several cultural and religious factors.

Gender and women status in a family or in the communities play a significant role on women's access to MHS. In most Ghanaian communities, women cannot make their own decisions without the permission of their husbands or household heads. This lack of autonomy affects women's ability to seek care. It was found in the findings that husbands, household heads, mother-in-laws and TBAs are those who determine if, when and where women access maternal health services. This makes it difficult for most women in these communities to make their own decisions to seek MHS.

Pregnancy rituals are performed in some communities in Ghana, where first-time pregnancy are not announced until after six months for fear of evil-eye on the foetus and the mother. Culturally, women are seen to be strong and do not need to access health facility for delivery, this makes women prefer to deliver at home than in the health facility to show that they are strong. Children and parenthood are highly valued in Ghana only when it is experienced in an acceptable manner. But because extra-marital sex or pre-marital sex is culturally to acceptable in many societies in Ghana, pregnancies resulting from it are highly stigmatised. Also, because children are valued, abortion is not accepted in many communities and act is stigmatised. These cultural factors limit women's ability to seek MHS in Ghana. It was found in this study that community engagement interventions are effective in overcoming gender and socio-cultural barriers for access to MHS.

For instance in Mozambique, Pathfinder International used community engagement approach to trained and sensitized community leaders, men and women on safe abortion which led to improve in acceptability of safe abortion services in the country. Islamic religion was found to be a barrier for access to MHS. Muslim women prefer the services of TBAs to skilled male midwives, this is because the Islamic religion prohibits them to expose their nakedness to males who are not their husbands, as a result, they are unable to access care from male health providers. Interventions aimed at using Lady Health Workers (LHW) to provide MHS could promote acceptability of the services among Muslim women. The findings show that Pakistan's government successfully used the LHW program which used the home-visit approach to collaborate with TBAs and CHVs to promote skilled deliveries, use of clean delivery kits and postnatal care in the country. This can be adapted to suit the context of Islamic communities in Ghana especially in northern part where Muslims are dominant.

### **5.3 Availability and accommodation/Ability to Reach**

Proximity of health facilities to the pregnant woman was found to be a determinant of uptake of MHS in this study. In communities where women have to travel for more than 2hours or pay for transport to access MHS declines. However, the findings show that health facilities and health staff for maternal health services are generally inadequate and unevenly distributed especially EmOC services, with the rural areas suffering the greatest burden. The CHPS initiative which was introduced to overcome distance barriers, nationwide has been low (2,580 available when 6,500 is required) with low skilled staff. The CHOs are not trained to provide basic obstetric emergencies and coverage of ambulance services is inadequate and expensive. These lead to delay in reaching health facilities especially during obstetric complications. The reviewed interventions show that approaches aimed at delivering MHS close to the communities were proven to be successful. As mentioned earlier, Mchini district in Malawi, used peer counsellors to promote birth preparedness and skilled delivery through home-based antenatal care (home-visit). Task-shifting was also found to be another useful intervention to ensure availability of skilled health providers at a lower cost. This intervention can be adapted in Ghana to train CHOs to provide basic emergency obstetric care at the CHPS level to improve on the availability skilled staff in the country.

MWH have been used in many LMICs to accommodate women close to health facilities to promote skilled delivery as in the case of Ethiopia and Zambia. It however failed in Ghana because of implementation issues such as water shortage, high cost of living, among other. Even so, MWH can be considered a feasible intervention in Ghana particularly for hard-to-reach communities. For the success of this intervention and learning from the challenges, community leaders, community members and women of reproductive age should be involved in the planning, implementation and management of the facility. Motor-cycle emergency transports are interventions used to overcome the delay in reaching health facility barriers. It was shown to be successful in Malawi as it was used in health centres for referral of women with obstetric complications to hospitals that provide emergency obstetric care. This motor-cycle emergency transportation intervention can be implemented in Ghana especially, in health facilities without car ambulances to help in referrals of emergency complications by equipping the facilities with motor-tri-cycle. Communities can also be empowered with these motor-cycles through community mobilisation and support from government and NGOs. This would help improve on their ability to reach health facilities and hence reduced the delay in reaching care for communities living long distance away from health facilities.

From the findings, it was found that health facilities providing safe abortion services are extremely inadequate in Ghana and the law also restricts abortion on economic reasons or on request. As a result women resort to unsafe abortion services leading to abortion complications and increased maternal mortality. Evidence shows that abortion complications are minimal in countries where abortion laws are liberal. Unsafe abortion significantly reduced, when the South African abortion reforms in the 1990s allowed women to access abortion services for economic reasons or on request and also expanded coverage of safe abortion services. Ghana need this form of intervention to reduce maternal mortality in the country, as mortality associated with unsafe abortion is one of the main causes of maternal mortality in Ghana. Though, religion and culture play an important role in the values of Ghanaian societies, with engagement of religious and community leader, it's feasible to adapt and implement this intervention.

#### **5.4 Affordability/Ability to pay**

Family and women's wealth status and NHIS coverage were identified to be the economic factors influencing women's access to MHS. This study found that women who are active



members of the NHIS are financially protected and are entitled to free MHS. This was seen an enabling factor for women's access to MHS. However, nationwide coverage of the NHIS was found to be very low (34%), meaning more than half of pregnant women are not covered by the insurance and this could affect their access to MHS. Also, it was reported that NHIS accredited health facilities sometimes faced shortage on certain services and women have to access and pay for these services in an NHS unaccredited facilities. These caused lost in trust on the NHIS and served as a disincentive for access to MHS especially to the financial marginalized families. It was also found that the NHIS does not provide financial protection for safe abortion services making it difficult for financially marginalised women to access. Wealth was also found to be a determinant for women's access to MHS. Women belonging to first two wealth quintiles household were more likely to access MHS than women belonging to lowest wealth quintile. Women in the lowest wealth quintile could not afford the costs (direct, indirect and opportunistic costs) associated accessing MHS.

From the reviewed interventions, many LMICs have used financial incentive approaches such as conditional cash transfer, voucher schemes and emergency loan/insurance fund to overcome the financial barriers for access to MHS. Conditional cash transfer, where women and families are provided with money for health services, which can also be used for food or other basic needs was found to be very successful in improving women access to MHS in many LMICs according to Lagarde et al. (2007). Another very important financial intervention found was the emergency loans/insurances funds for emergency obstetric care, where community members pool and manage funds locally to assist clients and families to pay for health cost. It was found to successful in Sierra Leone, Democratic Republic of Congo and among the Ekpoma clan in Nigeria (Galadanci *et al.*, 2011). These forms of financial interventions can be adapted to support the already existing NHIS in the country. Also, safe abortion care can be incorporated into the free maternal health policy to provide financial protection for women accessing safe abortion services.

### **5.5 Appropriateness/Ability to Engage**

The study has shown that maternal health services quality has been challenged with insufficient skilled staff, insufficient health infrastructure, and inadequate medical supplies and equipment. Overcrowding and frequent shortage of medical supplies made women to lose confidence in

most government health facilities and rather prefer the service of TBAs. Unfriendly attitude of some health providers was also found to be a determinant for women's access to MHS and their ability to participate in their care. Women often experience beatings, insults, neglect, and other forms abuse from providers which serve as disincentive for women access to MHS. Women required the needed health information to be able to fully participate in their care. However, as stated earlier in this study, health literacy among women in Ghana is low. Evidence shows that these women can be empowered through health education using peer counsellor and home visiting approach. Regarding MHS quality improvement, it was found that the Nigerian government in collaboration with Rotary International used quality assurance approach involved upgrading and improving on the quality of health infrastructure, provision of medical supplies and equipment and staff training to improve the quality of MHS in Kano and Kaduna states in Nigeria. This intervention is feasible and can be adapted suit the context of Ghana.

## **Chapter 6: Conclusion and Recommendations**

This chapter responds to all the 4 objectives of the study in drawing conclusions (objectives 1 – 3) and suggesting recommendations to the stakeholders in health in Ghana (objective 4) based on the findings in chapters 3 and 4.

### **6.1 Conclusions**

Accessing MHS, including EmOC and safe abortion care remains a challenge in the country. The study acknowledge that both supply-side and demand-side factors affects women's access to quality MHS including EmOC and safe abortion care.

The most important supply-side factors identified to be barriers for women's access to quality MHS were; inadequate health information, insufficient knowledge of health providers on cultural and religious beliefs, inadequate health facilities, inadequate health staff and emergency transportation, low coverage of NHIS, inadequate medical supplies and poor provider's attitude.

More so, the study found low health literacy among women, socio-cultural and religious barriers (including gender issues), long distance travel/place of residence and low socio-economic status or poverty to be the main demand-side factors affecting women's access to MHS in the country. At the same time, a number of evidence-based interventions were identified for consideration in addressing MHS access barriers. For instance training of volunteer peer counsellors to provide health education through home visiting, women's participatory learning groups, trained and shift task to low health staff to provide quality services at low cost, re-introduce MWH and involve community members for its management, liberalization of the abortion law to include accessing abortion service on request or for economic reasons, the use of motorcycle-ambulance, the use of other financial incentives (conditional cash transfer, voucher schemes and emergency transport funds) and the use of quality assurance to improve the quality of health services to support the existing maternal health interventions in the country.

### **6.2 Recommendations**

Generally, long-term socio-economic interventions resulting in expansion of health infrastructure, more education, and poverty reduction, among others, will have lasting impact on access to MHS. These recommendations are however limited to those that are feasible and can be

achieved within a relatively short term by the government of Ghana and other relevant stakeholders.

### **Policy level: MOH and NHIS**

- The government of Ghana (GOG) through the Ministry of Health needs to increase financial commitment to health to expand of health infrastructure, including a nationwide scale up of Community-based Health Planning Services; ensure constant availability of medical supplies equipment to all health facilities providing MHS; and enforce the train and retain policy.
- Review the abortion law to permit abortion on request or based on economic reasons. This would give women autonomy to access safe abortion services and will reduce unsafe abortion related mortality in the country.
- The free MHS under the NHIS should be reviewed to include safe abortion care to ease the financial challenges for access to safe abortion care. Free MHS should be provided to all pregnant women and mothers regardless of their NHIS status, to ensure equal accesses of the services to all women.

### **Health Service Delivery Level: GHS, Teaching Hospitals and CHAG**

- Redistribute health staff especially doctors and midwives in the country to ensure nationwide availability of these health staff.
- Employ task-shifting approach by training CHOs on basic obstetric emergencies to increase the availability of these services at the CHPS level.
- Employ quality assurance approach by ensuring regular supply of medical supplies and equipment including logistics for safe abortion, and regular refresher-training for health workers on MHS.
- Provision of cultural and religious accommodative health services to communities highly inclined to religious and cultural practices. For instance, the Pakistan's Lady health workers' approach can be adapted to train lady health workers to provide services to women in communities where the services of a male midwife is not accepted by their religion or culture.
- Use community engagement approach such as women's participatory learning groups, volunteer peer counsellors and home-visiting to improve health literacy among women and also improve access to MHS.

### **Community level: NGOs and Civil Society Organization**

- Empower women and families through income generating activities and other financial incentives such as conditional cash transfer and voucher scheme to compliment the NHIS. This would help overcome the indirect and opportunistic costs barriers and improve women's financial capacity to access MHS.
- Mobilized and support communities to establish community-based transport services and emergency loans/insurances funds for emergency obstetric care to ease the challenges in reaching health facilities.

## References

- Aboagye, P. K., Asare, G. Q., Mitchell, E. M. H. and Addy, J. (2007) *An assessment of the readiness to offer contraceptives and comprehensive abortion care in the Greater Accra, Eastern and Ashanti regions of Ghana*. Edited by C. Greenlee-Donnel. Chapel Hill, NC: Ipas.
- Abor, P. A., Abekah-Nkrumah, G., Sakyi, K., Adjasi, C. K. D. and Abor, J. (2011) 'The socio-economic determinants of maternal health care utilization in Ghana', *International Journal of Social Economics*, 38(7), pp. 628–648. doi: <http://dx.doi.org/10.1108/03068291111139258>.
- Ahmed, S., Creanga, A. A., Gillespie, D. G. and Tsui, A. O. (2010) 'Economic status, education and empowerment: Implications for maternal health service utilization in developing countries', *PLoS ONE*, 5(6). doi: 10.1371/journal.pone.0011190.
- Alhassan, R. K., Duku, S. O., Janssens, W., Nketiah-, E., Spieker, N., Ostenberg, P. Van and Arhinful, D. K. (2015) 'Comparison of Perceived and Technical Healthcare Quality in Primary Health Facilities : Implications for a Sustainable National Health Insurance Scheme in Ghana', *PLoS ONE*, 10(10), pp. 1–19. doi: 10.1371/journal.pone.0140109.
- Ameyaw, E. K., Kofinti, R. E. and Appiah, F. (2017) 'National health insurance subscription and maternal healthcare utilisation across mothers' wealth status in Ghana', *Health Economics Review*. *Health Economics Review*, 7(16). doi: 10.1186/s13561-017-0152-8.
- Aniteye, P. and Mayhew, S. H. (2013) 'Shaping legal abortion provision in Ghana : using policy theory to understand provider-related obstacles to policy implementation', *Health Research Policy and Systems*, 11(23), pp. 15–17.
- Apanga, P. A. and Adam, M. A. (2015) 'Factors influencing the uptake of family planning services in the Talensi district, Ghana', *Pan African Medical Journal*, 20, pp. 1–9. doi: 10.11604/pamj.2015.20.10.5301.
- Arthur, E. (2012) 'Wealth and antenatal care use: Implications for maternal health care utilisation in Ghana', *Health Economics Review*. *Health Economics Review*, 2(1), pp. 1–8. doi: 10.1186/2191-1991-2-14.
- Aryeetey, R., Aikins, M., Dako-Gyeke, P. and Adongo, P. B. (2015) 'Pathways Utilized for

Antenatal Health Seeking Among Women in the Ga East District, Ghana.’, *Ghana medical journal*, 49(1), pp. 44–9. doi: 10.4314/gmj.v49i1.8.

Asamoah, B. O., Agardh, A. and Cromley, E. K. (2014) ‘Spatial Analysis of Skilled Birth Attendant Utilization in Ghana’, *Global Journal of Health Science*, 6(4). doi: 10.5539/gjhs.v6n4p117.

Asamoah, B. O., Agardh, A., Pettersson, K. O. and Östergren, P. (2014) ‘Magnitude and trends of inequalities in antenatal care and delivery under skilled care among different socio-demographic groups in Ghana from 1988 – 2008’, *BMC pregnancy and childbirth*, 14(295), p. 14.

Asante-Sarpong, H., Owusu, A. Y., Saravanan, S., Appiah, E. and Abu, M. (2016a) ‘Determinants of use of supervised delivery care under Ghana’s fee exemption policy for maternal healthcare: the case of the Central Region’, *BMC Pregnancy and Childbirth*. *BMC Pregnancy and Childbirth*, 16(1), p. 172. doi: 10.1186/s12884-016-0960-6.

Asante-Sarpong, H., Owusu, A. Y., Saravanan, S., Appiah, E. and Abu, M. (2016b) ‘Determinants of use of supervised delivery care under Ghana’s fee exemption policy for maternal healthcare: the case of the Central Region.’, *BMC pregnancy and childbirth*. *BMC Pregnancy and Childbirth*, 16(1), p. 172. doi: 10.1186/s12884-016-0960-6.

Ayanore, M. A. et al (2016) ‘Focused maternity care in Ghana : Results of a cluster analysis’, *BMC Health Services Research*. *BMC Health Services Research*, pp. 1–31. doi: 10.1186/s12913-016-1654-5.

Baiden, F. (2009) ‘Making Safe Abortion Services Accessible in Ghana’, *Journal of Women’s Health*, 18(12), pp. 1923–1925. doi: 10.1089 = jwh.2009.1689.

Banchani, E. and Tenkorang, E. Y. (2015) ‘Implementation challenges of maternal health care in Ghana : the case of health care providers in the Tamale Metropolis’, *BMC Health Services Research*, 14(7). Available at: <http://www.biomedcentral.com/1472-6963/14/>.

Banke-thomas, O. E., Banke-thomas, A. O. and Ameh, C. A. (2017) ‘Factors influencing utilisation of maternal health services by adolescent mothers in Low-and middle-income

- countries : a systematic review', *BMC pregnancy and childbirth*. BMC Pregnancy and Childbirth, 17(65), pp. 1–14. doi: 10.1186/s12884-017-1246-3.
- Benson, J., Andersen, K. and Samandari, G. (2011) 'Reductions in abortion-related mortality following policy reform : evidence from Romania , South Africa and Bangladesh', *Reproductive Health*. BioMed Central Ltd, 8(1), p. 39. doi: 10.1186/1742-4755-8-39.
- Bhutta, Z. A., Darmstadt, G. L., Haws, R. A., Yakoob, M. Y. and Lawn, J. E. (2009) 'Delivering interventions to reduce the global burden of stillbirths : improving service supply and community demand', *BMC pregnancy and childbirth*, 37, pp. 1–37. doi: 10.1186/1471-2393-9-S1-S7.
- Bhutta, Z. qar A., Soofi, S., Cousens, S., Mohammad, S., Memon, Z. A., Ali, I., Feroze, A., Raza, F., Khan, A., Steve Wall, J. and Martines, O. (2011) 'Improvement of perinatal and newborn care in rural Pakistan through community-based strategies : a cluster-randomised effectiveness trial', *The Lancet*, pp. 403–412. doi: 10.1016/S0140-6736(10)62274-X.
- Bonfrer, I., Breebaart, L. and De Poel, E. Van (2016) 'The effects of Ghana's national health insurance scheme on maternal and infant health care utilization', *PLoS ONE*, 11(11), pp. 1–13. doi: 10.1371/journal.pone.0165623.
- Borghgi, J., Ensor, T., Somanathan, A., Lissner, C. and Mills, A. (2006) 'Mobilising financial resources for maternal health', *The Lancet*, 368. doi: 10.1016/S0140-6736(06)69383-5.
- Bosomprah, S., Tatem, A. J., Dotse-gborgbortsi, W., Aboagye, P. and Matthews, Z. (2016) 'Spatial distribution of emergency obstetric and newborn care services in Ghana : Using the evidence to plan interventions', *International Journal of Gynecology and Obstetrics*, 132, pp. 130–134.
- Braa, J., Hanseth, O., Heywood, A., Town, C., Mohammed, W. and Shaw, V. (2007) 'Developing Health Information Systems in Developing Countries: The Flexible Standards Strategy', *Mis Quarterly*, 31(1), pp. 1–22.
- Brazier, E., Andrzejewski, C., Perkins, M. E., Themmen, E. M., Knight, R. J. and Bassane, B. (2009) 'Improving poor women ' s access to maternity care : Findings from a primary care intervention in Burkina Faso q', *Social Science & Medicine*. Elsevier Ltd, 69(5), pp. 682–690.



doi: 10.1016/j.socscimed.2009.06.023.

Bright, T., Felix, L., Kuper, H. and Polack, S. (2017) 'A systematic review of strategies to increase access to health services among children in low and middle income countries', *BMC Health Services Research*. BMC Health Services Research, pp. 1–19. doi: 10.1186/s12913-017-2180-9.

Brugiavini, A. and Pace, N. (2016) 'Extending health insurance in Ghana: effects of the National Health Insurance Scheme on maternity care', *Health Economics Review*. Health Economics Review, 6(1), p. 7. doi: 10.1186/s13561-016-0083-9.

Care International (2014) *Healthy Moms , Healthy Societies, Care International*. 151 Ellis Street, Atlanta, GA 30303. Available at: <http://www.care.org/work/health/maternal-health> (Accessed: 16 May 2017).

Chatham House Report (2014) *Shared Responsibilities for Health A Coherent Global Framework for Health Financing Final Report of the Centre on Global Health Security Working Group on Health Financing*. 10 St James's Square London SW1Y 4LE.

Custodio, R., Gard, A. M., Graham, G. and Graham, G. (2009) 'Health Information Technology: Addressing Health Disparity by Improving Quality, Increasing Access, and Developing Workforce', 20(2), pp. 301–307.

Dixon, J., Tenkorang, E. Y., Luginaah, I., Kuuire, V. Z. and Boateng, G. O. (2014) 'National health insurance scheme enrolment and antenatal care among women in Ghana : is there any relationship?', *Tropical Medicine and International Health*, 19(1), pp. 98–106. doi: 10.1111/tmi.12223.

Doherty, T., Chopra, M., Nsiband, D. and Mngoma, D. (2009) 'Improving the coverage of the PMTCT programme through a participatory quality improvement intervention in South Africa', *BMC Public Health*, 9, pp. 1–9. doi: 10.1186/1471-2458-9-406.

Duysburgh, E., Williams, A., Williams, J., Loukanova, S. and Temmerman, M. (2014) 'Quality of antenatal and childbirth care in northern Ghana', *International Journal of Gynecology and Obstetrics*, pp. 117–126. doi: 10.1111/1471-0528.12905.

- Ediaou, M., Wanyenze, R. K., Machingaidze, S., Otim, G., Olwedo, A. and Iriso, R. (2013) 'Trends in antenatal care attendance and health facility delivery following community and health facility systems strengthening interventions in Northern Uganda', *BMC Pregnancy and Childbirth*. *BMC Pregnancy and Childbirth*, 13(1), p. 1. doi: 10.1186/1471-2393-13-189.
- Elmusharaf, K., Byrne, E. and Donovan, D. O. (2015) 'Strategies to increase demand for maternal health services in resource-limited settings : challenges to be addressed', *BMC Pregnancy Childbirth*. *BMC Public Health*, pp. 1–10. doi: 10.1186/s12889-015-2222-3.
- Ensor, T. and Ronoh, J. (2005) 'Effective financing of maternal health services : A review of the literature &', *Health Policy and Planning*, 75, pp. 49–58. doi: 10.1016/j.healthpol.2005.02.002.
- Enuameh, Y. A. K., Okawa, S., Asante, K. P., Kikuchi, K., Mahama, E., Ansah, E., Tawiah, C., Adjei, K., Shibanuma, A., Nanishi, K., Yeji, F., Agyekum, E. O., Yasuoka, J., Gyapong, M., Oduro, A. R., Asare, G. Q., Hodgson, A., Jimba, M., Owusu-Agyei, S., Yoneyama, Y., Appiah-Denkyira, E., Addei, S., Kukula, V., Sarpong, D., Narh, C., Williams, J., Debpuur, C., Sakeah, E., Wontuo, P., Hagiwara, A., Shiratori, S. and Kamiya, Y. (2016) 'Factors influencing health facility delivery in predominantly rural communities across the three ecological zones in Ghana: A cross-sectional study', *PLoS ONE*, 11(3), pp. 1–16. doi: 10.1371/journal.pone.0152235.
- Escribano-ferrer, B., Cluzeau, F., Cutler, D. and Akufo, C. (2016) 'Quality of Health Care in Ghana : Mapping of Interventions and the Way Forward', *Ghana medical journal*, 50(4), pp. 238–247. doi: <http://dx.doi.org/10.4314/gmj.v50i4.7>.
- Finlayson, K. and Downe, S. (2013) 'Why Do Women Not Use Antenatal Services in Low- and Middle-Income Countries ? A Meta-Synthesis of Qualitative Studies', *PloS Med*, 10(1). doi: 10.1371/journal.pmed.1001373.
- Galadanci, H., Künzel, W., Shittu, O., Zinser, R., Gruhl, M. and Adams, S. (2011) 'Obstetric quality assurance to reduce maternal and fetal mortality in Kano and Kaduna State hospitals in Nigeria', *International Journal of Gynecology and Obstetrics*. *International Federation of Gynecology and Obstetrics*, 114(1), pp. 23–28. doi: 10.1016/j.ijgo.2011.02.005.
- Ganle, J. K. (2016) 'Why Muslim women in Northern Ghana do not use skilled maternal

healthcare services at health facilities : a qualitative study’, *BMC International Health and Human Rights*. BMC International Health and Human Rights, (2015). doi: 10.1186/s12914-015-0048-9.

Ganle, J. K., Otupiri, E., Parker, M. and Fitzpatrick, R. (2015) ‘Socio-cultural Barriers to Accessibility and Utilization of Maternal and Newborn Healthcare Services in Ghana after User-fee Abolition’, *International Journal of Maternal and Child Health*, 3(1), pp. 1–14. doi: 10.12966/ijmch.02.01.2015.

Ganle, J. K., Parker, M., Fitzpatrick, R. and Otupiri, E. (2014) ‘A qualitative study of health system barriers to accessibility and utilization of maternal and newborn healthcare services in Ghana after user-fee abolition’, pp. 1–17. doi: 10.1186/s12884-014-0425-8.

Gething, P. W., Amoako Johnson, F., Frempong-Ainguah, F., Nyakro, P., Baschieri, A., Aboagye, P., Falkingham, J., Matthews, Z. and Atkinson, P. M. (2012) ‘Geographical access to care at birth in Ghana: a barrier to safe motherhood’, *BMC Public Health*. BMC Public Health, 12(1), p. 1. doi: 10.1186/1471-2458-12-991.

Ghana Health Service (2013) *2013 Annual Reproductive and Child Health Report Annual Report*. Accra, Ghana.

Ghana Health Service (2014) *Family Health Annual Report*. Accra, Ghana.

Ghana Health Service (2015) ‘Family Health Annual Report’, *Ghana Health Service*, pp. 60–85.

Ghana Health Service (2017) *Ghana health service 2016 annual report*. Accra, Ghana.

Ghana Statistical Service (2015) *Ghana Demographic Health Survey*, *Ghana Statistical Service*. Accra, Ghana.

Graham, W., Woodd, S., Byass, P., Filippi, V., Gon, G., Virgo, S., Chou, D., Hounton, S., Lozano, R., Pattinson, R. and Singh, S. (2016) ‘Diversity and divergence: the dynamic burden of poor maternal health’, *The Lancet*. Elsevier Ltd, 388(10056), pp. 2164–2175. doi: 10.1016/S0140-6736(16)31533-1.

Guttmacher Institute (2013) *Fact Sheet: Abortion in Ghana*, *Guttmacher Institute*. New York.

Hagman, M. (2013) 'Maternal Mortality : Gender and Access to Health Services – The Case of Ghana', *Journal of Politics & International Studies*, 9, pp. 173–211.

Hofman, J. J., Dzimadzi, C., Lungu, K., Ratsma, E. Y. and Hussein, J. (2008) 'Motorcycle ambulances for referral of obstetric emergencies in rural Malawi : Do they reduce delay and what do they cost?', *International Journal of Gynecology and Obstetrics*, pp. 191–197. doi: 10.1016/j.ijgo.2008.04.001.

Holmes, W. and Kennedy, E. (2010) *Reaching emergency obstetric care : overcoming the 'second delay'*, *Burnet Institute on behalf of Compass. The Women's and Children's Health Knowledge Hub*. Melbourne, Australia.

IHME (2013) *Ghana Findings from the Global Burden of Disease Study*, IHME. Ghana.

International Pathfinder (2010) *Comprehensive Safe Abortion Programming : Pathfinder International's Safe Abortion Program, the Pathfinder International approach*, . 9 Galen Street, Suite 217 Watertown, MA 02472, USA.

Johnson, F. A., Frempong-Ainguah, F., Matthews, Z., Harfoot, A. J. P., Nyarko, P., Baschieri, A., Gething, P. W., Falkingham, J. and Atkinson, P. M. (2015) 'Evaluating the impact of the community-based health planning and services initiative on uptake of skilled birth care in Ghana', *PLoS ONE*, 10(3), pp. 1–18. doi: 10.1371/journal.pone.0120556.

Kachimanga, C., Malindi, C., Limbe, G., Wroe, E. B., Makungwa, H., Musisi, I., Dunbar, E., Ng, J., Nazimera, L. and Drake, J. (2016) 'Using Community Health (CHWs) to increase access to maternal health services-preliminary findings from Neno, Malawi', *Annals of Global Health*. Elsevier Inc, 82(3), p. 392. doi: 10.1016/j.aogh.2016.04.641.

Koblinsky, M., Moyer, C. A., Calvert, C., Campbell, J., Campbell, O. M. R., Feigl, A. B., Graham, W. J., Hatt, L., Hodgins, S., Matthews, Z., McDougall, L., Moran, A. C., Nandakumar, A. K. and Langer, A. (2016) 'Quality maternity care for every woman, everywhere: a call to action', *The Lancet*. Elsevier Ltd, 388(10057), pp. 2307–2320. doi: 10.1016/S0140-6736(16)31333-2.

Kusi, A., Enemark, U., Hansen, K. S. and Asante, F. A. (2015) 'Refusal to enrol in Ghana's

National Health Insurance Scheme : is affordability the problem ?', *International journal for equity in health*, 14(2), pp. 1–14. doi: 10.1186/s12939-014-0130-2.

Lagarde, M., Haines, A. and Palmer, N. (2007) 'Conditional Cash Transfers for Improving Uptake of Health Interventions in Low- and Middle-Income Countries: A Systematic Review', *JAMA*, 298(16), pp. 1900–1910.

Lassi, Z. S., Middleton, P. F., Bhutta, Z. A. and Crowther, C. (2016) 'Strategies for improving health care seeking for maternal and newborn illnesses in low- and middle-income countries: A systematic review and meta-analysis', *Global Health Action*, 9(1). doi: 10.3402/gha.v9.31408.

Levesque, J.-F., Harris, M. F. and Russell, G. (2013) 'Patient-centred access to health care: conceptualising access at the interface of health systems and populations', *International Journal for Equity in Health*, 12(1), p. 18. doi: 10.1186/1475-9276-12-18.

Lewycka, S., Mwansambo, C., Rosato, M., Kazembe, P., Phiri, T., Mganga, A., Chapota, H., Malamba, F., Kainja, E., Newell, P. M.-L. and Greco, G. (2013) 'Effect of women ' s groups and volunteer peer counselling on rates of mortality , morbidity , and health behaviours in mothers and children in rural Malawi ( MaiMwana ): a factorial , cluster- randomised controlled trial', 381(9879), pp. 1721–1735. doi: 10.1016/S0140-6736(12)61959-X.Effect.

Lonkhuijzen, L. Van, Stekelenburg, J. and Roosmalen, J. Van (2014) 'Maternity waiting facilities for improving maternal and neonatal outcome in low-resource countries', *Europe PMC Funders Group Author Manuscript*, (Appendix 2). doi: 10.1002/14651858.CD006759.pub3.Maternity.

Lonkhuijzen, V., Stekelenburg, J. and Roosmalen, V. (2009) 'Maternity waiting facilities for improving maternal and neonatal outcome in low- resource countries COCHRANE DATABASE OF SYSTEMATIC REVIEWS Maternity waiting facilities for improving maternal and neonatal outcome in low-resource countries ( Review ) van L', *Cochrane Database of Systematic Reviews*, 3(CD006759). doi: 10.1002/14651858.CD006759.pub2.

Lori, J. R., Dahlem, C. H. Y., Ackah, J. V, Adanu, R. M. K., Reduction, R., Arbor, A., Assistant, C., Arbor, A., Midwife, C. and Hospital, M. D. (2015) 'Examining Antenatal Health Literacy in Ghana Jody', *Author manuscript*, 46(6), pp. 432–440. doi: 10.1111/jnu.12094.Examining.

Mamaye (2015) *Factctsheet on Health Finacing in Ghana 2015, African Health Budget Network*. Available at: <http://www.mamaye.org/en/budget-network>.

Manandhar, D. S., Osrin, D., Shrestha, B. P., Mesko, N., Morrison, J., Tumbahangphe, K. M., Tamang, S., Thapa, S., Shrestha, D., Thapa, B., Shrestha, J. R., Wade, A., Borghi, J., Standing, H. and Manandhar, M. (2004) ‘Effect of a participatory intervention with women ’ s groups on birth outcomes in Nepal : cluster-randomised controlled trial’, *The Lancet*, 364, pp. 10–12.

Masters, S. H., Burstein, R., Amofah, G., Abaogye, P., Kumar, S. and Hanlon, M. (2013) ‘Travel time to maternity care and its effect on utilization in rural Ghana: A multilevel analysis’, *Social Science and Medicine*. Elsevier Ltd, 93, pp. 147–154. doi: 10.1016/j.socscimed.2013.06.012.

Miller, S., Abalos, E., Chamillard, M., Ciapponi, A., Colaci, D., Comandé, D., Diaz, V., Geller, S., Hanson, C., Langer, A., Manuelli, V., Millar, K., Morhason-Bello, I., Castro, C. P., Pileggi, V. N., Robinson, N., Skaer, M., Souza, J. P., Vogel, J. P. and Althabe, F. (2016) ‘Beyond too little, too late and too much, too soon: a pathway towards evidence-based, respectful maternity care worldwide’, *The Lancet*, 388(10056), pp. 2176–2192. doi: 10.1016/S0140-6736(16)31472-6.

Ministry of Health (2008) *The Health Sector in Ghana: Facts and Figures, Ministry of Health*. Accra, Ghana.

Ministry of Health (2014a) *Holistic Assessment of the Health Sector Programme of Work 2014, Ministry of Health Ghana*. Accra, Ghana.

Ministry of Health (2014b) *National Community Health Planning and Services ( CHPS ) Policy, Ministry of Health, Ghana*. Accra, Ghana.

Ministry of Health (2015) *The Health Sector in Ghana: Facts and Figures, Ministry of Health*. Accra, Ghana.

Montori, V. M., Kunneman, M., Henselmans, I. and Laarhoven, H. W. van (2017) *Shared Decision-Making for Good Clinical Care: Better, but Not Easier, NEJM Catalyst*. Available at: [catalyst.nejm.org/shared-decision-making-good-clinical-care/](http://catalyst.nejm.org/shared-decision-making-good-clinical-care/) (Accessed: 5 August 2017).

Morhee, R. A. S. and Morhee, E. S. K. (2006) ‘Overview of the Law and Availability of

Abortion Services in Ghana', *Ghana Medical Journal*, 40(3), pp. 80–86.

Moyer, C. A. and Philip, A. (2013) “‘ It ’ s up to the Woman ’ s People ”: How Social Factors Influence Facility-Based Delivery in Rural Northern Ghana “‘ It ’ s up to the Woman ” s People ’’: How Social Factors Influence’, (February). doi: 10.1007/s10995-013-1240-y.

Murry, C. J. and Evans, D. B. (2003) ‘Health systems performance assessment. Debates, Methods and Empiricism’, *WHO Geneva*, p. 963. doi: 10.1016/S1386-5056(03)00131-X.

Nakua, E. K., Sevugu, J. T., Dzomeku, V. M., Otupiri, E., Lipkovich, H. R. and Owusu-Dabo, E. (2015) ‘Home birth without skilled attendants despite millennium villages project intervention in Ghana: insight from a survey of women’s perceptions of skilled obstetric care.’, *BMC pregnancy and childbirth*. BMC Pregnancy and Childbirth, 15, p. 243. doi: 10.1186/s12884-015-0674-1.

Nesbitt, R. C., Lohela, T. J., Soremekun, S., Vesel, L., Manu, A., Okyere, E., Grundy, C., Amenga-Etego, S., Owusu-Agyei, S., Kirkwood, B. R. and Gabrysch, S. (2016) ‘The influence of distance and quality of care on place of delivery in rural Ghana’, *Scientific Reports*. Nature Publishing Group, 6(1), p. 30291. doi: 10.1038/srep30291.

Ninepence, A. M. (2015) ‘The 2015 UN Millennium Development Goals and Ghana’.

Nyonator, F. K., Awoonor-Williams, J. K., Phillips, J. F., Jones, T. C. and Miller, R. A. (2005) ‘The Ghana Community-based Health Planning and Services Initiative for scaling up service delivery innovation’, *Health Policy and Planning*, 20(1), pp. 25–34. doi: 10.1093/heapol/czi003.

Obeng, S., Takyi, B. K. and Addai, I. (2006) ‘Challenges to the reproductive-health needs of African women : On religion and maternal health utilization in Ghana’, 62, pp. 2930–2944. doi: 10.1016/j.socscimed.2005.11.034.

Odoi-agyarko, H. (2003) *Profile Oof Reproductive Health Situation in Ghana ., For World Health Organization, Ghana*. Accra, Ghana.

Ofori-Adjei, D. (2007) ‘Ghana ’ s Free Delivery Care Policy’, *Ghana Medical Journal*, 41(3), pp. 94–95.

Ononokpono, D. N. and Odimegwu, C. O. (2014) ‘Determinants of Maternal Health Care

Utilization in Nigeria : a multilevel approach', 17(Supp 1), pp. 1–6. doi: 10.11694/pamj.supp.2014.17.1.3596.

Owoo, N. and Lambon-Quayefio, M. (2013) 'National health insurance, social influence and antenatal care use in Ghana', *Health Economics Review*. Health Economics Review, 3(19), pp. 1–12. doi: 10.1186/2191-1991-3-19.

Payne, C. M., Debbink, M. P., Steele, E. A., Buck, C. T., Lisa, A., Hassinger, J. A. and Harris, L. H. (2013) 'Why Women are dying from unsafe Abortion : Narratives of Ghanaian abortion providers', *African Journal of Reproductive Health*, 17(June), pp. 118–128.

Peters, D. H., Garg, A., Bloom, G., Walker, D. G., Brieger, W. R. and Hafizur Rahman, M. (2008) 'Poverty and access to health care in developing countries', *Annals of the New York Academy of Sciences*, 1136, pp. 161–171. doi: 10.1196/annals.1425.011.

Richard, F., Ouédraogo, C. and Brouwere, V. De (2008) 'Quality cesarean delivery in Ouagadougou , Burkina Faso : A comprehensive approach', *International Journal of Gynecology and Obstetrics*. International Federation of Gynecology and Obstetrics, 103(3), pp. 283–290. doi: 10.1016/j.ijgo.2008.08.008.

Sakeah, E., Doctor, H. V, McCloskey, L., Bernstein, J., Yeboah-Antwi, K. and Mills, S. (2014) 'Using the community-based health planning and services program to promote skilled delivery in rural Ghana: socio-demographic factors that influence women utilization of skilled attendants at birth in northern Ghana.', *BMC public health*. BMC Public Health, 14(1), p. 344. doi: 10.1186/1471-2458-14-344.

Santos, C., Jr, D. D., Baptista, A., Matediane, E., Bique, C. and Bailey, P. (2006) 'Improving emergency obstetric care in Mozambique : The story of Sofala', *International Journal of Gynecology and Obstetrics*, pp. 190–201. doi: 10.1016/j.ijgo.2006.05.024.

Sarkodie, J. O. and Abubakari, A.-R. (2014) 'Assessment of the Socio-Cultural Determinants of Maternal Mortality in the East Gonja District of Ghana', *Adrri Journal of Arts and Social Sciences*, 4(4), pp. 1–27. doi: 2014.

Satt, H., McLaughlin, M. M. and Seung, K. J. (2013) 'The role of maternity waiting homes as



part of a comprehensive maternal mortality reduction strategy in Lesotho.’, *PIH Reports*, 1(1).

Schieber, G., Cashin, C., Saleh, K. and Lavado, R. (2012) *Health financing in Ghana*. 71894th edn. Washington D,C,: The World Bank. doi: 10.1596/978-0-8213-9566-0.

Sokey, P. P. and Adisah-atta, I. (2017) ‘Challenges Confronting Rural Dwellers in Accessing Health Information in Ghana : Shai Osudoku District in Perspective’, (Aryee 2014). doi: 10.3390/socsci6020066.

Sundaram, A., Juarez, F., Bankole, A. and Singh, S. (2012) ‘Factors Associated with Abortion-Seeking and Obtaining a Safe Abortion in Ghana’, *Studies in Family Planning*, 43(4), pp. 273–286. doi: 10.1111/j.1728-4465.2012.00326.x.

The Republic of Uganda (2012) *Report on Reproductive Health Vouchers in Western Uganda*, World Bank Group. Africa Region.

The World Bank (2016) *Maternal mortality ratio (modeled estimate, per 100,000 live births) / Data*, World Bank Group. Available at: <http://data.worldbank.org/indicator/SH.STA.MMRT> (Accessed: 14 May 2017).

UNAIDS (2015) *Unaid Terminology Guidelines*. Geneva.

UNDP (2016) ‘Human Development Report 2016 Human Development for Everyone Ghana’, *UNDP*, pp. 1–8.

Unicef (2017) *Only half of women worldwide receive the recommended amount of care during pregnancy*, Unicef. Available at: <https://data.unicef.org/topic/maternal-health/antenatal-care/> (Accessed: 2 June 2017).

United Nations (2006) *UN Millennium Project | About the MDGs*, United Nations Publication. Available at: <http://www.unmillenniumproject.org/goals/> (Accessed: 8 May 2017).

United Nations (2015) *Sustainable development goals - United Nations*, United Nations. Available at: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/> (Accessed: 5 June 2017).

Watt, C., Abuya, T., Warren, C. E., Obare, F. and Kanya, L. (2015) ‘Improve Quality of

Postnatal Care ? A Quasi- Experimental Evaluation of Kenya ' s Safe Motherhood Voucher Scheme', *PLoS ONE*, pp. 1–20. doi: 10.1371/journal.pone.0122828.

Webster, N. (2013) 'Unsafe abortion : regulation of the social body even beyond time and space and space', *Culture, Health & Sexuality*, 1058(August). doi: 10.1080/13691058.2012.758313.

Wekesah, F. M., Mbada, C. E., Muula, A. S., Kabiru, C. W., Muthuri, S. K. and Izugbara, C. O. (2016) 'Effective non-drug interventions for improving outcomes and quality of maternal health care in sub-Saharan Africa : a systematic review', *Systematic Reviews*. Systematic Reviews. doi: 10.1186/s13643-016-0305-6.

WHO (2005) 'World health report 2005: make every mother and child count', *World Health*, 33(6), pp. 409–11. doi: ISBN 92 4 156290 0 (NLM).

WHO (2015) *WHO Country Office Ghana: Annual Report 2014*. Accra, Ghana. Available at: <http://www.who.int/countries/gha/publications/en/>.

WHO (2016a) 'Ghana: Life Expectancy', *Ghana: WHO statistical profile*, pp. 1–3. Available at: <http://www.who.int/countries/gha/en/>.

WHO (2016b) *WHO / Maternal mortality*, WHO. World Health Organization. Available at: <http://www.who.int/mediacentre/factsheets/fs348/en/> (Accessed: 23 February 2017).

WHO (2016c) *WHO Recommendation on Antenatal care for positive pregnancy experience*, *WHO Recommendation on Antenatal care for positive pregnancy experience*.

WHO (2017a) 'GHO | By category | Health service coverage - Data by WHO region', WHO. World Health Organization. Available at: <http://apps.who.int/gho/data/view.main.1610?lang=en> (Accessed: 2 June 2017).

WHO (2017b) *Skilled Birth Attendance*, WHO. World Health Organization. Available at: [http://www.who.int/gho/maternal\\_health/skilled\\_care/skilled\\_birth\\_attendance\\_text/en/](http://www.who.int/gho/maternal_health/skilled_care/skilled_birth_attendance_text/en/) (Accessed: 31 May 2017).

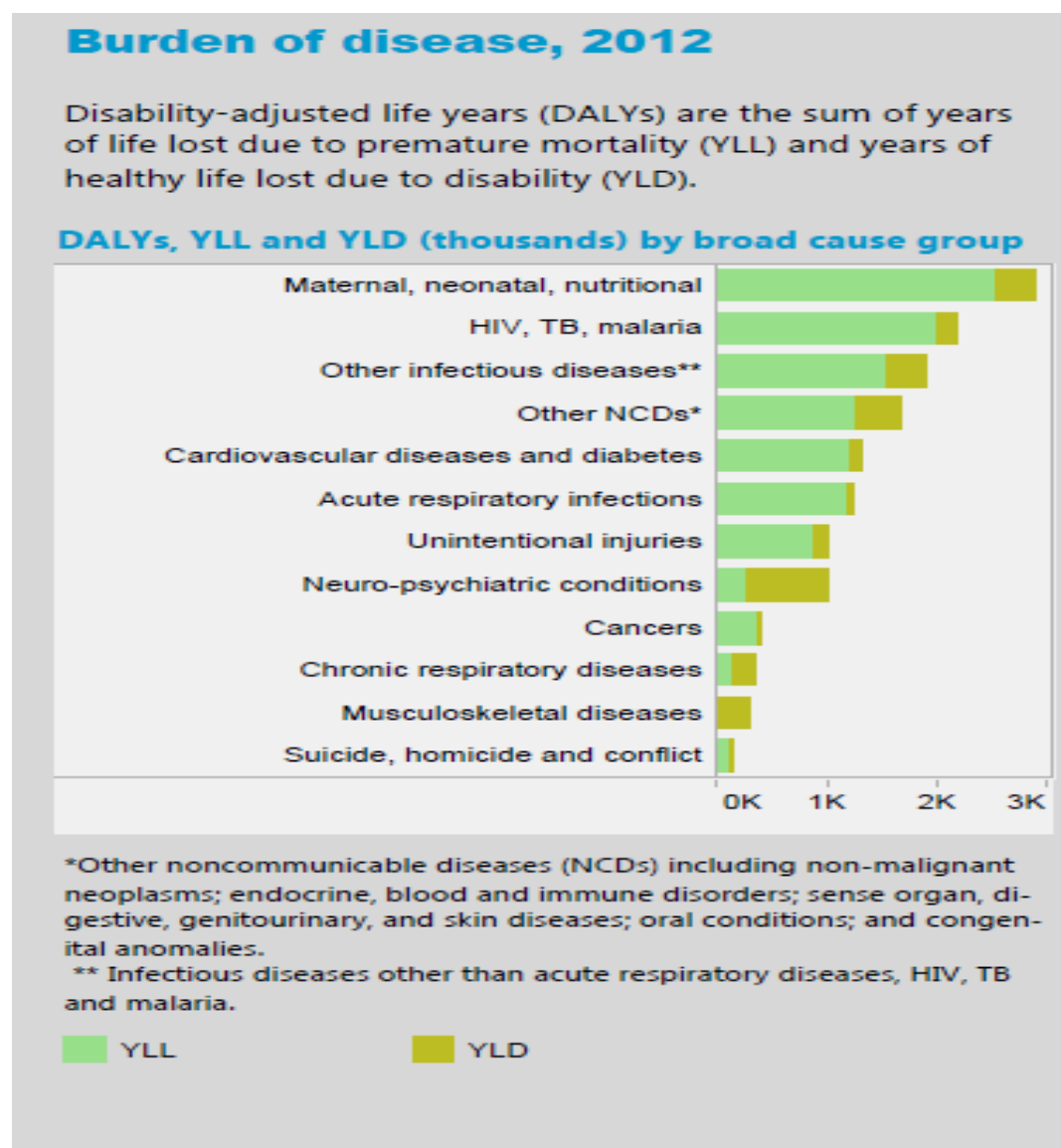
WHO, UNICEF, UNDP, World Bank Group, The United Nations Population Division, Of, L., Mortality, M., Of, C. and Death, M. (2015) 'Trends in maternal mortality 1990 to 2015'. doi: 10.

WHO, UNICEF, UNFPA, World\_Bank\_Group and UNPD (2015) 'Trends in maternal mortality: 1990 to 2015. Executive Summary', p. 14. doi: 10.

World Bank Group (2016) *Health expenditure, total (% of GDP) | Data, The World Bank*. Available at: <http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS/> (Accessed: 24 May 2017).

Yakubu, J., Benyas, D., Emil, S. V., Amekah, E., Adanu, R. and Moyer, C. A. (2014) 'It ' s for the Greater Good : Perspectives on Maltreatment during Labor and Delivery in Rural Ghana', *Open Journal of Obstetric and Gynecology*, 4, pp. 383–390. doi: <http://dx.doi.org/10.4236/ojog.2014.47057>.

## Appendix 1: Top 10 disease burden in Ghana



Source: WHO statistical country profile