2016

Government Policy and Initiatives on Maternal Mortality Reduction in Nigeria

Enifome U. Eto
South Dakota State University

GOVERNMENT POLICY AND INITIATIVES ON MATERNAL MORTALITY REDUCTION IN NIGERIA

BY

ENIFOME U. ETO

A dissertation submitted in partial fulfillment of the requirement for the

Doctor of Philosophy

Major in Sociology

South Dakota State University

2016

GOVERNMENT POLICY AND INITIATIVES ON MATERNAL MORTALITY REDUCTION IN NIGERIA

This dissertation is approved as a creditable and independent investigation by a candidate for the Doctor of Philosophy in Sociology degree and is acceptable for meeting the dissertation requirements for this degree. Acceptance of this does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Diane Kayongo-Male, Ph.D.
Dissertation Advisor Date

Mary Emery, Ph.D.
Head, Department of Sociology Date

Dean, Graduate School Date

I dedicate this project to my husband Samuel Ogbimi and my precious daughter Gwenevere Ogbimi, for their unending love and support these past few years. And also to my parents Mathias and Queen Eto for their continuous prayers, encouragement and support throughout my education and my life from beginning till date.

ACKNOWLEDGMENT

First, I thank God for His faithfulness, grace, and strength to complete this project. He is the fountain from which my life flows.

I also thank my husband Samuel Ogbimi; my daughter Gwenevere; my parents Mathias and Queen Eto; my brothers Enakeno, Emumena, Emmanuel, Ekezimero and Ewomamobuho; and my friends for their support and contributions.

I also like to thank my advisor Dr. Diane Kayongo-Male for setting such high standards. You kept me on my toes the whole time. I really appreciate your guidance, encouragement and support from start to finish.

To Dr. Redlin, Dr. Yingling, and Dr. Nelson in the Veterinary and Biomedical Sciences, I thank you for serving in my committee. I get the credit for this project but you all worked behind the scene to make it a success.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES AND GRAPH

ABSTRACT

GOVERNMENT POLICY AND INITIATIVES ON MATERNAL MORTALITY REDUCTION IN NIGERIA

ENIFOME U. ETO

2016

This research is a case study of the decline in Nigeria's maternal mortality ratio from 1990 to 2013. The goal was to examine the reasons behind the decline. Using a combination of ideas from Eager (2004) and Nathanson (1996) as the theoretical framework, this study explained the factors that resulted in the decline. Both theorists focus on the processes of normative change relative to public health outcomes at a societal or international level.

Available secondary or documentary data were used for this study. Data sources include: Nigerian government reports on maternal health interventions; non-governmental reports on maternal health interventions; reports from other government and international agencies; and information on social activists groups. Data were analyzed using key indicators developed from theoretical framework. These indicators relative to maternal health included: interventions or actions by the government; the role of active social movements; influence of international agencies; and statements by "transformative actors" which fit with the process of the social construction of maternal mortality as a societal concern.

Key findings show that even though social movements and other transformational actors contributed to the decline, the maternal health interventions by the Nigerian

government had the most continuous impact on the 2013 maternal mortality decline. Also the decline was largely due to the active collaboration between transformational actors as well as alliances between local and international social movements and actors.

CHAPTER ONE:
INTRODUCTION

Introduction

Ideally, motherhood is celebrated as a joyous occurrence, yet in many Nigerian households, it is synonymous with sadness since many women die in childbirth (Ayanleye 2013:127). Nigeria has had one of the highest maternal mortality ratios (MMR) in the world, yet has managed to reduce this rate from 1990. This case study aims to partially fill a gap in studies documenting the mechanisms that contribute to this reduction.

Countries in sub-Saharan Africa have some of the highest maternal mortality ratio[1] in the world, despite a number of international initiatives aimed at reducing those rates. The global concern for maternal death can be traced to the 1987 Safe Motherhood Conference in Nairobi (Cohen 1987:68)[2] where a call for a reduction in maternal mortality was originally made. It was at that international conference that the issue of maternal deaths was identified as a serious problem facing the developing nations. As a result, targets for maternal health and safe delivery were set for the developing nations. As well, international agencies developed the Millennium Development Goals (MDG) which included the improvement in maternal health and reduction in maternal deaths

[1] This is a measure of the number of maternal deaths per 100,000 live births.

[2] The Safe Motherhood Conference was organized under the joint sponsorship of the World Bank, WHO, and United Nations Funds for Population Activities (UNFPA). It was attended by health ministers and developing experts from about 20 Africa, Asian and Latin American countries, the Agency for International Development; representatives from the U.S., British, Canadian, Swedish, Danish, Norwegian and Finnish development agencies; the Ford Foundation; the Rockefeller Foundation; and the Carnegie Corporation.

(Anger 2013:139; Omideyi 2007:4)[3] . Since then, Nigeria and other developing countries have made efforts to reduce maternal mortality rates in their countries.

Nigeria was selected as a case study based on a number of criteria. Nigeria's maternal mortality ratio (MMR) decreased between 1990 and 2013. Specifically, Nigeria has one of the highest rates of decline in maternal mortality among African nations from 1,200 per 100,000 live births in 1990 to 560 per 100,000 live births in 2013 which is a reduction of 3.3 per cent. Secondly, based on the Reproductive Justice Index (Kayongo-Male, 2013), Nigeria was ranked as one of the most reproductively "unjust" countries in Africa. Unjust countries are so ranked due to 13 indicators, including the Human Development Index of the UNDP; births attended by skilled personnel; threats of death from disease-related or ecological factors such as water pollution, malaria, HIV prevalence, and tuberculosis (Kayongo-Male 2013:18). All of these indicators were potential factors influencing maternal mortality based on a review of literature. Third, with a population of 182 million people in 2015, Nigeria has the largest population in all of Africa (UN, *World Population Prospects* …2015: 23). Fourth, there is comparatively more general information and journal articles on Nigeria than on many other African nations.

This study is a case study of the reduction of the maternal mortality ratio in Nigeria from 1990 to 2013. Specifically, this research seeks to examine the factors that have led to this reduction in maternal mortality ratio (MMR) in Nigeria since 1990. While there could be a number of reasons behind the reduction, the focus of this study is

[3] Among the Millennium Development Goals (MDGs), adopted at the 2000 United Nations Millennium Summit, was Goal 5 - Improve the health of mothers – reducing maternal mortality by three-quarters between 1990 and 2015.

based on the work of Eager (2004) and Nathanson (1996). Eager (2004) developed a five-step process for understanding the evolution of norms (in the international community) for reproductive health for women. In a parallel fashion, Nathanson dealt with the idea of social construction of risk and how that influences effectiveness of public health policy.

The research question this study seeks to answer is, "To what extent can the reduction in the maternal mortality ratio in Nigeria from 1990 to 2013 be linked to 'transformational agents' and to the social construction of maternal health and mortality as a significant national issue in Nigeria?" Specific research objectives include:

1) Identifying what actions were taken by the Nigerian government over this time period that relate specifically to maternal health and reduction of maternal mortality.
2) Identifying the contribution of local organizations, international groups or organizations and social activism have played in this reduction.
3) Determining if there is a national norm for maternal health and reduction in maternal mortality and, if so, describing that norm and how it has evolved.

The significance of this study lies in its potential to identify what government actions, other organizations, and /or social activists contributed to a decrease in maternal mortality in Nigeria. This study employed secondary data in answering the research question. Findings from this study could be useful to other sub-Saharan African countries dealing with high rate of maternal mortality since it will provide details on how Nigeria successfully reduced its maternal mortality rate. The lessons learned could also be applied to dealing with similar and other health issues in the Nigerian health care system as a whole.

Background on Nigeria - the Case Study Country

Nigeria is a country located in West Africa and the seventh largest most populous country in the world, in terms of global population (UN, *World Population Prospects* … 2015: 23). While Nigeria's rate of natural increase was 2.5 per cent in 2014, the world's rate was 1.2 per cent. This means that compared to the global rate, Nigeria's population is growing more rapidly (Population Reference Bureau 2014b, *2014 World Population Data Sheet*:7). The United Nations projected that by 2020, Nigeria will be the third most populous country in the world following India and China (UN, *World Population Prospects* …2015: 24). In terms of age structure, the country is made up of a relatively young population. The median age for both males and females is 17 years (UN, *World Population Prospects* … 2015: 35). About 51 per cent of the total population is between 15–59 years; and 4.2 per cent are 60 years and over (UN, *World Population Prospects* … 2015: 29).

Just for comparison, the world and U.S. figures are provided here. For the world, the median age is 29 years (UN, *World Population Prospects* … 2015:33). Sixty-one per cent is between 15-59 years; 13.7 per cent are 60 years and over (UN, *World Population Prospects* … 2015:27). Similarly, for the U.S., 38 years is the median age for both males and females (UN, *World Population Prospects* … 2015:36). Sixty per cent of the entire population is between 15-59 years; 23.8 per cent is 60 years and over (UN, *World Population Prospects* ... 2015:31).

In terms of family planning trends, there has been a general increase in knowledge and use of contraceptive methods, especially the modern methods (NPC, *Nigeria Demographic and Health Survey* 2013:90). Specifically, within the last two decades,

there has been a significant increase in the use of contraceptives among currently married women (NPC, *Nigeria Demographic and Health Survey* 2013: 97).

In addition, over the past two decades, there has been a significant increase in the number of skilled birth attendants during birth. In terms of trends in maternal mortality, the rate are higher among rural than for urban women (Galadanci, Idris, Sadauki and Yakasai 2010:32) and highest in Northern Nigeria compared to the rest of the country (Galadanci, Idris, Sadauki and Yakasai 2010:31). These rates have, however, significantly declined over two decades. Even though the country had not met the MDG 5 target of reducing its MMR by 75 per cent by 2015, which would be 300 maternal mortality deaths per 100,000 live births (Anger 2010:139; Omideyi 2007:4), it was ranked as one of the countries making substantial progress towards the target (World Health Organization 2014, *Trends in Maternal Mortality...:*40).

Theoretical Framework

This study used a combination of ideas from Eager (2004) and Nathanson (1996) as its theoretical framework. These theorists describe the changes that must occur in order for changes in norms that influence women's health or for the development of effective public health policies. Specifically, Eager (2004:148) focused on explaining how new international population norms were developed for women's health. She argues that normative changes largely depend on changes in the international community or the nation state's priorities and interests. She proposed a process model of change from existing to new norms. From Eager, this study takes the idea of how new norms are

developed and relates it to maternal mortality and actors who worked to transform the norm.

Nathanson (1996:609) emphasized the role of government policies and social movements in labeling health "risks" and thereby bringing about changes in public health. She argued that the process by which a government prioritizes and implements health policies are critical in disease prevention and decreasing mortality in that country. She highlighted three key factors and argued that the success or failure of public policies towards reducing mortality and disease prevention are largely based on these factors. From Nathanson (1996) this study takes the idea of government action including collaboration with other actors; social movements; and societal construction of risk.

Case Study Approach and Data Collection

This qualitative research, is a single-case study of the decrease in maternal death in Nigeria. A case study gives a researcher the chance to focus on a given case and get a holistic perspective of that case (Yin 2014:4). With the unit of analysis being Nigeria, the aim of the proposed research is to test ideas from Eager (2004) and Nathanson (1996) to see what fit the MMR reduction in Nigeria. Case studies put together evidence to demonstrate a relationship between identified factors and the outcome of interest (George and Bennett 2015: 80, 116). In this case, the outcome of interest is the decline in the maternal mortality rate and the identified factors are: government policies, evidence of social constructions related to maternal health and mortality, collaboration of key actors, and social activism.

Data sources include government policies, reports from international agencies such as USAID, UNFPA and WHO reports, and initiatives from non-governmental agencies. These data will be used to gather evidence of indicators based on the work of Eager (2004) and Nathanson (1996).

Organization of the Dissertation

This dissertation has eight chapters. Chapter One contains a general introduction to the study. Chapter Two is the review of literature regarding what other countries did to reduce maternal mortality. Specifically, the literature review examined some success stories of government policies and interventions that have been shown to decrease maternal mortality in other nations. These countries were selected because they once struggled with high rates of maternal deaths but most importantly, they had maternal mortality as government priorities. Cambodia, Chile, Egypt, Eritrea, Honduras, Lao PDR, Malawi, Malaysia, Nepal, Rwanda, Sri Lanka, Sweden, and Vietnam are the case studies reviewed in the literature. Some of the key factors that led to the MMR decline in these countries include the recruitment and training of health personal especially midwives; and the building and upgrading of equipment and health facilities

Chapter Three presents a detailed discussion of the theories of Eager (2004) and Nathanson (1996) and the selected parts of their work that provided a framework for what was measured and analyzed in this study. Chapter Four focuses on the case study methodology of this study, including the data collection and analysis procedures. Chapter Five presents a general overview of Nigeria as the country of study including the political features, demographic compositions, national population policy, and trends in the country's family planning and maternal mortality.

The next two are the findings chapters. Chapter Six contains initiatives and interventions by transformational actors including international agencies, the Nigerian government and non-governmental organizations. Chapter Seven presents the key sequence of events in terms of the theoretical framework including the construction of maternal health risk, Nigeria's prioritization of Safemotherhood, collaboration of transformational actors and the contribution of social activist group towards the decline. Chapter Eight is a summary of the study, analysis of the data, findings that fit and did not fit the theoretical framework, study's limitations, practical implications and recommendations for future studies.

CHAPTER TWO:

LITERATURE REVIEW

Introduction

In general, there have been significant improvements in maternal health all over the world, even though millions of maternal deaths still occur daily. Specifically, recent data show that globally maternal mortality ratios (MMRs) have declined by an estimated 45 per cent between 1990 and 2013 (World Health Organization 2014, *Trends in Maternal Mortality…*:1). Progress in MMR, however, varies widely across countries irrespective of similar socioeconomic levels (World Health Organization 2014, *Success Factors*…:6).

Maternal mortality ratio (MMR) is measured by the number of maternal deaths per 100,000 live births. Table 2.1 provides a global context for maternal mortality rates and the countries profiled in this chapter. It provides a few examples of some of the highest and lowest MMR countries over three time periods. The United States had a low MMR, but has not been within the lowest 20 countries for any of these time periods. It is included in the table to provide a reference point for readers from the U.S. The majority of the countries with the highest MMR over these periods were located in Africa.

Table 2.2 summarizes the same information for the case study countries discussed in this chapter. The "progress" included both tables refers to the measure of a country's effort towards achieving the Millennium Development Goals (MDGs) 2015 target. This is in line with the 2000 United Nations Millennium Summit (United Nations Millennium Summit, 2000) where 189 member countries of the United Nations (UN), convened and

adopted a set of 8 Millennium Development Goals (MDGs). These goals were directed towards improving the standard of living and quality of life of every citizen (Anger 2010:138). Among the adopted goals was MDG 5, involving maternal health; with a target to improve maternal health and reduce maternal deaths by three-quarters or 75 per cent between 1990 and 2015 (Anger 2010:139; Omideyi 2007:4). Specifically, the 2015 MDG 5 target applied to countries that had a MMR equal or higher than 100 in 1990 (World Health Organization 2014, *Trends in Maternal Mortality*…:2).

Table 2.1: High and Low MMR Countries from 1990 to 2013

Country	1990	2000	2013	% Change in MMR between 1990 and 2013	Progress towards Achieving Maternal Health[a]
Sierra Leone	2300	2200	1100	-54	Making progress
Chad	1700	1500	980	-41	Making progress
Equatorial Guinea	1600	790	290	-81	On track
Ethiopia	1400	990	420	-69	Making progress
Burundi	1300	1000	740	-41	Making progress
Nigeria	1200	950	560	-52	Making progress
United States	12	13	28	136	--
Canada	6	7	11	-81	--
Finland	6	7	4	-36	--
Greece	6	5	5	-5	--

Source: Annex 2. World Health Organization (2014) *Trends in Maternal Mortality 1990 to 2013.*
[a]For countries with an MMR of 100 or over in 1990, a country is "on track" if it had a 5.5% or more average annual decline; "making progress" if the MMR was reduced by 2 to 5.5%; and "insufficient progress" if the decline was less than 2%.

Case Studies

Evidence abounds that countries that are on the fast track to achieving the Millennium Development Goals (MDG 5) of reducing maternal mortality by 75 per cent by 2015 (Zureick-Brown *at el*, 2013:32; Omideyi 2007:4) have deployed strategies that

are tailored to their unique situation. In other words, there is no formula or set of strategies for maternal mortality reduction that works for all nations. Still, understanding what works in specific countries to significantly reduce maternal death and create conditions for an overall improvement in maternal health (World Health Organization, *Success Factors. . .*:9) is important. The insight gained from case studies should provide a set of "lessons learned" or a variety of alternative strategies which will benefit nations struggling to deal with this problem.

Table 2.2: Case Studies Countries' Patterns of MMR from 1990 to 2013

Country	**1990**	**2000**	**2013**	**% Change in MMR between 1990 and 2013**	**Progress towards Achieving Maternal Health[a]**
Cambodia	1200	540	170	-86	On track
Chile	55	29	22	-60	--
Egypt	120	75	45	-62	Making progress
Eritrea	1700	670	380	-77	On track
Honduras	290	150	120	-60	Making progress
Lao PDR	1100	600	220	-80	On track
Malawi	1100	750	510	-53	Making progress
Malaysia	56	40	29	-48	--
Nepal	790	430	190	-76	On track
Rwanda	1400	1000	320	-76	On track
Sri Lanka	49	55	29	-40	--
Sweden	6	5	4	-34	--
Vietnam	140	82	49	-64	Making progress

Source: Annex 2. World Health Organization (2014) *Trends in Maternal Mortality 1990 to 2013.*
[a]For countries with an MMR of 100 or over in 1990, a country is "on track" if it had a 5.5% or more average annual decline; "making progress" if the MMR was reduced by 2 to 5.5%; and "insufficient progress" if the decline was less than 2%.

A number of countries are good examples of how maternal mortality might be reduced. This literature review examines success stories of countries and how they managed to cut their maternal mortality ratio (MMR), especially the key interventions as well as government policies that significantly led to such decline. These countries were selected because they once struggled with high rates of maternal deaths but also because

maternal mortality became a government priority. Cambodia, Chile, Egypt, Eritrea, Honduras, Lao PDR, Malawi, Malaysia, Nepal, Rwanda, Sri Lanka, Sweden, and Vietnam are some of the case studies covered in this literature review. Table 2.2 above summarizes the MMR data for these case studies countries in this chapter.

Cambodia

Cambodia's MMR fell by 86 per cent in 23 years, from 1,200 per 100,000 to 170 per 100,000 live births between 1990 and 2013. Another remarkable achievement is that the country met its 2010 MDG 5 target of 250 per 100,000 live births and hopes to meet the global Millennium Development Goals (MDG 5) target of 140 per 100,000 by 2015. The drop in MMR is associated with a number of factors, but it is largely due to fertility decline and the presence of skilled birth attendants during delivery (WHO *Cambodia* 2014:13).

In response to maternal health needs, the government, in 1995, implemented a birth spacing policy, amongst other reproductive and maternal health policies, with a focus on increasing access to modern contraceptives (WHO *Cambodia* 2014:17). There was an increase in the spacing of childbirth, with 40 months as the estimated average spacing time between births in 2010 (WHO *Cambodia* 2014:13). Additionally, the contraceptive prevalence rate (CPR) increased from 19 per cent in 2000 to 34 per cent in 2013 (WHO *Cambodia* 2014:10). Similarly, the total fertility rate (TFR) dropped from six to three between 1990 and 2012 (WHO *Cambodia* 2014:9).

Furthermore, under the Health Strategic Plan (2008-2015), the government recruited and increased the numbers of workers in the health workforce, especially midwives, and improved and upgraded their skills through competency-based training

and deployment across the country. “From 2008, midwifery training was changed from a three-year nurse training plus one-year midwifery training, to a three-year direct entry midwifery training to boost the number of secondary midwives. By 2009, all health centers (HCs) had at least one primary midwife (with one year’s training) and over half had a secondary midwife (with three years’ training).” (WHO *Cambodia* 2014:22). By 2013, the number of health facilities with secondary midwives increased to 75 per cent (WHO *Cambodia* 2014:22).

To further increase the proportion of facility deliveries attended by a skilled birth worker, the government introduced a national incentive scheme in 2007. Under this scheme, a skilled birth attendant receives a $15 incentive for every live birth in a health center and a $10 bonus for each live birth at a referral hospital (WHO *Cambodia* 2014:23). This approach led to a dramatic rise in skilled birth attendant-assisted deliveries, from 32 per cent in 2000 to 84 per cent in 2013; and deliveries in health facilities went from 10 per cent to 80 per cent. In addition, the number of “at least four antenatal visits” increased from 9 per cent to 56 per cent in the same period (WHO *Cambodia* 2014:10).

There was also improvement in health infrastructures. Construction of health facilities in rural areas, led to a rise in the number of health facilities with basic and comprehensive Emergency Obstetric and Newborn Care (EmONC), from 44 in 2009 to 132 in 2013 (WHO *Cambodia* 2014:26).

Chile

In a 2012 comprehensive research study, it was found that Chile accomplished one of the most phenomenal declines in MMR over a 50 year period. Between 1957 and

2007, the Chilean MMR dramatically dropped from 270.7 per 100,000 to 18.2 per 100,000 live births – a 93.8 per cent reduction (Koch *et al*. 2012:3). This made Chile the country with the lowest rate in all of Latin America, and also a model of maternal health for other countries (Koch *et al.* 2012:7). The research was conducted using official government data on maternal health and death from the Chilean National Institute of Statistics from 1957 to 2007 (Koch *et al.* 2012:2).

Primarily, the study focused the following factors as likely to have played a role in the decline in Chilean's MMR in five decades: women's education, skilled attendants during delivery, per capita income, and total fertility rate (Koch *et al.* 2012:1). The project also analyzed some historical interventions and policies that are likely to have contributed to the decline, such as the free and compulsory primary education up to at least eight years implemented in 1965; a prenatal and family planning program implemented between 1964 and 1967; and the 1989 legislation that prohibited abortion in Chile (Koch *et al.* 2012:2). The 1965 educational policy resulted in an increase in the average number of years for female education from 3.1 to 12 years between 1957 and 2007 (Koch *et al.* 2012:12).

Findings reveal that of all the earlier factors included in the explanatory model, women's level of education was the strongest link that significantly led to the decline. In other words "without increasing women's education level, the simple availability of maternal health facilities, medicines and skilled personnel may be insufficient to improve maternal health" (Koch *et al.* 2012:11). Thus, an increase in women's educational level results in higher knowledge on how to utilize available maternal health services as well as increased autonomy on the use of preferred fertility method (Koch *et al.* 2012:11). As a

matter of fact, each additional year of maternal education resulted in an estimated MMR decline of 29.31 per 100,000 live births (Koch *et al.* 2012:7).

Interestingly, one of the most significant findings was that, the 1989 legislation that made abortion illegal contributed to the decline in MMR. As a matter of fact, due to the policy, the MMR decreased from 41.3 per 100,000 to 12.7 per 100,000 live births, making a 69.2 per cent reduction in fourteen years after the policy (Koch *et al.* 2012:9).

Egypt

Within the last two decades, Egypt made dramatic improvements in its maternal and child health (MCH). As a matter of fact, Egypt is one of the low-and middle-income countries on a fast track to achieving its MDG 5 for reducing maternal mortality. The most recent maternal mortality estimates reveal that Egypt's MMR declined by 62.5 per cent in 23 years, from 120 in 1990 to 45 in 2013 (WHO *Egypt* 2014:9). Although it is difficult to determine the implemented MCH interventions that directly led to the decline (WHO *Egypt* 2014: 11), the drop in MMR is likely due to a number of initiatives such as high rates of family planning use, antenatal care, and skilled birth attendance (WHO *Egypt* 2014:4).

Reducing maternal mortality has been one of the key goals in Egypt. Efforts towards achieving the said goal resulted in the country developing policies that were committed to improving health care for women and children (WHO *Egypt* 2014:5). Earlier in 1973, Egypt prioritized family planning through the National Population Policy, and later integrated family planning as one of the components of its maternal and child health programs following the 1994 International Conference on Population and

Development[4] (ICPD). These programs led to an increase in contraceptive use from 18.8 per cent in 1976 to 60.3 per cent in 2008, an increase in antenatal care coverage from 28 per cent in 1995 to 74 per cent in 2008, and a drop in total fertility rate (TFR) from 4 in 1990 to 3 in 2011 (WHO *Egypt* 2014:17).

In 1993, the first National Maternal Mortality Study (NMMS) revealed that, although MMR was high across the country, the rates were higher in Upper Egypt than Lower Egypt. The study also established that majority of these deaths can be avoided with early medical interventions. In response, the Egyptian government intensified its Safe Motherhood interventions in Upper Egypt with the Healthy Mother/Healthy Child Programs (1993–2009) as one of the prominent interventions that targeted Upper Egypt (WHO *Egypt* 2014:18).

Working with USAID and John Snow Inc.,[5] the Egyptian Ministry of Health developed a set of interventions as part of the Healthy Mother/Healthy Child Project, to improve the quality of antenatal, delivery, obstetric and emergency care amongst other MCH services. Strategies included upgrading of health facilities and equipment resulting in a network of about 5000 primary health facilities; competency-based training to upgrade skills of health personnel and phase out traditional birth attendants (TBAs), and expanded midwifery training for nurses. These interventions resulted in an estimated 2.6 million females of child bearing age gaining access to the needed maternal health care.

[4] This is the critical meeting referred to as the Cairo Conference. This conference was the one identified by demographers as a turning point in international population policy and a key focus of Eager's 2004 study in terms of the new norm that was institutionalized through this meeting.

[5] John Snow, Inc., is a public health research and consulting firm, deeply committed to improving the health of individuals and communities worldwide. JSI partners with governments, organizations, and host-country experts to improve quality, access and equity of health systems worldwide. JSI also collaborates with government agencies, the private sector, and local nonprofit and civil society organizations to achieve change in communities and health systems.

Also, the number of skilled birth attendants present during delivery increased from 38 per cent in 1988 to 80 per cent in 2008 (World Health Organization *Success Factors*. . . 2014:22; WHO *Egypt* 2014:18).

Eritrea

Eritrea is one of the few African countries that made the global Millennium Development Goals (MDG 5) target of reducing MMR by 75 per cent by 2015. In 23 years, the country's MMR drastically dropped from 1,700 per 100,000 in 1990 to 380 per 100,000 live births in 2013 – a 77 per cent reduction, putting Eritrea ahead of the target for the global MDG date of 2015. This remarkable achievement occurred despite Eritrea having one of the highest MMRs in the world in 1990 (World Health Organization 2014, *Trends in Maternal Mortality*….:38).

The decline in its MMR was associated with the improvements in skilled birth attendants during delivery, especially trained obstetricians and gynecologists and improvements in specialized facilities. Between 1995 and 2000, the government of Eritrea with support from international agencies, recruited, trained and deployed midwives to health facilities across the country to provide maternal and child services. The Orotta Medical School in the capital Asmara was also established. At Orotta Medical School doctors were trained in obstetrics and gynecology and also deployed to regional hospitals to provide comprehensive emergency obstetric services (Holzgreve, Greiner and Schwidtal 2012:S51). Deliveries in the Asmara facility increased from 7000 in 2004 to 9200 in 2010 (Holzgreve, Greiner and Schwidtal 2012:S50).

In order to strengthen facilities so as to reduce maternal and child mortality, the government has since independence, in 1991, built and rehabilitated health facilities

across Eritrea (Eritrea Ministry of Information, 2009) including primary level heath facilities which provide prenatal and other basic maternal and child health services; secondary-level hospitals which focus on obstetric care; and other secondary maternal and health care services and tertiary national referral hospitals. This strategy led to a rise in the number of health facilities from 126 in 1991 to 231 in 2012 (Holzgreve, Greiner and Schwidtal 2012:S52). As a result, antenatal coverage increased from 19 per cent in 1991 to 89 per cent in 2010. Also access to skilled birth attendants who provide comprehensive emergency obstetric care rose from 43 per cent in 2006 to 84 per cent in 2010 (Holzgreve, Greiner and Schwidtal 2012:S51).

Honduras

In 1990, safe motherhood emerged as one of the top government priorities in Honduras. Between 1990 and 1997, Honduras achieved one of the most phenomenal declines within a short period ever recorded in the developing world - a 40 per cent reduction in its maternal mortality ratio in seven years (Shiffman 2007:798), from 182 to 108 maternal deaths per 100,000 live births (Shiffman, Stanton and Salazar 2004:380). This decline was, in part, due to the expansion of the Honduras' health infrastructure, which led to a rise in the number of doctors and professional nurses, and training of non-professional birth attendants to recognize women who develop obstetric complications and what actions to take to save such pregnancies (Shiffman, Stanton and Salazar 2004:384).

Actions behind the Honduras decline began when a 1990 Reproductive Age Mortality Survey (RAMOS) study on maternal health revealed that the MMR was 182 maternal deaths per 100,000 live births. This study resulted in a call for action. As a

result, one of the strategies employed by Honduras was to expand the health infrastructure across the country. With a focus on regions with the highest MMRs, the government, with support from USAID (Shiffman, Stanton and Salazar 2004: 384), built new rural area hospitals, maternity waiting homes, birthing centers, medical health centers as well as rural health centers.

This increase in health centers led to a corresponding rise in health personnel staff, such as doctors, professional nurses, and auxiliary nurses in all facilities (Koblinsky 2003:53; Shiffman, Stanton and Salazar 2004: 386). Other international agencies including the Pan American Health Organization (PAHO), UNFPA, UNICEF, and the World Bank (Shiffman, Stanton and Salazar 2004:383) also contributed to the overall improvement in safe motherhood in Honduras.

Similarly, during the early 1990s, the Honduras Ministry of Health developed a method of integrated care for women, that is, a "risk focus" strategy with the aim of improving maternal health. This approach had two prongs. First, it ensured that women with obstetric emergencies are referred to the hospital to get the needed medical attention. Second, it identified women with higher risk of obstetric complications and encouraged them to give birth in a health facility where they can get the needed services. Within this approach, clinical staff, Community Health Workers (CHWs) (including traditional birth attendants or TBAs) were trained to identify risk in pregnancy, such as the extremes of ages of mothers; underlying medical problems; danger signs in childbirth such as bleeding and hypertension; and, to immediately refer such women to hospitals for the needed services (Koblinsky 2003:44).

In 1995, the Ministry of Health, published the guide for the integrated care of women, described above, which was used in all health facilities across the country. This guide reflected the national priority or norm which emphasized the recognition and immediate referral of pregnant women at risk and with obstetric emergencies to hospitals. Women and families were also educated about the danger signs for pregnant women during prenatal care. This led to an increase in the use of prenatal care services from 73 per cent in the early 1990s to 83 per cent in the late 1990s, especially in the rural areas (Koblinsky 2003:44). There was also an increase in health facilities delivery from 45 to 61 per cent during this period (Shiffman, Stanton and Salazar 2004: 386).

Lao PDR

Lao People's Democratic Republic (PDR) is another developing country that has successfully cut its MMR by 80.9 per cent in 23 years. Specifically, between 1990 and 2013, the country's MMR declined from 1100 per 100,000 to 210 per 100,000 live births. As a matter of fact, Lao PDR has achieved the 2015 target of 260 per 100,000 live births (WHO *Lao PDR* 2014:12). Although other factors contributed to the decline, this decrease is largely attributed to fertility decline which is associated with an increase in contraceptive prevalence rate (World Health Organization 2014, *Success Factors*…:27).

In response to high rates of MMR, the government of the Lao PDR implemented the 1997 National Birth Spacing Policy, amongst other reproductive and maternal health policies, with a focus on improving contraceptive use as a strategy for child spacing which could, in turn, lead to a decline in the MMR (WHO *Lao PDR* 2014:14). As a result, the contraceptive prevalence rate increased from 29 per cent in 2006 to 42 per cent in 2012 (WHO *Lao PDR* 2014:10), with a corresponding drop in the total fertility rate

from six in 1990 to three in 2012 (WHO *Lao PDR* 2014:9) and an associated increase in the birth interval resulting in 34 months as the average birth interval (WHO *Lao PDR* 2014:12).

Similarly, under the Skilled Birth Attendance Development Plan (2008-2012), the government adopted the strategy of recruiting, training and deploying more health workers, especially midwives across the country, particular in remote areas. The implementation of this policy led to improved health outcomes (WHO *Lao PDR* 2014:17). Skilled birth attendance increased from 20 per cent in 2006 to 42 per cent in 2012, and, facility deliveries also increased from 17 per cent to 38 per cent in the same period resulting in few deaths (WHO *Lao PDR* 2014:10).

Then, in 2010, the government introduced a policy that provided free health care services to pregnant women and children younger than five years of age, as part of the national effort to provide universal health care. This also led to an increase in facility deliveries (WHO *Lao PDR* 2014:16). Antenatal care coverage slightly increased from 35 per cent in 2006 to 37 per cent in 2012 (WHO *Lao PDR* 2014:10). In other words, even though these significant improvements in skilled birth attendant and facility deliveries occurred, the MMR decline is predominantly associated with fertility decline (WHO *Lao PDR* 2014:4).

Malawi

Malawi is a low-resource African nation that managed to cut its MMR by 59 per cent in 20 years. Between 1990 and 2010, the MMR dropped from 1100 per 100,000 to 460 per 100,000 live births (Mhango 2014:57). A combination of both clinical and non-clinical interventions led to the drop including the use of strategies that tackled

postpartum hemorrhage amongst other clinical interventions, and included infrastructural development, family planning services, and community mobilization (Mhango 2014:58).

One of the clinical interventions that the Malawi Ministry of Health used to address MMR was to tackle hemorrhage through the use of misoprostol[6] for the prevention or treatment of postpartum hemorrhage, medical abortion and post-abortion care. Also a policy was developed that required women who delivered in health facilities to stay for a minimum of two days preceding delivery, to prevent any chances of hemorrhage occurring. Women who delivered at home were also required to report to the nearest health facilities for a medical check-up to rule out possible post-delivery complications such as their having retained products of conception including parts of placenta or fetal tissues after delivery, as well as treatment of any injuries sustained during delivery (Mhango 2014:55).

On the non-clinical side, health facilities were built and upgraded across the nation, especially in the rural regions, to cater for pregnant women with basic obstetric complications. Waiting rooms were also part of the facilities where women could stay few days prior to delivery, especially if such women had slim chances of making it to the nearest facility during labor (Mhango 2014:58).

Then, to address the high unmet need of contraceptives, Malawi with the support of USAID and UNFPA, took family planning services to rural regions through trained Community-Based Distributor Agents (CBDAs). Primarily, the CBDAs were responsible for taking injectable contraceptives to women in rural areas to prevent unwanted

[6] Misoprostol is a medicine used for the prevention or treatment of postpartum hemorrhage, medical abortion and post-abortion care, amongst other uses.

pregnancies. As a result of this strategy, the contraceptive prevalence rate increased from 7 percent in 1992 to 42 per cent in 2010 (Mhango 2014:60).

In addition, the Ministry of Health organized community mobilization campaigns where community leaders were trained about safe motherhood and the need to reduce maternal and infant mortality. These opinion leaders were to inspire and mobilize the rest of the community, especially men, to actively participate in promoting safe motherhood (Mhango 2014:61). In other words, men were encouraged to allow their wives to go for prenatal visits and deliver in health facilities. The Malawi Ministry of Health referred to this practice as "birth preparedness." So, in a bid to promote maternal health in these communities, the community leaders developed by-laws that made it a punishable offence for men to allow their wives to deliver at home rather than the local health facilities (Mhango 2014:62).

Similarly, to further encourage birth preparedness in the communities, women who visited health facilities accompanied by their husbands got priority treatment over those who did not. This policy led to an increase in prenatal visits (Mhango 2014:63). Additionally, the percentage of deliveries with skilled birth attendants rose from 55 per cent in 1992 to 83 per cent in 2011 (Mhango 2014:64).

Malaysia and Sri Lanka

Irrespective of different levels of income and growth rates, the governments of Sri Lanka and Malaysia have been able to use same interventions to cut maternal mortality by 90 per cent within a period of 51 and 53 years, respectively. Specifically, Sri Lanka's maternal mortality declined, between 1955 and 2006, from 405 per 100,000 live births to 39.3 per 100,000 live births - a 90.1 per cent reduction (Haththotuwa, Senanayake,

Senarath, and Attygalle 2012:S45). Similarly, Malaysia's maternal mortality declined between 1957 and 2010, from 540 per 100,000 live births to 28 per 100,000 - a 94.8 per cent reduction (Yadav 2012:S143). The decline was primarily due to improvement in health facilities and professionalization of midwives.

The first significant factor that led to the remarkable reductions in Sri Lanka and Malaysia is the improvement in widespread access of maternal health care through the development of health infrastructures across the each country especially in rural areas. These developments started in Sri Lanka and Malaysia in the 1930s (Levine 2007:43) and 1957 (Yadav 2012:S146), respectively.

Primarily, health facilities were built, staffed with skilled health workers, and equipped to care for maternal health complications. While some were equipped to provide basic essential maternal care, others were also equipped for comprehensive obstetric complications (Pathmanathan *et al.* 2003:15). In addition, maternal health care services in both countries was free for those who could not afford payment (Pathmanathan *et al.* 2003:10)

Subsequently, the number of health facilities in Sri Lanka increased from 112 in 1930 to 247 in 1948 (Levine 2007:43). Similarly, in Malaysia, clinics increased from a few centers before 1957 to about 2833 clinics and about 165 mobile clinics in 2010 (Yadav 2012:S149). Evidence from both countries show that this increase in health facilities provided access to maternal care which led to a corresponding increase in prenatal care, babies born in facilities in the presence of skilled health workers, and an overall improvement in maternal health among the rural populations (Levine 2007:43; Yadav 2012:S146; Pathmanathan *et al.* 2003:3).

Apart from the investment in building health facilities, the second and more crucial element of success was the professionalization and increased use of midwives in Sri Lanka and Malaysia (Pathmanathan *et al*. 2003:13). In fact, since the 1930s, both countries defined a "skilled attendant" as "a clinically trained, certified, and legally registered midwife, nurse – midwife, or a medical doctor." Thus, at the time maternal health care was prioritized both countries had already established and accepted guidelines for training skilled attendants (Pathmanathan *et al*. 2003:16).

As a result, through the judicious mix of health personnel, Sri Lanka and Malaysia were able to provide immediate access to maternal health care services, the bulk of which were rendered by skilled midwives under the supervision of nurse-midwives and doctors (Pathmanathan *et al*. 2003:11; Haththotuwa, et al. 2012:S47; Levine 2007:43). The experiences of Sri Lanka and Malaysia demonstrate how skilled midwives can be central in MMR reduction. In other words, midwifery was the backbone of these initiatives (Pathmanathan *et al.* 2003:16).

Nepal

In spite of the political instability since the inception of democracy in 1990, coupled with a long armed conflict that recently ended in 2006, Nepal makes the list as one of the few developing countries that have successfully reduced its MMR (World Health Organization 2014, *Success Factors*…:30). In fact, between 1991 and 2011, Nepal's MMR declined from 850 per 100,000 to 170 per 100,000 live births, making an 80 per cent reduction in 20 years (WHO *Nepal* 2014:4), and achieving the 2015 MDG 5 target in the process (World Health Organization 2014, *Trends in Maternal Mortality*…:2).

The intriguing part is that, contrary to widely held assumptions that facility deliveries and skilled birth attendants during delivery are major factors that lead to MMR decline, the paradox in Nepal is that the decline happened despite a low proportion of skilled birth attendants (Bhandari 2014:3). Instead, the decline is due to fertility decline which was linked to high rates of spousal separation. Specifically, the total fertility rate (TFR) dropped from 5.3 in 1991 to 2.6 in 2011 (WHO *Nepal* 2014:4), mainly due to the fact that spouses of many married couples, especially in the rural areas, migrate abroad in search of better job opportunities. This perpetual absence of the migrant partner in a marriage resulted in overall few pregnancies in Nepal (WHO *Nepal* 2014:9).

Similarly, changes in women's education also contributed to the decline (Hussein *et al.* 2011:6). Due to the free education policy, the female literacy rate, of girls ages 15 and older, increased from 17 per cent in 1990 to 47 per cent in 2011. This change in women's educational status created an awareness that empowered women to take charge of their health, leading to an increase in age of first marriage from teenage years to later and avoiding early pregnancies in the process (WHO *Nepal* 2014:16). Nevertheless, there have been improvements in maternal health services since 1996, involving a 50 per cent increase in antenatal care visits between 1996 to 2011, and also an increase in facility deliveries and skilled birth attendance during childbirth, from 10 per cent in 2001 to 36 per cent in 2011 (WHO *Nepal* 2014:9; World Health Organization 2014, *Success Factors*…:31).

Rwanda

Despite the 1994 genocide which left millions dead and homeless, Rwanda made significant progress in reducing maternal mortality in 10 years (WHO *Rwanda* 2014:8).

Between 2000 and 2010, Rwanda's maternal mortality ratio (MMR) dropped by 50 per cent from 1071 per 100,000 live births to 476 per 100,000 live births. This decrease was due to improvements in skilled birth attendance and an improved contraceptive prevalence rate (WHO *Rwanda* 2014:10).

Following the genocide, Rwanda suffered a severe shortage in its health workforce, especially midwives, with resultant high rates of maternal and child mortality. In response, the government of Rwanda developed a number of policies to improve maternal and child health care (WHO *Rwanda* 2014:5). One of the strategies Rwanda employed to tackle the shortage was to recruit health workers, especially midwives, upgrade their skills through competency-based training, with specific residency training program designed for doctors and eventual deployment to health facilities across the country (WHO *Rwanda* 2014:12). This intervention led to an increase in births attended to by skilled health workers from 31 per cent in 2000 to 69 per cent in 2010 (WHO *Rwanda* 2014:10).

To further expand the health workforce, in 1995 the government established the female community health workers (CHWs) initiative to provide essential health services in remote areas (WHO *Rwanda* 2014:12). These CHWs were hired and trained by the Rwandan Ministry of Health to provide maternal and newborn services including prenatal care and family planning services, and other maternal and child health (MCH) services (WHO *Rwanda* 2014:15). As a result, the modern contraceptive prevalence rate increased from 4 per cent in 2000 to 45 per cent in 2010 (WHO *Rwanda* 2014:10).

Later, in 2005, the government of Rwanda implemented a national performance-based financing (PBF) system. Within the scheme, the staff of all health facilities and

CHWs receive financial incentives plus their monthly salaries. The incentives were offered based on a number of maternal and child health care indicators which includes the number of facility-based deliveries and the percentage of children receiving full immunization amongst other indicators (WHO *Rwanda* 2014:15). The goal of the PBF scheme was to enhance productivity and increase staff commitment, where rewards are attached to quality outcomes (WHO *Rwanda* 2014:13). The scheme was shown to have increased the use of maternal health services including family planning as well as an increase in the number of women that delivered in health facilities (World Health Organization 2014, *Success Factors*…:37).

It is also worthy of note that, Rwanda has achieved the MDG 5 target of reducing MMR by 75 percent between 1990 and 2015 (World Health Organization 2014, *Trends in Maternal Mortality*…:2).

Sweden

It took Sweden 149 years to cut its maternal mortality by 74 per cent, resulting in the lowest maternal mortality ratio in all of Europe in the early 20th century. Between 1751 and 1900, the MMR declined from 900 per 100,000 live births to 230 per 100,000 (Högberg 2004:1316; Chamberlain, McDonagh, Lalonde, and Arulkumaran 2003:95). This Swedish success was, in part, due to national policies developed for training professional midwives, and, in part, due to the use of modern aseptic techniques for disease prevention during child birth (De Brouwere, Tonglet, and Lerberghe 1998:773).

Even though the office of the Registrar General started a systematic collection of data on individual health as early as 1749, the first national statistical report on the magnitude of maternal mortality was presented in 1751. That same year, the Swedish

Health Commissioner stated that "out of 651 women dying in childbirth, at least 400 could have been saved if only there had been enough midwives." This statement marked the beginning of efforts towards improving obstetric care through the training of midwives (Högberg 2004:1314). Midwives here refer to community midwives who served in the community health centers under the supervision of the general practitioner (Högberg 2004:1316).

Consequently, the Swedish government developed policies directed towards the training of large numbers of health personal, especially midwives, to ensure that all hospitals and home deliveries were attendant to by skilled personnel (De Brouwere and Lerberghe 2001:11). In other words, this training was to ensure an increase in the number of qualified midwives present at birth and reducing the number of non-professional birth attendants.

In 1861, a century after the report on maternal mortality, the number of professional midwives present at birth was 40 per cent. By 1900, the number increased to 78 per cent, with a corresponding decrease in birth attendance by traditional birth attendants (TBAs) from 60 per cent to 18 per cent in the same time period (De Brouwere, Tonglet, and Lerberghe 1998:772).

Similarly, the implementation of the systematic use of aseptic techniques contributed to the decline of maternal mortality in Sweden. The aseptic technique was earlier introduced in the hospitals in the 1870s. But by 1881, the government issued a decree that required certified midwives who assisted in home deliveries to apply this technique for disease prevention during childbirth (Högberg 2004:1317). Between 1881 and 1900, the aseptic technique was estimated to have prevented about 96 per cent of

septic maternal deaths. Also, while the technique was estimated to have reduced maternal morality by 49 per cent, midwifery was estimated to have reduced nonseptic maternal mortality by 46 per cent (Högberg 2004:1318).

Vietnam

Vietnam is another of the countries that has made significant progress in reducing maternal mortality. Efforts towards achieving MDG 5 resulted in a 70 per cent decline in the MMR in 19 years. Precisely, maternal mortality declined from 233 per 100,000 in 1990 to 69 per 100,000 live births in 2009. The decline is attributed to a drop in total fertility rate associated with a rise in modern contraceptive prevalence rate. As well, a rise in facility-based deliveries attended by skilled birth personnel contributed to the decline (World Health Organization 2014, *Success Factors*…:39; WHO *Vietnam* 2014:11) in maternal mortality.

Then in 1981, the government came up with recommendations on family size as part of public health services. The recommendations included: a limit of two children in each family, an increased birth interval to between three to five years, and 19 years as the minimum age of first delivery. At the same time, modern contraceptives and abortion services were free and easily accessible. The recommendations became an official policy in 1988 (WHO *Vietnam* 2014:8). As a result, total fertility rate declined from six in the early 1970s, down to four in the early 1990s, and further down to two by 2000, with a rise in modern contraceptive prevalence rate from 74 per cent in 2001 to 80 per cent in 2008 among women ages 15 to 49 years (WHO *Vietnam* 2014:12).

Similarly, improvement in health facilities and skilled birth attendance contributed to the decline in MMR. Since 1990, Vietnam expanded its network of health

facilities across the country, ranging from national hospitals to primary health centers at the community level. These facilities are also staffed with a network of trained health workers, especially midwives. Vietnam further expanded its health workforce by recruiting and training community health workers who assist health care staff in activities such as family planning, encouraging women to access health care services and deliver their babies in health care facilities, amongst other activities. This resulted in an increase in the overall coverage of skilled birth attendants during delivery from 77 per cent in 1997 to 97.9 per cent in 2012 (World Health Organization 2014, *Success Factors*…:40).

Conclusion

An analysis of how each country was able to reduce its MMR can be linked to two phases namely, national awareness about the tragedy of maternal death and the actions geared towards curbing the trend. It should be noted here that, prior to the adoption of the MDGs (United Nations Millennium Summit, 2000), a 1987 Safe Motherhood Initiative (SMI) was held in Nairobi, that created global awareness about the numbers of women dying from childbirth and pregnancy complications, and called for actions to curb the trend, especially in the developing nations (Cohen 1987:68).

This international meeting amounted to what Nathanson (1996) explained as "risk construction" since it made maternal mortality reduction a national priority in developing nations. Nathanson's (1996) study emphasized the role of social and government policies in reducing mortality. This idea forms part of the theoretical framework of this study which will be discussed in detail in the next chapter. And, significant to all the countries reviewed in this chapter, is the fact that their successes hinged on the fact that they all had MMR reduction as top government or national priorities.

So, even though the speed and timing of reduction differs by country, the strategies and policies that led to these declines came as responses to each government's efforts directed towards reducing maternal mortality and improving maternal health. It should be noted that most of the strategies were those proposed at the SMI as crucial to the reduction of MMR, including family planning and prenatal care services; training of skilled birth attendants, especially midwives to assist in delivery; and the referral of women with obstetric complications to adequately equipped hospitals or maternity centers to get the needed obstetric care (Cohen 1987: 69).

Table 2.3 summarizes the commonalities and differences among the case study countries. While most of the countries combined many of the SMI suggestions for strategies to decrease their MMR, one country had a very unique migration situation and other countries added one or more other strategies that were more specifically tailored to fit their MMR situations. For instance, Nepal's MMR declined due to the increase in the number of spouses of married individuals who migrated abroad for greener pasture, which then resulted in fewer pregnancies and an eventual drop in the total fertility rate. The paradox in Nepal was that MMR declined despite the low proportion of skilled birth attendants (Bhandari 2014:3). Table 2.3 provides a summary of the key policy initiatives which were part of each case study country's approach to maternal health.

Cambodia and Lao PDR both implemented birth spacing polices (WHO *Cambodia* 2014:17; WHO *Lao PDR* 2014:14) which led to an increase in the median birth interval (WHO *Cambodia* 2014:13; WHO *Lao PDR* 2014:12), a corresponding drop in the total fertility rates (WHO *Cambodia* 2014:9; WHO *Lao PDR* 2014:9), and, an eventual drop in MMR. For Vietnam, one of the factors that contributed to the decline in

Table 2.3: Key Factors in Reducing Maternal Mortality in Case Study Countries

Country	Mid wife train ing	Increase in health personn el	Female commu nity health workers	Family planning Services	Built and upgraded health facilities	Recommend ed older age at marriage	Communit y mobilizati on	Women's education	Policy on increase d birth interval	Prohib ition of abortio n	Spousal separati on
Cambodia	X	X		X	X				X		
Chile								X		x	
Egypt	X	X		x	X						
Eritrea	X	X		x	X						
Honduras		X			X						
Lao PDR	X	X		x					X		
Malawi				x	x		X				
Malaysia	X	X			x						
Nepal		X		X				X			x
Rwanda		X		X							
Sri Lanka	X	X			x						
Sweden	X	X									
Vietnam	X	X	x	X	x	X			X		

MMR was the policy that put a limit on the number of children per family. This policy also set the official recommended age of a woman's first birth (WHO *Vietnam* 2014:8). Malawi's communities played a vital role in the decline of MMR. Their solid commitment towards improving maternal health resulted in the development of bylaws that included punitive measures for men who refused to allow their wives to go for prenatal visits and have their babies in health facilities (Mhango 2014:62). This shows how effective community mobilization can be, especially in low-resource countries with high MMR. Also, Malawi happens to be one of the few countries to have used misoprostol (Mhango 2014:55) to improve maternal health.

In the case of Chile, it took an increase in women's educational status to significantly cut MMR in Chile (Koch *et al*. 2012:11). With these interventions, Chile achieved one of the three highest reductions in MMR (Koch *et al*. 2012:3) of all the case study countries in this review of literature.

Malaysia and Sri Lanka are the other two countries with the greatest success. Both nations cut their MMR through building and equipping health facilities across the country, especially in the remote regions (Pathmanathan *et al*. 2003:15), and through training of skilled birth attendants, especially midwives(Pathmanathan *et al*. 2003:13). The highlight of these three countries was their ability to cut MMR by over 90 per cent in five decades.

Consequently, an examination of the success stories above show that maternal morality can be reduced rapidly in other developing countries who are currently struggling with high rates of maternal death. As stated earlier, there are no standard strategies or formula for MMR decline. In fact, remarkable results can be made when

each country understands the strategies that best fit its unique maternal mortality context, especially in terms of the level of the government's commitment to improving maternal health and the extent to which this commitment is realized in policies and concrete initiatives. In other words, it appears that progress requires national political will (World Health Organization 2014, *Success Factors*…:9).

The next chapter discusses the theoretical framework.

CHAPTER THREE:

THEORY

Introduction

This study used a combination of ideas from Eager (2004) and Nathanson (1996) as its theoretical framework. These theorists describe the changes that must occur in order for the development of effective public health policies. While Eager (2004) proposed a process model of change from existing to new norms, Nathanson (1996) emphasized the role of government policies and social movements in labeling health "risks" and thereby bringing about changes in public health. This chapter outlines the arguments of each theorist in detail and then highlights the selected perspective of each theorist that is relevant to this study.

Eager's Model of International Norm Construction

Eager's (2004:148) study focused on explaining how new norms were developed for women's health. She argues that normative changes largely depend on changes in the international community or state's priorities and interests. Eager's study utilized a macro-social constructivist approach to examine the process of changing from an existing international norm on population policy to the development of a new norm.

From a constructivist view, state or non-state actors who propagate a new norm, do so based on their interpretation of social reality (Eager 2004:147). In Eager's study, various international feminist activists and groups managed, through their relationships and negotiations with both local and international allies, to get institutionalized a new

norm for women's reproductive health. This new norm dramatically changed the nature of global population policy and practice.

Eager's (2004) study focused on a case study of how global population policy changed from an emphasis on population control to one centered on women's reproductive rights. In this case, the UN was the ultimate platform for the actualization of such global change. Based on the examination of the details of this case study, Eager (2004) proposed a process model of change from a dominant norm to a new norm.

Prior to the 1960s, global population policy was primarily influenced by a set of international players including states, NGOs, international organizations and foundations. Beginning in 1965, the United States in collaboration with a few developed nations, promoted population control in the developing world as the dominant norm that guided global population policy (Eager 2004). Their argument was that the uncontrolled rapid population growth from the developing world had a negative impact on economic growth. As a result, they supported the norm of population control in national population policies. At times, this involved governments of the developing nations implementing coercive family planning programs to slow population growth. These programs were largely funded and supported by countries which developed, supported and propagated the population control movement[7], especially the U.S.

The origin of population control as the dominant norm began in the late 20th century when the world's population increased rapidly to billions of people, with 90 per cent of this population growth happening in the developing world. For instance, between

[7] The population control movement included the U.S. as the major actor, a number of Western European nations, experts working for USAID, the Rockefeller and Ford Foundation, the Population Council and research universities.

1950 and 1980 China's population was estimated to have increased from 547 million to almost a billion, making a 92 per cent increase in population growth. Similarly, Nigeria's population rose from 33 to 77 million, and Mexico's grew from 27 to 68 million, within the same period (Eager 2004: 151).

This "concern about population explosion in the developing world soon became a fear" (Eager 2004:151) resulting in public policy discussions with a focus on population control measures which led to the development and funding of family planning programs in the developing world. The public rationale for this concern was that unchecked population explosion could have a negative impact on economic development of advanced nations as well as any country with rapid population growth. Hence, between 1965 and 1980, the U.S. was responsible for more than half of international assistance for family planning programs in the developing nations.

This dominant norm, however, failed to consider and recognize women's right to control their reproductive behavior and to attain overall reproductive health. Population control meant that international organizations, developed nations or elites or political authorities controlled women's reproduction even if it resulted in harm to the women.

Population control was pitched as the solution to underdevelopment in poorer nations, a stance, orchestrated primarily by the U.S., which resulted in a huge backlash from the developing nations during the Bucharest meeting. This included a feminist movement linked with developing countries and marked the beginning of the debate that challenged the prevailing norm. In 1974, at the Bucharest International Conference, members of the G-77[8] and the few feminist representatives in attendance challenged the

[8] The Group of 77 is the largest intergovernmental organization of developing countries in the United Nations, which provides the means for the countries of the South to articulate and promote their collective

existing norm as the solution to underdevelopment in developing nations and argued that population increase was not the cause of underdevelopment.

In spite of the G-77 opposition, the U.S. still funded family planning programs in the developing world. With the declaration of the UN decade for women (1975-1985) came an opportunity for women to convene at world conferences and deliberate on the effect of the existing norm on women's health (Eager 2004:155). What had been ignored in previous norms and related policies were high rates of maternal mortality and the absence of prenatal and post-natal care amongst others (Eager 2004:156).

Then, in the 1970s and early 1980s, the Catholic Church joined the Global Women's Health and Rights Movement (GWHRM)[9] in critiquing the existing norm for violating human rights but also differed with the GWHRM in some ways. To begin with, the feminist movement advocated for birth control that involves women's right to take charge of their reproductive behavior as the solution to population growth, while the religious group actors opposed any form of artificial contraceptive use and abortion (Eager 2004:156) arguing that governments should promote a pro-natalist[10] agenda. The GWHRM advocated for the government to play a role in subsidizing voluntary and more health-promoting family planning programs rather than implementing coercive and draconian measures to slow population growth.

In May 1984, shortly before the next World Population Conference in Mexico, the U.S. issued a statement reversing its position on population saying that the earlier

---

economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system, and promote South-South cooperation for development.

[9] The GWHRM was the main feminist group or actor that propagated the shift from population control to reproductive rights and health.

[10] Pro-natalist is the practice or policy of encouraging the bearing of children, especially government support of increased birthrate.

position amounted to a "demographic overreaction to world population" (Eager 2004:157). Then, in August 1984, key U.S. government delegates, UN agencies and NGOs convened in Mexico City for the conference and the U.S. officially announced its decision to stop any form of funding and support towards abortion or coercive family planning services in the developing nations as part of population control measures (Eager 2004:158).

During this time, the feminist movement organizations became somewhat of a unified actor, pulling other like-minded global human rights activists to join in challenging population control measures. As a matter of fact, many NGOs that focus on reproductive issues joined the feminists' movement in framing abortion and coercive family planning services as a health and human rights issue.

Reproductive rights and health was promoted as the new norm to guide population policy, using UN sponsored conferences as a platform for promoting this new norm (Eager 2004:158). In addition, other international organizations such as Amnesty International and Human Rights Watch also shifted their focus towards research and publications on violations of women's human rights, including female genital mutilation, and violation of women's reproductive rights. These movements contributed to the expansion of the human rights agenda to include "reproductive rights and health concerns" (Eager 2004:159).

Eventually, in 1994, the International Conference on Population and Development (ICPD) in Cairo marked a successful paradigm shift where reproductive rights and health emerged as the new norm to guide global population policy (Eager 2004:160). This meant that women should no longer be subjected to draconian or coercive family

planning measures as a means to end population explosion. Instead women have the right to control their reproductive behaviors "free of coercion, violence, and discrimination by governments and non-state actors" (Eager 2004:146). About 10,000 people and 179 governmental delegates convened at the conference in Cairo (Eager 2004:160).

Eager (2004), however, noted that the shift from population control to reproductive rights and health as the new norm was not without obstacles. In fact, she stated that the GWHRM in the vanguard of promoting a shift from the dormant to the new norm experienced a lot of opposition and hindrances in the process. As a matter of fact, one of the major obstacles to the paradigm shift was that the population control agenda was mainly promoted, supported and funded by the U.S., which happens to be the most powerful and influential nation in the world (Eager 2004:160) but also one of those most opposed by developing nations.

Nevertheless, based on this successful paradigm shift, Eager (2004:165) proposed a five-stage process model for the shift from an existing to a new norm. This model is relevant to the current study. Specifically, the process starts with actors who are dissatisfied with the existing norm challenging it, using conferences and meetings as structures to do so. As a result of this dissatisfaction, actions are taken to change the existing norm and create a new one. Second, the new norm would need to be brought forward by both state and non-state actors who have the transformational capacity to influence policy and practice. In other words, these actors believe that the existing norm is unjust, bring the new norm into consideration by a broad base of actors, and make efforts within their power to change it (Eager 2004:166).

Third, the shift from a prevailing to a new norm is accelerated by the effective framing of an alternate norm (Eager 2004:167) particularly in critical state and international documents. Fourth, actors who seek to create a new norm need the support of local social movement organizations or non-governmental organizations (Eager 2004:168). Fifth, normative change occurs more quickly if the transformative actors develop a broad network of local, regional and international allies. In other words, normative changes do not just happen. They are rather the result of a sequence of specific and preferably coordinated actions and do not occur without opposition.

Nathanson's Construction of Health Risk

Nathanson's (1996:633) study focused on the development of changes in public health policies. She emphasized the role the government and social movements play in adopting effective public health policies that contribute to decline in mortality. In more specific terms, she stated that effective "public health policies are not adopted and implemented in a socio-political vacuum" (Nathanson 1996:609). In other words, effective policies do not just happen. They occur as a result of active social and political processes.

To this end, she highlighted three hypotheses that are vital to the success or failure of public policies towards reducing mortality and disease prevention: First, public health policies that lead to mortality decline are likely to be implemented by a strong and highly centralized government which focuses on the welfare of its citizens. Second, effective public health policies that lead to decrease in morality are likely to be adopted as a response to active grassroots involvement from social and/or political movements.

And, third, the implementation of effective public health policies involve the culturally credible construction of risk (Nathanson 1996:611). The last two hypotheses are the most relevant to this study.

Both of these hypotheses include factors also included in Eager's theory, that is, the importance of social movements and the construction of risk. In her discussion of the construction of risk Nathanson (1996) notes that there are three elements which are critical to credible construction of risk. Credible refers to the degree to which the construction fits with cultural frameworks in the society. The first element is basically Eager's "transformative actors," though Nathanson (1996) simply refers to groups or individuals who have the "authority to define and describe the danger that threatens" (1996: 615). The second element is the construction of a believable causal chain explaining the cause of the health risk. Finally, there is a need to identify designated victims of the risk.

Furthermore, Nathanson (1996) examined her hypotheses by comparing France and the U.S. in terms of two policies: 1) maternal and infant health and 2) tobacco control public health policies (1996: 615). She attempted to explain the changes in policies that led to a decline in these areas in her case studies, using her hypotheses as a framework (1996: 616).

In France, the decline in infant mortality was more successful than the U.S. because the former saw the death of pregnant mothers and infants as a national tragedy. The credible construction of risk in France involved framing mothers as a national asset who reproduce on behalf of the state by giving birth to healthy babies to preserve the existence of the nation. In other words, the death of infant results in depopulation and a

weak military (Nathanson 1996: 627) and that is the risk which France attempted to avert (Nathanson 1996:617). In contrast, the U.S. construction of risk was less effective because the U.S. did not see fertility decline and infant mortality as an immediate national tragedy, instead, it was construed as a threat to the existence of immigrants (Nathanson 1996:619).

Similarly, Nathanson (1996) acknowledged that even though social movements are powerful actors that bring about changes in policies, she noted that the social construction of risk should not be left entirely to social movement groups. Other actors including political and economic players should be part of the risk construction process (1996: 614). In the case of France, the government, physicians and women movements were the key players involved in the risk construction and implementation of public health policies that led to the decline in infant mortality and improvement in maternal health in France (1996: 617). The reverse was the case in the U.S. where the American Medical Association (AMA) strongly opposed any form of collaboration between physicians, the state, and women's movement groups (1996: 620).

Overall, Nathanson (1996) found that the different health successes in both countries was largely due to the credible construction of risk (1996: 627) but also to the collaboration between states and social movements which played a vital role in bringing changes in public health policies (1996: 617).

Conclusion

The current project is a case study of the reduction of maternal mortality ratio (MMR) in Nigeria from 1990 to 2013. Using the ideas of Eager (2004) and Nathanson

(1996), the research sought to examine the social and political factors that facilitated this decline over a period of two decades. As outlined above, both theorists focus on the process of change in the construction of either norms or health risks. Selected parts of their theories are combined to provide a framework for this study.

In Eager's (2004) perspective, the change from an existing to a new norm occurs in phases, namely, the development of the new norm; consolidation of the norm in meetings or conferences where the blueprint for actions and policy towards change are proposed, discussed and agreed upon; and then the implementation of actions that incorporate the new norm and lead to the eventual change in policy. So, from Eager (2004), this study takes the idea of how new norms are developed and relates it to maternal mortality and actors who worked to transform the norm.

Also, from Eager (2004), this study takes the idea that the timing of the shift from an existing norm to a new one differs by situation and location, which fits with the detail provided in a case study. For instance, it took from 1974 to 1994 which is a period of 20 years, to change the existing norm from population control to reproductive rights and health (2004:153). Simply put, even though population control as the dominant norm emerged in 1957, the period of critical debate that challenged this prevailing norm began in 1974. In a similar vein, the drop in Nigeria's maternal mortality ratio occurred within a period of 23 years.

Nathanson's ideas (1996) are also relevant in helping to understand how risk is constructed and what types of changes would be relevant to the study of a reduction in the maternal mortality ratio (MMR) in Nigeria in the past few decades. In fact, Nathanson (1996) emphasized that, whether actions would be taken towards addressing public health

concerns would depend on the active labeling, framing or social construction, from credible state or non-state actors, of the dangers to the public's health (1996:614). And, this construction varies by culture, social circumstances or location. This explains why France interpreted the death of mothers and their newborns as detrimental to the country, whereas the U.S. did not perceive same as a primary threat to the entire nation. So, from Nathanson (1996), this study takes the idea of government action, social movements, collaboration among key actors, and societal construction of risk (1996:616).

Similarly, a closer look at the ideas of both theorists reveal that Eager (2004) and Nathanson (1996) tend to apply the concept of "framing" in their arguments in terms of Eager's (2004) idea on "development" of a new norm and Nathanson's (1996) "construction of risk." Nathanson also noted that the extent to which a government prioritizes and implements health policies is critical in disease prevention and decrease in mortality in that country (1996: 609).

This chapter has summarized the theoretical framework for this study. Based on the identified ideas from Eager (2004) and Nathanson (1996), this study focused on answering this research question: "To what extent can the reduction in the maternal mortality rate in Nigeria from 1990 to 2013 be linked to 'transformational agents' and to the social construction of maternal health and mortality as a significant national issue in Nigeria?"

The next chapter focuses on the methods used in this study.

CHAPTER FOUR:

METHODOLOGY

Introduction

This study is a qualitative one focused on explaining the decline in Nigeria's maternal mortality ratio within a period of two decades. This explanation is based on indicators from the ideas of Eager (2004) and Nathanson (1996) discussed in the previous chapter. This chapter outlines the research methods used in this study, the data collection process and data analysis.

Case Study Methodology

In choosing the research method, this study carefully took into consideration the unit of analysis and research foci. Given that the unit of analysis is a single country, this study chose the single-case study methodology. Most importantly, a number of authors provided justification and guidance for the use of case study methods and data analysis on which this chapter is based, including Yin (2014), Gerring (2007), and George and Bennett (2005).

George and Bennett (2005) define a case study as the "detailed examination of an aspect of a historical episode to develop or test historical explanations that may be generalizable to other events" (2005: 5). In this case, the focus is to identify instances of a relationship between factors that explain the reduction in Nigeria's maternal mortality ratio.

Yin (2014) argued that there is no standard formula for using the said method. In fact, he mentioned that the method is appropriate when a researcher intends to understand and explain a given social situation. In brief, a case study gives a researcher the chance to focus on a given case and get a holistic perspective of that case (2014: 4).

Yin (2014) also noted that, contrary to the view of many social scientists who think that the method is only appropriate for exploratory research and that experimental research is the only method for explanatory research; the case study method is also appropriate for explanatory or causal case research (2014: 6). In fact, Yin (2014) pointed out that some of the best and well- known single case-studies are examples of explanatory research (2014: 7). The use of the case study method as explanatory research fits with the intent of this study to present an explanation for the decrease in maternal mortality in Nigeria.

In addition, Yin (2014) argued that the "how" or "why" types of research questions is one of the three conditions that favor an explanatory case study research approach (2014: 9). The rationale is that such questions deal with an examination of causal factors and outcomes that need to be investigated over a given period of time. In our case, the foci of the research question is "why" these efforts were initiated and "how" these efforts or policies were implemented (2014: 10). The "why" might include, for example, wanting to meet the Millennium Development Goal (MDG 5) 2015 target (Zureick-Brown *et al*. 2013: 32) or creating a social construction of pregnant women as national assets to the continuous existence of Nigeria. The "how" would include government and non-governmental actions being carried out to reduce the loss of the lives of pregnant women (Nathanson 1999: 617).

Apart from the "how" or "why" questions mentioned above, the other two conditions that favor case study methods include cases that focus on current events over which the researcher has little or no control. In other words, case studies are appropriate for contemporary or recent historical events which the researcher could not directly observe. As a result, the researcher relies on available documents as data (Yin 2014:12).

Furthermore, Yin (2014:41) argues that one of the rationales for single-case studies is to test the significance of an established theory or theories by confirming or challenging it, which means that the theoretical framework is critical for choosing a single-case study method. And, as mentioned earlier, the aim of this research is to test ideas from Eager's (2004) and Nathanson's (1996) theories to see what ideas seemed to offer an explanation for the maternal mortality decline.

In general, the case study method increases internal validity (Gerring 2007:43). In other words, it is often, "easier to establish the veracity of a causal relationship pertaining to a single case (or a small number of cases) than for a larger set of cases" (Gerring 2007: 44). Specifically, case study research can provide more insight into the causal mechanism or an understanding of the causal pathway(s) than is possibly with large size quantitative studies.

Gerring (2007) further highlighted nine techniques for case-selection. Relevant to this study is the crucial case technique, which is defined as "Cases (one or more) are most- or least-likely to exhibit a given outcome." (2007: 89). One of the primary uses of this technique is to confirm or refute a general theory without any statistical testing. As a matter of fact, out of the nine techniques, the crucial case technique presents the strongest evidence possible "in a non-experimental single-case setting" (Gerring 2007: 115).

The crucial case technique is one that is highly deductive in nature with the assumption of precise causal factors leading to the outcomes (Gerring 2007:117). However, the current study will adopt what Gerring (2007) referred to as the "softer" version of this technique since this allows for the possibility that the outcome might be explained by some other causal factors that are external to the theories that are being tested (2007: 118).

Data Collection

This study relied on available or secondary data. Yin (2014) referred to such data as a "documentary" source of evidence out of six major data sources for case studies (2014: 105). Yin (2014) also noted that documentary data are increasingly available through the internet and can be used by researchers for convenience (2014: 107) which could be due to time constraint. Data used for this study are public and accessible. Yin (2014) also highlighted some strengths of documentary data to include: 1) a researcher can review the documentary data as many times as necessary; 2) documentary data provides the researcher with a detailed description of events; and 3) data cover different time periods and events (2014: 106), which in this case means a sequence of state and non-state interventions at different periods of time.

This study's data sources include: government reports on interventions; NGO reports on interventions; reports from other government and international agencies such as the USAID, UNFPA and WHO; statements from key government officials and other transformational actors; academic journal articles; and newspapers. These data were used to gather evidence of key indicators based on the work of Eager (2004) and Nathanson

(1996). As mentioned in the previous chapter, the types of indicators relative to maternal health and reduction of maternal mortality include: roadmaps for action, explicit policy statements, programs or interventions by the government, the role of non-governmental agencies, influence of international agencies, social activism, and statements by "transformative actors" which fit with the process of the social construction of maternal mortality as a societal concern.

Again, given that the focus of this study is to explain the events that happened between 1990 and 2013 that led to the MMR reduction in Nigeria, this study gathered available information from before 1990 to 2005. The rationale is that data prior to 1990 and early 2000s would likely explain the causal events that led to the 2013 outcome. I also included information from 2005 to 2015 to provide an update of events.

The strategy I used in gathering data was typing specific search phrases in Google and Google Scholar. Yin (2014) had indicated that there are no set limits on the amount of data that should be collected. Rather, a researcher should collect "enough" data that attempts to explain the goal of study (2014: 104). So, I wanted to be sure I gathered as much relevant information as possible on the theoretical concepts framing this study (Yin 2014:109). As a result, I included search terms like "*maternal mortality*" "*reduction or decline*" and "*Nigeria*" in my search phrases. My search on Google using key phrases outlined in Table 4.1 below gave me access to reports, statements, news articles and other information which comprised my available data or documentary evidence.

For each search phrase, I received thousands of hits from which the most relevant information were selected that led me to the data sources mentioned above. Specifically, I filtered through these thousands of hits by downloading as many references whose titles

Table 4.1: Key Search Phrases on Google and Google Scholar

Search Phrases	Number of hits on Google	Number of hits on Google Scholar
Nigeria tackles maternal mortality	321,000	10,300
Nigeria tackles maternal mortality from 1990 to 2005	458,000	5,540
Nigeria curbs maternal mortality	141,000	5,630
Nigeria curbs maternal death from 1990 to 2005	690,000	6,690
Maternal mortality reduction in Nigeria	466,000	39,400
Government action to reduce maternal mortality in Nigeria	275,000	23,500
NGO intervention on maternal death in Nigeria	244,000	18,100
NGOs actions on reducing maternal death in Nigeria	200,000	18,300
Statements by Nigerian government on maternal mortality	368,000	17,500

fit the indicators that were developed from the theoretical framework. I further skimmed through the downloaded documents from which I selected the ones with the most relevant information to my research. Other evidence used in this study consisted of peer-reviewed journal articles which were identified largely through a search of Google Scholar though some were located through the Google search. These journal articles were then retrieved through Briggs Library databases, including EBSCOhost and JSTOR. Overall, I used about 60 peer reviewed articles, 97 reports and 2 newspapers for this study.

In terms of specific time periods, information from before 1990 were the hardest to get while those from 1990 and thereafter were easier to find. Data from the 1950s and 1980s, which were the earliest time periods for this study, were retrieved from peer-reviewed journal articles.

I also searched Nigeria's Federal Ministry of Health (MOH) official website where I got some information about some of the key government interventions. Then, I proceeded to search the official websites of these interventions for detailed information such as the Midwives Service Scheme, SURE-P amongst other interventions. Details on these interventions are provided in the findings chapters.

Hypothesis Coding

Coding is "a data condensation task that enables you to retrieve the most meaningful material, to assemble chunks of data that go together, and to further condense the bulk into readily analyzable units" (Miles, Huberman and Saldaña 2014: 73). Codes are words, short phrases or labels that captures or represents the content of the data (Saldaña 2013:3).

There is no generally accepted way to code qualitative data (Saldaña 2013:2; Harding 2013:104). Coding decisions depend on the uniqueness and nature of each study. So, given that this study is a historical study with a single national case-study, it was important to select the appropriate coding method that fit the overall goal of the study (Saldaña 2013: 60). As a result, I used the coding method I believed to be the most appropriate from Saldaña's (2013) numerous coding techniques.

The coding method I used is what Saldaña's (2013:147) called hypothesis coding, which basically refers to codes or indicators that are developed from a theory under investigation (see also Miles, Huberman and Saldaña 2014:78). In other words, very general indicators were used for process tracing and identification of evidence that fit the theoretical framework. Thus, the key general indicators from the theories of Eager (2004)

Table 4.2: Key indicators from Eager and Nathanson

Indicators	Eager (2004)	Nathanson (1996)
Process model - periods of critical debate	X	
Process model - actors with transformational capacity must promote normative change and nascent norm emergence	X	
Process model - transformative actors require the effective framing of a new norm	X	
Process model - transformative actors need support from social movements	X	
Process model - transformative actors need allies	X	
Concrete actions are taken by key actors	X	X
Collaboration among key actors	X	X
Public health policies		X
Active involvement by social/political movements		X
Culturally credible construction of risk - Groups that have the authority to define health "risk"		X
Culturally credible construction of risk - Believable causal chain of health risk		X
Culturally credible construction of risk - Victims of risk		X

and Nathanson (1996) found in Table 4.2 above were used to develop an explanation of the causal processes that led to the 2013 outcome of reduced mortality. These general indicators are markers of events, actions or other things that need to be identified from the evidence in order to provide some confirmation that these theories help explain what occurred in Nigeria. These indicators guided my selection of evidence.

Data Analysis Procedures

Data analysis involves "examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study" (Yin 2014:132). A number of data analysis techniques suggested for case studies are used in this study. One of these is the *process-tracing method.* This method focuses on identifying possible

intervening variables that may have led to the observed outcome or alternative paths through which an outcome could have occurred (George and Bennett 2005:206-207).

For this research, the idea of tracing the steps in the causal process which led to the reduction in maternal mortality will not be looking at "intervening variables" per se but instead will be tracing the indicators from the theoretical work, all of which in combination are thought to lead to the outcome. In other words, this research attempts to trace theoretical factors that best explain the decrease, primarily government policies, evidence of social constructions related to maternal health and mortality, social activism and so on. Alternative variables, outside of the theoretical focus, will be suggested at the conclusion of the dissertation in terms of future research, but will not be "traced" in this analysis.

So, process-tracing is a tool for tracing both causal and rival factors that may have led to an outcome. Process-tracing is a tool for testing established theories to see how well they explain causal sequences of events and outcomes (George and Bennett 2005:210). Basically, this study uses a timeline of key events in order to compare the evidence to the theory. Miles, Huberman and Saldaňa (2014:222) refer to this timeline of events, detailing actions by transformational actors, as a causal network of explanations which presents links between the process and the outcome. In this study, the general indicators covered under the section on the coding process will be used to construct the timeline for maternal mortality decline in Nigeria.

George and Bennett (2005) note that process-tracing techniques can also be used for different purposes including theory development (2005: 209), though that is not how the technique was used in this study. Among the varieties of process-tracing, the one

most relevant to this study is the analytic explanation technique, which involves using theory to present detailed explanation of historical narratives of events (2005: 211).

Similar to process-tracing is Yin's (2014) *explanation building analytic technique* which is relevant for explanatory case studies, like the present study. This technique involves an examination of the "case study data by building an explanation about the case" (2014: 147). Put differently, explanation building involves explaining the processes and reasons behind an observed outcome. This process can be iterative in nature and would then be closer to theory development. It begins with an initial theoretical statement, compared with results from a specific study, resulting in the revision of the initial statements, and then repeating this process over again (2014: 149). This study builds an explanation but primarily in terms of a deductive process rather than a more grounded theoretical approach.

Case studies can shed light on theoretical concepts, theories or statements. Yin (2014) referred to this process as analytical generalization. It consists of "a carefully posted theoretical statement, theory, or theoretical proposition" (2014: 68) resulting from findings of a case study and generalized to other situations, not only similar cases. Consequently, this study will apply the process of analytical generalization in two respects. First, this study will attempt to link its findings to its theoretical framework. Secondly, findings from this study are summarized as generalization that may be applied to other national situations.

Conclusion

This chapter was developed with guidelines from various authors dealing with single-case studies, coding of qualitative data, and ideas from the theoretical framework.

In terms of the case study, Yin (2014), who is the key expert on case studies in sociology, indicates that a case study is appropriate for understanding and explaining a given social situation, which in this study is the decline of maternal mortality in Nigeria over two decades. Gerring's (2007) "softer" version of the crucial case technique will be used. From George and Bennett (2005) suggested one variety of process-tracing, that is, the analytical explanation technique, whereby theory is used to select and present detailed explanation of historical narratives of particular causal processes. The basic idea is to use the data gathered from this study to examine the relevance of ideas from the theories of Eager (2004) and Nathanson (1996)

All three authors indicated that, in analysis of qualitative data, there are possibilities of rival causal factors that explain the observed outcome. In this case, it means alternative explanations leading up to the 2013 outcome that are external to key indicators of the theories under investigation. George and Bennett (2005) referred to this as "alternative paths through which an outcome could have occurred" (2005: 207). Yin (2014:140) referred to it as an examination of plausible rival explanation as one of the general strategies in case study analysis.

So, in order to acknowledge possible rival causal factors, this study will refer to other variables that may be relevant for future researchers to further investigate either Nigeria as a case study or other studies. An example of rival causal factors would be the effect a change in the attitude of health workers would have on type-three delay (Igwegbe *et al.* 2012:197) as demonstrated through other studies. Type-three delay is the delay on the part of hospital management in providing quick and adequate care in cases of emergency (Nwagha *et al.* 2010:323). Unfortunately, an examination of rival factors is

not one of the objectives of this study. Specifically, since no other study has applied this study's theoretical ideas to maternal mortality and given the vast amount of material necessary to trace the details on the Nigerian case study, it makes more sense to focus on the identified variables from the theoretical framework.

It is also important to note here that, this study does not seek to push the theories beyond their predictions (George and Bennett 2005:116) but rather to investigate to see what ideas from Eager (2004) and Nathanson (1999) best explain the decrease in maternal death in Nigeria.

In this chapter, the coding decision was based on Saldaňa's (2013:60) method of hypothesis codes. The codes or indicators were developed from the theoretical framework. They are ways of measuring or operationalizing the theoretical ideas which focus on specific actions by actors or agents that possess transformational capacities, whether and how a change occurred from the existing to new norms, and finally how all these factors related to a reduction in maternal mortality in Nigeria over several decades.

The next chapter is on general overview about the case study country.

CHAPTER FIVE:

OVERVIEW OF NIGERIA

Introduction

This chapter focuses on the general overview of Nigeria. Specifically, it covers a detailed description of crucial facts about Nigeria including the political structure, key demographic composition, the population policy, trends in family planning and trends in maternal mortality.

Political and Demographic Composition

Political Divisions and Religious Groups

Nigeria, officially known as the Federal Republic of Nigeria, (Federal Republic of Nigeria, 1999) is a country located on the western coast of Africa bordering the Gulf of Guinea in the South, Niger and Chad in the North, Cameroun on the East and the Republic of Benin on the West (See Figure 5.1). The country gained its independence from Britain on October 1st 1960 and became a Federal Republic on October 1st 1963 (NPC, *Nigeria Demographic and Health Survey* 2013: 1). There are three tiers of government under the 1999 Constitution, namely, the Federal, State and Local Government Area (Federal Republic of Nigeria, 1999). Nigeria is currently a Federation consisting of 36 states and a Federal Capital Territory in Abuja, with about 774 local government areas. Nigeria is grouped into six geopolitical zones namely the North Central, North East, North West, South East, South South and South West (NPC, *Nigeria Demographic and Health Survey* 2013: 2).

Another important fact about Nigeria is that the country is a multiethnic and multilingual one. In fact, the country has about 374 ethnic groups with Yoruba, Ibo and Hausa as the dominant ethnic groups (NPC, *Nigeria Demographic and Health Survey* 2013: 2). And, even though Nigeria's official language is English (Adegbola 2008:67), there are over 500 additional indigenous languages (C.I.A. 2015).

Figure 5.1: Map of Nigeria

Source: National Population Commission (NPC) [Nigeria] and ICF International (2014) *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International. Pp XXVI.

Apart from the ethnic and linguistic diversities, Nigeria is also a multi religious country comprised of Muslims, Christians and indigenous or traditional worshippers. According to the 1963 census which was the last Nigerian census that obtained information on ethnicity and religion, 47 per cent of the total Nigerian population were Muslims, 35 per cent were Christians and 18 per cent indigenous worshippers (Adegbola 2008: 67). A recent C.I.A. report estimated Muslims at 50 per cent, Christians 40 percent and indigenous worshipers at 10 percent. (C.I.A. 2015). Muslims live primarily in the North while the majority of Christians live in the South. Among the Muslims are: Sunni, Qadriyya, and the Tijaniyya, amongst others. Christian religious communities include: Roman Catholic, Anglican, Methodist, and Baptist, amongst others (Adegbola 2008: 67).

Overall Demographic Profile

In terms of population, Nigeria is the most populous country in all of Africa, and currently the seventh largest most populated nation in the world. In 2015, the Nigerian population was estimated to have grown to 182 million people (UN, *World Population Prospects*… 2015: 23). In 2014, Nigeria had a 2.5 per cent rate of natural increase (Population Reference Bureau 2014b, *2014World Population Data Sheet*: 7). Nigeria makes the list as one of the 22, 26 or 16[11] countries that, in combination, accounted for or are estimated to account for 75 per cent of the annual percentage increase globally (UN, *World Population Prospects* … 2015: 25).

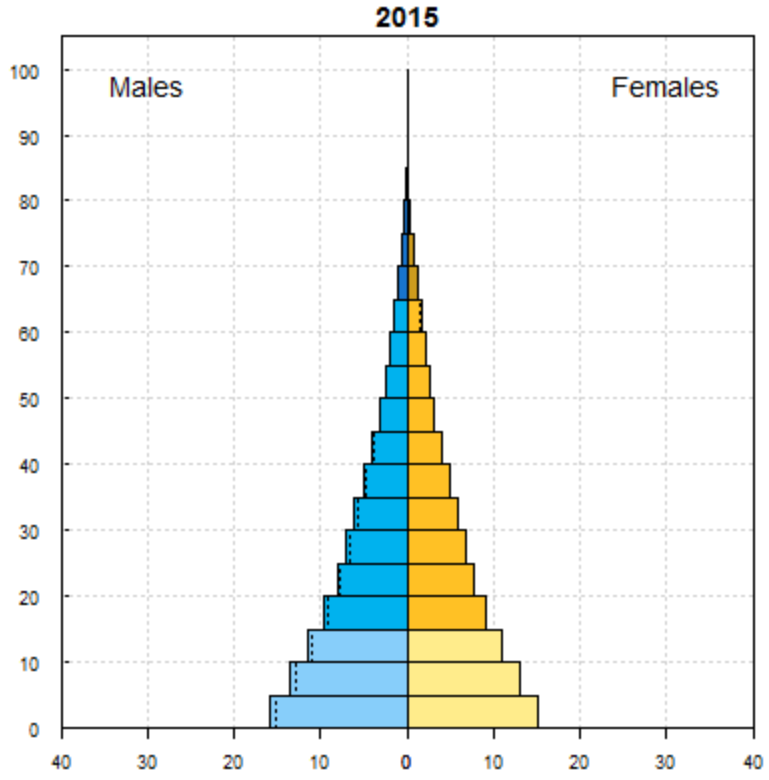
With the increasingly high population growth rate, the United Nations projected that Nigeria's population will further increase to 399 million people by 2050 which

[11] These three figures refer to three time periods: 1950-1955; 2010-2015; and 2045-2050.

would make it the third most populous country in the world after India and China (UN, *World Population Prospects* …2015: 24).

In terms of age structure, Nigeria is comprised of a relatively young population. For both males and female, the median age is 17 years (UN, *World Population Prospects* … 2015: 35). About 51 per cent of the total population is between 15–59 years; 44 percent between 0-14 years, four percent are over 60 years and 0.2 percent above 80 years (UN, *World Population Prospects* … 2015: 29). The sex ratio is estimated to be 1.04 males to one female (UN, *World Population Prospects* … 2015: 16). Graph 5.1 is the 2015 Nigerian population pyramid.

Graph 5.1: Nigeria's 2015 Population Pyramid.



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). *World Population Prospects: The 2015 Revision.*

Age at First Marriage and Birth

In many societies, like Nigeria, children born out of wedlock in a woman's life are regarded as illegitimate. In other words, marriage in a woman's life is highly valuable because it marks the beginning of when childbearing is socially acceptable. In general, women who marry early are more likely to have more children than those who marry later. The 2013 Nigeria Demographic and Health Survey (NDHS) indicates that among women ages 25-49, the median age at first marriage[12] is 18.1 years of age (NPC, *Nigeria Demographic and Health Survey* 2013:57).

Nigerian men tend to marry later than the women. As a result, the analysis for men was not done for the 20s age group but instead was carried out for the 30s age group. So for men ages 30-49, the median age at first marriage was 27.2 years. Also, a comparison of the median age at first marriage between women and men ages 30-34, shows that this was 18.2 years for the women and 27.4 years for men. In other words, women, on average, marry nine years earlier than men (NPC, *Nigeria Demographic and Health Survey* 2013:57).

Also, the median age at first marriage varies substantially by location and level of education. Urban women were reported to marry four years later than their rural counterparts, that is, 20.8 and 16.6, respectively. Women with higher education marry later than women with no formal education. For ages 25-49, 21.5 years was the median age of marriage for women with a secondary school education, compared with 15.5 years for women with no education in the same age group. Meanwhile, urban men tend to marry later than rural men. The median age at first marriage for urban men ages 30-49 is

[12] Age at first marriage means the age at which a man/woman begin living with her/his first spouse.

29.3 years of age and 25.6 years for their rural counterparts. For men, the median age at first marriage increases with education and wealth (NPC, *Nigeria Demographic and Health Survey* 2013:58).

Although marriage in Nigeria is almost universal, men tend to marry considerably later than women. Specifically, the proportion of married women ages 15-49 is 69.4 per cent, it is 49.1 per cent for men. Or, put another way, the proportion of single unmarried women ages 15-49 is 23.9 per cent compared to 48.3 per cent for men (NPC, *Nigeria Demographic and Health Survey* 2013:53).

Another important demographic measure is the age at first birth[13] which influences the Total Fertility Rate (TFR) as well as the health status of mother and child. An increase in age at first marriage can contribute to a woman's likelihood of having fewer children. Results from the survey show that the overall median age at first birth among Nigerian women ages 25-49 is 20.2 years (NPC, *Nigeria Demographic and Health Survey* 2013:77). Also, the median age at first birth increases with women's level of education. Women with no education are likely to have children four years earlier than those with education. While the median age as first time mothers is 18.1 years for women with no education, it is 22.4 years for those with secondary education (NPC, *Nigeria Demographic and Health Survey* 2013:77).

Table 5.1 summarizes Nigeria's key demographic features. Based on a summary of the key indicators, Nigeria's population is growing rapidly compared with the global rate in terms of the rate of natural increase, as stated earlier in this section. The rapid growth is also evidenced in the total fertility rate. Also, Nigeria's crude birth and death

[13] Age at first birth is the age at which childbearing commences.

Table 5.1: Nigeria's Key Demographic Features

Indicators	Nigeria	World
[b] Population size 2015	182 million	7.3 billion
Rate of natural increase (2014)	2.5	1.2
Total fertility rate[4] (2015)	5.5	2.5
Crude birth rate per 1,000 population (2015)	39	20
Crude death rate per 1,000 population (2015)	14	8
Percentage of married women 15-49 using modern contraceptives (2015)	10	56
[d] Percent of women ages 20-24 giving birth by age 18	29	--
[d] Median Birth Interval in months (2013)	31.7	--
[c] Percentage of skilled attendance at birth (1990)	31	--
[d] Percentage of skilled attendance at birth (2013)	38	--
[c] Average annual percentage change in maternal mortality ratio from 1990 to 2013	-3.3	-2.6
Maternal mortality ratio per 100,000 live births (1990)	1,200	269
Maternal mortality ratio per 100,000 live births (2013)	560	136
Life expectancy at birth for both sexes 2015	52	71
Infant mortality rate per 1,000 live births (2015)	69	37
Gross National Income per Capita ($US) 2014	5,680	15,030
Female share of parliament members 2015	5	20

Sources: Data are from the Population Reference Bureau *2014 and 2015 World Population Data Sheet* except where source is indicated as [b] United Nations, Department of Economic and Social Affairs, Population Division (2015) *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*. New York, [c] World Health Organization (W.H.O) or [d] National Population Commission (NPC) [Nigeria] and ICF International. 2014. *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.

rates are higher compared with the global figures provided in the table. In terms of contraceptive use, fewer currently married Nigerian women use modern methods, compared with the global rate. In addition, a significant number of Nigerian women give birth by age 18.

Similarly, the average spacing time between childbirth is precisely two years and seven months. There has also been a significant increase in the number of skilled birth attendants in attendance at births within the past two decades. Based on the average annual percentage change in MMR, Nigeria's MMR has declined by a little more than half in the past two decades. The average number of years people live in Nigeria is shorter compared with global rates by about 20 years. Nigeria has higher mortality rates including infants mortality rates, compared with global rate. In terms of Gross National Income (GNI), Nigeria ranks 125 on a global scale according to the Population Reference Bureau 2014 GNI Purchasing Power Parity (PPP) estimate (Population Reference Bureau 2014a, *GNI PPP Per Capita*). In addition, the proportion of women in the Nigerian parliament are fewer compared to the global rate.

Nigerian Population Policy

Nigeria's first explicit population policy took effect in 1988. The original aim of the policy was to improve the standards of living and quality of life of her citizens by providing a framework and guidelines to reduce the country's increasing and explosive population growth. The previous Buhari (1983-1985) and Babangida (1985-1993) administrations, respectively, felt there was a critical need to formulate a national population policy as the increasingly high population growth rate had negative

consequences on the welfare of Nigerians and the socioeconomic development of the country (Obono 2003:103). It should be noted here that the idea of a national population policy originated from "deliberations of international conferences" (Obono 2003:104). In other words, the original idea behind the Nigerian population policy was Western and alien to the Nigerian ethnic diversity and pro-natalist culture.

The policy was also ineffective and criticized on a number of grounds. One of the more serious criticisms was that the policy failed to take into cognizance the country's cultural or ethnic diversity (Adegbola 2008:60; Obono 2003:108-109). The strongest criticism of the population policy, however, was that the policy only targeted women's fertility behavior for change but ignored the male reproductive motivation. As a matter of fact, advocates of the policy consisted mainly of males with few females, which was an indication of the neglect of the female voices even though women are obviously central to any fertility decision-making (Obono 2003:108).

Subsequently, newer issues like poverty, HIV/AIDS, and gender inequality gained wider national recognition. This prompted a review of the 1988 National Population Policy. In January 2004, the 1998 policy was replaced with the National Policy on Population for Sustainable Development signed by Chief Olusegun Obasanjo, the then President and Commander-in-Chief of the armed forces of the Federal Republic of Nigeria (NPC, *Nigeria Demographic and Health Survey* 2013:3). The overall goal of the 2004 policy is to promote the welfare and improve the standard of living of Nigerians through improving the health of all Nigerians, reducing infant and maternal mortality, reducing fertility, increasing modern contraceptive prevalence rate, eliminating illiteracy,

and promoting basic education amongst other specific goals (NPC, *Nigeria Demographic and Health Survey* 2013:4).

In more specific terms, the 2004 policy set certain targets to be achieved by 2015 including reducing the national population growth rate to two per cent or less by 2015, and reducing MMR by 75 per cent by 2015, among other targets (NPC, *Nigeria Demographic and Health Survey* 2013:4). Eleven years after, outcome measures show that none of the targets were achieved (Shofoyeke 2014:2520). For instance, data from the 2013 edition of the World Statistic Pocketbook, put the 2010-2015 Nigerian population growth rate at 2.5 percent, which is higher than the 2 percent 2015 target (World Statistics Pocketbook 2013: 144; Shofoyeke 2014:2522). However, Nigeria's MMR has significantly declined in two decades (Cooke and Tahir 2013:3), even though it has still not reached the MDG 5 target which is a 75 per cent reduction by 2015 (Anger 2010:139; Omideyi 2007:4).

Trends in Family Planning and Maternal Mortality

Family Planning

Family planning refers to a couple's use of traditional methods or modern contraceptives to space childbirth (NPC, *Nigeria Demographic and Health Survey* 2013:89). Contraceptive methods are either modern or traditional. Some examples of modern contraceptive methods include the pill, injectables, male and female condoms, and other modern methods. On the other hand, traditional methods include withdrawal, separation during breastfeeding, and periodic abstinence.

Overall, the contraceptive (modern and traditional) prevalence rate among Nigerian women who are currently married, increased from 6 percent to 15 percent between 1990 and 2013. On the other hand, the use of modern methods among women who are currently married rose from four to 10 percent in the same 23 years period (NPC, *Nigeria Demographic and Health Survey* 2013:97). These modern methods are obtained largely from private sectors, such as private hospitals or clinics, pharmacist, and NGOs amongst other private sources, with less being obtained from public sectors such as public or government hospital and clinics (NPC, *Nigeria Demographic and Health Survey* 2013:98; Population Reference Bureau 2013, *Family Planning*…: 11).

Currently, there is widespread knowledge and use of contraceptive methods in Nigeria. The rates of general awareness and use are, however, higher with modern than traditional contraceptive methods. As a matter of fact, 84 percent of women and 94 percent of men know of at least a modern contraceptive method while 56 percent of women and 65 per cent of men know of a traditional method (NPC, *Nigeria Demographic and Health Survey* 2013:90).

As expected, the knowledge and use of contraceptive methods varies by education, location and wealth. While women with education, women who live in urban areas and the richer quintile have higher knowledge of contraceptive methods, the reverse is the case for their counterparts (NPC, *Nigeria Demographic and Health Survey* 2013:91). As well, in terms of practice, women with education, women who live in urban areas and women in the richer quintile are more likely to use contraceptives than their counterparts (NPC, *Nigeria Demographic and Health Survey* 2013: 97).

In terms of use, while 16 per cent of all women use any contraceptive method, 15 percent of currently married women use any contraceptive method with 10 percent of them using modern contraceptive methods and the remaining five per cent using traditional methods. In addition, amongst currently married women, the pill is the most known modern contraceptive method (NPC, *Nigeria Demographic and Health Survey* 2013: 93) though injectables are the most widely used (NPC, *Nigeria Demographic and Health Survey* 2013:92; Population Reference Bureau 2013, *Family Planning*…: 6).

Maternal Mortality Ratio

Nigeria has had one of the highest maternal mortality ratios (MMR) in the world, yet has managed to reduce this rate from 1990. In general, the primary causes of maternal death in Nigeria include obstetric complications such as hemorrhage, infection, unsafe abortion, hypertension and obstructed labor (Fabamwo and Okonofua 2010:55). Other risk factors include very young maternal age (Ujah *et al.* 2005:32).

The majority of these deaths could have been avoided by timely medical interventions (Thaddeus and Maine 1994:1092). These "three delays" are some of the key factors contributing to maternal deaths: delay in seeking early prenatal care, delay in getting access to health facilities during pregnancy, and delay on the part of management in giving quick and adequate care in emergency situations (Nwagha *et al*. 2010:323). This third delay, which also includes health workers' lateness to work and lack of empathy, has posed challenges to the Nigerian government in all its sectors including health, education, security and other public sectors (Igwegbe *et al*. 2012:197).

The situation is further aggravated by the poverty level in Nigeria. With most Nigerians living below a dollar a day, many pregnant women are either not able to access

good prenatal health care services or obtain transportation to hospitals. As well, many are unable to pay for medical services rendered during and after pregnancy (Okonofua, Lambo, Okeibunor and Agholor 2011:132). Another serious problem is that there are not enough health facilities equipped for deliveries, especially at the rural level (Ayanleye 2013:129).

Evidence also abounds that about 70 per cent of maternal deaths in Nigerian hospitals occur due to "unbooked emergencies" which is linked to poverty. These refer to women who fail to receive antenatal care and instead arrive at the hospital for the first time when they experience complications in labor (Harrison 1997:8). In the same vein, due to lack of knowledge, women in rural areas make limited use of available maternal and child services for themselves and their infants (Nwala, Ebunoha and Ugwu 2013:4).

Adegoke *et al.* (2013:320) pointed to an overall poor health care system and also a lack of access to skilled health workers during delivery as another cause of maternal deaths in Nigeria. Put differently, most women deliver in their homes without assistance from trained health staff who could care for pregnant women or make referrals in emergency situations (Ayanleye 2013:130). Galadanci, Idris, Sadauki and Yakasai (2010:34) mentioned insufficient blood supply in blood banks and low staff salaries as some factors that contribute to maternal deaths in Nigeria.

Maternal mortality is also an indicator of inequity in Nigeria mostly affecting the poor and disadvantaged (Ujah *et al.* 2005:30). Based on the Reproductive Justice Index (Kayongo-Male, 2013), Nigeria was ranked as one of the most reproductively "unjust" countries in Africa (See Appendix B for the Reproductive Justice Index). Nigeria is in the top 11 of 37 countries in that index. Unjust countries are measured by the level of

prevailing inequality in reproductive justice and are so ranked based on a total of 13 indicators, including the Human Development Index of the UNDP; births attended by skilled personnel; and threats from disease-related or ecological factors such as water pollution, malaria, HIV prevalence, and tuberculosis (Kayongo-Male 2013:18). All of these indicators were potential factors influencing maternal mortality. .

Occurrence of maternal mortality is more common among women in the rural areas than those in the urban regions (Galadanci, Idris, Sadauki and Yakasai 2010:32). In most cases, pregnant women in rural areas die due to poor living conditions such as lack of clean water, limited power supply and lack of other basic amenities (Harrison 1997:7).

Overall, maternal mortality rates are highest in the Northern parts of Nigeria (Galadanci, Idris, Sadauki and Yakasai 2010:31). Wall (1998:347) attributes the high rates in the North to an Islamic culture that undervalues women, the practice of purdah or wife seclusion which restricts women's access to medical care, early marriage and childbirth and others factors.

However, nationwide there has been a positive change in trend of maternal mortality. Nigeria's maternal mortality ratio has significantly declined in the past few decades (Cooke and Tahir 2013:3) from 1,200 per 100,000 live births in 1990 to 560 per 100,000 live births in 2013 - a 52 per cent reduction, (WHO *Nigeria,* 2014:1) making the country one of the highest with an annual percentage declines in maternal mortality rates among African nations (World Health Organization 2014, *Trends in Maternal Mortality*…:33).

It should be recalled that the original call for maternal mortality reduction was made at the Safe Motherhood Conference (Cohen 1987:68) from which the MDG goals

were developed including the MDG 5 2015 target (Anger 2010:139; Omideyi 2007:4). Given the tremendous international attention being devoted to monitoring and publicizing progress on the MDG goals, Nigeria and other developing countries have made efforts to reduce maternal mortality rates in their countries (Igwegbe *et al.* 2012:197). In other words, the national norm seems to have been strongly influenced by the MDG goal-setting process.

Conclusion

This chapter focused on some general facts about important population issues as a means of presenting a deeper understanding of Nigeria as the country of research. Basically, the issues discussed here are some vital components of maternal health which if overlooked could contribute to maternal mortality and morbidity. For instance, the non-use of any contraceptive method whether modern or traditional can lead to mistimed pregnancies, especially among currently married women who wish to space childbirth. Studies have shown that a spacing interval between children of two years or longer contributes to improved maternal and child health (NPC, *Nigeria Demographic and Health Survey* 2013:72).

As for the contraceptive prevalence rate, results from the survey indicate that, in general, a low proportion of women use any method whether modern or traditional, despite the general widespread knowledge of these methods (NPC, *Nigeria Demographic and Health Survey* 2013: 93). Yet, among women currently married, there is a modest but significant increase in the contraceptive prevalence rate over the last two decades (NPC, *Nigeria Demographic and Health Survey* 2013: 97).

Lastly, even though Nigeria's MMR was once among the highest in the world, the country has managed to reduce the rate of MMR. So far, Nigeria is ranked as one of the countries making progress towards the 2015 target for MDG 5 (World Health Organization 2014, *Trends in Maternal Mortality*...:40), that is, reducing its MMR by 75 per cent by 2015 (Anger 2010:139; Omideyi 2007:4).

The next chapter discusses initiatives and interventions that contributed to the decline of MMR in Nigeria.

CHAPTER SIX:

INITIATIVES AND INTERVENTIONS

Introduction

Chapters Six and Seven are the two chapters that contain the findings related to the theoretical framework. This chapter discusses the key initiatives and interventions that in combination with other factors covered in Chapter Seven, contributed to the 2013 observed outcome. Both this chapter and the next will introduce theoretical concepts most relevant to the material being covered with the understanding that some of the material may be interpreted in terms of more than one theoretical concept. A more comprehensive summary of the findings in terms of the theoretical framework will be included in the final chapter.

Transformational Actors

In the case of all the initiatives and interventions, the theoretical concept of transformational actions is most relevant. Eager referred to transformational actors as those agents who have the capacity or power to change an existing norm. In more specific terms, she argued that transformational actors could be "states, international organizations, ad hoc alliances, social movements, or even individuals" (Eager 2004:166). Transformational individuals will be discussed in the next chapter. In this chapter, transformational actors include: international organizations organizing critical international meetings or broader initiatives, foreign government and international agencies such as the USAID and UNFPA, the Nigerian government, and

Nongovernmental Organizations (NGOs). These actors or agents include both state and non-state actors. Specifically, these actors initiated and implemented various interventions within different time periods that in combination with other factors led to the observed outcome. Interventions by transformational actors are now described in detail.

International Initiatives or Campaigns

Some of the most important influences on Nigeria's effort to decrease maternal mortality were international meetings or campaigns which were meant for a large number of countries. The history of how Nigeria created a norm for healthy motherhood and reduced maternal mortality is interconnected with international initiatives which made safe motherhood a key focus of national development efforts particularly in developing nations.

Millennium Development Goals. One international initiative or campaign, discussed in Chapter Two, was designation of the 2000 UN Millennium Development Goals[14] (MDG) (United Nations Millennium Summit, 2000) which included the target of improvement in maternal health and reduction in maternal deaths by three-quarters by 2015, among other MDG goals (Anger 2010:139; Omideyi 2007:4).

Safe Motherhood Initiative. Another international initiative was the Safe Motherhood Initiative (SMI)[15] . One of the origins for the global concern for maternal

[14] Among the Millennium Development Goals (MDGs), adopted at the 2000 United Nations Millennium Summit, was Goal 5 - Improve the health of mothers – reducing maternal mortality by three-quarters by 2015.

[15] The Safe Motherhood Conference was organized under the joint sponsorship of the World Bank, WHO, United Nations Funds for Population Activities (UNFPA). It was attended by health ministers and developing experts from about 20 Africa, Asian and Latin American countries, Agency for International

health, as noted in the literature review chapter, was the 1987 Safe Motherhood Initiative (SMI) in Nairobi where the call for a reduction in maternal mortality was originally made. It was at that international conference that the issue of maternal deaths was identified as a serious problem facing the developing nations. A call for action to reduce maternal deaths was issued at that meeting (Cohen 1987:68).

Following the SMI which set the global agenda for Safemotherhood[16] in 1987, Nigeria was one of the earliest countries to expand the initiative at the country level. It organized its first National Safemotherhood Conference in Abuja in 1990. The conference which was convened by the Society for Obstetrics and Gynecology of Nigeria[17] (SOGON) (Shiffman 2007:800) was a formal call to action across all levels of society in the nation, to reduce the high rates of avoidable maternal and infant mortality as well as improve maternal welfare and health care (Conroy 1995:134).

The Nigeria National Safemotherhood conference sparked interest from the federal government and international organizations like the USAID, to investigate the causes of the high rates of maternal death so as to come up with effective interventions that would address the problem. In fact, in 1991 (Conroy 1993:25) the Nigeria Federal Ministry of Health sought assistance from USAID in helping to reverse the trend. As a

---

Development; representatives from the U.S., British, Canadian, Swedish, Danish, Norwegian and Finnish development agencies; the Ford Foundation; the Rockefeller Foundation; and the Carnegie Corporation. See Cohen, Susan A. (1987) "The Safe Motherhood Conference." *International Family Planning Perspectives* 13(2):68-70.

[16] Safe motherhood means ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth. The first meeting was in 1987 in Nairobi, Kenya.

[17] The Society of Gynecology and Obstetrics of Nigeria (SOGON) is the umbrella professional organization of Gynecologists and Obstetricians in Nigeria. It was inaugurated in April 1965 and formally registered with the Corporate Affairs Commission as a Non-Government Organization in 1999. SOGON has a vision that Nigerian women achieve the highest possible standards of physical, mental, reproductive and sexual health and wellbeing throughout their lives. SOGON works with the Federal Ministry of Health, international development partners, other professional bodies and non-governmental organizations in Nigeria.

result of this request, MotherCare (of USAID) was invited to design and carry out a country-level project that would help reduce maternal mortality in Nigeria (Conroy 1995:134). Specifically, the request from the Nigerian Federal Ministry of Health led to the design and implementation of MotherCare Nigeria which will shortly be discussed in detail.

Consequently, the period of concrete actions and intervention leading to the "reduction of maternal mortality" as the new norm began with the Safemotherhood conference where the spotlight was officially put on the tragedy of maternal mortality in the developing nations (Cohen 1987:68). Following that meeting, actors who possessed the required resources to bring about a reduction in the high MMR in Nigeria, swung into action. This fits Eager's idea that a change from an existing to new norm is brought about by actors who have transformational capacity to do so (Eager 2004:166).

Foreign Government Agency Interventions

MotherCare in Nigeria. One of the earliest efforts made to tackle maternal mortality was the establishment of the MotherCare project. MotherCare was the global maternal health project developed by the United States Agency for International Development (USAID) which lasted for over a decade, from 1989 to 2000. The primary objective of this project was to reduce maternal and infant mortality and related morbidities as well as to promote the health of mothers and their newborns. To this end, the USAID entered into a five-year (1988 to 1993) MotherCare contract implemented by John Snow Inc. (JSI) in selected developing countries including Nigeria (Gordis *et al.*

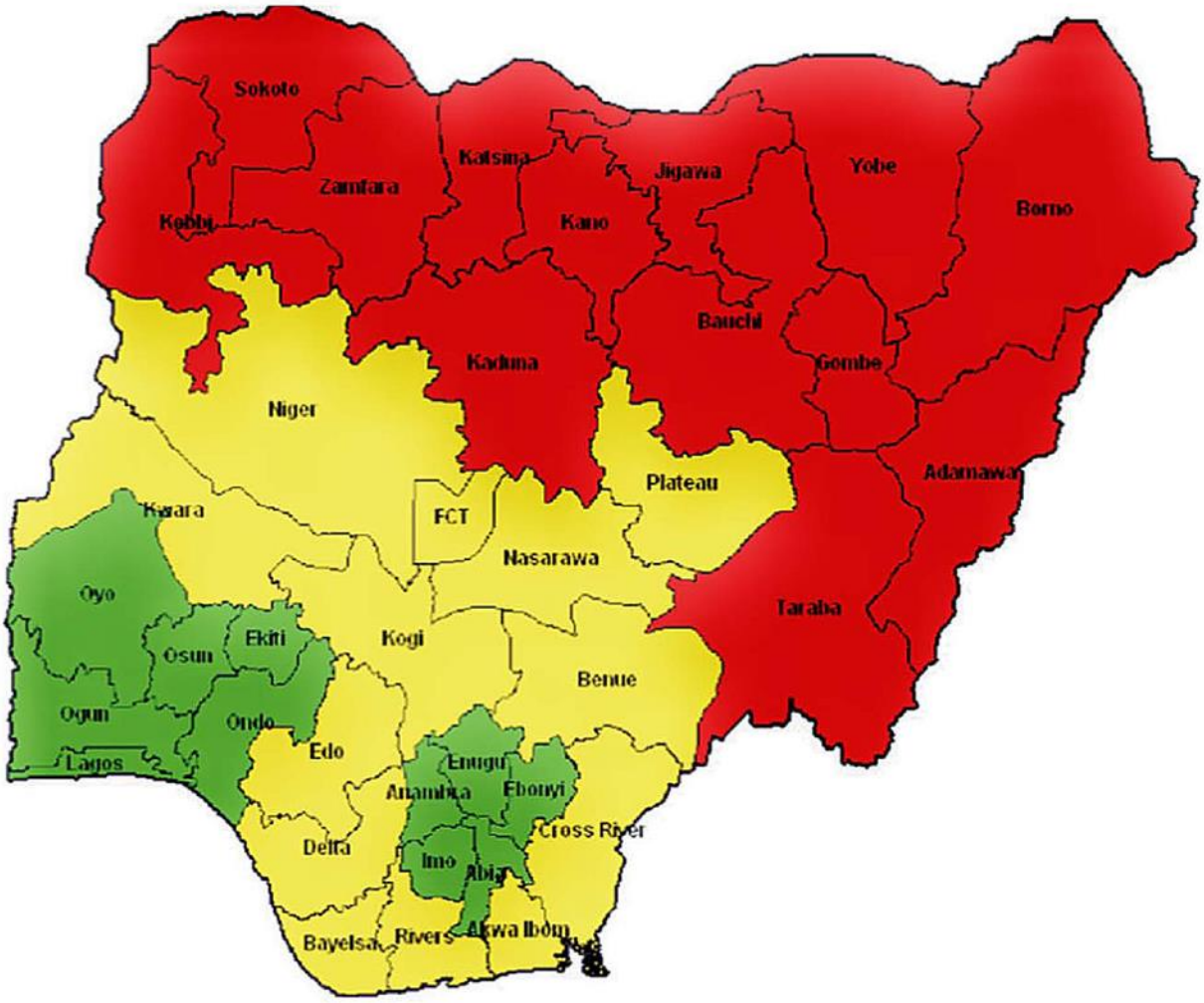
1994:5). The MotherCare project commenced in 1989 with the goal of improving pregnancy outcomes for mothers and their newborns (Kwast 1995:S70).

MotherCare Nigeria project, which followed from the original MotherCare project, was a 19-month project (March 1992 to September 1993) (USAID, *MotherCare Nigeria*…1991: 1). MotherCare Nigeria will further be covered as a separate intervention in the section on the Nigerian government efforts later in this chapter.

To achieve its aim, MotherCare in Nigeria project employed three strategies to guide the implementation process (Gordis *et al.* 1994:8). First was the focus on an improvement in delivery of maternal services through the training of midwives (USAID, *MotherCare Nigeria* …1991: i). The second strategy was an improvement in policy formulation to "support the expanded role of the midwives and the targeting of hospitals to function as training centers" (Kwast 1995:S80). Third, there was the intent to influence women to change their health behavior during pregnancy so that they seek prenatal and other maternal health services. This included creating awareness about the nutritional and health problems of mothers and their newborns through social marketing (Gordis *et al.* 1994:8).

The MotherCare in Nigeria project had the support and cooperation of the Nigerian government and non-governmental organizations. While the governments of the selected states of Oyo, Osun and Bauchi (See Figure 6.1 below) upgraded and equipped facilities (Gordis *et al.* 1994:29); the Nigerian Nurses and Midwives' Council (NNMC) in collaboration with the Society for Obstetrics and Gynecology of Nigeria (SOGON) provided the manual for the training of health care providers (Kwast 1996:51). Health care staff, especially midwives, were trained in workshops to improve their life-saving

Figure 6.1: Nigerian Map with Maternal Mortality Categories by States in 2012



Note: While states in the North East and North West zones highlighted in **red** have the highest MMR in Nigeria, states in the South East and South West highlighted in **green** have the lowest MMR. States in the North Central and South South zones highlighted in **yellow** are in the middle in terms of MMR. Still the rates vary across zones. Specifically, while the MMR in the North East was 1,549/100,000, making it the region with the highest MMR; it was 165/100,000 for the South West, making it the region with the lowest MMR.

Source: Abimbola, Seye, Ugo Okoli, Olalekan Olubajo, Mohammed J. Abdullahi, and Muhammad A. Pate (2012) "The Midwives Service Scheme in Nigeria." *PLoS medicine* 9(5):e1001211.

skills, interpersonal communication skills and counselling skills on maternal and newborn health, so as to provide more effective and high-skilled services in project facilities (Kwast 1995:S80).

Though the exact number of midwives trained was not provided in reports, information from the MotherCare in Nigeria work plan estimated a minimum of 160 midwives were to be trained during the course of the project (USAID *MotherCare Nigeria…*1991: i). Also, for this project only the technical assistance[18] budget in the amount of ₦7,192,992 naira ($599,416.00) was provided by USAID (USAID, *MotherCare Nigerian…*1991: ii, 13). In other words, the Oyo, Osun and Bauchi state' governments covered the cost of the other parts of the project, such as the cost of upgrading of facilities, among other expenses, even though their exact financial contribution was not given.

Based on the data collected, outcome measures were only provided for Bauchi state out of the three project states mentioned above. No reason was given regarding why Oyo and Osun states were left out. Specifically, there was a 57 per cent reduction in postpartum hemorrhage, and a 59 percent increase in the number of women who worked as midwives in Bauchi. Most importantly, these actions and training contributed to a reduction in maternal mortality and morbidity, though exact numbers or the percentage of decrease was not provided for Bauchi state (Kwast 1996:51; Kwast 1995:S81).

[18] Technical assistance is a form of aid given to less-developed countries by international organizations. Its object is to provide those countries with the expertise needed to promote development. Technical assistance include technical advice, training or sending experts into the field to teach skills and to help solve problems, among others. They are financed by voluntary contributions from members.

ACCESS/ MCHIP

Another USAID-sponsored intervention is the Access to Clinical and Community Maternal, Neonatal and Women's Health Services (ACCESS) project. ACCESS Nigeria was a three-year project that ran from January 2006 to March 2009 (USAID *Nigeria* 2012:13). The project, which was implemented by an international NGO, JHPIEGO[19] , affiliated with Johns Hopkins University (USAID *Nigeria* 2012:8), began in selected Local Government Areas (LGAs) in Kano and Zamfara states. By 2008, Katsina state was included in the project at the request of the state government. In all, ACCESS worked in selected facilities in 22 LGAs in the states of Kano, Zamfara and Katsina (USAID *Nigeria* 2012:13).

In general, the Northwestern zone where the above mentioned states are located had higher Total Fertility Rates (TFRs); and poorer maternal and infant health outcomes than the national average including higher maternal and infant mortality rates. They have also had a lower Contraceptive Prevalence Rate (CPR), Skilled Birth Attendance (SBA), facility deliveries and Antenatal Coverage (ANC) compared to the national rates (USAID *Nigeria* 2012:14). As a result of these poor health indicators, ACCESS in collaboration with the selected states and LGAs worked to improve maternal and infant health outcomes in project sites (ACCESS *Nigeria* 2015:103).

Ultimately, the goal of ACCESS Nigeria was to contribute to the decline in maternal and infant mortality. This goal was to be achieved through the program objectives which dealt with two aspects of quality of care: an increased access to and use

[19] JHPIEGO is an "international non-profit health organization affiliated with Johns Hopkins University." The group was founded in 1973 and was initially called the Johns Hopkins Program for International Education in Gynecology and Obstetrics, but is now referred to simply as JHPIEGO.

of Emergency Obstetric and Newborn care (EmONC), and Family Planning (FP) services (ACCESS *Nigeria* 2015:103; USAID *Nigeria* 2012:13).

ACCESS Nigeria originally started as a three-year project, scheduled to end in March 2009, but it transitioned under the Maternal and Child Health Integrated Program (MCHIP), to another three-year project that commenced in April 2009 and ran to February 2012 (USAID *Nigeria* 2012:13). As a matter of fact, "the transition from ACCESS Nigeria to MCHIP Nigeria was facilitated by the fact that the latter project was designed to build on the successes achieved and lessons learned under the ACCESS/Nigeria project; and to continue support to the Government of Nigeria (GON) to increase and improve maternal and newborn care services in project sites" (USAID *Nigeria* 2012:13). In other words, MCHIP/Nigeria Project was a continuation of ACCESS Nigeria with the same goal and activities (MCHIP *Nigeria* 2015:160).

The ACCESS/MCHIP also extended coverage to a total of 58 facilities in 28 LGAs across the three project states, (USAID *Nigeria* 2012:13). Twenty-three of the selected facilities were located in 11 LGAs in Kano state (USAID *Nigeria* 2012:88-90). Twenty facilities were located in eight LGAs in Zamfara state (USAID *Nigeria* 2012:87-88) and the remaining 15 facilities were located in nine LGAs in Katsina state (USAID *Nigeria* 2012:90-91).

Overall, the USAID/Nigeria yearly transferred funds to Nigeria from January 2006 to February 2012, which was the duration of the two projects. These funds went "first, to ACCESS and, subsequently, when ACCESS ended, to MCHIP" (USAID *Nigeria* 2012:13). While, the total funds "obligated and transferred" for ACCESS Nigeria was $6,073,000, there was also $6,250,000 for MCHIP Nigeria, making a total of

$12,323,000 (USAID *Nigeria* 2012:14). The USAID may have covered the total cost of both projects as there was no information provided on additional financial support from the Nigerian government towards these projects.

ACCESS/MCHIP key intervention strategies include a Household-to-Hospital Continuum of Care (HHCC) model. This involves community- and facility-based interventions that focused on family planning and EmONC. Here, trained community counsellors increased the demand for facility use by linking communities with a facility where trained health professionals provided the required care (USAID *Nigeria* 2012:18).

Community mobilization efforts also included the recruitment and training of 477 female Household Counselors (HHCs), and 449 Male Birth Spacing Motivators (MBSMs) (MCHIP *Nigeria* 2015:161) on methods of increasing awareness among individual women and men in their respective homes regarding how to access quality EmONC and family planning services. Basically, the female counsellors educated pregnant women on how to recognize danger signs during pregnancy and after delivery. On the other hand, the male motivators educated men on identifying danger signs during and after pregnancy; the benefits of contraceptive use as it helps with childbirth spacing; and the importance of explaining to women the benefits of antenatal visits and facility delivery with skilled birth attendants. They urged the men to encourage their wives to take advantage of both antenatal visits and delivery with a skilled birth attendant (USAID *Nigeria* 2012:8).

On the other hand, the facility-based intervention include the training of health providers on EmONC and family planning, as well as renovating and upgrading of health facilities in project areas. A total of 2,678 midwives, doctors and Community Health

Extension Workers (CHEWs) were trained to provide quality maternal and child health care (USAID *Nigeria* 2012:24). More than 600 of them were trained to provide quality family planning services, postpartum family planning, and contraceptive technology updates among other services (USAID *Nigeria* 2012:22). In addition, 19 health facilities were refurbished and equipped with basic obstetric equipment including delivery and Caesarean section kits, among others. This equipment and material were also provided for other facilities that needed them (USAID *Nigeria* 2012:25).

Some key achievements from the final evaluation report of ACCESS/MCHIP include the fact that female counsellors successfully reached 32,926 pregnant women out of which 12,481 were referred to health facilities for the needed maternal and child health care. Also, the male motivators referred more than 11,000 men to facilities for family planning counselling (USAID *Nigeria* 2012:8). Similarly, from 2007 to 2011, the number of facility deliveries with a skilled birth attendant, overall, increased from 7,685 to 57,755, which was a 6.59 per cent increase. Antenatal care visits rose from 33,333 to 265,266; and family planning counselling visits increased from 11,924 to 134,278, all in the same period in the selected facilities mentioned earlier, in Kano, Zamfara and Katsina states (USAID *Nigeria* 2012:19).

Furthermore, data from 10 facilities in Kano and Zamfara states revealed that out of the 7,685 deliveries in 2007, there were only 283 maternal deaths. In 2010, the number decreased to 163 maternal deaths out of 21,977 deliveries. In other words, between 2007 and 2010, there was a MMR decline from 3.68 percent to .74 percent of all births. No data on maternal deaths was provided for Katsina state as the third state (USAID *Nigeria* 2012:40). One of the reasons given for minimal impact in Katsina is that there were fewer

scale-up efforts in Katsina state than there were in Kano and Zamfara states. For instance, only two of the selected 15 facilities in Katsina state were renovated (USAID *Nigeria* 2012:96). Clearly, this affected performance and overall outcome in Katsina state. Still, one very positive impact of ACCESS/MCHIP is that "once communities became aware that certain facilities had been renovated and providers trained, they were more inclined to seek services from these nearby facilities" (USAID *Nigeria* 2012:8).

Interventions by the UN and International Agencies

UNFPA Maternal Health Thematic Fund

In 2008, the United Nations Population Fund (UNFPA)[20] in collaboration with the United Nations Children's Fund (UNICEF), the World Bank, and the World Health Organization (WHO) launched the Maternal Health Thematic Fund (MHTF). The five-year project (2008-2013) was a joint effort by these international agencies with the target of supporting a total of 60 countries, with the highest maternal mortality, in decreasing their maternal and child mortality rates by the end of the five-year period. The first wave of 11 countries supported include: Bénin, Burkina Faso, Burundi, Cambodia, Djibouti, Ethiopia, Guyana, Haiti, Madagascar, Malawi and Sudan (UNFPA 2008:30).

In the first year of implementation, UNFPA was able to come up with $25 million with pledges from Austria, Finland, Ireland, Luxembourg, The Netherlands, Spain and Sweden (UNFPA 2008:3). The seven core areas of focus of the MHTF include

[20] UNFPA is the lead UN agency for delivering a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled. UNFPA expands the possibilities for women and young people to lead healthy and productive lives. See *United Nations Population Fund (2016) About Us* http://www.unfpa.org/about-us

upgrading skills of maternal health care personnel, especially midwives; increasing access to family planning; Emergency Obstetric and Newborn Care (EmONC); and improving access to Sexual and Reproductive Health (SRH) among others (UNFPA 2008:6).

Earlier, in 2003 the UNFPA and partners[21] launched the Campaign to End Fistula "to reduce morbidity as well as mortality in order to improve maternal health" (UNFPA 2008:23). In the 2008 Maternal Health Thematic Fund Annual Report, obstetric fistula was listed as one of the additional issues that was considered to be included in the MHTF "maternal and newborn health programming" (UNFPA 2008:34). As a result, in the 2009 report, "The Campaign to End Fistula, was integrated programmatically and financially into the MHTF" (UNFPA 2009:21) with $6,981,654 in contributions from donors like the Americans for UNFPA[22] or Friends of UNFPA, the governments of Iceland, Republic of Korea, Luxembourg, Spain, Poland, Norway, New Zealand, Women's Missionary Society of the African Methodist Episcopal Church, and Zonta International and private contributions (UNFPA 2009:76).

In the second full year of implementation in 2010, Nigeria joined the countries that got full support from the MHTF. Specifically, Nigeria was allocated $300,000 for maternal health (UNFPA 2010:94) and $208,025 for obstetric fistula (UNFPA 2010:97). In that year, the MHTF had a $27 million budget for its overall operation (UNFPA

[21] UNFPA partners comprised of approximately 25 institutional members including international and regional NGOs, universities, health facilities and United Nations agencies.

[22] Americans for UNFPA's name was changed to Friends of UNFPA in 2012. Friends of UNFPA was established in 1998. It is a non-profit organization that supports the work of UNFPA. UNFPA is delivering a world where every pregnancy is wanted, every childbirth is safe, and every young person's potential is fulfilled. Friends of UNFPA advances this global effort by mobilizing funds and action for UNFPA's lifesaving work.

2010:8). For the remaining three years of the project, 2011, 2012 and 2013, Nigeria got full support from the MHTF. In 2011, $370,000 was allocated for maternal health (UNFPA 2011:37) and $180,000 for obstetric fistula (UNFPA 2011:41). In 2012 and 2013, Nigeria got $400,000 MHTF support for each year for maternal health (UNFPA 2013:46) with no additional funding for obstetric fistula for either year (UNFPA 2013:50).

Nigerian Government Actions and Interventions

MotherCare Nigeria

The Nigerian government had been part of earlier attempts to tackle maternal mortality in Nigeria. As earlier noted, the birth of MotherCare Nigeria project was initiated in response to a request made by the Nigeria Federal Ministry of Health to the USAID to help tackle the problem of maternal mortality in Nigeria (Conroy 1995:134). As a matter of fact, at the commencement of the MotherCare Nigeria country project, which began in 1992, the participating state governments of Oyo, Osun and Bauchi states showed solid commitment to the reduction of maternal mortality by signing a formal agreement with the international agencies about their shared responsibilities in the implementation process (Conroy 1995: 133). In more specific terms, a memorandum of understanding between the three participating state governments, the USAID and Nigeria Federal Ministry of Health was agreed upon regarding their various roles towards the implementation of the project (USAID, *MotherCare Nigeria*…1991:3).

The participating state governments were, among other roles, responsible for training healthcare staff, especially midwives, so as to improve the quality of maternal

health care services. They were also required to furnish health facilities with the necessary equipment needed for providing quality maternal health care services, such as prenatal, labor, and delivery. In addition, they were to ensure that the needed management and logistics support required for the successful implementation of activities were in place (Conroy 1993:26).

On the other hand, the USAID was to provide technical assistance to support project activities (Conroy 1993:24) and the Federal Ministry of Health was responsible for implementing national policies regarding the quality of maternal health care (Conroy 1993:28). Put differently, the Federal Ministry of Health was to organize policy meetings in order to provide an explanation or justification for better standards but also "to promote an upgraded standard of practice for midwives" (Conroy 1993:27).

It should be noted that, information from the MotherCare Nigeria work plan showed that Oyo, Osun and Bauchi were selected as the participating states after a "preliminary assessment" was conducted by the Nigeria Federal Ministry of Health and MotherCare USAID in six states of Oyo, Osun, Kano, Kaduna, Niger and Bauchi. This assessment was based on some selection criteria which were not explicitly stated in the work plan. It is possible that these states had very high MMR at that time. What is clear in the work plan was that, the MotherCare Nigeria project was intended to be implemented in both Northern and Southern states. That explains why there are states like Bauchi from the North East with states such as Oyo and Osun from the South West (USAID, *MotherCare Nigeria…*1991:3).

Misoprostol Use Approved

In his statement about the high rate of maternal death, former president Olusegun Obasanjo described the situation as "unacceptable and (that it) must be reversed." In an attempt by the federal government to reverse this trend, the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC) approved the use of misoprostol[23] for the prevention or treatment of postpartum hemorrhage (PPH) in hospitals and clinics. In fact, stakeholders at the meeting had agreed that a 75 per cent decline in maternal mortality by 2015 would be impossible to achieve "without widespread access to misoprostol" (Jadesimi and Okonofua, 2006: 213). This made Nigeria the first country in the world to use the drug for the treatment or prevention of postpartum hemorrhage (Jadesimi and Okonofua, 2006: 213).

This decision was the result of the consensus from a February, 2006 policy meeting held in Abuja about strategies on how to reduce maternal mortality in Nigeria. Participants at the meeting included leaders in the medical community, nurses, pharmacists and representatives of the Federal Ministry of Health, members of the Society of Obstetricians and Gynecologists of Nigeria (SOGON) and non-governmental organizations. The consensus to use misoprostol was based on the experience of health professionals at the meeting who pointed to the effectiveness and safety of the drug for pregnant women (Jadesimi and Okonofua 2006: 213).

Similarly, in December 2010, Nigeria took another remarkable step when it became the first country in the world to endorse the guidelines for the use of the drug at

[23] Among other uses, Misoprostol is a medication used to start or induce labor to prevent postpartum or excessive bleeding after childbirth. It is also used to treat postpartum or excessive bleeding due to insufficient contraction of the uterus.

the community level. Besides being an inexpensive drug, the use of misoprostol tablets at the community level offers a life-saving solution to pregnant mothers. The guidelines for the use of misoprostol tablets at the community level was the product of the combined effort of two teams. While the guidelines were specifically drafted by a team comprised of Dr. Clara Ejembi of the Population and Reproductive Health Partnership (PRHP), Venture Strategies Innovations (VSI) and a research unit from Ahmadu Bello University in Kaduna State, the protocol was finalized and approved by another technical team comprised members of the Federal Ministry of Health, and local and international non-governmental organizations (VSI, 2015).

Free Maternal and Child Health Policy

The policy of Free Maternal and Child Health[24] (MCH) services has also contributed to the reduction of maternal death in Nigeria. This initiative started as a federal government initiative that was adopted by states. As a matter of fact, Kano state was the first to implement this policy at the state level in 2001 (Yakasai, Abubakar, and Dikko 2012:18; Saka *et al.* 2008:7; Galadanci, Idris, Sadauki, and Yakasai 2010:33) in 36 general hospitals across the state (Yakasai, Abubakar, and Dikko 2012:19).

Free maternal and child services include free antenatal services, normal delivery, caesarean section, routine examinations, "drugs during admission for medical or surgical complications; early neonatal admission and the screening of donated blood" (Yakasai, Abubakar, and Dikko 2012:18). Among other impacts, this policy resulted in a 30 percent

[24] Free maternity service provision removes user fees and therefore increases access of women to maternity care services.

decrease in MMR in the general hospitals mentioned above between 2001 and 2008 (Yakasai, Abubakar, and Dikko 2012:18).

In terms of funding, the Kano state government, at the commencement of the policy in 2001, budgeted ₦20, 000,000 (twenty million naira)[25] for the project. By 2008, this amount increased to ₦150, 000,000 (one hundred and fifty million naira) (Galadanci, Idris, Sadauki, and Yakasai 2010:33). Jigawa state followed suit in implementing free maternal health services at the state level in 2005 (Saka *et al.* 2008:9).

Subsequently, in a national effort to tackle poverty as one of the factors contributing to maternal and child mortality in Nigeria (Omideyi 2007:4), President Olusegun Obasanjo in July 2006, set up a Presidential Advisory team to advocate for free maternal services in all 36 states (including the Federal Capital Territory) at the national, state and local government levels. This was a short-term strategy for reducing maternal and child death (Okonofua, Lambo, Okeibunor, and Agholor 2011:132). Members of the team included: an Honorary Adviser for health, officials of the Federal Ministry of Health, members of the Nigerian Medical Association (NMA), members of the Society of Gynecology and Obstetrics of Nigeria (SOGON), and members of the Pediatrics Association of Nigeria (PAN) (Okonofua, Lambo, Okeibunor, and Agholor 2011:133). At this time, some state governments like Kano were already implementing the user fee policy in their states (Okonofua, Lambo, Okeibunor, and Agholor 2011:132)

Prior to this, a study was first conducted by the federal government in individual states on the cost of maternal and child health services and attitudes regarding the elimination of user fee for maternal and child health services. The advocacy activities

[25] A rough estimate of the current exchange rate is ₦200 naira to one dollar.

involved the team presenting the results of the study to policy makers at the federal level in 2007. The team highlighted the obstacles created by the cost of maternal and child care and, thus, the need to discontinue making pregnant women pay for prenatal services they get at hospitals. This presentation of the results of the situation analysis to policymakers was also aired on national television in 2007 (Okonofua, Lambo, Okeibunor, and Agholor 2011:133).

It should be noted here that the Free Maternal and Child Health policy was not implemented at the federal level due to the transition to a new government at the national level in 2007. However, the federal government declared a policy of free maternal and child health care services in all federal health institutions in Nigeria in 2006 (Okonofua, Lambo, Okeibunor, and Agholor 2011:135).

Following the national advocacy program, other state governments implemented the policy in their states. Most impressive was the Northern State Governors commitment to implement the policy in their states with the goal of reducing MMR in Nigeria. This commitment was made in 2007 at the Northern State Governors Forum first Health Summit held in Abuja. The theme of the meeting was titled: *Alarming Death Rates in the Northern States: The Time for Change is Now* (Saka *et al.* 2008:7). In addition, the governors of the Northern States pledged to allocate at least 15 per cent of their total budget to health care and also "implement free health services for the vulnerable groups of the population especially women during pregnancy, childbirth and puerperal conditions) and children under five years" (Saka *et al.* 2008:14).

So far the Northern states that have implemented the user fee policy in their states include: Bauchi, Gombe, Kaduna, Katsina, Kebbi, Kwara, Niger, Sokoto, and Zamfara.

Other states are: Federal Capital Territory - Abuja (located in North Central); Lagos and Ibadan[26] (located in the South West); Edo, Rivers, and Delta (located in the South South); and Enugu (located in the South East) (Saka *et al.* 2008:7).

Midwives Service Scheme

Also, one of the most prominent and effective national intervention efforts aimed at decreasing maternal death in Nigeria was the establishment of the Midwives Service Scheme (MSS) in 2009. The Midwives Service Scheme was established by the federal government and funded through the Debt Relief Fund[27] to decrease the maternal and child mortality rate and thus meet Goals 4 and 5 of the Millennium Development Goals (MDGs). This initiative was implemented by the Nigeria National Primary Health Care Development Agency (NPHCDA) (Cooke and Tahir 2013:8). The scheme also enjoyed support from international allies like UNICEF, WHO, UNFPA, ACCESS/JEPHIGO, Pathfinder International[28] , Planned Parenthood Federation of Nigeria (PPFN)[29] and Partnership for Reviving Routine Immunization in Northern Nigeria--Maternal and Newborn Child Health (PRRINN-MCH) (Adogu 2014:345).

Crucial to the scheme is a formal agreement between the three tiers of government about their shared roles and responsibilities. While monthly allowances are

[26] Ibadan is a city in Oyo state located in South West Nigeria.
[27] Debt Relief Funds are obtained from partial or full cancellation of loans or debts from foreign governments and international financial institutions, such as the IMF and World Bank.

[28] Pathfinder International, is a global NGO that focuses on reproductive health, family planning, HIV/AIDS prevention and care, and maternal health. The organization operates in more than 20 developing countries throughout Africa, Asia, the Near East, and Latin America.

[29] The Planned Parenthood Federation of Nigeria (PPFN), is a national non-governmental organization promoting Reproductive Health (RH) in Nigeria. As a full member of the International Planned Parenthood Federation (IPPF), PPFN has expanded the scope of its programs beyond family planning to cover broad reproductive health, emphasizing the needs of adolescents and young people and safe motherhood.

paid by the federal government, the state governments give supplementary stipends, and the local government provides decent local accommodation for the midwives. The scheme mobilized midwives, which included newly graduated, unemployed and retired midwives who were posted to selected primary health care facilities in remote communities for a period of one year (Cooke and Tahir 2013:8). The goal was primarily to address the shortage of skilled midwives in rural areas and tackle maternal and child mortality (Adogu 2014:344).

To improve the quality of obstetric care, recruited midwives, in addition to their midwifery training are further trained in life saving skills as well as Integrated Management of Childhood Illness (IMCI) which involves assessing, treating and prevention of childhood sicknesses and diseases. The scheme was designed to operate around a cluster model. A cluster consists of four primary health centers and a general hospital. This means that the primary health centers that provide basic obstetric care cluster around a general hospital or secondary facility that performs comprehensive emergency obstetric care. In cases of emergency, trained midwives refer patients to these secondary facilities for the needed obstetric care (Adogu 2014:345).

At the commencement of the scheme, an initial 2,488 midwives were recruited and deployed to 652 primary health centers across the nation (Abimbola *et al.* 2012:2). So far, this number has increased to 4,000 midwives posted to 1,000 primary health care facilities across the nation (Cooke and Tahir 2013:8).

Within the first year after its implementation, there was evidence of overall progress in decreasing maternal[30] and child mortality in selected rural areas, though the

[30] Dr. Muhammad Ali Pate the former Nigeria Minister for State of Health pointed to a 26 per cent modest reduction in MMR in selected facilities (See Cooke, J. G., and Tahir, F. (2013*) Maternal Health in Nigeria,*

reduction was not even across the nation (Abimbola *et al.* 2012:4). Additionally, over this same time period, infant mortality decreased from 10.97 per 1,000 live births to 9.3 per 1,000 live births. There was also an overall increase in facility deliveries, total antenatal visits, and proportion of women receiving family planning services, and other maternal health services (Abimbola *et al.* 2012:4). Specific data was not provided for the increase in this last set of maternal health indicators.

Meanwhile, in the 68th Session of the United Nations General Assembly meeting held in New York on September 23, 2013, world leaders convened to address actions that would accelerate the reduction of maternal mortality in order to achieve MDG 5 by 2015. In his statement about the Nigerian government's efforts to accelerate maternal mortality reduction, the immediate past Nigerian Health Minister Dr. Onyebuchi Chukwu talked about the government's investment in human resources which includes the training and deployment of midwives to rural areas to help tackle maternal and child mortality and other interventions. He was talking specifically about progress of the Midwives Service Scheme (UNPFA, *UN Secretary General…*2013).

Abiye Project

Another phenomenal state government intervention is the *Abiye*[31] (safe motherhood) project. For clarity about project locations and outcomes, a quick overview about the intervention is first provided. The *Abiye* project is a state project that was implemented in Ondo state located in South West of Nigeria. It commenced in 2009 as a

With Leadership, Progress is Possible. Center for Strategic and International Studies. Washington, DC. A report of the CSIS Global Health Policy Center. Page 8). It should be noted that Dr. Pate pioneered the implementation of a Nigeria national Midwives Service Scheme (MSS).

[31] Abiye is the Yoruba literal translation of Safe Motherhood

pilot project in Ifedore Local Government Area in Ondo state (Cooke and Tahir 2013:10). The Mother and Child Hospital was established in Akure[32] , the capital of Ondo state as a referral hospital that handles emergency maternity cases that could not be handled across the state (Ogundipe 2013:150; Ondo State Ministry of Health 2015). So while, the results from the Akure hospital forms a part of the comprehensive *Abiye* project, results from the *Abiye* project refer to outcomes from the Ifedore project health facilities in the Ifedore Local Government Area (LGA) in Ondo which was where the pilot project commenced.

According to a 2008 survey, Ondo state was recorded to have had the highest rate of MMR in South West Nigeria. Alarmed by this high rates the Ondo state Governor Olusegun Mimiko, a physician by training, made maternal mortality reduction a top government priority (Cooke and Tahir 2013:10). As a result, the *Abiye* project was launched on October 28, 2009 (Mimiko, Nair, Mai, and Cooke 2013:21) in Ifedore Local Government Area (LGA), with the aim of reducing MMR in Ondo state. To achieve this goal, an initial needs assessment and baseline survey were conducted in rural areas to get information on the challenges facilities and pregnant women face while trying to access maternal care during delivery (Cooke and Tahir 2013:10). Findings from the survey revealed that of the total percentage of women who registered for antenatal services, only 16 percent of them eventually delivered in the facilities in the presence of a skilled birth attendant (Cooke and Tahir 2013:11). In other words, the remaining 84 per cent delivered outside the facilities.

Similarly, the survey revealed that the four delays were major factors contributing to maternal death. They are: 1) delay in seeking maternal health care; 2) delay in reaching

[32] Akure is a city in south-western Nigeria, and is the largest city and capital of Ondo State.

facilities due to lack of transportation, poor infrastructure and communication; 3) delay in receiving care due to poorly equipped facilities; and 4) delay in making referrals in emergency situations. As a result, specific strategies were implemented to address all four delays (Cooke and Tahir 2013:10; Ondo State Ministry of Health 2015).

To tackle the first delay, the Ondo state government trained community health extension workers known as "health rangers." These health officials were equipped with pre-paid cell phones and assigned about 20 to 25 registered pregnant women each. Every registered pregnant woman was also given pre-paid cell phones that freely connects them with their health rangers and health care providers in emergency situations (Ogundipe 2013:150).

Ultimately, the mandate of the health rangers was to effectively track progress in pregnant woman during the course of individual pregnancies by maintaining constant communication and home visits with their individually assignment patients. They were also expected to monitor the women's health with a customized checklist including detecting pregnancies at risk; normal birth preparedness and complications readiness plan; as well as post-delivery services including counselling on family planning; and child immunizations among other services (Cooke and Tahir 2013:11).

To tackle the second delay, the state government equipped the local health facilitates with the needed and appropriate transportation depending on the location of operation, including motorcycles, four-wheel-drive ambulances, tricycle ambulances (Mimiko, Nair, Mai, and Cooke 2013:26) and speedboat ambulances for riverine areas in the state (Ondo State Ministry of Health 2015). To tackle the third delay, the Ondo state government, constructed new health facilities, renovated, upgraded all the existing ones

across the 18 Local Government Areas (LGAs) in the state (Cooke and Tahir 2013:11) and also ensured that they were adequately and well-equipped with the necessary drugs, medical supplies and staff. Getting the required staff members involves recruiting more midwives and training health professionals (Mimiko, Nair, Mai, and Cooke 2013:28).

To tackle the fourth delay, the state government established the Akure Mother and Child Hospital, as a referral hospital, well-equipped to handle emergency cases in the state (Ogundipe 2013:150; Ondo State Ministry of Health 2015). Specifically, the goal of the hospital is to "run an integrated maternal and child care facility fully poised to offer qualitative and critical interventions when required" (Mimiko, Nair, Mai, and Cooke 2013:37). The maternity center was commissioned on February 2010 with 100 beds (Mimiko, Nair, Mai, and Cooke 2013:37) and happens to be the only maternity facility that offers free health care services in the whole of Nigeria. These free services include, "free consultation, admissions, medications, blood transfusions and surgical operations" (Mimiko, Nair, Mai, and Cooke 2013:38). In other words, irrespective of an individual's location, ethnicity and social status, all services offered at the Akure Hospital are free of charge, making it the busiest maternity facility in southern Nigeria as well as one of the busiest in the whole nation (Mimiko, Nair, Mai, and Cooke 2013:38).

Outcome measures of the Akure Mother and Child Hospital show that, within the first 30 months (February 2010 - August 2012) of its establishment, the maternity facility attracted 50,000 registered patients; and had 13,000 deliveries including 2,000 caesarean operations (Cooke and Tahir 2013:11). By 34 months (February 2010 - December 2012) of operations, these numbers increased to 59,557 registered patients, 15,730 deliveries, with 2,395 caesarean sections (Mimiko, Nair, Mai, and Cooke 2013:37). Overall,

between 2010-2012, the Akure Mother and Child Hospital achieved a 58 per cent increase in patients registration, a 96 per cent increase in deliveries, and a 47 per cent reduction in MMR (or a 15 percent annual MMR reduction), among other achievements (Mimiko, Nair, Mai, and Cooke 2013:43). It is safe to say here that even though the hospital is new it contributed modestly to a reduction of MMR in a short time.

Similarly, an evaluation of the *Abiye* project revealed that the intervention has achieved some amazing results within its first 30 months of operation. Prior to the *Abiye* project, approximately 100 deliveries were managed in the Ifedore project facilities. However, during the course of the project's first full year, over 2,000 women delivered in the facilities. This number increased to over 6,000 deliveries in the second year (Cooke and Tahir 2013:10). Also, it should be recalled that prior to the *Abiye* project, only 16 per cent of the women who registered for antenatal care eventually delivered in the facilities. By the second year of the project, this proportion increased to over 60 per cent (Cooke and Tahir 2013:11). Overall, the *Abiye* project accounted for a 31 percent MMR reduction in the Ifedore project facilities within the first two years (Mimiko, Nair, Mai, and Cooke 2013:51). Again, information regarding funding allocated for this project was not contained in our data.

Apart from the government actors, another transformation agent are the NGOs. Below are examples of contributions from NGOs in reducing maternal mortality in Nigeria.

NGO Initiatives

Emergency Transport Scheme

Another effort directed towards reducing MMR was the establishment of the Emergency Transport Scheme[33] (ETS) in Nigeria. The ETS is an initiative of the Nigeria National Union of Road Transport Workers (NURTW) (NURTW, *Programs* 2015). Even though the exact date the ETS was established was not provided, our data show that the NURTW has partnered with various government and non-government agencies since 2004 to implement the ETS scheme (Kabiru 2015:7). Some NURTW partners include the Partnership to Reintroduce Routine Immunization in Northern Nigeria - Maternal, Newborn and Child Health (PRINN-MNCH)[34], Transaid[35], and others (NURTW, *Programs* 2015).

Transaid, has been part of the implementation of the ETS scheme since 2007, especially in Northern Nigeria. Specifically, Transaid in collaboration with NURTW implemented the ETS scheme in three Northern States namely, Katsina, Yobe and Zamfara. The ETS scheme in these states was implemented as a component of the PRRINN-MNCH project to reduce maternal mortality and improve child health care in Northern Nigeria (Silva 2010:4).

---

[33] The ETS is a programme where drivers who volunteer for the Scheme are being trained to respond to emergency needs of pregnant women in their communities by using their vehicles to convey the women to Healthcare centers nearest to them, thus helping to prevent maternal mortality.

[34] PRRINN-MNCH is an NGO that was established in 2006 to address the high rates of maternal, newborn and child mortality in Northern Nigeria, specifically, Jigawa, Katsina, Yobe and Zamfara. PRRINN-MNCH is funded and supported by UK aid from the UK Government and the State Department of the Norwegian Government and managed by a consortium of Health Partners International, Save the Children and GRID Consulting, Nigeria.

[35] Transaid is an international UK development charity that aims to reduce poverty and improve livelihoods across Africa and the developing world through creating better transport.

The goal of the scheme was to tackle the problem of unavailable transportation by improving access to low-cost transportation in emergency situations in selected rural areas in the project states (Silva 2010:3). In brief, the ETS is "a humanitarian service provided by commercial car drivers and motorbike riders, all of whom belong to transport unions. . . The ETS transfers women with a maternal complication and other pregnant women who need to use the health services to the health facility without delay and at the lowest possible price" (NURTW, *Emergency Transport Scheme Training Manual* 2013:6). In other words, "as soon as a maternal complication is identified, a trained ETS driver rushes the woman and her helpers to the nearest health facility that is able to deal with maternal complications without delay" (NURTW, *Emergency Transport Scheme Training Manual* 2013:7).

The ETS project in the selected states was a five-year project (2009-2014) (Transaid, *Northern Nigeria Emergency Transport Scheme* 2015:1). In the implementation process, Transaid, using the ETS training manual, trained NURTW officials on a variety of topics including the ultimate goal and principles of the ETS, first aid skills, identifying danger signs in pregnancy, and other topics (Transaid, *Northern Nigeria Emergency Transport Scheme* 2015:1). The trained NURTS officials become Master Trainers who in turn trained other volunteer drivers in a three-day workshop. Also volunteers who could not attend the workshop were participants in a mass awareness campaign through a three-hour session during which they are introduced to the basic principles of the ETS (Silva 2010: 5). In the three project states, 188 drivers were trained in 47 communities (Transaid, *Northern Nigeria Emergency Transport Scheme* 2015:1).

Results show that within the first year (2009-2010) of the scheme, 851 women were transported to health facilities in emergency situations by ETS drivers in the selected project states: 323 in the states of Katsina, 304 in Yobe and 224 in Zamfara (Transiad, *Northern Nigeria Emergency Transport Scheme* 2015:2). By 2013, the number of communities increased to 2,398. As well, a total of 19,811 women had been transported in emergency situations: 9,529 in Katsina, 4,564 in Yobe and 5,718 in Zamfara states (Kabiru 2015:7). Besides Katsina, Yobe and Zamfara, the ETS has successfully been implemented more recently in other states in Northern Nigeria (NURTW, *Emergency Transport Scheme Training Manual* 2013:6), including Bauchi, Gombe, Kaduna, Kano, Kebbi, Jigawa and Niger states (NURTW, *Programs* 2015).

Nigerian Urban Reproductive Health Initiative

The underutilization of modern family planning methods is one of the factors that contribute to high fertility, which, in turn, leads to high maternal and child mortality in developing nations. To address this issue and reverse the trend, the Bill and Melinda Gates Foundation[36] funds the Urban Reproductive Health Initiative (URHI) in various developing nations to increase modern contraceptive prevalence rate[37] and also reduce unintended pregnancies in selected rural areas.

The Nigerian Urban Reproductive Health Initiative (NURHI) (NURHI, *Measurement, Learning & Evaluation. . .* 2013:5) was a five-year (2009 -2014) project

[36] Bill & Melinda Gates Foundation is the largest private philanthropic organization in the world. It was launched in 2000. One of the primary aims of the foundation are is to enhance healthcare and reduce extreme poverty globally.

[37] Contraceptive prevalence rate (CPR) is the percentage of women of child bearing age who currently use a family planning method to space childbirth. It is the most widely used and valuable measure of the success of a family planning program.

with the mandate to increase modern contraceptive prevalence rate by about 20 percent by 2014 in project areas (NURHI, *NURHI Overview* 2013). The project was led by Johns Hopkins University Center for Communications Programs in the six selected project cities namely, Abuja FCT, Kaduna, Ibadan, Ilorin, Benin City and Zaria. This project focused on making it easier to access modern family planning methods in selected rural communities (NURHI, *Measurement, Learning & Evaluation*…2013:5).

NURHI outlined four intervention strategies to achieve its goal. First, NURHI worked with private and public health sectors to take clinical services to families in remote areas through various outreach efforts. This included a distance education training program developed for family planning providers through technological resources like smart phones and training of providers in counselling and clinical service provisions. Second, NURHI used mass media entertainment which included radio drama, a television campaign and social mobilization to educate people on the use of modern family planning practices (NURHI, *NURHI Overview* 2013).

Third, NURHI worked with media advocates, and religious leaders at national, state and community levels to effect greater support for modern family planning use. Fourth, NURHI used evidence-based approaches. They relied on data to guide the designing and implementation process of the family planning program (NURHI, *NURHI Overview* 2013). These strategies have been quite successful.

The initial baseline survey for the initiative was conducted from 2010 to 2011 in the six selected project cities after which a follow-up survey was conducted with the same group of women at the end of the project in 2014 (NURHI, *Nigeria Baseline Household Survey* . . . 2011:4). Results of the post-project survey show that there was an

overall increase in modern contraceptive use by all women in project cities and an equal increase in the number of women who intended to use family planning methods within the next 12 months preceding the final evaluation.

Specifically, NURHI found the highest increase in modern contraceptive prevalence rate was in Zaria with a 15.2 percent increase (NURHI, *Endline Findings for Zaria* 2015: 1), compared with increases of 12 percent in Kaduna (NURHI, *Endline Findings for Kaduna* 2015:1), 11.3 percent in Ilorin (NURHI, *Endline Findings for Ilorin* 2015:1), 10 percent in Ibadan (NURHI, *Endline Findings for Ibadan* 2015:1), 8.9 percent in Abuja, FCT (NURHI, *Endline Findings for Abuja* 2015:1) and 4.8 percent in Benin City(NURHI, *Endline Findings for Benin* 2015:1) . Similarly, the results show the biggest increase in proportion of women who intended to use some contraceptive method within the next 12 months at 18.6 percent in Ibadan (NURHI, *Endline Findings for Ibadan* 2015:1) compared with 14.9 percent in Kaduna (NURHI, *Endline Findings for Kaduna* 2015:1), 8.8 percent in Ilorin (NURHI, *Endline Findings for Ilorin* 2015:1), 7.1 percent in Zaria (NURHI, *Endline Findings for Zaria* 2015:1), 7.7 percent in Benin City (NURHI, *Endline Findings for Benin* 2015:1), and 2.6 percent in Abuja, FCT (NURHI, *Endline Findings for Abuja* 2015:1).

Prevention and Treatment of Obstetric Fistula project

It is worthy of note here that even though this project is not directly related to maternal mortality, it was, however, included in this section because it relates to maternal health and has been connected to a decline in maternal mortality.

The "Prevention and Treatment of Obstetric Fistula in Northern Nigeria" (Rotary *Pilot Project: Final Report* 2015:2) is a pilot project that was initiated by the Rotary family. The project was implemented by the Nigerian Rotary association including Rotary local partners in Kano, Kaduna, and Zaria (Rotary *Pilot Project: Final Report* 2015:8) and supported by international Rotary, including about 200 partners from Germany, Austria, Rotaract[38], Inner Wheel Clubs[39], Rotary satellite projects and many other stakeholders (Rotary *Pilot Project: Final Report* 2015:9). Project expenses totaled to 1.002.658,00 million Euro (€) and was financed by Nigerian partners, German Rotary, the German Federal Ministry for Economic Cooperation and Development (BMZ), Aventis Foundation, and the International Association for Maternal and Neonatal Health (IAMANEH) (Rotary *Pilot Project: Final Report* 2015:13).

The five-year project commenced in July 2005 and continued until March 2010 in 10 general hospitals in Kano and Kaduna states (Rotary *Pilot Project: Final Report* 2015:7-8). With the ultimate goal of reducing maternal and infant mortality (Rotary *Pilot Project: Final Report* 2015:10-11) in the project regions mentioned above, the project consisted of a comprehensive approach that focused on some key approaches/foci for action: 1) awareness and advocacy campaigns; 2) prevention and treatment of obstetric fistula including rehabilitation; and 3) quality assurance in obstetrics, including the training of health personnel.

[38] Rotaract is a Rotary-sponsored organization. It is a service, leadership and community service organization for young men and women between the ages 18–30. Rotaract focuses on the development of young adults as leaders in their communities and workplaces. Clubs around the world also take part in international service projects, in a global effort to bring peace and international understanding to the world. "Rotaract" stands for "Rotary in Action."

[39] Inner Wheel is a voluntary organization for women that was established to complement and support Rotary Clubs.

On the first approach, strategies include advocacy and awareness campaigns in the local media, education of target groups in communities and secondary schools about the causes and prevention of obstetric fistulae, family planning, and other maternal health related issues (Rotary *Pilot Project: Final Report* 2015:3). In this regard, the Rotary project team collaborated with religious and traditional tribal rulers to fully access selected communities (Rotary *Pilot Project: Final Report* 2015:2). Also, through community dialogues held in 10 villages surrounding the selected hospitals, the project team, led by the project's chief midwife with support from the village head, educated women of childbearing age, husbands, traditional birth attendants as well as parents about the benefits of healthy nutrition in pregnancy, antenatal visits, infant immunizations, and family planning; and the importance of hospital delivery attended by a skilled birth attendant (Rotary *Pilot Project: Final Report* 2015:3).

Secondly, one fistula treatment center and one rehabilitation center were established each in Kano and Kaduna states (Rotary *Pilot Project: Final Report* 2015:3-4) and equipped with the needed equipment including trained health staff (Rotary *Pilot Project: Final Report* 2015:3). Trained health staff consists of seven doctors trained on fistula surgery and 15 theatre and ward nurses trained to assist doctors during surgery as well as to care for fistula patients after surgery (Rotary *Pilot Project: Final Report* 2015:5). Vocational training and microcredit grants were also provided for treated fistula patients to aid them in setting up small businesses when they eventually leave the rehabilitation centers (Rotary *Pilot Project: Final Report* 2015:4).

Third, to improve the quality of obstetric care, Rotary, supported by the Nigerian Federal Ministry of Health, introduced quality assurance in obstetrics in the 10 selected

hospitals by (Rotary *Pilot Project: Final Report* 2015:6). This was meant to improve the quality of delivery of care including providing the needed equipment to the hospital and training health personnel in improved procedures for the process (Rotary, *Maternal and Child Health Hospital-Report* 2010:4). Doctors, nurses, midwives, traditional birth attendants and Community Health Extension Workers (CHEWS) were trained in obstetric care (Rotary *Pilot Project: Final Report* 2015:6). In total, 43 doctors, 344 nurses and midwives, 197 traditional birth attendants and 200 CHEWS were trained (Rotary, *List of trained health*…2015: 1).

At the end of the project, some notable achievements of the comprehensive approach show that the awareness campaigns reached several hundreds of students and several thousands of people in the surrounding communities (Rotary *Pilot Project: Final Report* 2015:3). They were told about the dangers of early marriage and how to prevent obstetric fistula (Rotary *Pilot Project: Final Report* 2015:12). Also, due to the establishment of fistula treatment and rehabilitation centers in each state, a total of 1.453 fistula patients were successfully operated upon. Additionally, many benefited from the vocational training and grants (Rotary *Pilot Project: Final Report* 2015:5).

Most importantly, the introduction of quality assurance in obstetric services resulted in improved quality of outcome (Rotary, *Maternal and Child Health Hospital-Report* 2010:4) which included the reduction of maternal death by 60 per cent in the selected hospitals in Kano and Kaduna states (Rotary *Pilot Project: Final Report* 2015:6). As a result of the success of this project, the government of Kano and Kaduna took over the project in April 2010 with the aim of sustaining it (Rotary *Pilot Project: Final Report* 2015:1).

The implementation of this fistula project contributed to a significant decrease in MMR in project areas (Rotary *Pilot Project: Final Report* 2015:6). This was most likely due to the fact that early marriage increases maternal mortality and this project directly tackled the issue of early marriage.

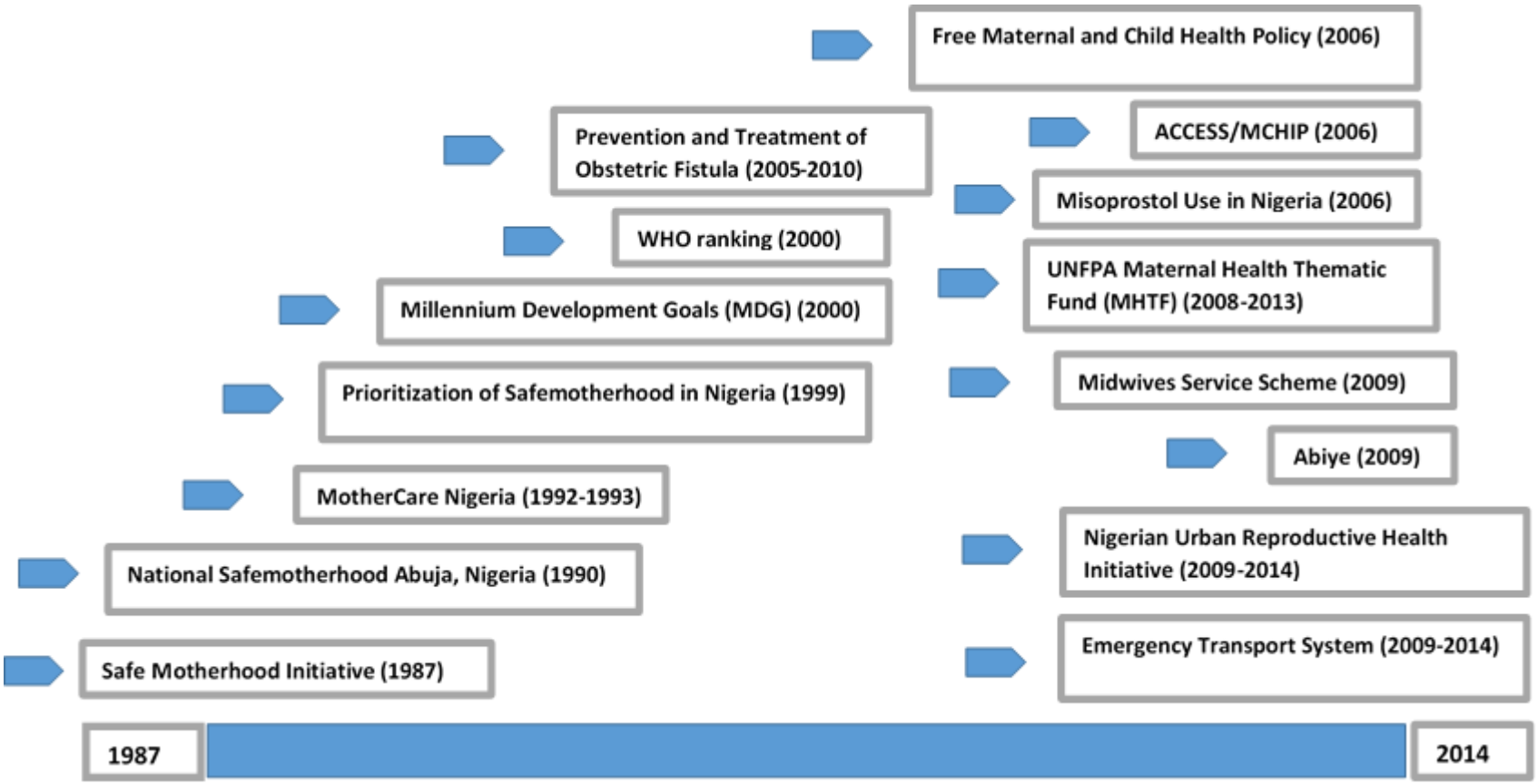
Summary of Initiatives

Beginning with the earliest interventions, this chapter focused on key interventions by transformational actors leading up to the 2013 MMR decline. Specifically, the chapter discussed these key interventions in detail including the agents that initiated, funded and/or collaborated in specific projects. These interventions were implemented in various locations across Nigeria.

The chapter also discussed key international and local events that contributed to the decline. Figure 6.2 below contains a timeline of these interventions and events, some of which will be covered in the next chapter. But like previously mentioned in this section, the timeline of events started with the 1987 Safemotherhood initiative in Nairobi, Kenya (Cohen 1978:68), followed by the 1990 Nigerian National Safemotherhood Conference in Abuja, Nigeria (Shiffman 2007:800). Subsequently, the key maternal mortality interventions highlighted above followed suit.

At the start of the chapter, a map (Figure 6.1) with the maternal mortality categories by states in Nigeria was provided. This map helps to clearly visualize the recent rates of maternal mortality by states. This map shows that the highest rates were in the Northern states and the lowest rates in the South East and South West states. Even though this is 20 years after the beginning of the timeline for this study, it could be assumed that the patterns of high, medium and low rates were largely similar in 1990.

Figure 6.2: Key Maternal Mortality Events and Interventions in Nigeria



This assumption is justified in terms of general evidence of decline in maternal mortality rates over the last three decades in most nations in the world, with very few examples of increases in maternal mortality rates over this time period. So, even though, there is a need for caution in somewhat projecting backwards in time, Figure 6.1 is the only data available showing maternal mortality rate differences among the states of Nigeria. Since national priorities differed for these states, it would seem likely that the most aggressive implementation of initiatives would occur in states that had the most serious problem with maternal mortality.

So, first of all, what patterns from this map of maternal mortality rates for the states in 2012 seem to fit with the overall patterns of interventions in various states? Did the states with the highest mortality rates get the most attention with the various interventions listed in Table 6.1? Or, were the geographical areas of "greatest need" not very useful in understanding the geographic pattern of the interventions.

Table 6.1 contains a summary of interventions in states in the six geopolitical zones in Nigeria. While some of the interventions discussed above were implemented across the country, others were regional interventions. The geographical pattern of interventions seems to fit well with Figure 6.1 in the sense that the interventions were mostly implemented in the North as the area that was likely to have had the highest need for maternal health interventions.

In terms of interventions implemented across the country, the approved Use of Misoprostol and Midwives Service Scheme were national interventions that were implemented across the country in every state. The Midwives Service Scheme is the most prominent and comprehensive national intervention related to maternal mortality

Table 6.1: Summary of Key Interventions in Nigeria

Zones	States		Key interventions in Nigeria from 1992 to 2014								
		2010 Relative Poverty (% poor)	Foreign Government Agency		Nigerian Federal Government and/or Federal with State Collaboration			One State	Nongovernmental Organizations		
North Central			A/M	MC	M	FMCH	MSS	ABIYE	ETS	NURHI	PTOF
	FCT-Abuja	60			X	X	X			X	
	Benue	74			X		X				
	Kogi	74			X		X				
	Kwara	74			X	X	X			X	
	Nasarawa	72			X		X				
	Niger	44			X	X	X		X		
	Plateau	80			X		X				
North East											
	Adamawa	81			X		X				
	Bauchi	84		X	X	X	X		X		
	Borno	61			X		X				
	Gombe	80			X	X	X		X		
	Taraba	76			X		X				
	Yobe	80			X		X		X		
North West											
	Jigawa	79			X	X	X		X		
	Kaduna	73			X	X	X		X	X	X
	Kano	72	X		X	X	X		X		X
	Katsina	82	X		X	X	X		X		
	Kebbi	81			X	X	X		X		
	Sokoto	86			X	X	X				
	Zamfara	80	X		X	X	X		X		
South East											
	Abia	63			X		X				
	Anambra	68			X		X				

	Ebonyi	80			X		X				
	Enugu	72			X	X	X				
	Imo	57			X		X				
South South											
	Akwa-Ibom	63			X		X				
	Bayelsa	58			X		X				
	Cross-River	60			X		X				
	Delta	70			X	X	X				
	Edo	73			X	X	X			X	
	Rivers	59			X	X	X				
South West											
	Ekiti	59			X		X				
	Lagos	59			X	X	X				
	Ogun	69		X	X		X				
	Ondo	57			X		X	X			
	Osun	48			X		X				
	Oyo	61		X	X	X	X			X	

Source: Information on zones and states are from Appendix B, National Population Commission (NPC) [Nigeria] and ICF International. 2014. *Nigeria Demographic and Health Survey 2013.* Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International, p. 380. ***Note: FCT is not a state*.** Data on relative poverty level by state are from the Nigeria Bureau of Statistics (2012) *Nigeria Poverty Profile 2010*.

Note: MC stands for MotherCare Nigeria project. A/M stands for ACCESS/MCHIP. M stands for Misoprostol Use. FMCH stands for Free Maternal and Child Care Policy. MSS stands for Midwives Service Scheme. Abiye stands for *Abiye* project. ETS stands for Emergency Transport System. NURHI stands for Nigerian Urban Reproductive Health Initiative. PTOF stands for Prevention and Treatment

reduction. Through this scheme, the government has been able to deploy thousands of trained midwives to rural areas which has contributed to the decline in MMR. The scheme is an ongoing national project.

The Free Maternal and Child Health policy was also a national intervention even though not all the state governments eventually implemented the policy at the state level. Still, the policy was implemented across 18 of the 36 states in Nigeria. All of the states in the North West zone implemented this intervention. This might mean that the North West zone was one of the regions with the highest MMR. This assumption fits with Figure 6.1.

Another piece of information that might be relevant is the relative poverty or wealth of the states. While ideally, it would have been good to have this information for 1990, the only such data for Nigerian states that could be located was for 2010. Information from the 2010 Nigeria poverty profile maps by the Nigeria Bureau of Statistics (NBS), reveal that most of the Northern states fall above the national average in terms of relative[40] and absolute[41] poverty (See Table 6.1). In other words, the states in the North West and North East zones are some of the poorest states in the country (Nigeria Bureau of Statistics, *Nigeria Poverty Profile* 2010:24-25). The average of the percentage of poor in the states of each zone is: 79 per cent for the North West, 77 per cent for North East, 68 per cent in South East and North Central, 64 per cent in South South and 59 per cent in South West. High levels of poverty would more often be associated with both

[40] Relative poverty measure sums up the total expenditure of a household. In other words, relative poverty refers to the overall standard of living in a society.

[41] Absolute poverty is a state of poverty in which income is insufficient for maintaining a minimum standard of living.

higher rates of maternal mortality and more limited resources for dealing with the problem. However, it is clear from the review of literature that poverty alone does not always hinder nations from being successful in developing effective responses to reducing maternal mortality.

In addition, the Emergency Transport Scheme, though mostly a regional intervention, is another example of an intervention that was implemented in many of the states. Six of the eleven states which implemented the ETS were in the North West zone with three others in the North East zone.

In terms of an intervention in just one state, *Abiye* is the example which is outstanding in terms of its overall comprehensive approach to the problem and level of financial commitment. In fact, the *Abiye* success story is one that has attracted global attention. It is a landmark intervention for the structure of its approach and implementation but also it is the first maternal intervention program of its kind in Nigeria (Ogundipe 2013:149). It has also received praise from the World Bank as a role model for tackling the infant and MMR in Africa (Cooke
and Tahir 2013:9, 10). What is most intriguing is the high success rate it managed to achieve in a very short time.

Other interventions listed in Table 6.1 include MotherCare Nigeria which, started in 1992, evolved from the USAID initiative, MotherCare in Nigeria in 1989. ACCESS/MCHIP was a USAID sponsored intervention which ran from 2006 to 2009. The Nigerian Urban Reproductive Health Initiative (NURHI) was only implemented in five states. This was an initiative funded by the Bill and Melinda Gates Foundation. The Prevention and Treatment of Obstetric Fistula (PToF) was only implemented in two

states in the North West zone. This project was begun by Rotary international, with local Nigerian partners, Germany Rotary and other partners. This project ran from 2005 to 2010.

Conclusion

Over the years, there have been quite a number of government and non-governmental attempts made to decrease the maternal mortality rate (MMR) in Nigeria (Cooke and Tahir 2013:7). These attempts also include actions implemented by international government and agencies. Most importantly, these actions were influenced by international initiatives from which national initiatives like the 1990 national Safemotherhood was adopted.

A closer look at the interventions reveal that a number of the projects were primarily implemented in the Northern zones as seen in Table 6.1 above. This matches with the locations where the need for maternal health interventions was the greatest as seen in Figure 6.1. Specifically, one of the interventions, that is, the Free Maternal and Child Health policy was largely implemented by the states in the Northern parts of Nigeria. Clearly, the Northern states were more supportive of the policy. While 20 of the 36 states, including the Federal Capital Territory (FCT) or 54 per cent were in the Northern zones, 12 of the 18 states with FMCH or 67 per cent of FMCH states were in Northern zones. Another way of describing this is that 60 per cent of the states in the Northern zones implemented this policy compared to 35 per cent of the states in the Southern zones. In fact, all the states government in the North West zone implemented the policy like they said they would in the Northern States Government forum (Saka *et al* 2008:7, 14).

Also, the Emergency Transport System intervention was implemented only in the North. Again, of the five participating NURHI states, three were in the North. Only two were from the South. ACCESS/MCHIP was also implemented in the North. As mentioned earlier, the fistula intervention, even though indirectly related to MMR, was included in the interventions because it relates to maternal health. Still, it was implemented in the North.

So, what might be responsible for this dominance of the Northern states for some of these interventions? It should be recalled that it was mentioned in Chapter Five, that in general, the MMR in Nigeria is highest in the North (Galadanci, Idris, Sadauki and Yakasai 2010:31). Specifically, Wall (1998:347), also mentioned in Chapter Five, argues that the high rates of maternal mortaltiy in the North are due to an Islamic culture that undervalues women, the practice of purdah or wife seclusion which restricts women's access to medical care, and encourages early marriage and childbirth, among others factors. So, it is likely that high MMR may explain why most of the interventions, not implemented nationally, that is, four (A/M, ETS, NURHI and PToF) were implemented primarily in the North. Another possible explanation for why the Northern states collaborated in or independently implemented most of these projects might have to do with a more serious construction of risk. However, there is no way of verifying this given available data sources.

It is worthy of note here that even though this dissertation discusses the events leading up to the 2013 MMR decline, the NURHI (NURHI, *NURHI Overview* 2013) and ETS (Transaid, *Northern Nigeria Emergency Transport Scheme* 2015:1) were both five year projects that extended until 2014 though they kicked off earlier. As mentioned in

Chapter Four, interventions from up to 2015 were included in the research project in order to give an update of recent events.

The next chapter discusses other concepts that fit the theoretical framework.

CHAPTER SEVEN:
CONSTRUCTIONISM, ALLIANCES AND SOCIAL MOVEMENTS

Introduction

This chapter focuses on the sequence of events based on the theoretical framework which includes other concepts that fit with the ideas of Eager (2004) and Nathanson (1996). In no chronological order, these are events which contributed to the 2013 observed outcome: the construction of risk, prioritization of Safemotherhood in Nigeria, collaboration between actors, and the influence or contributions of social movements or in this case social activist groups. This chapter will make reference to previous chapters in this dissertation.

Construction of Maternal Health "Risk"

Nathanson (1996:614-615) refers to "risk" as danger, threat or hazard to life and health. In this study, "risk" refers to danger or threat to maternal health. So based on our data, Nigeria did not officially construct a maternal health "risk" other than the one originally constructed at the Safemotherhood international conference. In other words, Nigeria officially adopted the global "risk" as constructed in this international conference regarding the need to tackle high MMR (Cohen 1987:68). Specifically, this adoption of the global "risk" was orchestrated by the Society for Obstetrics and Gynecology of Nigeria (SOGON) which mobilized the first national Safemotherhood conference in Nigeria in 1990 (Shiffman 2007:800) with an action call to reverse the trend (Conroy 1995:134). The SOGON is a professional medical organization committed to "the improvement of women's health and rights and the reduction of maternal and newborn

mortality…" (SOGON 2015). This action by the SOGON fits both the process of construction of risk as described by Nathanson (1996:611) and Eager's (2004:167) idea of effectively framing an alternate norm at the conference.

Closely linked to risk construction is the theory of social construction. In general, this theory argues that issues that become or are perceived to be important in a society follow from efforts by those with power and resources to identify what is important or deserves attention (See Macvarish 2010 and Reichenbach 2002).

In 2010, former President Goodluck Jonathan gave a speech on maternal and child health, where he stated that "the management of health of women and children in every society is at the heart of their wellbeing and development. Anything short of that will end in failure of the family as an engine of survival of the community…" (Every Woman, Every Child, 2015). In brief, the management of maternal wellbeing is crucial to the continued existence of the family and nation.

This speech by Goodluck Jonathan was given in his capacity as co-chair of the Global Strategy for Women's and Children's Health[42] initiative. This initiative was launched by the United Nations in 2010 with the overall goal of increasing access to overlooked life-saving commodities. Specifically, "the Strategy called on the global community to work together to save 16 million lives by 2015 through increasing access to and appropriate use of essential medicines, medical devices and health supplies that effectively address leading avoidable causes of death during pregnancy, childbirth and

[42]Global Strategy for Women's and Children's Health initiative highlighted the inequitable access to life-saving medicines and health supplies suffered by women and children around the world and calls on the global community. Recognizing that many millions die each year from preventable causes, the Strategy identifies the need for increased access to and the appropriate use of essential medicines, medical devices and other commodities.

childhood"(Every Woman, Every Child, *UN Commission Report*… 2012:2). These life-saving commodities include misoprostol, injectable antibiotics, female condoms, contraceptive implants, amongst other live-saving maternal and child health commodities (Every Woman, Every Child, *UN Commission Report…* 2012:7).

This initiative is in line with Nigeria's 2010-2015 efforts towards ensuring maternal and child survival. For instance in 2010, Nigeria made commitment to increase its budgetary allocation for health care from five per cent to 15 per cent and also to deploy more healthcare staff to rural areas to strengthen the health system. In 2012, Nigeria was also committed to achieving a contraceptive prevalence rate of 36 per cent by 2018 as part of the country's efforts towards saving one million lives by 2015 (Every Woman, Every Child, 2015).

This shows that Jonathan attached his reputation as President of Nigeria to this initiative. So even though, his speech did not quite fit the risk construction described in the theoretical framework, in terms of definitive statements from key Nigerian leaders, it does fit the nature of the social constructionist perspective in that considerable resources, support and effort were directed at dealing with the problem of maternal mortality. In other words, the issue of maternal mortality was constructed as "a serious" one.

Similarly, a review of the five (1990, 1999, 2003, 2008 and 2015) editions of the Nigerian Demographic and Health Survey[43] (NDHS) reveal that the federal government under the National Population Commission (NPC), first constructed the issue of maternal mortality as one of national concern in the second edition of 1999. It was in that edition that the maternal mortality module was included in the national survey in a national

[43] It should be noted that only the 1990 first edition of the Survey was conducted by the Federal Office of Statistics. Subsequent editions are conducted by the Nigerian Population Commission.

"attempt to obtain an estimate of the level of maternal mortality in Nigeria" (NPC, *Nigeria Demographic and Health Survey* 1999:112). However, the 2008 and 2013 editions have the most detailed coverage of maternal deaths in Nigeria.

The Prioritization of Safemotherhood in Nigeria

Even though safe motherhood got some policy attention in Nigeria, it was not until 1999 that it actually became a national priority (Shiffman and Okonofua 2007:128). Put differently, even though one of the earliest maternal health interventions in Nigeria was orchestrated by the federal government (Conroy 1995:134), their role was a supplementary one. It was after 1999 that the Nigerian government began to initiate, implement and fund projects that contributed to reduction of the maternal mortality ratio.

One of the factors that contributed to this prioritization was that in 1999, Nigeria's political system transitioned from many years of military rule, since independence, to a democratic government. Due to this democratic transition, social issues, like maternal mortality reduction became priorities on the national agenda. Also, civil societies expressed increased concern regarding the alarming rates of MMR in the country. For instance, the Society of Gynecology and Obstetrics of Nigeria (SOGON) converge annually for a meeting where maternal health discussions tops the agenda. Like previously stated in Chapter 6, the SOGON was instrumental in the first national Safemotherhood conference held in Nigeria in 1990, where the Safemotherhood initiative was formally adopted (Shiffman 2007:800).

Another wakeup call came for Nigeria in 2000, when the WHO ranked the country's healthcare system as one of the worst globally, in terms of performance (Shiffman and Okonofua 2007:128). In addition, available funding from other

international sources like USAID, WHO, UN amongst others, contributed in prioritizing the fight aimed at MMR reduction. For instance, USAID pledged over $10 million for Safemotherhood projects in Nigeria (Shiffman and Okonofua 2007:129).

As noted in Chapters Two and Five, the 2015 MDG 5 target to reduce maternal death by 75 per cent also contributed to Nigeria's prioritization of maternal health (Anger 2010:139; Omideyi 2007:4). In 2005, the government came up with a plan of action targeted at achieving MDGs 4 and 5 (Shiffman and Okonofua 2007:129). This plan of action included the creation of a presidential commission to supervise, develop and implement various policies and initiatives that are geared towards achieving the MDG (Nigeria 2015, *Millennium Development Goals*).

Collaboration of Key Actors or Resource Mobilization

As previously discussed in Chapter Three, Nathanson (1996) noted that the successes of France and the U.S. in the development of public health policies that reduce mortality was due, in part, to the active collaboration between the transformational actors (: 629). Similarly, in this study, the collaboration between transformational actors led to the 2013 observed MMR decline. Table 7.1 summarizes some of these key collaborations. This table contains the names of interventions and organizations or groups that collaborated in each project

For instance, for the USAID sponsored projects beginning with **MotherCare Nigeria** project discussed in Chapter Six, the collaboration was between MotherCare USAID, John Snow Inc., the Nigeria Federal Ministry of Health, the participating state governments of Oyo, Osun, and Bauchi (USAID, *MotherCare Nigeria*…1991:3) and

Table 7.1: Interventions and Organizations that Worked Together on Each Project

Interventions	Organizations
MotherCare Nigeria	MotherCare USAID
	John Snow Inc.
	The Nigerian Federal Ministry of Health
	Participating state government of Oyo, Osun and Bauchi
	The Nigerian Nurses and Midwives' Council
	Society for Obstetrics and Gynecology of Nigeria
ACCESS/MCHIP	USAID
	JHPIEGO
	Participating state governments of Kano, Zamfara and Katsina
Misoprostol Use	Nigerian National Agency for Food and Drug Administration and Control
	Society of Obstetricians and Gynecologists of Nigeria
	Population and Reproductive Health Partnership
	Venture Strategies Innovations
Midwives Service Scheme	Nigeria National Primary Health Care Development Agency
	UNICEF
	WHO
	UNFPA
	ACCESS/JEPHIGO
	Pathfinder International
	Planned Parenthood Federation of Nigeria
	Partnership for Reviving Routine Immunization in Northern Nigeria-Maternal and Newborn Child Health
Free Maternal and Child Health Policy	Nigerian Medical Association
	Society of Gynecology and Obstetrics of Nigeria
	Pediatrics Association of Nigeria
Emergency Transport Scheme	Transaid
	Nigeria National Union of Road Transport Workers
	Partnership to Reintroduce Routine Immunization in Northern Nigeria - Maternal, Newborn and Child Health
Nigerian Urban Reproductive Health Initiative	Bill and Belinda Gates Foundation
	Johns Hopkins University Center for Communications Programs
Prevention and Treatment of Obstetric Fistula	Rotary
	Rotaract
	Inner Wheels Club
	Aventis Foundation
	International Association for Maternal and Neonatal Health

professional medical associations such as the Nigerian Nurses and Midwives' Council (NNMC) and the Society for Obstetrics and Gynecology of Nigeria (SOGON) (Kwast 1996:51).

For **ACCESS/MCHIP** project, it was a collaboration between JHPIEGO (USAID *Nigeria* 2012:8), and the participating state and local governments' areas in Kano, Zamfara and Katsina state (USAID *Nigeria* 2012:13).

For a consideration of larger government interventions, it seems relevant to mention that the theory of resource mobilization complements the ideas of Eager and Nathanson. In brief, the theory argues that the success of social movement actions depends on the ability of groups to mobilize resources towards achieving a desired social change goal. The theory involves social movement groups pulling together significant resources that are directed towards social change (Jenkins 1983:533). Key resources include money, professional expertise, facilities, and manpower, as well as formation of social networks, alliances or coalition with other groups (Jenkins 1983:533).

In one of the most significant government interventions, the federal government worked with professional organizations like the National Agency for Food and Drug Administration and Control (NAFDAC)[44], the Society of Gynecology and Obstetrics of Nigeria (SOGON), and other NGOs to successfully approve the use of misoprostol for the prevention or treatment of postpartum hemorrhage in health facilities across the country (Jadesimi and Okonofua, 2006: 213). In addition, the Population and

[44] NAFDAC is a Nigerian government agency under the Federal Ministry of Health that is responsible for regulating and controlling the manufacture, importation, exportation, advertisement, distribution, sale and use of food, drugs, cosmetics, medical devices, chemicals and packaged water.

Reproductive Health Partnership[45] (PRHP), Venture Strategies Innovations (VSI)[46] worked with the Nigerian government to successfully approve the guidelines for use of the drug at the community level (VSI, 2015). This coalition fits well with resource mobilization theory.

Under the **Midwives Service Scheme**, the Nigerian government formed an alliance with UNICEF, WHO, UNFPA, ACCESS/JEPHIGO, Pathfinder International , Planned Parenthood Federation of Nigeria (PPFN) and Partnership for Reviving Routine Immunization in Northern Nigeria-Maternal and Newborn Child Health (PRRINN-MCH) (Adogu 2014:345). As Eager (2004:169) noted, an additional step in norm construction is the need for allies to work together to accelerate normative change, which fits with this international alliance. This alliance also fits with resource mobilization theory.

Another example of collaboration was between the federal government and professional medical organizations such as the Nigerian Medical Association[47] (NMA) the Society of Gynecology and Obstetrics of Nigeria (SOGON) and Pediatrics Association of Nigeria (PAN) to implement the **Free Maternal and Child Health Policy** (Okonofua, Lambo, Okeibunor, and Agholor 2011:133). These groups collectively advocated for free maternal and child health services in Nigeria. Following this action,

[45] Population and Reproductive Health Partnership (PRHP) is a research unit within Ahmadu Bello University Teaching Hospital's Department of Obstetrics and Gynecology in Kaduna state.

[46] From 2008-2015, VSI was a nonprofit private foundation dedicated to increasing access to essential medicines and services for women and girls in developing countries. VSI closed its operations in March 2015

[47] The Nigerian Medical Association (NMA) is the professional association and registered for Nigerian doctors and Physicians. NMA's membership spans all six major specialties of Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Public Health and Laboratory Medicine/Pathology.

some state governments implemented the policy at the state level. This example of active social networking fits the theory of resource mobilization.

For the NGO interventions, Transaid worked with the Nigeria National Union of Road Transport Workers (NURTW) in the **Emergency Transport Scheme** (Silva 2010:4) that helped volunteer drivers respond to emergency needs of pregnant women. The NURTW partnered with other NGOs including Partnership for Transforming Health Systems phase 1(PATHS 1), Partnership for Transforming Health Systems phase 2 (PATHS 2)[48], PRINN-MNCH, Society for Family Health (SFH)[49], Transaid, SURE-P[50], the Maternal Newborn and Child health Programme (MNCH 2)[51] and the Clinton Health Access Initiative (CHAI)[52] (NURTW, *Programs* 2015). The **Nigerian Urban Reproductive Health Initiative** (NURHI) worked with Johns Hopkins University Center

[48] Partnership for Transforming Health Systems (PATHS) is a project funded by the UK's Department for International Development (DFID) that seeks to strengthen Nigeria's health system by expanding access to efficient, effective, and quality health services to poor people through investments in health workers, health facilities, and communities. PATHS 1 was a six-year (2002-2008) project. PATHS 2 was also a six-year (2008–2014) project. Improving maternal and child health was one of PATHS 2 primary objectives.

[49] Society for Family Health is a non-governmental organizations with a mission to empower Nigerians, particularly the poor and vulnerable to lead healthier lives. Working with the private and public sectors, SFH adopts social marketing and behavior change communication to improve access to essential health information, services, and products to motivate the adoption of healthy behaviors.

[50] The Subsidy Reinvestment and Empowerment Programme (SURE-P) is a scheme aimed at implementation of different programs including Maternal and Child Health, public works, employment schemes, mass transit programs, vocational training and skill acquisition schemes. The Maternal and Child Health component (MCH) of the SURE-P, aspires to contribute to the reduction of maternal and newborn morbidity and mortality, and place Nigeria on track to achieve the fourth and fifth Millennium Development Goals.

[51] The Maternal Newborn and Child health Program (MNCH2) is a country led program which aims to reduce maternal and child mortality in northern Nigeria. The project is funded by the Department for International Development (DFID).

[52] The Clinton Health Access Initiative, Inc. (CHAI) was founded in 2002 with a transformational goal: help save the lives of millions living with HIV/AIDS in the developing world. CHAI's solution-oriented approach focuses on both global and national level work by rapidly improving market dynamics for medicines and diagnostics; lowering prices for treatment; accelerating access to lifesaving technologies; and helping governments build the capacity required for high-quality care and treatment programs.

for Communications to successfully increase the modern contraceptive prevalence rates in Abuja FCT, Kaduna, Ibadan, Ilorin, Benin City and Zaria (NURHI, *Measurement, Learning & Evaluation*…2013:5).

Also, the **Prevention and Treatment of Obstetric Fistula** project, enjoyed financial support from both local and international Rotary, the German government, Aventis Foundation[53] as well as International Association for Maternal and Neonatal Health (IAMANEH)[54] (Rotary *Pilot Project: Final Report* 2015:13). Again, this monetary support fits the resource mobilization theory. In terms of public policies, the free maternal and child health policy and the *Abiye* project are examples that fit Nathanson's (1996) argument regarding the role that government plays in implementing active public health policy that contributes to a decrease in a health risk (p. 609), in this case, maternal mortality.

As noted earlier in Chapter Six, both Eager (2004) and Nathanson (1996) argue that social movements are active agents of social change. As a result, they play a vital role in bringing about normative change (Eager 2004:168; Nathanson 1996:611). Below are examples of contributions from social activist groups.

[53] The Aventis Foundation is a non-profit foundation headquartered in Frankfurt am Main, Germany. Established as the Hoechst Foundation in 1996 but renamed the Aventis Foundation in 2000. It is an independent foundation with legal capacity under German civil law. It finances the projects it promotes and its administrative expenses with the earnings generated by its foundation capital. The Aventis Foundation only supports projects; it neither has nor runs its own projects.

[54] Based in Geneva, the International Association for Maternal and Neonatal Health (IAMANEH) is a non-governmental, non-profitmaking organization with the purpose of improving maternal and neonatal health throughout the world.

Social Activists and Activism

Actions by social activists, especially women groups, have also contributed to the current norm. Throughout Nigerian history, women have been involved in a number of protests and strikes as ways of protecting their interest on national issues that concern them. As a matter of fact, in 1959, the National Council of Women's Societies (NCWS) was launched as the major national organization that represents all women in Nigeria (Dixon-Mueller and Germain, 1994:203).

Leadership of NCWS, together with other women organizations, such as the Muslim Women's Group, protested about the unequal representation of women and neglect of women's interest in the 1988 Nigerian population policy. This was one of the main criticisms of the policy that led to its ineffectiveness. In spite of these criticisms, these groups favored certain provisions of the population policy including voluntary access to family planning services and more focus on reduction of maternal and child mortality among other objectives (Dixon-Mueller and Germain, 1994:205).

Another feminist action was undertaken by the National Association of Nigeria Nurses and Midwives[55] (NANNM) were the group campaigned against the *gishiri* cut – a practice where traditional midwives cut the birth passage to ease difficult delivery. Such practices have contributed to excessive bleeding and maternal death (Dixon-Mueller and Germain, 1994:208). It is important to note that the NANNM is part of a broader

[55] The National Association of Nigeria Nurses and Midwives (NANNM) is a professional non-governmental and non-profit organization authorized to organize all professional nurses and midwives who are trained, registered and licensed to practice Nursing Profession at all the levels of healthcare delivery system, namely primary, secondary and tertiary both in public and private sectors in the country. Its mission is to regulate the practice and activities of Nigerian Nurses and Midwives in the most efficient manner that safeguards best healthcare delivery for Nigerians.

network called the Women's Health Research Network of Nigeria. This network was formed in 1988 by a group of social scientists, health and legal professionals and community leaders, in a bid to tackle female reproductive issues. The network participates in research for and advocacy with policymakers on issues that concerns the general health and well-being of women (Dixon-Mueller and Germain, 1994:207).

Like previously mentioned, the Society of Gynecology and Obstetrics of Nigeria (SOGON) holds annual general meetings with Safemotherhood as one of top priority discussions. In fact, in 2003, the MacArthur Foundation, provided financial support to the SOGON for its Safemotherhood advocacy and trainings activities across Nigeria.

Similarly, in another effort to improve maternal health and reduce unsafe abortion, the Nigeria Campaign against Unwanted Pregnancy (CAUP)[56] was established in 1991. Specifically, this initiative was borne out of concern from a group of obstetrics and gynecology specialists who viewed abortion as a public health crisis following the number of unsafe abortion deaths and morbidities in their hospitals. As a result, on August 1991, this group of medical doctors convened a meeting of 27 consultants who were "committed to the promotion of women's sexual and reproductive health and rights" (Oye-Adeniran, Long, and Adewole 2004:210). This consultative group was comprised of people from different disciplines, including lawyers, women's health professionals, the media, and representatives of academia and grassroots organizations. In other words, this initiative was launched as a multi-disciplinary one with a vision to promote a nation that would be free of unsafe abortion (Oye-Adeniran, Long, and Adewole 2004:210).

[56] The CAUP's mission was to create a prominent organization committed to reducing the burden of unsafe abortion among women in Nigeria.

Within 14 years of its establishment, the initiative has, through advocacy, media campaigns and other activities, managed to bring forward the sensitive issue of safe abortion and "made it a legitimate subject for public discussion and debate" (Oye-Adeniran, Long, and Adewole 2004:210). All of these efforts were meant to help improve post-abortion care in Nigeria (Shiffman and Okonofua 2007:128).

Two other women's advocacy groups, Women Advocates Research and Documentation Centre (WARDC)[57] and Women Arise for Change Initiative[58], recently took to the streets of Lagos in protests of maternal death. Placards with various inscriptions were displayed during the protest, some of which read "No Woman Should Die at Childbirth," "Save Our Women from Unnecessary Death," and "No Women, No Nation." In her statement, Dr. Joe Okei-Odumakin[59], the President of the Women Arise Initiative stated that the protest was proof that the Nigerian women were tired of losing their colleagues to maternal death (The News, 2015). In a similar campaign against maternal death, Dr. Okei-Odumakin stated that pregnant women at the grassroots level should be educated on healthy living as this will help reduce maternal death. She stressed that women remain a great asset at all levels in society (Kalu, 2014).

[57] Women Advocates Research and Documentation Centre (WARDC) is a nonprofit civil rights organization established in the year 2000 to promote respect for Human Rights, Gender Equality, Equity, Rule of Law, Accountability and Social Justice in Nigeria.

[58] Women Arise for Change Initiative is a civil right organization that works for the women, encouraging them to come together to stand up against "misuse and abuse" in a male dominated society.

[59] Josephine "Joe" Obiajulu Okei-Odumakin is a Nigerian women's rights activist. She is the president of the rights Women Arise for Change Initiative.

Conclusion

This chapter discussed "other" data that fit with other concepts, from the theoretical framework, which were not previously covered in Chapter Six. In terms of risk construction, the speech by former President Goodluck Jonathan did not quite fit well with the theoretical framework. Still, it fits with the theory of social construction in the sense that by attaching his reputation to the Global Strategy for Women's and Children's Health initiative, he made the issue of maternal mortality a serious issue that attracted definite action directed towards improving maternal and child health. One of such actions was Nigeria's commitment to increase contraceptive prevalence rate and saving one million lives by 2015 (Every Woman, Every Child, 2015).

Similarly, the prioritization of maternal health as a serious issue in Nigeria flowed from the identification of maternal mortality as a serious issue by transformational actors such as the Nigerian government and social movements like SOGON. This is also in line with the idea of social constructionism.

In addition, and in line with the theoretical framework, the active collaboration and alliances between agents were instrumental to the MMR decline in Nigeria (Nathanson 1996:629; Eager 2004:169). Also actions from social movements (Nathanson 1996:611) contributed to the 2013 observed outcome. For instance, the Society for Obstetrics and Gynecology of Nigeria (SOGON) was one of the professional organizations that was actively involved from the beginning of the normative change process (Shiffman 2007:800) in 1990. As seen in Table 7.1, SOGON was also one of the organizations that was the most involved in the overall projects such as MotherCare Nigeria, Misoprostol projects and the Free Maternal and Child Health policy. Another

organization that was actively involved was the Partnership for Reviving Routine Immunization in Northern Nigeria--Maternal and Newborn Child Health (PRRINN-MCH). This group was involved in the Midwives Service Scheme and the Emergency Transport Scheme.

The next chapter will provide an overview of the study results and an analysis of the case study data.

CHAPTER EIGHT:

CONCLUSION

Introduction

This final chapter presents a summary and analysis of the study. Specifically, it summarizes the focus of the study, the case study approach, and the theoretical framework as related to the key findings. It provides an overview of the data in terms of what fit and did not fit with the theoretical framework, the shortcomings and practical implications of the study, and suggestions for future studies.

Overview of the Study

As discussed in Chapter Five, in the past few decades, Nigeria has managed to significantly cut its MMR (Cooke and Tahir 2013:3) by more than half (WHO *Nigeria*, 2014:1). This study focused on the reduction of MMR in Nigeria from 1,200 per 100,000 live births in 1990 to 560 per 100,000 live births in 2013, making a 52 per cent reduction (WHO *Nigeria*, 2014:1). Despite this significant decline in MMR in two decades, Nigeria fell short as one of few in meeting the Millennium Development Goal (MDG) 5 target of cutting its MMR by 75 per cent by 2015 (Anger 2010:139; Omideyi 2007:4). Nevertheless, Nigeria makes the list as one of the African countries that is making progress towards achieving the set MDG 5 goal (World Health Organization 2014, *Trends in Maternal Mortality*...:40)

With a combination of ideas from Eager (2004) and Nathanson (1996) as the theoretical framework, this study examined the factors that led to this reduction. These

theorists describe the changes that must occur in order for the development of effective public health policies and goals. While Eager proposed a process model of change from existing to new norms, Nathanson emphasized the role of government policies, collaboration between medical professionals and government actors, and social movements in labeling specific health "risks" as critical to the nation and thereby bringing about changes in public health.

Overall, the goal of this study was to fill a gap in studies documenting the mechanisms that contributed to the reduction in Nigeria's MMR since 1990. In terms of the research method, as discussed in Chapter Four, a single-case study method was considered as the most appropriate for this research. In this case, a single country is the unit of analysis. Case study methodology allows a researcher to examine in depth and understand factors that explain given outcomes (Yin 2014:4) for a single case study. This use of case studies fits perfectly with the focus of this research since the intent was to present an explanation of the reasons behind Nigeria's MMR decline.

Most importantly, this study relied on suggestions from a number of authors that guided the data collection process. Specifically, Yin (2014) argued that case studies are useful tools for shedding light on the explanatory value of existing theories, and theoretical concepts or propositions which can then extend the theoretical generalizations to other cases or situations. Findings or lessons learned from case studies can also form the foundation upon which studies can be refined or modified. Yin referred to this process as *analytical generalization* (2014: 40-41). As stated previously, this study used ideas from Eager (2004) and Nathanson (1996) as the theoretical framework. Relevant data were identified based on key indicators from this theoretical framework. Hence, this

study benefitted from analytical generalization by extending, for the first time, their theoretical ideas to the explanation of the decline of the maternal mortality rate in one nation, which in this case was Nigeria.

In terms of data, this study relied on available or secondary data. As outlined in Chapter Four, the data sources used include: reports from the Nigerian government on maternal mortality interventions; domestic and foreign NGO reports on maternal mortality interventions; reports from other international government and agencies such as the USAID, UNFPA and WHO on their contributions to the reduction of the maternal mortality rates; statements from key government officials and other transformational actors; academic journal articles; and newspapers.

These data were used to gather documentary evidence of key indicators based on the ideas of Eager (2004) and Nathanson (1996). These indicators relative to maternal health and MMR decline included: interventions or actions by the government; the role of active social movements; influence of international agencies; and statements by "transformative actors" which fit with the process of the social construction of maternal mortality as a societal concern.

Analysis of the Case Study

This study used data analysis methods discussed in Chapter Four. The *process-tracing method* was one of the methods used out of a number of data analysis techniques suggested for case studies. This method involves using key indicators from theory to present an explanation about a given outcome of events (George and Bennett 2005:211). In other words, this method was used to trace the sequence of events and outcomes and

how they match the theoretical framework. Specifically, this study traced the maternal health interventions by the Nigerian government, interventions by other government and international agencies, interventions by NGOs, contributions by social activists groups and statements by "transformative actors" which fit with the process of the social construction of maternal mortality as a serious issue and how these events explained the 2013 MMR decrease. These factors form the key indicators that emerged from the ideas of Eager (2004) and Nathanson (1996) and contributed to the decline.

In line with examples of visual diagrams as part of qualitative data analysis as highlighted by Miles, Huberman and Saldaňa (2014:222), this study constructed a timeline of the MMR decline that help visualize the link between actions and events that resulted in the 2013 observed outcome. The timeline which is shown in Figure 6.1 in Chapter Six included maternal health initiatives, actions and events from 1987 to 2014 that influenced the decline in the MMR.

In more specific terms, the sequence of the timeline shows that the process of normative change began in the late 1980s, starting with the 1987 Safemotherhood Initiative in Kenya (Cohen 1987:68). This was followed by the extension of that meeting at the country level in Nigeria in 1990 (Shiffman 2007:800), where the maternal health risk originally constructed at the 1987 meeting was officially adopted (Conroy 1995:134). Then came the earlier MotherCare Nigeria intervention implemented by USAID but orchestrated (Conroy 1995:134) and supported by the Nigerian government.

However, full blown maternal health interventions began after 1999 when Nigeria regarded the issue of maternal morality as top national concern or priority, following the transition of the Nigerian political system from many years of military regime to a

democratic dispensation, among other factors (Shiffman and Okonofua 2007:128). In fact, all the other maternal mortality interventions, except MotherCare Nigeria, took place in the 2000s. This means that, in terms of concrete actions, 1999 marked the actual turning point for maternal mortality reduction in Nigeria since, my findings show that, other USAID interventions like ACCESS/MCHIP, Nigerian federal and state government and NGO interventions happened after that time.

Similarly, in terms of the degree or extent of international involvement, the timeline shows that the international organizations were very much involved in the whole normative change process that resulted in the 2013 observed decline in Nigeria. For instance, the 1987 Safemotherhood (Cohen 1987:68) and 2000 Millennium Development Goals (United Nations, 2000) are two key international initiatives that help shape the normative change process in Nigeria. As a matter of fact, as discussed in Chapters Two and Six, both of these initiatives urged the developing nations, including Nigeria, to take steps to reverse the high rates of maternal deaths in their countries. Also, USAID implemented the MotherCare Nigeria and ACCESS/MCHIP projects that contributed to the decline. The WHO's 2000 ranking of Nigeria's healthcare system as one of the worst in terms of global performance contributed to the nation's prioritization of the need to reduce the rate of MMR (Shiffman and Okonofua 2007:128). As well, Nigeria was one of the countries that enjoyed full financial support from the UNFPA Maternal Health Thematic Fund project in decreasing the high rates of maternal mortality within the project duration.

Closely related to the process-tracing technique is what Yin (2004:147) referred to as the *explanation building analytical technique.* This analytical technique is relevant

for explanatory case studies, like the current study and involves presenting an explanation about the factors leading to an observed outcome. Specifically, as covered in Chapters Six and Seven, this study explained the processes that led to the MMR decline in Nigeria given the data that was available. As the data was presented in those two chapters, the analytical technique meant that these findings were organized in light of key concepts from the theoretical framework. Still, this analytical technique allows for additions to the explanation and further specification or critique of the explanations emerging from the theoretical framework.

Overall, findings from this study's data seems to reinforce the key concepts of Eager (2004) and Nathanson (1996) on which this study was built, even though the sequence described by these theorists was a bit modified. Apart from this case study shedding light on the relevance of concepts from the theoretical framework (Yin 2014:40) to explaining the decline in MMR in Nigeria, this study has also filled a gap in studies of maternal mortality by documenting the factors that contributed to the 2013 MMR reduction in Nigeria.

Sequence of 'Social Constructionist' Processes

As discussed in Chapter Three, a combination of the ideas of Eager (2004) and Nathanson (1996) focused the data collection for this study. These theorists describe the process of change towards the development of effective public health policies. For Eager (2004) normative change occurs through her proposed five-stage process model discussed in Chapter Three. In brief, the relevant concepts from Eager's (2004) theory include: the role of social movements as well as alliances between these agents in effecting normative

changes. Also, this study's concept of risk construction, though taken from Nathanson (1996), fit with what Eager refers to as the "development" of a new norm.

Nathanson (1996) emphasized the role of the government, social movements and effective construction of risk in bringing about changes in public health policies. In brief, the relevant concepts from Nathanson (1996) include: the government's role, social movement influence and risk construction in effecting changes in public health policies. In addition, Nathanson (1996: 617) pointed out that the collaboration between various agents, particularly government actors with medical practitioners is vital in influencing changes in public health policies and the resultant success or failure in health outcomes.

Consequently, from a combination of ideas from both theorists, the concepts that framed this study's data collection include: the government's role, the influence of social movements, the construction of risk, various types of intervention, and the collaboration between actors that result in normative changes in public health policies goals and outcomes. The role of the government involved the implementation of public health policies or initiatives that led to improved health of citizens. The influence of social movements involves the contributions and activities of social movements that result in changes in public health policies. Risk construction here involves the definition or description of what amounts to health "risk" by individuals or groups who have the authority to do so. Lastly collaboration between actors involves a corporation and alliances between networks of state and non-state actors towards effective normative changes.

So, then, to what extent did the study's data fit with key concepts of Eager (2004) and Nathanson (1996)? From my findings, this study's data fit the key components of the

theoretical framework. For instance, Eager's (2004: 165) five-stage process model in shifting from an existing to a new norm starts with challenges from international and national actors who are dissatisfied with the existing norm and using meetings and conferences as platforms to do so. This is followed by concrete actions taken to change from the existing to a new norm following the dissatisfaction with the existing norm. In this case study, as mentioned in Chapter Six and Seven, transformational actors who were dissatisfied with the high rates of maternal death, swung into concrete action in Nigeria in a bid to change the existing norm. Specifically, the 1990 national Safemotherhood conference in Abuja, Nigeria (Shiffman 2007:800) was the platform where actors began to highlight the unacceptability of the high rates of maternal mortality in Nigeria. The focus on maternal mortality as an important health risk was adopted at this meeting.

Concrete actions for a normative change followed the outcome of the Safemotherhood international meeting (Cohen 1987:68). As stated in Chapter Six, these actions by agents fit Eager's idea that normative change is activated by transformational actors (Eager 2004:166). Transformational actors here included state and non-state actors as well as representatives of international organizations.

Similarly, in Chapter Three, Nathanson (1996:627, 627) noted in her case study on France and the U.S. that the health success achieved in both countries was due mainly to the credible construction of risk but also to cooperation among key actors. In this case, as discussed in Chapters Six and Seven, the success of the 2013 MMR in Nigeria was due to the country's adoption of the original maternal health risk constructed in the 1987 Safemotherhood conference in Nairobi (Cohen 1987:68), but largely due to the active collaboration between transformational actors as well as alliances from local and

international social movements (Eager 2004:169) as summarized in Table 7.1. In addition, social movements played a vital role in the process of normative change (Nathanson 1996:611).

In terms of the sequence of events, Eager (2004) and Nathanson (1996) gave similar descriptions of what led to the successes in their respective case studies. For Eager (2004), the sequence of events include: 1) dissatisfaction with the old norm, 2) the gradual emergence of a new norm, 3) prioritization in meetings that 4) that led to action pushing for the realization of the new norm. Specifically, under the population control norm, discussed in Chapter Three, women in the developing world were being forced to obey harsh laws as a means of population control measures. These policies took away their rights and also had negative impacts on maternal health as they were made to participate in coercive family planning as a measure of slowing population growth. As a result, the Global Women's Health and Rights Movement (GWHRM) feminists movement in collaboration with other global human rights activists who were dissatisfied with the prevailing norm, framed or developed "women's reproductive rights and health" as the new norm to replace population control which was the dominant norm (Eager 2004:158-159). This agenda was top priority in their meetings which eventually led to action in the 1994 Conference where there was a successful paradigm shift resulting in the new norm, that is, women's reproductive rights and health, replacing the dominant one of population control.

For Nathanson (1996) the sequence of events described in her case study that led to the success of the maternal and infant health policies in France and tobacco control

policies in the U.S. began with 1) the construction[60] of health risk, 2) which made improvement in public health a priority, and 3) which then led to actions or interventions by actors. Specifically, as also discussed in Chapter Three, the risk constructed by France was that pregnant women were a national asset to the country and also that the high rate of infant deaths could lead to further depopulation. So to reduce the likelihood of further depopulation and avert an existential threat to France, the issue of maternal and infant health welfare was made a national priority which resulted in actions from the French government, physicians and women who worked together to ensure they reversed the trend (1996: 617-618).

This case study did not fit the theoretical framework in two respects: lack of a clear statement on the national risk of maternal mortality and the sequence of events in social construction of maternal health risk. Specifically, for the first, as discussed in Chapter Seven, other than the risk adopted (Conroy 1995:134) from the Safemotherhood international conference (Conroy 1995:68), no official maternal health risk was constructed in Nigeria. This means that the speech by former President Goodluck Jonathan on maternal health (Every Woman, Every Child 2015) did not match the concept of risk construction as described by the theoretical framework (Nathanson 1996:611; Eager's 2004:167). In other words, as interpreted by Nathanson, risk construction would include clear statements about maternal mortality as a priority for the nation of Nigeria.

[60] Eager (2004) and Nathanson (1996) applied the concept of "framing" in their arguments. While Eager meant it as the "development" of a new norm, Nathanson referred to it as the "construction of risk." See Chapter 3.

Still it fits with the idea of social construction which is closely related to a general social constructionist framework (Macvarish 2010; Reichenbach 2002). As previously discussed in Chapter Seven, social construction, in brief, argues that those in position of power in any given society determine what issues are to be regarded as important. This means that even though the speech by Goodluck Jonathan did not closely match the idea of risk construction as described by the theoretical framework, it does fit well with the social construction perspective in that by virtue of his status as President, he constructed the issue of maternal mortality as a serious one in his speech on maternal health. This speech mentioned women in general in a global context but not specifically as a national priority in Nigeria.

One can argue that the absence of a maternal health risk nationally constructed in Nigeria could be due to the multi ethnic and multi religious nature of the country as highlighted in Chapter Five. In other words, due to the different religious beliefs and ethnic differences, it would seem difficult to construct a maternal health risk that accommodates the country's diversity. It should also be recalled in Chapter Five that one of the reasons the 1988 Nigerian population policy was ineffective was due to the fact that it did not take into cognizance the various ethnic and cultural diversity.

Similarly, as also covered in Chapters Seven, the issue of maternal mortality was first considered a serious one in the 1999 second edition of the Nigerian Demography and Health Survey (NDHS), following the first edition which was in 1990. It was in that second edition that the federal government considered maternal mortality a serious issue worthy of national survey and attention (NPC, *Nigeria Demographic and Health Survey*

1999:112). Subsequently, the forth (2008) and fifth (2013) editions have surveyed the extent of maternal death in the country.

Additionally, problems can be constructed in different ways including taking of concrete actions or committing significant resources for specific approaches to a problem. In Nigeria, those in positions of power either committed sizable resources to reduce maternal mortality or actively collaborated with a series of international actors in attacking the problem. Both the commitment of resources as well as the collaboration in efforts to solve the problem implicitly or indirectly constructing maternal mortality as a problem worthy of much attention.

Based on the sequence described in the theoretical framework above, it is important to note that, from my findings, the events leading up to the 2013 MMR in Nigeria did not follow the exact sequence as highlighted by Eager (2004) or Nathanson (1996). As discussed in Chapter Seven, Nigeria did not view the issue of Safemotherhood as one of national priority until 1999 (Shiffman and Okonofua 2007:128). In fact, some maternal mortality interventions, like the MotherCare Nigeria project discussed in Chapter Six, had already been implemented before Safemotherhood was prioritized as a national issue, even though the Nigeria government originally orchestrated the intervention and also played a supplementary role in that project (Conroy 1995:134). This means that the government started initiating and implementing interventions after 1999 as covered in Chapter Six. In other words, actions preceded prioritization in terms of official statements to that effect or identification of a new norm that was a focal point of national development plans or that treated maternal mortality as a significant threat to the nation in the earlier portion of the study period (1990 to 2013).

Again, this sequence of events differs from that highlighted in the theoretical framework were prioritization preceded action.

Overall, based on my findings, this study's sequence of events is a bit modified from the sequence described by Eager (2004) and Nathanson (1996), which was close to this sequence: 1) explicit construction of the new norm or maternal health risk, 2) Prioritization of maternal health, and 3) Action or maternal health interventions. The sequence that occurred in Nigeria was: 1) action on maternal health interventions; 2) more implicit construction of maternal health risk; and 3) national prioritization of a reduction in maternal mortality.

Interpreting Findings on Other Theoretical Concepts

Interventions

These interventions revealed a complex pattern of collaboration among state and federal actors with NGOs and international actors. Interventions sometimes occurred much before "construction of risk" at a national level for Nigeria or are otherwise "out of sequence" with the outcome of MMR. In other words, some interventions will continue beyond the existence of a high level of MMR for Nigeria just as a proactive, continuing offering for women. Other interventions were discontinued long before there was evidence of a decline in MMR.

Chapter Six extensively covered specific interventions by transformation actors starting with international agencies, Nigerian government and ending with NGOs. My findings reveal that even though interventions solely initiated, funded and implemented by the Nigerian government started in 2006, which is later than those by the international

agencies, none of such government interventions ran for a specific period of time or had an end date. For instance the **Misoprostol Use** and **Free Maternal and Child Health** policy commenced in 2006, **Midwives Service Scheme** and the ***Abiye*** project commenced in 2009. These federal and state government interventions are still ongoing and would likely remain so until maternal mortality no longer poses as a health risk to women and a threat to the nation as a whole. In addition, in Table 6.1 in Chapter Six, two out of the three federal government interventions cut across all states in Nigeria which are the **Misoprostol Use** and **Midwives Service Scheme**. No other interventions had such extensive impact.

On the flip side the two interventions by USAID and the three by the NGOs all had start and end dates. Specifically, while **MotherCare Nigeria** project lasted just one year; **ACCESS/MCHIP** was for six years. Then the **Nigerian Urban Reproductive Health initiative**, the **Emergency Transport Scheme**, and the **Prevention for Treatment and Obstetric Fistula** all ran for five years each. Based on this analysis, it is safe to conclude that the efforts by the Nigerian government have had the most continuous impact on the 2013 MMR decline.

Collaborations of Key Actors

In the absence of any original maternal health "risk" constructed in Nigeria, as covered in Chapters Six and Seven, it seems that the active collaboration between the transformational actors had the most impact on the 2013 observed outcome. For instance, as covered in Chapter 7.1, under foreign agencies interventions like **MotherCare Nigeria**, USAID collaborated with five other groups including another international group, the federal and participating state governments, and professional medical

associations to work together to ensure the success of the project. Under the **ACCESS/MCHIP** project, USAID also worked with two other groups including an international NGO and the participating state governments.

For government interventions, the federal government collaborated with local professional medical associations, a university research unit, and a local NGO to successful approve the **Use of Misoprostol** as well as develop guidelines for its use at the community level.

Clearly, the extent of collaboration was higher in some of the interventions than others which seems to have affected their overall outcome. For instance, under the **Midwives Service Scheme** the federal government allied with seven other groups, including international agencies and local NGOs, which makes it the project with the most allies and collaboration. This could explain why the Scheme happens to be the most prominent of all government maternal mortality interventions, resulting in a 26 per cent reduction with its first year of implementation. For the **Free Maternal and Child Health** policy, the federal government worked with professional medical associations to successfully advocate the implementation of the policy.

For the NGO interventions, including the **Emergency Transport Scheme**, **Nigerian Urban Reproductive Health Initiative** and the **Prevention and Treatment of Obstetric Fistula**, both local and foreign governments and NGOs worked together for the successful implementation of each these projects. As earlier mentioned, the collaboration between actors that contributed to the 2013 decline in Nigeria matches the ideas of Eager (2004) and Nathanson (1996) in that health successes can also be achieved

through the cooperation as well as through more formal agreements or alliances between key transformational actors.

Social Movements

Apart from the government actors, and NGO's, other transformational agents that contributed to Nigeria's MMR decline were various social movement groups. In Chapter Three, both Eager (2004) and Nathanson (1996) argue that the active role social movements' play in bringing about normative change cannot be overemphasized (Eager 2004:168; Nathanson 1996:611). As previously covered in Chapter Six and Seven, the Society of Gynecology and Obstetrics of Nigeria (SOGON) is one of the most influential groups whose activities greatly contributed to the 2013 decline.

As a matter of fact, this professional organizational "kick" started the normative change process at the country level, with the 1990 national Safemothermood conference held in Abuja, Nigeria (Shiffman 2007:800) where a call for actions to reduce the high rates of maternal death in Nigeria was made (Conroy 1995:134). With increased concern for the high rates of maternal deaths in the country, the SOGON first prioritized maternal death in their agenda by making the issue of maternal health a top priority in their annual meetings. This put SOGON as one of the groups that also influenced Nigeria to make the reduction of maternal death a national priority beginning 1999 (Shiffman 2007:800).

In addition, as covered in Table 7.1, SOGON also collaborated with other groups in the implementation of maternal mortality intervention projects like **MotherCare Nigeria**, **Misoprostol use** and the **Free Maternal and Child Health policy**. Also, another group that actively worked with other groups in the interventions is the Partnership for Reviving Routine Immunization in Northern Nigeria-Maternal and

Newborn Child Health (PRRINN-MCH). This organization collaborated with other organizations to ensure the successful implementations of **Midwives Service Scheme** and the **Emergency Transport Scheme**.

Similarly, other groups I found to have contributed to this decline include the National Association of Nigerian Nurses and Midwives (NANNM) and the Nigeria Campaign against Unwanted Pregnancy (CAUP). The former campaigned against *gishiri* practice which involves traditional midwives cutting the birth passage of pregnant women to ease difficult delivery, resulting in excessive bleeding and maternal death in the process ((Dixon-Mueller and Germain, 1994:208). The later campaigned against unsafe abortions through advocacy, media campaigns and other activities (Oye-Adeniran, Long, and Adewole 2004:210). It should be recalled from Chapter Five that hemorrhage or excessive bleeding and unsafe abortions are some of the primary medical causes of maternal mortality (Fabamwo and Okonofua 2010:55). This means that the actions of these social movement groups contributed to tackling these causes which in turn contributed to the overall observed decline. This influence of social movement groups fits with the ideas of Eager (2004) and Nathanson (1996) that social movement groups are agents of normative change.

Limitations

As mentioned in Chapter Four, one limitation to this study was that comprehensive reports, especially on the specifics of the Nigerian government and NGO's interventions before 1990 were difficult to locate. Additionally, many reports that were used provided only limited information on the balance in the funding coverage

between various organizations and Nigerian sources, the degree of control of Nigerians in the nature of the implementation and specific outcomes. This made it difficult to identify which of the interventions had the most impact on the 2013 reduction.

While it was obvious from 2012 data that there were differences among the states of Nigeria in rates of maternal mortality, the exact statistics on maternal mortality by Nigerian states for the full time period covered in this study could not be found. The only information I found in this regard was a 2012 map with maternal mortality categories by states. Still this map did not contain comprehensive statistics of maternal mortality by states for the entire period of the study. This makes it difficult to ascertain the exact rate of maternal mortality decline per state.

Suggestions for Future Studies

There are a number of suggestions for future studies. This study focused on the factors identified by Eager (2004) and Nathanson (1996) to explain the decline in Nigeria's MMR in two decades, even though there may have been other factors that could explain the decline. As suggested by George and Bennett (2005), case studies can also look at plausible rival causal explanations for the outcome of interest. A more comprehensive approach for future studies would be to investigate the effect of rival causal factors that may have led to the 2013 observed outcome. One of such rival factors is the nature of the response of health workers to pregnant women in need in case of emergencies (Igwegbe *et al.* 2012:197). Studies have shown that a delay in health workers' response in emergency situations in one of the factors that contributed to the high rates of MMR in Nigeria. This delay is referred to as type three delay (Nwagha *et al.*

2010:323). Since there is limited available data on this type of response by health workers, it would be necessary to work with selected hospitals to develop a monitoring form to track this data over a five-year or longer time period.

Another suggested future study might be a comparison of Nigeria's approach towards the successful MMR decline between 1990 and 2013, compared to other African nations. This comparison could include any African nation with a greater reduction of the MMR than Nigeria over the two decades period, like Ethiopia; and one with less success than Nigeria in reducing MMR within the same time period, like Burundi. Ethiopia and Burundi are examples of two African countries that struggled with high MMR like Nigeria between 1990 and 2013. But while Ethiopia managed to successfully achieve a greater MMR decline than Nigeria, Burundi had a lesser MMR decline than Nigeria (See Table 2.1 in Chapter Two).

There is also the need to investigate differences in perceptions of and approaches to maternal mortality by states in Nigeria using interviews with representatives of the various states ministries of health. It would be important to fully describe the contexts of each state and how they differed from each other relative to the level of maternal mortality and the locally feasible approaches to solving the problem. This context would also include any available data on economic, educational, health infrastructure and other relevant factors. Comprehensive information on the actual rates of decline by states might be accessible through direct data collection from the state and/or national government sources.

It would also be interesting to understand whether there was a different risk construction in the various states. This would include a comparative study on differences

between religious and ethnic communities in terms of their collective interpretation of the causes of, importance of, and need to deal with the issue of maternal mortality.

Also, even though Nigeria successfully cut its MMR by over half, it was not clear if the norms actually changed as highlighted by Eager (2004) since this study did not have access to survey data dealing with norms. In future studies, it would then be interesting to investigate if there was an actual change in norms and not simply government actions influenced by the MDG 5 target that resulted in the 2013 decline.

Again, it would be interesting to find out how these initiatives were communicated to women. Put differently, how were these programs advertised? What kind of media? For instance, in the Abiye project, there was not any information on how women in Ondo state got information about the project. So, in future studies, it would be important to investigate how pregnant women knew how to find the needed help in project facilities.

Also, these maternal mortality interventions targeted both mothers and their infants. It would be important, for future studies, to investigate the impact these initiatives had on infant mortality as well.

Lastly, future studies might also look at the impact of the "gag rule" as highlighted by Barot, Sneha and Cohen (2015), wherein various groups and political figures worked to limit the international funding for any family planning to developing countries that allowed for abortion services. Specifically, this would mean looking at the change in maternal mortality ratios in various nations relative to changes in U.S. funding for family planning from the 1980s to the current time period. (See Barot, Sneha, and

Susan A. Cohen (2015) "The global gag Rule and fights over funding UNFPA: The issues that won't go away." *Guttmacher Policy Review* 18(2): 27-33.)

Practical Implications

This study describes how Nigeria successfully reduced its maternal mortality rate within two decades. As a result, the data from this study reveals a couple of practical implications. For one, there is the need for landmark interventions like the *Abiye* project to be replicated in all the states in the country so as to further reduce the MMR and meet the targeted MDG 5 goal. Also, there is the need for all hospitals across the country to possess all the necessary equipment and supplies to enable them effectively handle all health issues, including maternal, obstetric, infant, and other health related issues. This was one of the effective strategies adopted under the MotherCare Nigeria, *Abiye*, and the Obstetric Fistula projects

Similarly, lessons learned could be applied to dealing with similar and other health issues in the Nigerian health care system. One of such maternal health issue is obstetric fistulae which can be caused by prolonged labor, early marriage and childbirth, amongst others. One practical implication derived from the Prevention and Treatment of Obstetric Fistula project is that there is the need for more awareness campaigns about the harmful effect of early marriages, especially in the North.

In addition, other sub-Saharan African countries dealing with high rates of maternal mortality could utilize similar interventions covered in this study to improve their maternal health outcomes.

BIBLIOGRAPHY

ARTICLES AND BOOKS

Abimbola, Seye, Ugo Okoli, Olalekan Olubajo, Mohammed J. Abdullahi, and Muhammad A. Pate (2012) "The Midwives Service Scheme in Nigeria." *PLoS Medicine* 9(5):e1001211.

Adegbola, Olukunle (2008) "Population Policy Implementation in Nigeria, 1988-2003." *Population Review* 47(1):56-110.

Adegoke Adetoro, Campbell Malcolm, Martins Ogundeji, Taiwo Lawoyin, and Ann Thomson (2013) "Community Study of maternal mortality in South West Nigeria: how applicable is the sisterhood method." *Maternal and Child Health Journal* 17(2):319-329.

Adogu, Prosper (2014) "Midwifery and Midwives Service Scheme: A Panacea for Improvement of Some Maternal and Neonatal Indices in Nigeria - A Brief Review." *Open Journal of Obstetrics and Gynecology* 4:343-348.

Anger, Barnes (2010) "Poverty eradication, Millennium development goals and sustainable development in Nigeria." *Journal of Sustainable Development* 3(4):138-144.

Ayanleye, Oluwakemi Amudat (2013) "Women and Reproductive Health Rights in Nigeria." *OIDA International Journal of Sustainable Development* 6(5):127-140.

Bhandari, Tulsi Ram, and Dangal, Ganesh (2014) "Maternal mortality: Paradigm shift in Nepal." *Nepal Journal of Obstetrics and Gynecology* 7(2):3-8.

Bhutta, Zulfiqar A., Mickey Chopra, Henrix Axelson, Peter Berman et al. (2010) "Countdown to 2015 Decade Report (2000–10): Taking stock of maternal, newborn, and child survival." *The Lancet* 375(9730):2032-2044.

Chamberlain, J., R. McDonagh, A. Lalonde, and S. Arulkumaran (2003) "The role of professional associations in reducing maternal mortality worldwide." *International Journal of Gynecology & Obstetrics* 83(1):94-102.

Cohen, Susan A. (1987) "The Safe Motherhood Conference." *International Family Planning Perspectives* 13(2):68-70.

Conroy, Colleen B. (1995) "Policy change and its application to Safe Motherhood programming." *International Journal of Gynecology & Obstetrics* 48:S129-S137.

De Brouwere, Vincent, René Tonglet, and Wim Van Lerberghe (1998) "Strategies for reducing maternal mortality in developing countries: What can we learn from the history of the industrialized West?" *Tropical Medicine & International Health* 3(10):771-782.

De Brouwere, Vincent and Wim Van Lerberghe, eds. (2001) *Safe Motherhood Strategies: A Review of the Evidence*. Originally Vol. 17 of the journal - Studies in Health Services Organization & Policy. Antwerp: iTG Press.

Dixon-Mueller, Ruth, and Adrienne Germain (1994) "Population policy and feminist political action in three developing countries." *Population and Development Review* 20:197-219.

Eager, Paige Whaley (2004) "From population control to reproductive rights: understanding normative change in global population policy (1965–1994)" *Global Society* 18(2):145-173.

Fabamwo, A. O., and F.E. Okonofua (2010) "An assessment of policies and programs for reducing maternal mortality in Lagos State, Nigeria: original research article." *African Journal of Reproductive Health*: Special Issue 3 (14): 55-63.

Galadanci, H. S., S.A. Idris, H.M. Sadauki, and I. A. Yakasai (2010) "Programs and policies for reducing maternal mortality in Kano State, Nigeria: a review: original research article." *African Journal of Reproductive Health: Special Issue* 3(14): 31-36.

George, Alexander and Andrew Bennett (2005) *Case Studies and Theory Development in the Social Sciences.* Cambridge, Mass.: MIT Press.

Gerring, John (2007) *Case Study Research: Principles and Practices*. New York: Cambridge U. Press.

Harding, Jamie (2013) *Qualitative Data Analysis from Start to Finish*. London. SAGE.

Harrison, Kelsey A. (1997) "Maternal mortality in Nigeria: the real issues." *African Journal of Reproductive Health* 1(1): 7-13.

Haththotuwa, Rohana, Lakshmen Senanayake, Upul Senarath, and Deepika Attygalle (2012) "Models of care that have reduced maternal mortality and morbidity in Sri Lanka." *International Journal of Gynecology & Obstetrics* 119:S45-S49.

Hirschman, Charles (1994) "Why fertility changes." *Annual Review of Sociology* 20:203-233.

Högberg, Ulf (2004) "The decline in maternal mortality in Sweden: The role of community midwifery." *American Journal of Public Health* 94(8):1312-1320.

Holzgreve, Wolfgang, Dorothea Greiner, and Peter Schwidtal (2012) "Maternal mortality in Eritrea: Improvements associated with centralization of obstetric services." *International Journal of Gynecology & Obstetrics* 119:S50-S54.

Hussein, Julia, Jacqueline Bell, Maureen Dar Lang, Natasha Mesko, Jenny Amery, and Wendy Graham (2011) "An appraisal of the maternal mortality decline in Nepal." *Plos One* 6(5):e19898.

Igwegbe, Anthony O., George U. Eleje, Joeseph O. Ugboaja, and Robinson O. Ofiaeli (2012) "Improving maternal mortality at a university teaching hospital in Nnewi, Nigeria." *International Journal of Gynecology & Obstetrics* 116(3): 197-200.

Islam, Monir (2007) "The safe motherhood initiative and beyond." *Bulletin of the World Health Organization* 85(10):735-735.

Jadesimi, Amy, and Friday E. Okonofua (2006) "Tackling the unacceptable: Nigeria approves misoprostol for postpartum hemorrhage." *Journal of Family Planning and Reproductive Health Care* 32(4):213-214.

Jenkins, J. Craig (1983) Resource mobilization theory and the study of social movements. *Annual Review of Sociology* 9:527-553.

Karkee, Rajendra (2012) "How did Nepal reduce the maternal mortality? A result from analyzing the determinants of maternal mortality." *Journal of Nepal Medical Association* 52(186):88-94.

Kayongo-Male, Diane (March 27-30, 2013) *Reproductive Justice Index and the Meaning of Reproductive Rights for African Women*. Paper presented at the 76th Annual Meeting of Midwest Sociological Society, Chicago Marriot Downtown Magnificent Mile Chicago, Illinois.

Koblinsky, Marjorie A., eds. (2003). *Reducing Maternal Mortality: Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica, and Zimbabwe*. Washington: World Bank Publications.

Koch, Elard, John Thorp, Miguel Bravo, Sebastián Gatica, Camila X. Romero, Hernán Aguilera, and Ivonne Ahlers (2012) "Women's education level, maternal health facilities, abortion legislation and maternal deaths: A natural experiment in Chile from 1957 to 2007." *Plos One* 7(5):e36613.

Kwast, Barbara E. (1995) "Building a community-based maternity program." *International Journal of Gynecology & Obstetrics* 48:S67-S82.

Kwast, Barbara E. (1996) "Reduction of maternal and perinatal mortality in rural and peri-urban settings: what works?" *European Journal of Obstetrics & Gynecology and Reproductive Biology* 69(1): 47-53.

Levine, Ruth. (2007) *Case Studies In Global Health: Millions Saved*. Sudbury, MA: Jones & Bartlett Publishers.

Macvarish, Jan (2010) "The effect of 'risk-thinking 'on the contemporary construction of teenage motherhood." *Health, Risk & Society* 12(4):313-322.

Mhango, Chisale (2014) "Mobilizing the community against maternal death – the Malawi community champion model," Pp. 53-69 in *African Health Leaders: Making Change and Claiming the Future*, edited by Omaswa, Francis, and Nigel Crisp. Oxford University Press, Oxford, United Kingdom.

Miles, Matthew B., A. Michael Huberman, and Johnny Saldaña (2013*) Qualitative Data Analysis: A Methods Sourcebook.* California. SAGE Publications, Incorporated.

Mojekwu, J., and U. Ibekwe (2012) "Maternal Mortality in Nigeria: Examination of Intervention Methods." *International Journal of Humanities and Social Science* 2(20):135-149.

Nathanson, Constance (1996) "Disease prevention as social change: Toward a theory of public health." *Population and Development Review* 22:609-637.

Nwagha, Uchenna Ifeanyi, Daniel Nwachukwu, Dim Cyril, Ibekwe, Perpetus Chudi, and Onyebuchi Azubuike (2010) "Maternal mortality trend in South East Nigeria: less than a decade to the millennium developmental goals." *Journal of Women's Health* 19(2):323-327.

Nwala K. Emmanuel, Gladys N. Ebunoha, and Cosmas U. Ugwu. (2013) "Consumer knowledge and availability of maternal and child health services: a challenge for achieving MDG 4 and 5 in Southeast Nigeria." *BMC Health Services Research* 13:1-5.

Obono, Oka (2003) "Cultural Diversity and Population Policy in Nigeria." *Population and Development Review* 29:103–111.

Ogundipe, Olubiyi Love (2013) "Experiences of women participating in a safe motherhood (Abiye) project in Ondo state of Nigeria." *International Journal of Current Microbiology and Applied Sciences* 2(12):148-161.

Okonofua, Friday, Eyitayo Lambo, John Okeibunor, and Kingsley Agholor (2011) "Advocacy for free maternal and child health care in Nigeria - Results and outcomes." *Health Policy* 99(2): 131-138.

Omideyi, Adekunbi Kehinde (2007) "Poverty and development in Nigeria: Trailing the MDGs?" *African Journal of Infectious Diseases* 1(1):3-17.

Orji, Ernest O., and Uche Onwudiegwu (2002) "Prevalence and determinants of contraceptive practice in a defined Nigerian population." *Journal of Obstetrics & Gynecology* 22(5): 540-543.

Oye-Adeniran, Boniface A., Carolyn M. Long, and Isaac F. Adewole (2004) "Advocacy for reform of the abortion law in Nigeria." *Reproductive Health Matters* 12(24):209-217.

Pathmanathan, Indra Jerker Liljestrand, Jo. M. Martins, Lalini C. Rajapaksa, Craig Lissner, Amala de Silva, Swarna Selvaraju, Prabha Joginder Singh (2003). *Investing in Maternal Health: Learning from Malaysia and Sri Lanka*. Washington: World Bank Publications.

Ravichandran, J. and J. Ravindran (2014) "Lessons from the confidential enquiry into maternal deaths, Malaysia." *BJOG: An International Journal of Obstetrics & Gynecology* 121(s4):47-52.

Reichenbach, Laura (2002) "The politics of priority setting for reproductive health: breast and cervical cancer in Ghana." *Reproductive Health Matters* 10(20): 47-58.

Saldaña, Johnny (2013) *The Coding Manual for Qualitative Researchers.* 2nd Edition. London: SAGE.

Shah, N.M., (2004) "Women's Socioeconomic Characteristics and Marital Patterns in a Rapidly Developing Muslim Society, Kuwait." *Journal of Comparative Family Studies* 35(2): 163-183.

Shehu, D., A.T. Ikeh, M.J. Kuna, and Sokoto Prevention of Maternal Mortality (PMM) Team. (1997) "Mobilizing transport for obstetric emergencies in northwestern Nigeria." *International Journal of Gynecology & Obstetrics* 59:S173-S180.

Shiffman, Jeremy (2007) "Generating political priority for maternal mortality reduction in 5 developing countries." *American Journal of Public Health* 97(5):796-803.

Shiffman, Jeremy, Cynthia Stanton, and Ana Patricia Salazar (2004) "The emergence of political priority for safe motherhood in Honduras." *Health Policy and Planning* 19(6): 380-390.

Shofoyeke, A. D. (2014) "An Appraisal of the 2004 National Policy on Population for Sustainable Development." *Mediterranean Journal of Social Sciences* 5(23):2520-2529

Silva, Ana Luísa (November 23-25, 2010) "Maternal Health and Transport: Implementing an Emergency Transport Scheme in Northern Nigeria." *Paper*

presented at the first African Community Access Programme (AFCAP) Practitioners Conference, London UK.

Starrs, Ann M (2006) "Safe motherhood initiative: 20 years and counting." *The Lancet* 368(9542):1130-1132.

Thaddeus, Sereen, and Deborah Maine (1994) "Too far to walk: maternal mortality in context." *Social Science & Medicine* 38(8):1091-1110.

Ujah, I. A. O., O. A. Aisien, J.T. Mutihir, D.J. Vanderjagt, R.H. Glew, and V. Uguru (2005) "Factors contributing to maternal mortality in north-central Nigeria: a seventeen-year review." *African Journal of Reproductive Health* 9(3): 27-40.

Wall, L. Lewis (1998) "Dead mothers and injured wives: the social context of maternal morbidity and mortality among the Hausa of northern Nigeria*." Studies in Family Planning* 29(4): 341-359.

Weeks, John (2011) *Population: An introduction to concepts and issues*. Eleventh Edition. Cengage Learning.

Xi, Bo, Chengchao Zhou, Min Zhang, Yan Wang, and Lingzhong Xu. (2014) "Maternal and child mortality in China." *The Lancet* 383(9921):953-954.

Yadav, Hematram (2012). "A review of maternal mortality in Malaysia." *International e-Journal of Science, Medicine & Education* (*IeJSME)* 6(Suppl. 1):S142-S151.

Yakasai, I. A., I.S. Abubakar, and B.U. Dikko (2012) "Free maternity services in Kano State impact of free maternity services in Kano State Nigeria." *Tropical Journal of Obstetrics and Gynecology* 29(1): 18-21.

Yin, Robert (2014) *Case Study Research: Design and Methods*. Los Angeles: Sage.

Zureick-Brown, Sarah, Holly Newby, Doris Chou, Nobuko Mizoguchi, Lale Say, Emi Suzuki, and John Wilmoth (2013) "Understanding global trends in maternal mortality." *International Perspectives on Sexual and Reproductive Health* 39(1):32-41.

NEWSPAPERS AND REPORTS

ACCESS Nigeria (Retrieved October 7, 2015) *Increased Use of High quality Emergency Obstetric, Newborn and Family Planning Services. ACCESS End of Project Report: Country, brief Nigeria* http://www.mchip.net/sites/default/files/r_Nigeria_Country_Brief.pdf

Blumhagen Dan, Carol Barker, Muyiwa Oladosu, Olubunmi Olufunke Asa, and Jack Reynolds (2009) *USAID/Nigeria Maternal, Child, and Reproductive Health Program Mid-Term Evaluation. The Global Health Technical Assistance Project*. http://pdf.usaid.gov/pdf_docs/PDACP459.pdf

Central Intelligence Report (C.I.A.) (August 26, 2015) *The World Fact Book: Nigeria*. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html

Cooke, J. G., and F. Tahir (2013) *Maternal Health in Nigeria, With Leadership, Progress is Possible.* Center for Strategic and International Studies. Washington, DC. A

report of the CSIS Global Health Policy Center. Retrieved from http://csis.org/files/publication/130111_Cooke_MaternalHealthNigeria_Web.pdf

Conroy, Colleen B. (1993) MotherCare-Nigeria Trip Report February 9 – March 1, 1993 http://pdf.usaid.gov/pdf_docs/PDABH166.pdf

Countdown to 2015: Cambodia Maternal and Child Health Data (2014). http://www.countdown2015mnch.org/documents/2014Report/Cambodia_Country_Profile_2014.pdf

Countdown to 2015: Egypt Maternal and Child Health Data (2014). http://www.countdown2015mnch.org/documents/2014Report/Egypt_Country_Profile_2014.pdf

Countdown to 2015: Eritrea Maternal and Child Health Data (2014). http://countdown2015mnch.org/documents/2014Report/Eritrea_Country_Profile_2014.pdf

Countdown to 2015: Lao People's Democratic Republic (2014) http://countdown2015mnch.org/documents/2014Report/LaoPDR_Country_Profile_2014.pdf

Countdown to 2015: Nepal Maternal and Child Health Data (2014). http://www.countdown2015mnch.org/documents/2014Report/Nepal_Country_Profile_2014.pdf

Countdown to 2015: Nigeria Maternal and Child Health Data (2014) http://www.countdown2015mnch.org/documents/2014Report/Nigeria_Country_Profile_2014.pdf

Countdown to 2015: Rwanda Maternal and Child Health Data (2014). http://www.countdown2015mnch.org/documents/2014Report/Rwanda_Country_Profile_2014.pdf

Eritrea Ministry of Information (2009) *Eritrea at a glance VI*. Retrieved May 27, 2015 from: http://shabait.com/about-eritrea/eritrea-at-a-glance/1214-eritrea-at-a-glance-vi

Eritrea Ministry of Information (2014) *Eritrea Reduced Maternal Death by Over 75 Percent since 1990.* Retrieved May 27, 2015 from: http://shabait.com/articles/nation-building/17166-eritrea-reduced-maternal-death-by-over-75-percent-since-1990-who

Every Woman, Every Child (Retrieved April 17, 2015) *Nigeria* http://www.everywomaneverychild.org/commitments/all-commitments/nigeria

Every Woman, Every Child (2012) *UN Commission Report on life-saving commodities for women and children* http://www.unicef.org/media/files/UN_Commission_Report_September_2012_Final.pd

Federal Office of Statistics (FOS) [Nigeria] (1992) *Nigeria Demographic and Health Survey 1990*. IRD/IVlacro International Inc. Columbia, Maryland USA. Retrieved from

file:///C:/Users/Enifome/Downloads/NigeriaDemographic&HealthSurvey1990.pdf

Federal Republic of Nigeria 1999 Constitution. Retrieved from http://www.nigeria-law.org/ConstitutionOfTheFederalRepublicOfNigeria.htm

Gordis Deborah, Matjorie Koblinsky, Colleen Conroy, Kim Winnard, and Barbara Kwast. (1994) *MotherCare: lessons learned 1989-1993. Summary final report.* http://pdf.usaid.gov/pdf_docs/PNABR430.pdf

John Snow, Inc., Retrieved June 4, 2015 http://www.jsi.com/JSIInternet/About/index.cfm

John Snow Incorporation (2015) MotherCare. John Snow, Inc. and JSI Research & Training Institute, Inc. www.jsi.comJohn Snow, Inc. and JSI Research & Training Institute, Inc. www.jsi.com

Kabiru, Ado Yau (2015) *Successful Public Private Partnership-Working to Reduce Maternal Mortality in Nigeria*. Presentation by the General Secretary Administration, The National Union of Road Transport Workers (NURTW). Retrieved October 19, 2015. http://www.transaid.org/wp-content/uploads/2015/06/2-Public-Private-Partnerships-to-reduce-maternal-mortality-in-Nigeria.pdf

Kalu Ifeanyi (November 25, 2014) "Activist decries high rate of maternal deaths in Nigeria." SundiataPOST. Retrieved Tuesday February 17, 2015 from http://sundiatapost.com/2014/11/25/activist-decries-high-rate-of-maternal-deaths-in-nigeria/

MCHIP Nigeria (Retrieved October 7, 2015) MCHIP Country brief: Nigeria. USAID MCHIP End of project Report. http://www.mchip.net/Nigeria.pdf

Mimiko, Olusegun (Governor of Ondo State), Dinesh Nair, Mohammad Murtala Mai, and Jennifer Cooke (2013 estimated based on information in the document) *Maternal Health in Nigeria: Progress is Possible. Examining the Ondo State Abiye Model.* Presentation at Center for Strategic & International Studies. Retrieved September 30, 2015 http://csis.org/files/attachments/130116_Maternal_Health_in_Nigeria_ALL%20SLIDES_0.pdf

National Population Commission (NPC) [Nigeria] (2000) *Nigeria Demographic and Health Survey 1999*. Calverton, Maryland: National Population Commission and ORC/Macro. Retrieved from http://dhsprogram.com/pubs/pdf/FR115/FR115.pdf

National Population Commission (NPC) [Nigeria] and ORC Macro (2004) *Nigeria Demographic and Health Survey 2003*. Calverton, Maryland: National Population Commission and ORC Macro. Retrieved from http://dhsprogram.com/pubs/pdf/FR148/FR148.pdf

National Population Commission (NPC) [Nigeria] and ICF Macro (2009) *Nigeria Demographic and Health Survey 2008.* Abuja, Nigeria: National Population Commission and ICF Macro. Retrieved from http://pdf.usaid.gov/pdf_docs/PNADQ923.pdf

National Population Commission (NPC) [Nigeria] and ICF International (2014) *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland,

USA: NPC and ICF International. Retrieved from http://population.gov.ng/images/ndhs_data/ndhs_2013/2013_ndhs_final_report.pdf

Nigeria Bureau of Statistics (2012) *Nigeria Poverty Profile 2010*. http://nigerianstat.gov.ng/pdfuploads/Nigeria%20Poverty%20Profile%202010.pdf

Nigeria (2015) *Millennium Development Goals (MDG).* Retrieved from http://mdgs.gov.ng/

Nigeria National Population Commission (2004). *Population Policy*. Retrieved from http://www.population.gov.ng/index.php?option=com_content&view=article&id=116&Itemid=101

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Abuja* https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_abuja_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Benin* https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_benin_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Ibadan* https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_ibadan_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Ilorin* https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_ilorin_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Kaduna*. https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_kaduna_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2015) *Endline Findings for Zaria* https://www.urbanreproductivehealth.org/sites/mle/files/factsheet_zaria_9.17.15.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2013*) NURHI Overview* http://www.nurhitoolkit.org/nurhi-overview#.ViAYwflViko

Nigerian Urban Reproductive Health Initiative (NURHI) (2013) *Measurement, Learning & Evaluation of the Urban Health Initiative: Nigeria 2012 Midterm Survey* http://www.nurhitoolkit.org/sites/default/files/tracked_files/NURHI%20Midterm%20Report.pdf

Nigerian Urban Reproductive Health Initiative (NURHI) (2011*) Nigeria Baseline Household Survey 2010-2011*

http://www.nurhitoolkit.org/sites/default/files/tracked_files/NURHI%20Baseline%20Household%20Survey.pdf

NURTW (2013) *Emergency Transport Scheme Training Manual.* http://prrinn-mnch.org/documents/EmergencytransportschememanualforNURTW_2013.pdf

NURTW (2015) *Programs*. http://www.nurtwng.com/program/

Ondo State Ministry of Health (2015) *Abiye Safe Motherhood*. Retrieved October 1, 2015 http://ondostatemoh.gov.ng/abiye.php

Population Reference Bureau (2013) *Family Planning Worldwide 2013 Data Sheet*. Retrieved from http://www.prb.org/Publications/Datasheets/2013/family-planning-worldwide-2013.aspx

Population Reference Bureau (2014a) *GNI PPP Per Capita (US$).* Retrieved from http://www.prb.org/DataFinder/Topic/Rankings.aspx?ind=61&fmt=252&tf=69&loc=34235&loc=249&loc

Population Reference Bureau (2014b) *2014 World Population Data Sheet*. Retrieved from http://www.prb.org/Publications/Datasheets/2014/2014-world-population-data-sheet/data-sheet.aspx

Population Reference Bureau (2014c) *Nigeria*. Retrieved from http://www.prb.org/DataFinder/Geography/Data.aspx?loc=269

Population Reference Bureau (2015) *2015 World Population Data Sheet*. Retrieved from http://www.prb.org/pdf15/2015-world-population-data-sheet_eng.pdf

Rotary (Retrieved October 13, 2015) *List of trained health personnel: Rotary Pilot Project: Final Report* http://maternal-health.org/documents/attachment_11___list_of_trained_health_p_131.pdf

Rotary (2010) *Maternal and Child Health Hospital-Report 2009. Institute of Quality Assurance in Obstetrics of Kano State and Kaduna State* http://maternal-health.org/documents/hospital_report_2009___kano_and_kaduna_132.pdf

Rotary (Retrieved April 7, 2015) *Rotary Maternal Health Project in two states of Nigeria (Kano and Kaduna) 2005-2010* http://maternal-health.org/1/12/Maternal_Health_Pilot_Project/

Rotary (Retrieved April 7, 2015) *Rotary Pilot Project: Final Report* http://maternal-health.org/documents/trf_final_report_mg_53403_2005_2010_140.pdf

Saka, Mohammed Jimoh *et al* (October 2008) *Final Report of Assessment of Free Maternal Health Services in Nigeria.* Retrieved from http://www.unilorin.edu.ng/publications/sakamj/Technical%20Reports%20%20Saka%20MJ/Report%20of%20Free%20Maternal%20Health%20Services.pdf

Safemotherhood (2010) http://www.safemotherhood.org/

Safemotherhood - Family Care International (2007) *The Safe Motherhood Initiative 1987–2005* http://www.familycareintl.org/UserFiles/File/SM%20A%20Review_%20Full_Report_FINAL.

SOGON (2015) *Vision and Mission Statements of SOGON* http://www.sogon.org/vision-mission/

The Access to Clinical and Community Maternal, Neonatal and Women's Health Services (ACCESS) (Retrieved October 7, 2015) from http://www.jhpiego.org/accesstohealth/

The News Nigeria (January 29, 2015) "LUTH to be sued over woman's death." Retrieved Tuesday February 17, 2015 from http://thenewsnigeria.com.ng/2015/01/29/luth-to-be-sued-over-womans-death/.

Transaid (Retrieved October 15, 2015) *Transport for life*. http://www.transaid.org/

Transaid (2010) *Emergency Transport Scheme (ETS) in Gombe State, Nigeria (Part 4 – Final Monitoring and Evaluation).* Retrieved October 15, 2015 http://www.transaid.org/wp-content/uploads/2015/06/15-Transaid-Technical-Case-Study-Emergency-Transport-Scheme-in-Gombe-State-Nigeria-Part-4.pdf

Transaid (Retrieved April 8 2015) *Northern Nigeria Emergency Transport Scheme* http://www.amddprogram.org/sites/default/files/Transaid_Technical%20Case%20Study_Northern%20Nigeria%20ETS.pdf

UNDP in Eritrea (2013) *Reducing maternal death in Eritrea*. Retrieved May 21, 2015 http://www.er.undp.org/content/eritrea/en/home/ourwork/womenempowerment/successstories/-reducing-maternal-death-in-eritrea.html

United Nations (2000) *Millennium Summit*. Retrieved June 4, 2015. http://www.un.org/en/events/pastevents/millennium_summit.shtml

United Nations, Department of Economic and Social Affairs, Population Division (2015) *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. New York.* Retrieved from http://esa.un.org/unpd/wpp/Publications/Files/Key_Findings_WPP_2015.pdf

United Nations Population Fund (Retrieved March 11, 2016) *About us.* http://www.unfpa.org/about-us

United Nations Population Fund (2010) *Maternal Mortality Reduction Program in Rwanda. Kaciyuri, Kigali, Rwanda: UNFPA Rwanda Country Office*. Retrieved from: http://countryoffice.unfpa.org/rwanda/drive/MaternalMortalityReductioninRwanda(VLR).pdf

United Nations Population Fund (1998) *State of the World's Population 1998*. Retrieved from http://www.unfpa.org/publications?title=&field_thematic_area_tid_i18n=All&field_publication_date_value[value][year]=&field_type_of_publication_value=State%20of%20World%20Population&page=1

United Nations Population Fund (UNFPA) (2008) *The Maternal Health Thematic Fund: Annual Report 2008* http://www.unfpa.org/sites/default/files/pub-pdf/mhtf_annual_report.pdf

United Nations Population Fund (UNFPA) (2009) *The Maternal Health Thematic Fund: Annual Report 2009* http://www.unfpa.org/sites/default/files/pub-pdf/mhtf_annualreport_2009.pdf

United Nations Population Fund (UNFPA) (2010) *The Maternal Health Thematic Fund: Annual Report 2010* http://www.unfpa.org/sites/default/files/pub-pdf/Global_Report_2010_MH.pdf

United Nations Population Fund (UNFPA) (2011) *The Maternal Health Thematic Fund: Annual Report 2011* http://www.unfpa.org/sites/default/files/pub-pdf/MHTF%202011%20annual%20report%2008_2_2012.pdf

United Nations Population Fund (UNFPA) (2012) *The Maternal Health Thematic Fund: Annual Report 2012* http://www.unfpa.org/sites/default/files/pub-pdf/MHTF%202012%20Annual%20Report-final.pdf

United Nations Population Fund (UNFPA) (2013) *The Maternal Health Thematic Fund: Annual Report 2013* http://www.unfpa.org/sites/default/files/pub-pdf/MHTF%202013%20AR_09_08_2014-press.pdf

United Nations Population Fund (UNPFA) (23 September 2013) *UN Secretary-General, UNFPA Call for Accelerated Action to Prevent Women and Girls from Dying Unnecessarily*. http://www.unfpa.org/news/un-secretary-general-unfpa-call-accelerated-action-prevent-women-and-girls-dying-unnecessarily

USAID (Retrieved October 8, 2015) *Maternal and Child Health Integrated Program (MCHIP).* http://www.mchip.net/

USAID (1991 estimated based on information in the document) *MotherCare Nigerian Maternal Care Work plan March 1992 - September 1993* http://pdf.usaid.gov/pdf_docs/PDABH112.pdf.

USAID Nigeria (2012) *The Access to Clinical and Community Maternal, Neonatal and Women's Health (ACCESS) /Maternal and Child Health Integrated Program (MCHIP) Project Final Evaluation*. http://www.mchip.net/sites/default/files/MCHIP%20%20Final%20Evaluation%20Report-4-13-12.pdf

United States Agency for International Development (USAID) (Retrieved October 7, 2015). *ACCESS End of Project Report. USAID MCHIP-Maternal and Child Health Integrated Program* http://www.mchip.net/node/627

Venture Strategies Innovations (VSI) (2015) *Nigeria takes groundbreaking step with approval of guidelines.* http://www.vsinnovations.org/nigeria-community-misoprostol-guidelines.html

WHO Cambodia (2014) *Success Factors for Women's and Children's Health: Cambodia. Ministry of Health Cambodia, PMNCH, WHO, World Bank, AHPSR and participants in the Cambodia multistakeholder policy review (2014).* Geneva: World Health Organization. Retrieved from: http://www.who.int/pmnch/knowledge/publications/cambodia_country_report.pdf?ua=1

WHO Egypt (2014) *Success Factors for Women's and Children's Health: Egypt. Ministry of Health and Population Egypt, Partnership for Maternal, Newborn & Child Health, WHO, World Bank and Alliance for Health Policy and Systems Research*. Geneva: World Health Organization. Retrieved from:

http://www.who.int/pmnch/knowledge/publications/egypt_country_report.pdf?ua=1

WHO Eritrea (2012) *WHO Eritrea Supports Maternal Mortality Reduction Efforts*. Retrieved from: http://www.afro.who.int/en/eritrea/press-materials/item/4693-who-eritrea-supports-maternal-mortality-reduction-efforts.html

WHO Lao PDR (2014) *Success Factors for Women's and Children's Health: Lao PDR. Ministry of Health Lao PDR, PMNCH, WHO, World Bank, AHPSR and participants in the Lao PDR multistakeholder policy review (2014*). Geneva: World Health Organization. Retrieved from: http://www.who.int/pmnch/knowledge/publications/lao_country_report.pdf?ua=1

WHO Nepal (2014) *Success factors for women's and children's health: Nepal. MoHP Nepal, PMNCH, WHO, World Bank, AHPSR and participants in the Nepal multistakeholder policy review (2014).* Geneva: World Health Organization. Retrieved from: http://www.who.int/pmnch/knowledge/publications/nepal_country_report.pdf?ua=1

WHO Nigeria (2014) *Maternal Mortality in 1990 to 2013*. Retrieved from: http://www.who.int/gho/maternal_health/countries/nga.pdf?ua=1

WHO (2011) *Nigeria Midwives Service Scheme* http://www.who.int/workforcealliance/forum/2011/26_Nigeria.pdf?ua=1

WHO Rwanda (2014) *Success Factors for Women's and Children's Health: Rwanda. Ministry of Health Rwanda, PMNCH, WHO, World Bank, AHPSR and participants in the Rwanda multistakeholder policy review (2014).* Geneva: World Health Organization. Retrieved from: http://www.who.int/pmnch/knowledge/publications/rwanda_country_report.pdf?ua=1

WHO Vietnam (2014) *Success Factors for Women's and Children's Health: Vietnam. Ministry of Health Viet Nam, PMNCH, WHO, World Bank, AHPSR and participants in the Viet Nam multistakeholder policy review (2014).* Geneva: World Health Organization. Retrieved from: http://www.who.int/pmnch/knowledge/publications/vietnam_country_report.pdf?ua=1

WHO (2015) *United Nations agencies report steady progress in saving mothers' lives*. Retrieved May 21, 2015 from: http://www.who.int/mediacentre/news/releases/2014/maternal-mortality/en/

Women Advocates Research and Documentation Centre WARDC (2015) http://www.wardcnigeria.org/

Women Arise for Change Initiative (2015) http://www.womenarise.org.ng/

World Bank (April 2011) *Reproductive Health at a glance – Lao PDR*. Washington: World Bank. Retrieved May 31, 2015 from: http://siteresources.worldbank.org/INTPRH/Resources/376374-1303736328719/LAOhealth41811web.pdf

World Health Organization: Global Health Observatory (2014) *Maternal mortality country profiles.* Retrieved from: http://www.who.int/gho/maternal_health/countries/en/.

World Health Organization: Global Health Observatory (2015) *Women Data by country*. Retrieved September 7, 2015 from http://apps.who.int/gho/data/node.main.REPWOMEN39

World Health Organization. (1999) *Reduction of maternal mortality: a joint WHO/UNFPA/UNICEF/World Bank statement*. http://whqlibdoc.who.int/publications/1999/9241561955_eng.pdf?ua=1

World Health Organization (2014) *Success Factors for Women's and Children's Health: Policy and Program Highlights from 10 Fast-Track Countries. PMNCH, WHO, World Bank and AHPSR.* Geneva: WHO. Retrieved from: http://www.who.int/pmnch/knowledge/publications/success_factors_highlights.pdf?ua=1.

World Health Organization (2014) *Trends in Maternal Mortality: 1990 to 2013: estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division: Full Report.* Geneva: World Health Organization. Retrieved from: http://apps.who.int/iris/bitstream/10665/112682/2/9789241507226_eng.pdf?ua=1

World Statistics Pocketbook (2013 edition) United Nations Department of Economics and Social Affairs. New York. Retrieved from http://unstats.un.org/unsd/pocketbook/World_Statistics_Pocketbook_2013_edition.pdf

Appendix A: WHO Maternal Mortality Rates 1990-2013

Maternal mortality in 1990-2013

WHO, UNICEF, UNFPA, The World Bank, and United Nations Population Division Maternal Mortality Estimation Inter-Agency Group

Nigeria

Year	Maternal mortality ratio (MMR)	Maternal deaths	Number of AIDS-related indirect maternal deaths	Live births[a]	Proportion of deaths among women of reproductive age that are due to maternal causes (PM)
	Per 100 000 live births (lb)	Numbers	Numbers	Thousands	Per cent
2013	560 [300-1000]	40,000	1,600	7,166	15.6
2005	740 [400-1400]	44,000	1,500	5,949	18.1
2000	950 [500-1800]	50,000	920	5,284	22.8
1995	1100 [560-2000]	50,000	360	4,704	27.3
1990	1200 [610-2200]	49,000	95	4,224	31.2
Annual % change					
1990-2000	-2.3				
2000-2013	-4.0				
1990-2013	-3.3				

[a] World population prospects: the 2012 revision. New York, Population Division, Department of Economic and Social Affairs, United Nations Secretariat, 2013.

Source of data:

Civil registration	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Maternal deaths[b]	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

[b] ICD10 codes O00-O99 Pregnancy, childbirth and the puerperium and A34 Obstetrical tetanus; ICD9 codes 630-676 Complications of pregnancy, childbirth and the puerperium. Maternal deaths of an unknown age have been redistributed. Should you provide us with new data, kindly send maternal deaths and total number of female deaths by 5-year age group if available in order to be able to compute the PM.

[c] Points prepared for regression; appropriate adjustment made to match the definition and AIDS component of the estimates. See attached explanatory note for more details.

Other sources

Source	Definition	Reported in the source						Adjusted MMR[c]
		Period	Maternal deaths	Female deaths 15-49	Live births	PM (%)	MMR per 100 000 lb	per 100 000 lb
DHS 1999	Pregnancy-related	1993-1999	...	...	...	23	289	#N/A [#N/A]
DHS 2008	Pregnancy-related	2001-2008	398	1,699	...	...	545	832 [d]

[d] used in the regression

Source: World Health Organization: Global Health Observatory (2014) *Maternal mortality country profiles.*

Appendix B: Reproductive Justice Index

	Table 7: Countries Alphabetically on Reproductive Injustice Index																
Countries	HDI Index	Maternal Mortality Rate	Adolescent Fertility Rate	Contraceptive Prevalence - Any Kind	At Least One AnteNatal Visit	Births Attended by Skilled Personnel	Deaths Due to Water Pollution	Malaria per 100,000	HIV Prev	Schistosomiasis (2009)	TB Prevalence	Military Expenditure as % GDP	Total Exp. Health %GDP	Health Exp %/ military Exp % GDP		Total points with all items -- highest risk	Total Points Minus MMR
Angola	2	4	5	5	4	3	5	3	3	3	2	3	4	4		50	46
Benin	3	2	3	3	4	1	4	4	1	3	3	2	5	3		41	39
Botswana	1	1	1	1	1	1	1	1	5	2	5	4	1	2		27	26
Burkina Faso	5	3	3	3	3	3	4	5	4	3	5	3	2	3		49	46
Burundi	5	5	1	5	1	5	5	2	4	4	2	1	1	1		42	37
Cameroon	2	4	4	2	4	2	3	4	4	3	3	4	4	4		47	43
Central Africa Republic	4	5	3	3	5	4	3	5	4	3	2	4	4	5		54	49
Chad	5	5	5	5	5	5	4	5	1	3	1	3	2	2		51	46
Congo	1	4	3	1	3	1	1	4	5	3	4	1	5	3		39	35
Congo, Dem. Rep.	5	4	5	3	3	1	5	5	1	3	4	2	1	1		43	39
Cote d'Ivoire	3	2	4	4	3	2	4	4	2	3	4	5	4	5		49	47
Eritrea	4	1	1	5	5	5	2	1	4	2	3	2	5	5		45	44
Ethiopia	4	2	2	4	5	5	4	1	3	3	3	3	4	4		47	45
Gabon	1	1	2	2	1	1	1	2	1	3	1	2	5	4		27	26
Gambia	3	1	2	3	1	2	2	3	1	3	2	2	3	3		31	30
Ghana	1	1	2	2	2	2	2	2	1	4	1	4	3	3		30	29
Guinea	4	4	5	5	3	4	3	5	5	3	2	2	3	3		51	47
Kenya	1	3	2	1	2	4	2	1	5	3	3	4	4	4		39	36
Lesotho	2	3	2	1	2	2	1	1	1	2	3	3	1	2		26	23
Liberia	5	5	4	5	4	4	5	3	5	3	5	5	1	3		57	52
Madagascar	2	2	4	2	3	4	3	1	3	4	2	3	5	4		42	40
Malawi	3	3	3	1	2	3	4	3	1	3	3	2	2	2		35	32
Mali	4	5	5	5	5	3	5	4	2	3	1	5	4	5		56	51
Mauritania	2	3	2	5	4	2	2	2	3	3	2	5	1	5		41	38
Mozambique	5	3	5	4	2	3	2	5	1	4	5	1	3	1		44	41
Namibia	1	1	2	1	1	1	1	2	1	2	1	2	3	2		21	20
Niger	5	5	5	4	5	5	5	5	1	3	2	4	2	4		55	50
Nigeria	2	5	3	4	5	5	4	4	3	3	1	3	3	3		48	43
Rwanda	3	3	1	2	1	3	5	2	1	4	1	5	1	5		37	34
S Africa	1	2	1	1	2	1	1	1	4	3	5	1	1	1		25	23
Senegal	2	2	3	4	3	3	3	3	3	3	4	1	3	1		38	36
Sierra Leone	5	5	4	5	3	4	5	5	2	4	4	2	1	1		50	45
Tanzania	2	4	3	2	4	4	2	3	5	4	5	5	4	5		52	48
Togo	3	1	1	3	4	2	2	2	5	4	4	4	3	4		42	41
Uganda	2	2	5	2	1	4	3	3	2	3	4	1	1	1		34	32
Zambia	3	2	5	1	1	3	3	4	4	3	5	1	4	2		41	39
Zimbabwe	4	4	1	1	2	2	1	2	5	3	5	5	2	4		41	37

Source: Kayongo-Male, Diane (March 27-30, 2013) *Reproductive Justice Index and the Meaning of Reproductive Rights for African Women*. Paper presented at the 76th Annual Meeting of Midwest Sociological Society, Chicago Marriot Downtown Magnificent Mile Chicago, Illinois.

Appendix C: List of Abbreviations and Acronyms

ACCESS	Access to Clinical and Community Maternal, Neonatal and Women's Health Services
CHEWS	Community Health Extension Workers
EmONC	Emergency Obstetric and Newborn care
ETS	Emergency Transport Scheme
HHCC	Household-to-Hospital Continuum of Care
JHPIEGO	John Hopkins Program for International Education in Gynecology and Obstetrics
MBSMs	Male Birth Spacing Motivators
MCH	Maternal and Child Health
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goals
MHTF	Maternal Health Thematic Fund
MMR	Maternal Mortality Ratio
MSS	Midwives Service Scheme
NAFDAC	National Agency for Food and Drug Administration and Control
NURTW	Nigeria National Union of Road Transport Workers
NURHI	Nigerian Urban Reproductive Health Initiative
PPFN	Planned Parenthood Federation of Nigeria
PRRINN-MCH	Partnership for Reviving Routine Immunization in Northern Nigeria-Maternal and Newborn Child Health
SMI	Safe Motherhood Initiative
SOGON	Society for Obstetrics and Gynecology of Nigeria

Appendix D: List of Key Local and International Organizations that Cooperated with the Nigeria Government in the projects

Americans for UNFPA
Johns Hopkins Program for International Education in Gynecology and Obstetrics
Johns Hopkins University Center for Communications Programs
Nigerian Medical Association
Nigeria National Union of Road Transport Workers
Partnership for Reviving Routine Immunization in Northern Nigeria--Maternal and Newborn Child Health
Pathfinder International
Pediatrics Association of Nigeria
Planned Parenthood Federation of Nigeria
Population and Reproductive Health Partnership
Rotary
Society of Gynecology and Obstetrics of Nigeria
Transaid
UNFPA
UNICEF
USAID
Venture Strategies Innovations
World Bank
World Health Organization