POLICY ANALYSIS OF THE IMPLEMENTATION PROCESS OF THE SAFE MOTHERHOOD TRAINING COMPONENT IN BOTSWANA

Hezekiah Osore

Student no: 0515670V

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, in partial fulfilment of the requirements for the degree

of

Master of Public Health

Johannesburg, May 2015

DECLARATION

I, Hezekiah Osore, declare that this research report is my own work. It is being submitted for the degree of Master of Public Health in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

Signed on this 20th day of May, 2015

DEDICATION

I dedicate this work to:

My family for their understanding, support and encouragement during the time of writing of this research report. Thank you very much for giving me the drive to move on.

I would also like to express my profound gratitude to my parents for having given me the opportunity to be what I am.

ABSTRACT

Introduction

Worldwide, an estimated 800 women die each day from preventable causes related to pregnancy and childbirth, the majority in low-and middle-income countries (WHO, 2014:1). The Safe Motherhood Initiative (SMI) aims to achieve safe pregnancies and childbirth, but maternal mortality remains a significant problem in Botswana.

Aim and Objectives: The aim of this study was to analyse the implementation process of the SMI policy in Botswana, with specific reference to the training component. The specific objectives of the study were to: describe the context of policy implementation; analyse the content of the SMI policy guidelines; describe the process of implementation of the 2005 SMI policy guidelines; describe the key policy actors, their roles and their influence on the implementation of the policy; and describe the factors influencing the implementation of the SMI policy in Botswana.

Methods: The study used a contemporary health policy analysis framework. During 2008, key informants were selected purposively in the southern health region of Botswana. Following informed consent, 12 in-depth interviews were conducted with key informants to obtain their views and perceptions of the content, context, process and the actors of the SMI policy implementation process. The data were analysed using thematic content analysis.

Results: The study found that there was high level government commitment, with the SMI driven by the Ministry of Health. Key successes of the SMI policy included: the integration of the Prevention of Mother-to-Child Transmission (PMTCT) of HIV component into the SMI policy, the integration of SMI into the midwifery curriculum and the development, standardisation and distribution of reference manuals or protocols. However, legislative and health system barriers, as well as unsustainable funding, insufficient consultation with and

support by stakeholders, and inadequate coordination of the policy process hindered the successful implementation of the SMI policy.

Conclusion: The findings draw attention to the value of stakeholder involvement in policy formulation and implementation; the importance of addressing policy implementation barriers and resource availability; and the need for effective coordination and communication.

ACKNOWLEDGEMENTS

1. First and foremost I would like to express my gratitude to Professor Laetitia Rispel - my supervisor - whose advice, guidance and patience contributed greatly to the completion of this research report. Thank you for your patience and for teaching me how to write and for making the MPH course a worthwhile undertaking.
2. All the participants who volunteered to be interviewed in this study without whom the project would not have been realised.
3. I wish to thank Mr. Ermin Erasmus and Ms Loveday Penn-Kekana for their assistance during the protocol development stage.
4. Thank you to Mrs. Dolly Ntshambiwa for painstakingly translating the information sheet and the questionnaire into Setswana as required by the Research Unit of the Ministry of Health, Botswana.

Contents

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

ACRONYMS & ABBREVIATIONS

AMDD	Averting Maternal Death and Disability
AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
BNPH	Botswana National Policy on HIV/AIDS
EmOC	Emergency Obstetric Care
FCI	Family Care International
HPA	Health Policy Analysis
IAG	Inter-Agency Group
ICPD	International Conference on Population and Development
IHS	Institute of Health Science
IMMPACT	Initiative for Maternal Mortality Programme Assessment
LG	Local Government (ministry of)
MMR	Maternal mortality Ratio
NACA	National Aids Coordinating Agency
PHC	Primary health care
PLHIV	People living with HIV
PMNCH	Partnership for Maternal, New-born, and Child Health
PMTCT	Prevention of mother-to-child transmission
SADC	Southern Africa Development Community
SCI	Skilled Care Initiative
TOTs	Trainer of Trainers
UNAIDS	United Nations (Programme) AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

CHAPTER 1: INTRODUCTION & BACKGROUND

The health of mothers has long been recognised to be a keystone of public health. However, the maternal mortality ratio (MMR), that is, the number of women dying as a result of complications during pregnancy, childbirth or in the six weeks following delivery, per 100 000 live births and morbidity figures remain high in many countries (WHO, 2008). Although the global health and development agenda has been dominated by the discussions on the undesirably high levels of maternal mortality since the 1980s, in 2000, the global estimate for maternal deaths was 529 000, with 99% occurring in low-income developing countries (AbouZahr, 2003:13-25; AbouZahr, et al., 2004). In 1987, as an international effort to raise awareness of the scale and magnitude of maternal mortality, Safe Motherhood Initiative (SMI) was launched with the aim of galvanising commitment among various stakeholders to take steps to address maternal mortality as a public health problem (FCI, 2007).

In the decade that ended in 2007, four major global Safe Motherhood implementation and evaluation initiatives: Averting Maternal Death and Disability (AMDD), Initiative for maternal mortality programme assessment (IMMPACT), the Skilled Care Initiative (SCI), and the USAID ACCESS programme all came together to strengthen the call for the implementation of the SMI policy (Freedman, et al., 2007: 1383). These initiatives aimed to generate and synthesise evidence, develop instruments, create links for learning across countries, and provide technical guidance and support (Freedman, et al., 2007: 1383-91). Each of the four initiatives focused on a different aspect of maternal health (Freedman, et al., 2007). The Millennium Development Goals (MDGs) added momentum to the efforts of reducing the high levels of maternal mortality, particularly MDG 5, which set a target of a

75% reduction of the maternal mortality ratio (MMR) between 1990 and 2015 (Hill, et al., 2007; UN, 2000).

In the years that followed the 1987 Nairobi conference, there was increased recognition of maternal mortality as a major world problem especially by the Inter-Agency Group (IAG)- which consisted of the World Health Organisation (WHO), United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), United Nations Population Division, the World Bank and world renowned academicians leading to the "Safe Motherhood Initiative" (SMI) being integrated into the goal of "Health for All by the Year 2000" by WHO (Reid, 1990).

According to the UNDP human development reports (2013), the MMR in Botswana, stood at 330 deaths per 100,000 live births in 2005 (UNDP, 2013) with a slight improvement at 189 deaths per 100,000 live births in 2011 (MOH, 2014). The Ministry of Health (MOH) in Botswana launched the SMI policy to improve maternal health care and reduce maternal mortality and morbidity in the country. Following the launch of the policy little was known about the outcome of the implementation of the policy. This study focussed on the implementation of the 2005 SMI policy guidelines in Botswana, with particular reference to the training component of the policy.

This chapter provides the context and background to the study, and is divided into four sections: section one summarises the global context on maternal mortality and policy initiatives to achieve a reduction in maternal deaths; section two provides an overview of maternal mortality and Safe Motherhood Initiatives in Botswana; section three is a brief literature review of health policy studies, with a particular focus on Safe Motherhood

Initiatives. The concluding section highlights the value of health policy analysis, and outlines the rationale for this study.

1.1 Global Context

Global estimates suggest that worldwide, more than half a million women die annually from complications related to pregnancy or childbirth (WHO, 2007). The gravity of the problem is more pronounced in sub-Saharan Africa, which accounts for half of all maternal deaths worldwide (WHO, 2007; UN, 2009). In 2013, the global MMR estimates showed a decline from 380 deaths per 100,000 live births in 1990 to 210 deaths per 100,000 live births in 2013 (WHO, UNICEF, UNFPA & World Bank. (2012). According to Alvarez, maternal mortality is a good indicator of gender equity and of a country's healthcare system (Álvarez, 2010). In spite of the decline in maternal mortality, huge disparities also exist between countries. For example, "the risk of a woman dying as a result of pregnancy or childbirth during her lifetime is about one in six in the poorest parts of the world compared with about one in 30 000 in Northern Europe", (Ronsmans, et al., 2006:1180-1200). According to estimates by WHO, the risk of a maternal death occurring in a developing country to be about 36 times higher compared to one occurring in a developed country (WHO, 2012). Approximately 1 000 women therefore die each day from pregnancy and childbirth-related preventable causes, with 99% of these occurring in rural areas and among poorer and less educated communities in developing countries (WHO, 2010; UNFPA, 2010).

Based on the United Nations (UN) estimates, the highest MMRs occur in three countries: India (136,000), Nigeria (37,000) and Afghanistan (20,000). Sierra Leone and Afghanistan lead with the highest MMRs at 2000 and 1900 maternal deaths respectively per 100,000 live

births while the lowest rates occur in Australia and Iceland, at 4 and 10, respectively (APA Plataforma SINC, 2010:1).

Most maternal deaths occur around labour, during delivery, and the immediate postpartum period, with obstetric haemorrhage being the main medical cause of death (Ronsmans, et al., 2006:1189-2000). In countries with high prevalence of HIV infection, the two top causes of death in women of reproductive age are HIV&AIDS and complications related to pregnancy and childbearing, which account for 19% and 15% of all deaths in women aged 15 to 44 years, respectively (WHO, 2010). In many sub-Saharan African countries, high prevalence levels of HIV have caused significant devastation on maternal mortality amid women of child bearing age (Bicego, et al., 2002; Rogo, et al., 2006; Graham, et al., 1999). In this region, (sub-Saharan Africa), with an alarming heavy burden of HIV infection, many HIV infected pregnant women are faced not only with the risk of death associated with advanced HIV disease but also with an increased risk of pregnancy-related deaths (WHO, 2012; McIntyre, 2003).

At a global level, there have been several policy initiatives to achieve the goals of reducing maternal mortality and improving maternal health (UN, 2000; WHO, 2011; UNICEF, 2000). Following the Nairobi conference of 1987, global attention was drawn to the alarmingly high number of women dying as a result of pregnancy and from complications related to childbirth (AbouZahr, 2003). A global movement -the Safe Motherhood Initiative (SMI) was launched. This group took the mantle for advocacy for a reduction of maternal mortality and ill-health in developing countries by at least half by the year 2000 (FCI, 2007; Campbell & Graham, 2006). The SMI sought to raise international awareness of the scale and magnitude of

maternal mortality and to motivate commitment among governments, donors, UN agencies, and other relevant stakeholders to take steps to address this public health tragedy (FCI, 2007). By 1994, most regions in the world had been encouraged to hold a Safe Motherhood conference to discuss the state of motherhood in their local region. The epitome of these conferences was the Cairo International Conference on Population and Development (UN ICPD, 1994) where maternal mortality was identified as a core component of women's sexual and reproductive health and where the rights of women were reaffirmed (UN ICPD, 1994). At the UN assembly summit, governments agreed to cut the number of maternal deaths by half by the year 2000, and in half again by 2015 (FCI, 2007:15; UNFPA, 2010; Safe Motherhood, 2011; UN, 2000). In 1995, the Fourth World Conference on Women (FWCW) in Beijing reiterated the commitments made regarding maternal mortality and at the ICPD conference in Cairo (FWCW, 1995; Safe Motherhood, 2012).

In 1997, the SMI celebrated its tenth anniversary and the UN inter-agency group (IAG) developed a two-year programme-the "Safe Motherhood-at-10" to mark the milestone. One of the essentials was to pull together some research findings on the impact of the different maternal health interventions, identify the lessons learned, and share them with various partners so that programme planners could draw on them for the design of effective interventions (Safe Motherhood, 2012:17). Two key events included: an SMI Technical Consultation in Colombo, Sri Lanka in 1997 which brought together national and international programmers, policy-makers, and technical experts, to identify the most effective strategies for making motherhood safer; and subsequently in 1998, a campaign by WHO (World Health Day on 7, April 1998; FCI, 2007:17) to encourage national and local efforts to raise awareness about Safe Motherhood and launch new programmes.

In 2000, at a UN summit, 189 nations, agreed to the MDGs, with the reduction of maternal mortality and access to reproductive health services by 2015 among the key goals agreed to (UNDP, 2000; UN 2000; Safe Motherhood, 2012). Among the agreed upon MGDs, MDG 5 focused on increased attention to improved health care for women, including prevention of unplanned pregnancies and unsafe abortions, and provision of high-quality emergency obstetric care (UN, 2000; Paxton, 2005).

A review in 2007 on the SMI (FCI, 2007) found that: many organisations had dedicated programmes focusing on maternal health; donors had prioritised Safe Motherhood in their funding programmes; governments had developed national strategies and programmes to reduce maternal mortality; and there was greater knowledge and awareness of the problem and how it would be addressed (FCI, 2007). The review noted that maternal mortality remained high in spite of the global efforts to reduce it, even in countries where the utilisation of maternal health care (such as antenatal and delivery care) had improved. The review observed that the reasons for failure included faltering political commitment, inadequate funding, and a lack of clear technical priorities (FCI, 2007:1-96).

According to the 2010 estimates by the WHO, UNICEF, UNFPA and the World Bank (2010), maternal deaths globally have fallen by nearly 50 percent over the past two decades, indicating that global investments in maternal and reproductive health programmes are having a measurable impact around the world. According to the report (2010), worldwide maternal deaths are around 287,000 in 2010 - a 47% drop from 543,000 in 1990 (WHO, UNICEF, UNFPA and the World Bank, 2010). Notwithstanding the good progress, a reduction by 75% of maternal mortality is doubtful that it would be achieved by 2015 (WHO, UNICEF, UNFPA & World Bank, 2012). In Southern Africa, MMR still remains high

particularly in Botswana, Lesotho, Namibia, South Africa and Swaziland due to the high HIV prevalence rates (WHO, UNICEF, UNFPA & World Bank, 2012).

Table 1 summarises the various international policy initiatives to improve women's health and to prevent avoidable maternal mortality worldwide.

Table 1: International policy initiatives to address maternal mortality, 1984-2010

Year	Policy Initiative
1984	• WHO releases maternal mortality estimates for the first time.
1987	• First International Safe Motherhood Conference held in Nairobi, Kenya • Concept of "safe motherhood" defined and developed • Establishment of the Safe Motherhood Inter-Agency Group of UN Agencies - the World Health Organization (WHO), the World Bank, the International Planned Parenthood Federation (IPPF) and the Population Council.
1994	• International Conference on Population and Development (ICPD) held in Cairo, Egypt. 180 countries and 1254 NGOs are present. • Cairo Programme of Action adopted by 179 governments, thus acknowledging the link between women's empowerment, population, and development. • Women's sexual and reproductive rights and health are a central tenet of the agreement.
1995	• 4th World Conference on Women held in Beijing, China
1997	• 10th Anniversary Meeting of Safe Motherhood Initiatives held in Sri Lanka, with 3 core messages: every pregnancy faces risks; ensure skilled attendants at delivery; improve quality and access of maternal care.

Year	Policy Initiative
	• The IAG expanded to include the International Federation of Gynaecology and Obstetrics (FIGO) and the International Confederation of Midwives (ICM).
2000	• Agreement on MDGs • Goal 5 focuses on the reduction of the maternal mortality ratio by three-quarters, between 1990 and 2014.
2004	• The AIG becomes the Partnership for Safe Motherhood and New-born Health (PMNH).
2005	• Partnership for Safe Motherhood and New-born Health merged with the Child Survival Partnership and the Healthy New-born Partnership to become the Partnership for Maternal, New-born, and Child Health (PMNCH). • MDG Report 2005 acknowledges that despite progress in some countries, maternal mortality is of major concern. The World Health Report 2005 focused on maternal and infant health. It confirmed that in the poorest countries, progress in maternal and child health was slow, stagnating, or in some countries even reversing. It also called for the strengthening of the health workforce for scaling up universal access to maternal, new-born and child health services. • At the 2005 World Summit, world leaders agreed to integrate access to reproductive health into national strategies to attain the MDGs.
2007	• The Women Deliver Conference was held in London, marking the 20th anniversary of Safe Motherhood Initiative.
2008	• Countdown to 2015 – Maternal, Newborn and Child Survival • High-level meeting expanded to include maternal mortality and to include partners in the effort. The Countdown to 2015 MNCH Report reconfirmed that

Year	Policy Initiative
	few of the 68 high burden countries were making adequate progress on MDGs 4 and 5. The conference called for scaled-up investments in basic health services and human resources to reduce the preventable deaths of over 10 million children and women each year.
2010	• UN High -Level Plenary Meeting on the MDGs, September 20-22, 2010, New York. To build political will and mobilize national actions.
2010	• Global Strategy for Women's and Children's Health, launched in 2010 • Growing political momentum to achieve MDGs 4 and 5 (reduce child mortality and improve maternal health, respectively
2010	• Bill and Melinda Gates Scale up of funding for the MDGs 4 & 5. • Various practices and ideas identified to improve the implementation of maternal mortality reduction programmes in different south Asian countries.

Source: 1. Safe motherhood website:http://www.safemotherhood.org/priorities/international-commitments.htm. Retrieved February 10, 2012. ; Ki-Moon, 2010.

1.2 Overview of Safe Motherhood Initiatives in Botswana

In 2005, the MMR in Botswana was high at 330 deaths per 100 000 live births (UNDP, 2013) in a country with an estimated population of 2 065 398 (Botswana Population Census, 2011). The high MMR was exacerbated by the high HIV prevalence, which was estimated at 33 % among pregnant women in 2005 (UNAIDS & NACA, 2010). Hence the HIV epidemic had reversed the gains made in reducing the maternal mortality in Botswana. This was realised at the highest level of government, illustrated by the 2001 statement by the President of Botswana, whilst addressing the UN assembly when he said:

> "*We are threatened with extinction. People are dying in chillingly high numbers. It is a crisis of the first magnitude"*, President Mogae (Farley, 2001).

Table 2 highlights key chronological developments in Botswana with regard to SMI.

Table 2: Overview of Safe Motherhood Policy initiatives in Botswana

Year	Policy Initiative
1990	• Botswana adopted the SMI. • Monitoring of pregnancy done by the Botswana Obstetric Record (BOR). • Safe Motherhood Task Force set up. • Task force identified the clinical skills of health workers in obstetric care as a priority item.
1992	• Intersectoral Safe motherhood task force launched in March 1992 to guide, advise and monitor the development and implementation of the national Safe Motherhood project.
1993-94	• National Safe Motherhood Workshop conducted for various government ministries • NGOs and the community met to discuss the problem of maternal mortality and how to address it • Workshop also held for doctors and midwives. • Video developed on Safe Motherhood with target audience of the leaders (national, district religious, traditional etc.). • In-service training in Safe Motherhood
1995	• Study to determine the magnitude of maternal mortality.
1996	• Health workers trained as Master Trainers and Train-the-Trainers (TOTs) focussing on family planning clinical skills, AIDS/STD under Botswana Population Sector Assistance Program (BOTSPA). • Dissemination of policy guidelines and service standards on maternal health

Year	Policy Initiative
	and care and Safe Motherhood.
1997	• Review of BOR to make it more comprehensive to include HIV& AIDS which enabled doctors and midwives to identify the health risks for pregnant women. • MOH formulated the SMI policy, with commitment for implementation
1998	• Maternal mortality monitoring (MMM) system was developed to monitor the causes of maternal mortality on continuous basis.
2000	• New version of BOR was ready for use in all health facilities in Botswana for the provision of data for maternal mortality monitoring.
2005	• Revision of the SMI policy guidelines • Emphasis of the guidelines included: o Strengthened training of midwives and doctors o Comprehensive reproductive health services o Enhanced skills in obstetric emergencies. o Integration of HIV/& PMTCT with SMI policy o Comprehensive training in emergency skills at the Institute of Health Sciences (IHS).
2005 to date	• Implementation of the SMI policy guidelines • Expansion of anti-retroviral treatment and integration of HIV/& PMTCT with SMI policy • Continuing on-job training EmOC in the clinics • Emphasis on achieving the MDGs by 2015

Source: Fako, et al., 2004; MOH Botswana, 1994, 2005) & MOH, 2010; Emergency Obstetric and Newborn Care, training manual.

1.2.1 Implementation of Training

The implementation of the SMI policy training was envisaged as a phased approach. The Ministry of Health appointed a consultant who was responsible for the training of master trainers at the tertiary maternity units at the referral hospitals. The master trainers in turn were responsible for the cascading of the training to the primary hospitals and the maternity clinics. The consultant and master trainers (an obstetrician, doctors and midwives) were based at the national referral hospitals and the district hospitals. They were responsible for supervision and the training of the Trainer of Trainers (TOTs), who in turn were meant to continue with on-the-job training at the local facilities. The training included both theoretical and practical aspects as prescribed in the SMI policy manuals.

1.3 Literature Review- Policy Analysis and Safe Motherhood Initiative

1.3.1 Policy analysis - Conceptual Frameworks

Health policy encompasses “decisions, plans, and actions that are undertaken to achieve specific health care goals within a society", (WHO, 2014:1); it defines a vision for the future, sets priorities and the expected roles of different groups, builds consensus and informs people (WHO, 2014:1). Health Policy Analysis (HPA) is a “multi-disciplinary approach to public policy and aims to explain the interaction between institutions, interests and ideas in the policy process", thus assisting with understanding the successes and failures of previous policies and inform future policies (Walt, et al., 2008:307).

Different theoretical models of the public policy process have been proposed. These models include: multiple-streams (Kingdon, 1984), punctuated-equilibrium (Baumgartner & Jones, 1993) and top-down and bottom-up implementation (Sabatier, 1999). Kingdon’s *multiple-streams model* argues that the public policy process has a random character, with problems,

policies and politics flowing along in independent streams (Kingdon, 1984). The *problem stream* includes the broad problems and conditions facing societies, some of which become identified as issues that require public attention. The *policy stream* refers to the set of policy alternatives that researchers and others propose in order to address national problems while the *political stream* addresses the consensus achieved (Kingdon, 1984). Both Kingdon (1984) and Porter (1995), contend that for any policy to be successful, the problem needs to be identified explicitly, practical solutions must be presented, and political consensus must be attained (Kingdon, 1984; Porter, 1995). This model has been criticised as being too rational and linear and that it does not reflect accurately actual policymaking which in most situations is unmethodical and politically influenced (Robinson & Eller, 2010).

In the *punctuated-equilibrium* model of policy, it is argued that public policy exists in a relatively stable, balanced system with predictable values accredited to it but interspersed by episodic remarkable changes (Baumgartner & Jones, 1993). Some values may dominate or govern for a long time but with progressive understanding of the problem, new solutions or changes may be implemented (Baumgartner & Jones, 1993:312).

Sabatier's *multiple implementation theories* have been a subject of discussion on whether implementation of policy is top-down or bottom-up (Sabatier, 1999). It has been argued that even in developed institutions, public policy is developed and implemented from top to down and not from bottom to up and this echoes the values of the ruling elite (Dye, 2001).

In 1994, Walt and Gilson proposed a simplified framework for health policy analysis (Walt & Gilson, 1994:354). The so-called *health policy analysis triangle* focuses on four related

factors which are critical to understanding policy processes: context, content, process, and actors, and is shown in Figure 1 (Walt & Gilson, 1994).

In the proposed Walt & Gilson analysis triangle, description of the components is as follows:

Factors of context include**:** situational, structural, cultural and exogenous factors, the latter include the events and values outside of any one country or system (Walt & Gilson, 1994:354).

Factors of content relate to**:** the specific nature and design of reforms; the interaction between the specific policies of focus and between these policies and parallel institutional changes; Implementation guidelines (Walt & Gilson, 1994:354).

Factors concerning actors: are about stakeholders or interest groups and their power, interests, values and roles in relation to developing and implementing the reforms of interest.

Factors of process: are concerned with the way in which policies are identified, formulated and implemented, their timing, the strategies used with each stage of the policy process, and the specific mechanisms or bodies established to take forward any of the steps (Walt & Gilson, 1994:354).

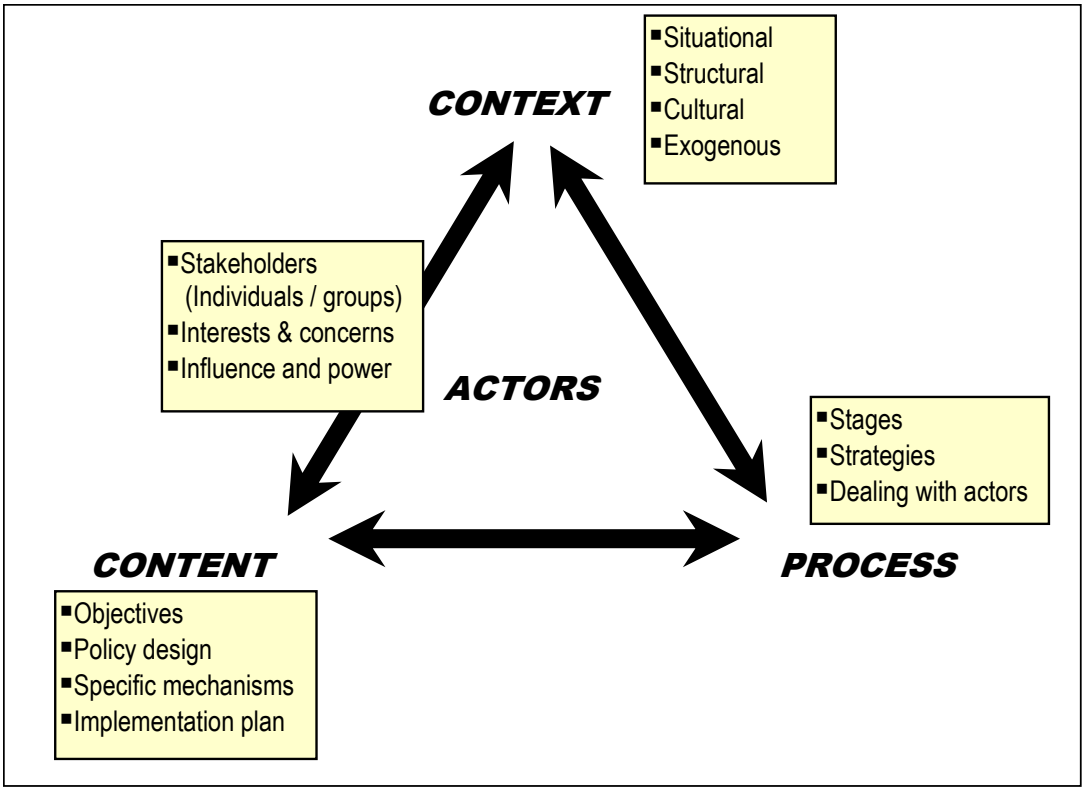

Figure 1: Framework for health policy analysis.

Source: Walt & Gilson, 1994:354.

1.3.2 HPA and studies on Safe Motherhood Initiatives

HPA is still in its infancy in low-and middle-income countries (LMICs) (Gilson & Raphaely, 2008). However, there is an increased interest in the application and use of HPA in LMICs, including in sub-Saharan Africa. In general, the few HPA studies have drawn on elements of the different theoretical frameworks, rather than focus on any one specific model.

The HPA studies are diverse and have focused on health system decentralisation in Kenya (Kimalu, et al., 2004), the policy process of the implementation of the National Health Insurance Scheme (NHIS) in Ghana (Alatinga, 2011), an HIV/AIDS clinical trial in,

Tanzania (Philpott, et al., 2002), and South Africa's HIV/AIDS policy-making and implementation (Wouters, et al., 2009).

There is a significant body of literature on maternal mortality and progress (or the lack thereof) with achieving zero maternal deaths (Brouwere, et al., 1998; Jowett, 2000; Bicego, 2002; Shiffman, et al., 2005; WHO, UNICEF, UNFPA & World Bank, 2012). This is because maternal mortality is largely avoidable, and the technical interventions to make a difference are well understood (Starrs, 1998).

Some authors have argued that the reduction of maternal mortality in developing countries is hindered by lack of political will (Mavalankar, 1999; 2005; 2008; Shiffman, 2007), inappropriate medical policies, lack of emergency medicines, supplies and equipment, poor access to health care facilities, and lack of adequately trained staff (Mavalankar & Rosenfield, 2005). Others have pointed out that the lack of progress can be attributed to poorly implemented policies or failure of implementation (Kwast, 1992; WHO, 1974). Koblinsky has suggested that "what is less clear is how to create an enabling environment to implement obstetric care interventions" (Koblinsky, et al., 1999:399).

The SMI itself has been criticised as lacking a clear strategic focus **(**Maine & Rosenfield, 1999), exacerbated by lack of prioritisation, poor allocation of resources, and inefficiencies at different levels (Maine & Rosenfield, 1999; Holdstock & Rowson, 2005**),** as well as paying insufficient attention to the social determinants of maternal health (Campbell & Graham, 2006).

Nonetheless, studies have shown that sound policies backed by informed evidence and participation of the relevant stakeholders (or policy actors) may achieve the desired policy outcome (Chowdhury, et al., 2007; Siddiqi, et al., 2004). In a study in Matlab, Bangladesh, a decline in maternal mortality between 1976 and 2005 was due to investment in midwives, emergency obstetric care, and safe pregnancy termination by manual vacuum aspiration. Analysts have pointed out that other policies, such as expansion of female education, better financial access for the poor, and poverty reduction, are essential to sustain the successes achieved (Chowdhury, et al., 2007,). In the same Matlab study, there was low uptake of skilled attendance at birth but a fall in abortion related deaths and improved access to emergency care (Chowdhury, et al., 2007). This study further emphasised the importance of a combination of interventions, including clinical care and health worker skills, infrastructure, and addressing cultural and social issues (Chowdhury, et al., 2007; IFPP, 2008).

Another study in Bangladesh, found that community-based family planning was one of the interventions that resulted in a reduction in maternal mortality. The decline in direct obstetric deaths was also attributed to better health care seeking practices and improved access to and use of higher-level referral care, and decline in total fertility rate as a result of successful family planning programme which reduced exposure to high risk pregnancies and thus prevented a large number of maternal deaths (USAID, 2011; Koblinsky, et al., 2008). In that study, policy analysis provided additional evidence for informing the future Safe Motherhood policies and programmes.

In a study of Pakistan's maternal and child health (MCH) and family planning (FP) policy, several lessons emerged including: the Ministry of Health (MOH) needed to provide continued stewardship or coordination; adequate budgeting of the programme; the policy

required adequate time allocation for the implementation and for the involvement of all actors in the policy process and that institutional capacity is fundamental for the effective implementation of MCH and FP policies (Siddiqi, et al., 2004).

In a policy analysis study in Malawi and Zimbabwe, the implementation of the Safe Motherhood Programmes was found to have been very slow, in part due to lack of human resources in the country (Jowett, 2000). The study recommended further work on the cost-effectiveness of Safe Motherhood interventions so as to provide useful information for policy makers concerned with reducing maternal mortality in the most cost-effective manner possible (Jowett, 2000).

In Safe Motherhood policy analysis studies in Kasongo and North Kivu regions, DRC (Congo), community-based maternity care programmes and Essential Obstetric Care (EOC) together, helped to reduce maternal mortality and created a positive impact on maternal health and on knowledge and access to information about reproductive health in the regions (Post, 1997; Esanga, 2011). Other success factors include building capacity, partnerships, and participation of the implementers in the policy formulation (Hussein & Clapham, 2005).

The health workforce is another important success factor, and the International Federation of Gynaecology and Obstetrics (FIGO) has argued that motivation of the health professionals through financial incentives, could improve utilisation of the facilities and therefore reduce maternal mortality (Benagiano, et al., 2003). Campbell (2001) has also emphasised the importance of well-functioning health systems to the long term, sustainable improvements in maternal health (Campbell, 2001), illustrated by the experience in Pakistan (Siddiqi, et al., 2004). The importance of strong health systems has also been shown in three Safe

Motherhood studies designed to reduce maternal mortality in sub-Saharan Africa (Luck, 2000). Two of the studies found that the upgrading of emergency obstetric services and community education increased the number of major obstetric complications treated, and one study showed that a range of improvements in hospital equipment and management reduced facility-based MMRs (Luck, 2000).

The researcher could not find any HPA studies from Botswana that focus on the SMI policy or its sub-components. Furthermore, there is a dearth of studies that have used the Walt & Gilson health policy analysis framework. The next section highlights the value of HPA and concludes with the rationale for the study.

1.4 Value of HPA and study rationale

HPA "focuses on understanding the forces that influence why and how policies are initiated, formulated, negotiated, communicated, implemented and evaluated" (Gilson, 2008:2). HPA may reveal factors influencing policy implementation and can help explain why certain health issues receive political attention and others do not (Shiffman, 2007). HPA also explains the interaction among institutions, interests and ideas in the policy process (Walt, 2008:308). HPA may identify supportive or resistant stakeholders of the policy reforms and the reasons for their behaviour. HPA may provide an understanding of ways in which actors, including service providers, patients and community members, translate their understanding of policies into their behaviours and practices; and may therefore, offer ways to deal with the shortcomings or implementation gaps in the policy (Gilson & Erasmus, 2008:1-4).

HPA is also useful as a 'post-mortem' of the policy implementation process. It may enhance the understanding of the successes and/or policy failures and therefore provide information for the planning of future policy processes (Walt, et al., 2008).

Freedman (2005) has argued that the achievement of the MDGs (including MDG 5) depends on health systems as core social institutions (Freedman, 2005). In this regard therefore, HPA helps in the understanding of the challenges to health policy implementation (Gilson, et al., 2006). HPA can also bring to light unintentional consequences and obstacles that challenge policy implementation that would influence the achievement of national and global goals (such as the MDGs) for improved health. HPA may assist with the achievement of improved health outcomes through an enhanced understanding of the factors that influence the implementation of the policy (Parsons, 1995). Policy analysis may also provide technical evidence for future policy formulation and implementation (Buse, et al., 2007).

HPA also allows a consideration of the notion of 'power' in the policy process (Walt, et al., 2008), defined as the capacity or ability to influence the outcome (Zimmerling, 2005; Walt, 2008). The influence may be over policy formulation or development or over the implementation of such policy, and may be positive or negative (Erasmus & Gilson, 2008; Simwaka, 2008). HPA also provides the opportunity to include a stakeholder analysis to examine the interests of the various actors and their position or standing on a new policy, and their power to influence health policies (Varvasovszky & Brugha, 2000:338-345).

There were several reasons for undertaking a policy analysis of the implementation process of the Safe Motherhood training component in Botswana. Firstly, maternal deaths continue to be a significant burden in Botswana, and information on policy implementation could assist

policymakers or implementers with the development of appropriate strategies to build on successes and/or overcome implementation barriers. Secondly, there was a dearth of HPA studies in Botswana, in particular, and in sub-Saharan Africa in general. Thirdly, the researcher is an obstetrician, and it was envisaged that the study findings would assist him with providing more strategic support to health facilities in Botswana.

1.5 Study Aim

The aim of the study was to evaluate the implementation process of the Safe Motherhood Initiative (SMI) policy- with specific reference to the training component of the policy in the maternity units in the southern health region of Botswana.

1.6 Specific Objectives

The specific objectives of the study were to:

a. Describe the *context* of implementation of the 2005 SMI policy guidelines in Botswana with particular focus on the training component.
b. Analyse the *content* of the 2005 SMI policy guidelines
c. Describe the *process* of implementation of the 2005 SMI policy guidelines
d. Describe the *key policy actors*, their roles and their influence on the implementation process of the policy.
e. Explore the *factors* that influenced the implementation of the SMI policy training guidelines.

The next chapter describes the study methodology.

CHAPTER 2: METHODOLOGY

The focus of this chapter is on the study methodology; including the research design, study setting, sampling, data collection procedures, tools and analysis.

2.1 Study Setting

Botswana is a large country with a population of approximately 2.0 million people (UNICEF, 2004). The country is divided into two health regions – the northern and the southern regions. Princess Marina Hospital is the main tertiary referral hospital in the southern health region of the country whilst Nyangagbwe is the tertiary referral hospital in the northern region of the country. Each of the two referral hospitals has a catchment area of district hospitals, primary hospitals and clinics.

The southern health region of Botswana was selected setting purposively for the following reasons: there are many similarities in many aspects of the southern to the northern region in terms of the distribution of the health facilities; budgetary constraints for the study due to the vastness of the country and the long distances; and similar approaches to SMI policy training.

2.2 Conceptual framework

The study used the health policy analysis triangle or framework proposed by Walt and Gilson (Walt & Gilson, 1994). The framework focuses on four related factors critical to understanding public policy-making: context; content, process; and actors (Figure 1).

2.3 Study Design

Policy analysis utilises predominantly qualitative research methods as the approach explains the experiences and understanding of a particular situation as opposed to findings derived from quantitative or statistical procedures or other means of quantification. Qualitative research designs also explain behaviours and social processes (Katzenellenbogen, et al., 2004: 176.).

The study design used in this study was qualitative and sought to explore and describe the implementation process of the 2005 SMI policy guidelines in Botswana, specifically as it related to the training component of the policy.

2.4 Recruitment and sampling

A purposive sampling approach was used in this study, which is a non-probability sampling that is effective for studying policy matters (Tongco, 2007). Particular individuals and groups were selected or targeted for this study as they were considered to have more knowledge about the SMI policy training in Botswana. The target included individuals from the Ministry of Health, Ministry of Local Government, the SMI policy consultant, hospital administrators, WHO and UNICEF country office, midwives and doctors who were involved in the policy development and provision of maternal health care.

The southern region of Botswana has five health districts. Participants were selected from Princess Marina Maternity Hospital, the Ministry of Health and from Scottish Livingstone Hospital Molepolole (SLHM), one of the district hospitals in the catchment area. Participants were also recruited from Gaborone West Maternity Clinic in the Gaborone City Council 'district' which has three maternity clinics. Other interviews were conducted at the Institute

of Health Sciences (IHS) in Gaborone and from two other institutions where the individuals preferred to remain anonymous.

2.5 Study Sample

The realised sample size was 12 interviews (eight midwives, two administrators, and two doctors) as data saturation was reached and there was repetition of information after the tenth interview. According to Guest et al., (2006), and Encyclopaedia Online, *the concept of "saturation*," "or the point at which no new information or themes are observed in the data" is a point at which the information had been heard before and the interviewees had the same experience (Guest, et al., 2006:58-82 & Bowen, 2008). The point of saturation for the data collection was reached when the information gathered by the researcher became repetitive and contained no new ideas.

2.6 Study Procedure and Data Collection

The study was conducted in 2008. Initial contact appointments were made with the key informants who were deemed to have more knowledge regarding SMI policy implementation (as described above) and requests for the interviews made to them. A second appointment was made by the researcher for the interview with those informants who had accepted to be interviewed. During the interview, the researcher explained the objectives and purpose of the study before obtaining a written consent by the interviewees (Appendices 4 to 7).

Good rapport was established between the researcher and the key informants. In-depth interviews were carried out on personal basis using a semi-structured open-ended interview guide (Appendix 7) to explore their viewpoints on the training aspect of the SMI policy implementation process. The themes addressed in the interviews were as follows:

- Context of implementation of the SMI policy in Botswana;
- Understanding of the content and a description of the training activities;
- The prioritised areas in the SMI policy process and how the guidelines were received;
- Implementation strategies followed and the reasons for a particular approach to implementation;
- Identification of policy actors and their roles in enabling or deterring the training activities of the policy and reasons for their behaviour;
- The roles each participant played during the SMI policy implementation, and the extent of support for the SMI policy;
- Description of both the enabling and constraining factors in the implementation of the 2005 SMI policy guidelines;
- The successes and the challenges encountered by the implementation process of the policy.

In-depth interviews were tape recorded where consent was granted by the interviewees.

The interviews were complemented by a review of relevant policy documents. These documents included the MOH SMI policy guidelines document (MOH, 2005; MOH 2010), Nurses and Midwives Act, 2002 and EmOC training manual MOH, 2010.

2.7 Pilot Study

A pilot study was carried out with four midwives in one of the maternity clinics in Gaborone. The training in SMI policy was intended to be uniform in all maternity units across the country. From the pilot study, two of the informants indicated that they had not heard of the

training of the SMI policy except for the training manuals supplied by the Ministry of Health to their units. The other respondent indicated that she had actually been trained as one of the master trainers but she had been deployed to an area other than maternity so she had not been able to participate in training of other midwives.

The decision was made to incorporate only two of the four informants piloted and to modify the initial questions to ask the informant if they had participated in the SMI policy, prior to requesting for their participation as key informants.

2.8 Data Analysis

Thematic content analysis, described by Weber (1990) was used to analyse the information obtained from both the interviews and the documents reviewed (Weber, 1990). The audio-recorded interviews were transcribed and typed out. The transcribed notes were read through many times to decode common or central themes emerging from the data. The most talked about themes were identified and coded. Relationships between themes to each other were then identified. The various themes identified in the interviewed data were then categorized or grouped using the conceptual framework of context, content, process and actors (Walt & Gilson, 1994). A similar process was used for the documents reviewed.

The stakeholder analysis was derived from the 'actors' portion of the conceptual framework, and the perceptions of key informants on the extent of support by each group of stakeholders.

2.9 Validity and reliability of data

The validity of a measurement is the degree with which the measured value reflects the characteristic it is intended to measure (Lewis, 1999) whereas reliability is a measure of the

randomness and consistency of the measurement process itself (Cherry, 2012). The validity and reliability of the collected data in this study was obtained by conducting in-depth interviews with key informants from different workplaces using the same instrument that focused on the SMI policy. To establish the reliability of the data obtained information from the interviews was compared to the data obtained from documentary reviews.

2.10 Ethical Considerations

Permission to conduct the research was obtained from the Human Research Ethics Committee of the University of the Witwatersrand, Johannesburg (reference M140986-Appendix 1). Permission was also granted by the Research Unit at the Ministry of Health in Botswana (Appendix 2), the Gaborone City Council (Appendix 3) and the individuals who participated in the interviews.

During the interviews, the researcher explained the objectives and purpose of the study before obtaining a written, informed consent from the interviewees' (Appendices 4 & 5). All key informants were informed of their rights. Anonymity was maintained where interviewees preferred it. The key informants were also informed that participation was voluntary and that they could choose not to answer certain questions or that they could terminate the interview at any time.

Confidentiality and anonymity of the participants was guaranteed by making sure that no identifying information, their names or the names of the clinics they worked for, were used anywhere in this research report.

2.11 Study limitations

The study data represents the views of the 12 key informants-their views are not generalisable because of the purposive method in selecting key informants. Because of the purposive selection of the southern health region of Botswana, there could be differences with regard to the training component of the SMI policy implementation in the northern health region. The data gathered also represent the perceptions of key informants at a point in time. Nonetheless, the study provides rich insights into some of the key policy implementation issues of the SMI policy in Botswana, with particular reference to the training component.

CHAPTER 3: RESULTS

This chapter presents the results of the study using the conceptual framework of context, content, process and actors (Walt & Gilson, 1994), described in Chapter 1.

3.1 The context of the SMI training implementation

The key study findings from the key informant interviews on the contextual analysis of the SMI policy are listed in the table below and then further elaborated on below.

Table 3: Key results on contextual analysis

1. There was high level government commitment and the SMI was driven by the Ministry of Health
2. The Prevention of Mother-to-Child Transmission (PMTCT) of HIV component was successfully integrated into the SMI policy
3. Barriers to the implementation of the policy included:
    a. Legislative barriers e.g. the Nursing Act which did not support all the changes that were envisaged in the SMI policy
    b. Structural health system barriers, including inadequate physical infrastructure/ closure of some facilities; insufficient staffing; and lack of transport;
    c. Unsustainable funding

3.1.1 High level government commitment

The Ministry of Health (MOH) formulated the SMI policy and it was launched by the President of Botswana to emphasise its importance. When the President launched the SMI

policy, he urged the SMI team to work 'hard' to reduce maternal mortality in Botswana and to improve the health of the women as stipulated in the MDGs (MOH, 2005).

The MOH also provided the funding and stewardship for implementation and appointed the consultant trainer. The programme was coordinated from the MOH headquarters. The HIV/AIDS division in the MOH together with Botswana National Policy on HIV/AIDS (BNPH, 1998) worked together with the Safe Motherhood Team in the MOH to ensure that there was integration of the HIV and PMTCT into the SMI policy.

This was borne out by the findings from the key informant interviews and documentary review (BNPH, 1998). The MOH SMI policy coordinator indicated that a consultant trainer, appointed by the MOH, guided them in the implementation of the policy, and trained the master trainers and the trainer of trainers (TOTs).

When asked about the budget for the SMI policy implementation and about the PMTCT programme, she further said:

> "*The MOH provided the funding of the SMI policy together with the country offices of WHO and UNICEF*. W*e did not do it alone*..... [referring to the PMTCT integration]... *the division of HIV/AIDS in the MOH together with the Botswana-Harvard Partnership were our concerted players in the PMTCT integration into the SMI policy "(***Key informant 1**).

This key informant also said:

> "*Our President was very passionate about the programme when he launched the policy....he appealed to the team to work hard and reduce maternal mortality in realization of the MDGs*" (**Key informant 1**).

3.1.2 Implementation barriers

Implementation barriers included both legislative and structural barriers. With regard to legislation, the Nursing Act was one of the contextual factors that constrained the implementation of the SMI policy as the Act did not support all the changes that were envisaged in the SMI policy. For example, the Act (Nurses and Midwives Act, Chapter 61:03) did not allow midwives to carry out some of the procedures (for example manual removal of placenta, evacuation of the uterus, vacuum extraction or delivery, repair of perineal and cervical tears (MOH, 2010)) prescribed in the SMI policy manuals. Some midwives therefore were uncomfortable in carrying out the procedures for fear of litigation. One commented as follows:

> "*Some of us* [midwives] *felt that if we were to carry out a procedure where we were not covered and if anything went wrong then we would be the ones to blame. We also felt afraid that since some doctors were not willing to be trained together with the midwives they would later blame us for taking over their procedures"* **(Key informant 4)**.

Another key informant observed:

> ''*Many of the midwives were afraid of carrying out some of the procedures as they were not covered by the Nursing Act. How could I do manual removal of placenta? I am not covered by the Act* [referring to the Nursing Act]! *What would the doctors be doing?"* (**Key informant 4**).

Although the Nursing Act was somewhat restrictive, there was also a perception that the midwives used the Nursing Act as an excuse. As one key informant observed:

> "*Other nurses as usual were just resistant to change as they felt that some procedures were being changed"* **(Key Informant 2).**

There were also structural health system barriers, including inadequate physical infrastructure/closure of some facilities; insufficient staffing; and lack of transport that prevented the SMI policy implementation. Lack of facilities for uterine evacuation, manual removal of placenta, lack of suction machines, insufficient staff and lack of transport were other barriers to the implementation of the policy.

Structural inadequacies in the health facilities also prevented the training in the SMI policy. SMI policy training activities were both theoretical and practical. The continued closure of the maternity unit in Gaborone City Council for more than three years (as from 2007) for renovations prevented practical training in skills in SMI Policy in the Local Government clinics. One key informant commented as follows:

> ‘‘*This continued closure of the maternity unit has held back the training on practical skills in Safe Motherhood in the clinic here. We cannot then learn any procedures*” (**Key informant 6**).

Another key informant from the local government (LG) said:

> “*We thought we would start doing the training as we have two midwives who had been trained as TOTs transferred here. They would teach us some of these skills but our maternity unit has been closed since 2007. This continued closure of the maternity unit here has held back the training on practical skills in SMI for us. We have no idea even when the work will be completed as the contractor has gone away”* (**Key informant 7**).

3.1.3 Lack of adequate and sustainable funding

The MOH and country offices of the WHO and the UNICEF provided initial funding for the SMI policy implementation. However, as time went by, after two years donor fatigue set in from WHO and the UNICEF resulting in lack of adequate and sustainable funding. This lack of sustainable funding consequently resulted in logistical problems such as lack of transport. Some institutions had problems of availability of vehicles and fuel costs. Therefore, the Master trainers and TOTs from the tertiary referral hospitals could not make training and follow-up visits to the peripheral clinics and hospitals of the SMI policy trained staff and adequately monitor the programme. At the IHS, the student midwives were unable to travel to the communities for practical training due to lack of transport. Consequently, there was little monitoring as a result of lack of transport as observed by one key informant:

> "*We as master trainers and TOTs we could not make follow-up visits of those who had been trained in SMI policy and train others..... as we had planned....we were told that there was no money and therefore no transport*"(**Key informant 2**).

Another key informant observed:

> *"We* [the master trainers] *could not travel outside our stations to supervise the trained midwives in other maternity units....we wanted to travel to monitor the progress of the trained staff but we were told that there was no transport available....so we could not do anything more"* **(Key informant 5).**

Another key informant went on to say:

> "*We had no transport when we needed to go out to supervise the peripheral clinics and health posts.....we do not authorise the vehicles from the stations so when we were told there was no transport we could not do anything*" (**Key informant 8**).

3.2 Policy content

The key characteristics or elements of the policy are listed below:

- The goal of the SMI in Botswana was to reduce maternal mortality by providing appropriate care and creating awareness of prompt referrals of the mothers to facilities where appropriate care was available.
- The SMI also aimed to train the health personnel in Safe Motherhood care and to provide awareness of the importance of appropriate care and prompt referrals of the mothers to facilities with the appropriate care.
- The SMI consultant appointed by the MOH was responsible for the training of the master trainers that included an obstetrician, medical officers and midwives based at the tertiary hospitals.
- The SMI policy envisaged the District Health Management Teams (DHMTs) together with the managers of the maternity units at the district hospital level to create a functional referral and supervisory system between the district (under MOH) and various local government controlled health units in the communities including, health centres, and maternity units.
- Maternal health care policy guidelines in 2005 (MOH Botswana SMI, 2005) stipulated that obstetric care was to be provided by a practitioner who had appropriate knowledge and skills (midwife or medical practitioner). Other health care providers were to identify clients and refer appropriately.
- Emergencies were to be handled by any other health care provider using the SMI manuals.
- The SMI policy also envisaged that counselling of all pregnant women on HIV/AIDS and PMTCT was to be done on first contact with the pregnant woman (PMTCT MOH Botswana SMI, 2005).

- The training of the health care staff was to be done in phases over a period of time so as to cascade it from 'higher' to 'lower' levels of the health care system (MOH Botswana SMI, 2005).

As indicated already, the SMI training was both theoretical and practical to ensure optimal patient care. The assumption was that the care of the individual patient would benefit from the skills and also the theoretical knowledge of the trained teams in SMI policy and the midwifery students from the IHS.

3.2.1 *Description of the SMI Policy training activities*

Some midwives and doctors were trained as master trainers and TOTs at the referral hospital by the Safe Motherhood consultant. The training was intended to cascade down from the tertiary hospitals to the peripheral clinics and peripheral district hospitals. This planning was deemed to be the best so as to minimise the disruption of the services in the maternity units at the inception of the programme. The training activities planned in the policy to be taken forward included: provision of SMI clinic protocols; integration of SMI in the midwifery basic training at IHS; integration of HIV/PMTCT programme into the SMI policy; and maternal mortality and clinical audits for monitoring within the maternity units. For the latter, each institution with a maternity unit in Botswana was meant to carry out clinical audits and submit the completed forms to the MOH for central audit purposes.

According to the documentary reviews (MOH Botswana, 2005), the consultant and the SMI training team developed the training manuals or protocols. These manuals were distributed in all maternity units around the country to serve as quick reference materials for midwives and

new staff (nurses and doctors) in order to standardise treatment and care. The protocols served as orientation materials for staff not well versed with or those midwives and doctors with minimal experience in maternal health care.

Health facilities with training maternity units could order materials and equipment from the MOH for some of the procedures to be undertaken in SMI policy training, seen as a continuous process. Other training activities included the integration of SMI policy into the IHS curriculum so that midwifery graduates from the institution had the necessary theoretical and practical skills. There was plan for in-service training (on-job training) of the midwifery staff. According to the interviews, the initial approach of training the TOTs by master trainers at the tertiary referral hospitals and then cascading the process to the local clinics was carried out according to the policy. However, progress was hampered by some logistical problems (for example lack of adequate staff and transport as discussed in another section (section 3.3.5) in the chapter) in some of the institutions, hence hampering the implementation process of the programme.

3.3 Policy Process

The key results from the process analysis of key informant interviews are listed in Table 4 below and further elaborated on below.

Table 4: Key results of analysis of policy process

1. Key successes of the SMI policy included: the integration into the midwifery curriculum at the IHS schools; integration of the HIV & AIDS, PMTCT into the SMI policy; development, standardisation and distribution of reference manuals or protocols.
2. The implementation of SMI policy was a 'top-down' process and there was insufficient coordination of policy process
3. There was lack of alignment between theory and practice
4. Human resource issues influenced the policy implementation process, and included the perceived lack of stature of the implementation champion and lack of authority by trained midwives.

3.3.1 Key successes of the SMI policy process.

There were several successes of the SMI policy implementation process. These included: development, standardisation and distribution of manuals or protocols to all maternity units, integration of the PMTCT programme into the SMI policy, integration of the SMI policy into the IHS midwifery training curriculum and the initiation of maternal mortality audits in the maternity units throughout the country. A key informant from the MOH commented as follows:

> "*It is easier than before to monitor the statistics of maternal mortality throughout the country as SMI policy improved the reporting procedures*" (**Key informant 1**).

There was integration of the SMI policy into midwifery training curriculum in the country, and all midwifery students at the IHS schools received SMI training. One of the midwifery tutors at the IHS on commenting on the curriculum and the SMI policy said:

> "*We are happy that we managed to include it* [referring to training in SMI policy] *in our curriculum for our midwifery students before they qualified"* **(Key informant 3)**.

Another key informant from the IHS when asked how they had succeeded with the SMI policy assimilation into the IHS curriculum replied as follows:

> "*Some of us* [midwifery department tutors at IHS] *worked very hard to include the SMI into our curriculum. I had to put it on my shoulders as the head of department to work with the staff* [midwifery tutors] *to go an extra-mile for this to happen and we did it!"* **(Key informant 5).**

The PMTCT of HIV during antenatal care was championed as one of the key areas of the 2005 revised SMI policy guidelines. This was a programme which aimed at providing anti-retroviral treatment to HIV positive pregnant women so as to prevent vertical HIV transmission. The majority of the key informants reported that after the revision of the SMI in 2005, PMTCT was prioritised in the implementation process. The views of key informants were backed by the documentary review. Additional resources were provided by increasing funding for the HIV&AIDS activities including provision for additional key staff to develop and coordinate the activities of various ministries and organizations (BNPH,1998), an enthusiastic and dynamic coordinator or champion for the programme and countrywide publicity of the PMTCT.

Asked how the two policy [SMI and PMTCT] programmes compared in terms of implementation, one key informant replied:

> "*We have had no problem with the PMTCT implementation. The PMTCT programme coordinator from the MOH organised workshops through which we were trained on 'Kitso '* ["Kitso" is the Setswana word for "knowledge." Setswana being the local language of Botswana] *and taught how to counsel, test and offer treatment to those affected"* **(Key informant 9).**

Another key informant observed:

> "*The PMTCT programme was better organised and coordinated, it had enough money for the activities and there were many stakeholders who were involved....everyone was talking about it including the researchers, politicians and the media who had the interest*" **(Key informant 12)**.

There was provision of newly developed SMI protocols to all maternity units throughout the country. The purpose of the SMI protocols or manuals was to provide quick reference materials or information in obstetric emergencies. The manuals were distributed in most, if not all the maternity units countrywide. Regarding the usefulness of these manuals or protocols, one key informant from the IHS said:

> "*I like the manuals and protocols developed by the SMI policy. They help a lot when teaching the midwifery students as they have been simplified and the students even use some of them as notes"* **(Key informant 5)**.

However, the objective of the SMI manuals or protocols was not achieved completely. At the time of this study, some midwives confessed that they were not familiar with the contents of the protocols and manuals in SMI policy. As some of the key informants put it during the interviews*:*

> "*Many of us were not trained in SMI policy procedures. We don't have time to familiarise ourselves with the contents of the manuals. Only some of the new doctors sometimes read the manuals on their own*" **(Key informant 4)**.

Other key informants remarked:

> "[We] *have had no time to train in these manuals...the work sometimes is so much that we can't even sit down and train in these manuals. We have no one from Safe Motherhood to teach us on how to use them*" **(Key informant 10)**.

> *"No one has shown us how to use these manuals"* **(Key informant 11)**.

3.3.2 'Top down' policy process

The results of the study suggest that there was no initial consultation with some of those involved in the implementation of the SMI policy, and that policy development and implementation was a 'top-down' process. The SMI policy was formulated by policymakers and other civil servants at the MOH. When asked how the policy was communicated to them and any contribution made by them before the implementation, one key informant from the LG said:

> "*It was all done by the MOH. Some of us were only told by our matron that we go for a training workshop. We only found out that the SMI policy was being conducted by people from the MOH. We did not know anything beforehand*" **(Key informant 6)**.

Key informants also indicated that some midwives were not aware of the existence of the SMI policy before the beginning of the implementation. Another midwife, a key informant from the LG when asked about the preparation made at her workplace regarding the SMI policy implementation said:

> "*We were told by the MOH that there was a consultant who would come for Safe Motherhood but we were not aware when he was to come and what was expected of*

*us. Sometimes things happen in the MOH without us knowing what is happening"***(Key informant 8)**.

The study findings suggest that expectations were not clarified to those involved in the SMI policy implementation process. One senior administrator who was to facilitate the policy implementation in one of the tertiary hospitals when asked about the process of SMI remarked:

‘‘*The MOH did not consult us at the beginning of the SMI policy. Things were mainly done from the MOH so some of us had no idea how we were to participate. People needed to be aware or sensitised of the problem. We should have been informed and feasibility of the programme tested. There were gaps in the whole process and assessment needed to be done first to gather information before the implementation of the programme*” (**Key informant 12)**.

The policy implementation appears to have been planned in a linear manner from the MOH to the tertiary referral hospitals then to the periphery primary health clinics at the lower end of the health system. This envisaged cascade of staff training from the tertiary facilities to the lower peripheral health clinics and hospitals was not completely achieved.

3.3.3 Insufficient coordination

Another finding of the study was that there was insufficient coordination of the process of implementation by the MOH, following the resignation of the coordinator who initiated the programme. Key informants were of the opinion that the successor lacked the stature to champion or catalyse the programme:

‘‘*The personnel changed at the MOH due to low salary structure for the coordinator who should have pushed for the programme to move on. I feel that the position of the coordinator should also have been held by a doctor so that the other doctors could have respected him”* **(Key informant 5)**.

"*The earlier coordinator had more charisma and was easy to work with. She also did her work with so much enthusiasm than the one who took over..... This programme would have gone far if the previous coordinator had continued..."* **(Key informant 2)**.

The results further suggest that there was insufficient coordination between the MOH and the LG. The LG was responsible for the clinics and provision of staff and infrastructure for the training in SMI policy, there was no commitment to the SMI policy as they viewed it as an MOH programme as there was no LG programme coordinator. The LG did not organise or coordinate the clinics for the training of SMI policy, shown by the comments below:

“*We have no idea about SMI policy as some of us have not participated*” **(Key informant 11)**.

“*The MOH and the LG have over the years had differences in the way the hospitals and the clinics run. The LG runs the primary health care clinics whereas the MOH runs the hospitals. The two* [referring to MOH and LG] *have different budgets and administrations. It was difficult for us* [referring to LG midwives] *just to do things on our own. Our matrons tell us what to do”* **(Key informant 5)**.

3.3.4 Lack of alignment between theory and practice

There was lack of alignment between theory and practice of the SMI training as the two did not go hand in hand as anticipated in the policy. The workshops conducted were to be

followed up by practical procedures training in the tertiary facilities. This did not happen in most situations. One of the key informants commenting on this said:

> *"Some of the workshops and the practical training were not altogether achieved in some cases. Some of us* [referring to midwives] *received the theoretical knowledge but could not carry out the practical procedures prescribed in the SMI policy"*- **(Key informant 4)**.

3.3.5 *The role of human resources in the policy implementation process*

The study found out that one of the main determinants in the implementation process of the SMI policy was human resources for health. The factors related to this included: lack of adequate staff; lack of authority by the trained staff of midwives resulting from delegation of responsibility by seniors in other discipline areas other than maternity units. These factors are elaborated on below:

Shortage of Staff: staff shortages and lack of staff severely hampered the implementation of the SMI policy. The shortage of staff went across the board from the MOH down to the LG and severely affected the SMI policy implementation in the institutions. The departure of some of the midwives and the few doctors trained in SMI for better remuneration or opportunities elsewhere hindered the SMI training process. Transfers and other delegated responsibilities by senior staff of the few SMI policy trained staff also stifled the SMI policy programme. The shortage was exacerbated by staff transfers, promotions, resignations and end of or termination of contracts by the foreign expatriate staff.

***Lack of authority and delegated responsibility*:** the study found out that some of the trained midwives in SMI policy in some institutions did not have the authority to implement the

policy at their workplaces. Some of them had other responsibilities delegated to them by their seniors. These midwives apparently lacked the authority or power to implement the policy on return to their workplaces. One key informant [midwife] said:

> "*Some of us junior midwives could not do anything when we returned to our workstations after training in SMI policy as the matrons would deploy us to other areas of need and so we could not disobey our seniors*"**(Key informant 7)**.

Regarding the delegation of duties to trained midwives by senior staff, one informant said:

> "*Our matrons decide where to allocate us in the hospital, so even when we want to work in maternity and practice midwifery, but they allocate you to work in surgical ward you can't refuse. We have to comply*" **(Key informant 10)**.

3.4 Policy Actors

The main results from the key informant interviews on the analysis of the roles of various actors in SMI policy implementation are described below.

3.4.1 Key SMI Policy Implementers or Actors

The key policy actors in the implementation of SMI policy included: midwives and junior doctors in the maternity units in the MOH and LG clinics, the MOH headquarters, and the IHSs (midwifery training institutions), administrators and financial donors i.e. WHO, and UNICEF. Others included the Safe Motherhood consultant, administrators of the training institutions, local administrative-sub-chiefs or '*dikgosana*', National Aids Council, and Ministry of Finance and Development planning. Following below is a brief description of the actors and the roles played in the implementation process of the SMI policy.

3.4.2 The Ministry of Health (MOH)

The MOH is the central actor in the provision of health care in Botswana and was the main actor at the centre of the SMI policy implementation process. It formulated the SMI policy, partly funded the programme and also provided the coordination of the SMI policy activities in the country. It also sourced and appointed the consultant trainer of the programme.

3.4.3 Local Government (LG)

The Ministry of Local Government was responsible for the functioning of the clinics, as it provided staff and the infrastructure for training in SMI policy. Despite the fact that all the maternity clinics were administered by the ministry of LG, the LG did not assign any particular individual or midwife the responsibility of the coordination of SMI policy training. There was also no champion in the LG to catalyse the process of SMI policy implementation in the LG. The LG viewed SMI policy primarily as an MOH programme; hence the LG's support from the policy implementation process was weak.

3.4.4 SMI policy consultant

The consultant appointed by the MOH organised and effected the SMI policy training at the tertiary referral hospitals by training master trainers and the TOTs and by developing the manuals and protocols for the SMI policy. Therefore, the support from the consultant was of essence for the policy success. The weaknesses included lack of consultation with various stakeholders or the building of linkages in the process of SMI policy implementation. It was apparent that the consultant's report that pointed to weaknesses in the tertiary referral hospital maternity units could have slighted some actors who subsequently failed to offer support for the policy.

3.4.5 Hospital administrators

The tertiary hospital administrators were initially very supportive of the SMI policy as they provided a venue for the training of master trainers and the TOTs. However, this support diminished after the critical report of the consultant that pointed out some areas of weaknesses in some of the maternity units in the hospitals. Some senior administrators at both the MOH and the hospitals viewed the report as a censure of their hospitals and lost their enthusiasm for the policy process.

One of the key informants observed:

> "*The hospital administrator lacked objectivity and thought that hospital staff We're being demeaned by the observations and recommendations made by the consultant. He* [administrator] *then became non-supportive of the programme*" **(Key informant 2)**.

One of the consequences was the lack of administrative support in some hospitals for the cascading down of the SMI training (MOH Botswana SMI, 2005). Another key informant noted:

> "*The administration would not authorise vehicles for us to travel to other maternity units for follow-ups of the TOTs and for training of other midwives in the peripheral clinics*" **(Key informant 4)**.

3.4.6 Medical doctors

Many of the junior doctors had negative attitudes towards the SMI policy, as they did not want to attend the SMI policy training together with the midwives. They regarded the contents of the training as too basic, and this was pointed out by key informants.

> "*Some of the doctors considered the training in SMI to be too basic to be trained together with us, the midwives*" **(Key informant 2)**.
>
> *"Some doctors were not excited at all by the training in the SMI policy….if they had supported us* [referring to midwives] *then we would have made tremendous progress"* **(Key informant 5)**.

Key informants were also of the opinion that some of the doctors who needed the training the most, did not participate.

> "*Some* [doctors] *chose not to go through the SMI Policy as some of them were too junior and lacked experience in maternity. They did not want to be trained by some of the experienced midwives in maternity just because they are midwives"* **(Key informant 4).**

3.4.7 Midwives

The majority of midwives were strong supporters of the SMI policy implementation process, as it gave them extra skills in maternal care. Although they supported the policy, the midwives were reluctant to carry out the SMI prescribed procedures as they were restricted by the Nursing Act. Another constraint was that midwives complained that they did not receive any additional remuneration for the extra work.

One key informant commented:

"Some of the midwives felt that they did not earn the same like the doctors...so why should we do their procedures...some others [referring to midwives] *said learning to carry out some of the procedures would just overload them with work which should have been done by the doctors and not nurses*"**(Key informant 6)**.

Nonetheless the general perception was that there was increased knowledge among midwives.

"*I guess up to may be 70% of the midwives who went through SMI policy training know what to do when confronted by an emergency in the maternity units"* **(Key informant 2).**

"I don't have a problem practising SMI policy skills as I was trained in them.....I cannot sit back and see a mother dying when I can do something about it" (**Key informant 4)**.

3.4.8 WHO & UNICEF country offices

WHO and UNICEF partly funded the SMI policy implementation hence their sturdy support for the SMI policy. However, when their financial support came to an end, this affected the training in the policy.

3.5 Summary of Stakeholder analysis

Table 5 summarises the stakeholder analysis for the key actors and their roles in the SMI policy implementation process.

Table 5: Summary of roles of key actors in the policy process

Actors	Role played	Type of activity
MOH	Policy formulation Funding Coordination	Initiation of SMI Funding Coordination
ML G	Provision of staff and physical infrastructure	Staff provision
SMI Consultant	Trained -master trainers Developed the manuals	Training of master trainers and TOTs Developing manuals
Tertiary Hospitals (administrators)	Provided training base for master trainers Referral centres	Provision of training venues for master trainers
Obstetricians	Professional care provision	Assist in training of midwives
Junior doctors	Care provision	Reluctant to participate in training
Midwives	Majority excited about the policy Few declined procedures	Participated in training but no champion to catalyse action

CHAPTER 4: DISCUSSION

4.1 Introduction

This study explored the implementation process of the SMI policy- with specific reference to the training component of the policy- in the maternity units in the southern health region of Botswana. This chapter discusses the results of the study findings in line with the conceptual framework, the study objectives and the available literature.

4.2 The context of policy implementation

Encouragingly, the study found that there was high level government commitment and the SMI was led by the Ministry of Health. The Prevention of Mother to Child Transmission (PMTCT) of HIV component was successfully integrated into the SMI policy, which is a positive aspect. Other studies have also found that successful policy implementation requires political will, government support and involvement, as well as support by all stakeholders (McCourt, 2001; Dieleman & Harnmeijer, 2006; Shiffman, 2007). Similar commitment and high political priority was demonstrated for Safe Motherhood programmes in Indonesia as the Head of State intervened and got involved in the Safe Motherhood national programme in order to reduce maternal mortality (Shiffman, 2002). In Malawi, the Government's and international donor commitment was found to foster impressive, comprehensive, and commendable efforts and response, for the successful implementation of the national AIDS policy (Mtonya, & Chizimbi, 2006; Avert, 2012).

Despite political will and government's commitment to implementing the SMI policy, there were several barriers to policy implementation. These included: legislative barriers, health system deficiencies, and unsustainable funding. Some of these barriers or challenges have also been reported in other HPA studies (Silal, et al., 2012; Jonsson et. al., 2014; Ridde, 2008), and some authors have pointed to the disjuncture between planned policies and actual implementation (Buse, et al., 2005).

This study found that the Nursing Act (as a legislative barrier) constrained the implementation of the SMI policy as it did not support all the proposed changes (MOH, 2010; Nurses & Midwives Act 2002). A similar legislative barrier was found in a study in Indonesia where legislation did not enable midwives to perform certain procedures as prescribed by the Safe Motherhood (Otuomo, 2005). The study also further found that health system barriers including inadequate physical infrastructure and closure of some maternity facilities were a hindrance to the implementation of the SMI policy, particularly the training component. There is now global recognition that weak health systems impact on the achievement of the MDGs and successful implementation of policies (Donelan et al. 1999; Atun, et al. 2005; Amalberti et al. 2005; WHO 2008). The presence of these barriers in the SMI policy implementation may continue to be an impediment to the achievement of the reduction of maternal mortality and the MDG5 target for Botswana.

This study found that financial barriers such as insufficient funding and unsustainable budgets hindered SMI policy implementation. Similarly, a study in Indonesia found that midwives faced logistical problems of lack of transport during the implementation of the Safe Motherhood programme (Otuomo, 2005). In contrast to this study, the Indonesian study found that there was increased domestic funding contribution which resulted in scaling up of

maternal services especially the Safe Motherhood programme, which in turn lead to a reduction in maternal mortality (Otuomo, 2005).

Crosby, (1996) has pointed out that poor budgeting for new programmes or priorities by governments lead to closure or stagnation of these programmes once there is depletion of donor funding (Crosby, 2002). Other studies have also found that for effective implementation of a policy or programme, sufficient financial resources are required (Mazmanian & Sabatier, 1989; Hildebrand & Grindle, 1994). The policy implication is that funding must be sufficient and made available for optimal policy implementation, and that there is need for proper planning to reduce the dependency on donor funding.

Human resource challenges were found to be another constraining factor, particularly staff shortages. The staff shortages were exacerbated by the perceived lack of authority of some of the trained midwives who lacked authority to initiate or implement the new SMI policy as they had other responsibilities delegated to them by their seniors. This hindered effective SMI policy implementation. Ngwisha (2011) reported in a policy study analysis in Tanzania that lack of health personnel was identified as one factor that affected the Safe Motherhood and the HIV/AIDS in PMTCT programmes (Ngwisha, 2011). According to Mazmanian and Sabatier (1989), availability of adequate personnel is a critical requirement for effective policy implementation (Mazmanian & Sabatier, 1989). Other studies have also reported challenges of human resource as a barrier to the implementation of policy in the LMICs (de Wet et. al, 2011; Ditlopo et. al, 2011; Wouters, et. al, 2009; Makinde, 2005). Wyss (2004) has pointed out that the achievement of the MDGs is closely linked to human resource availability and development (Wyss, 2004:11). Encouragingly, there is now global

recognition of the importance of the health workforce, and the need to pay attention to all aspects of staff recruitment, performance and retention (WHO, 2013).

Importantly, the translation of policies into effective services depends on adequate institutional capacity, human resources, and funding (Siddiqi, et al., 2004; Slack, 1998). Hogwood and Gunn, (1984), have argued that for policy to be implemented and achieve its objectives, sufficient resources must be made available (Hogwood and Gunn, 1984). The lack of human resource could therefore imply that there would be delays in the time frame set out for the reduction of maternal mortality in Botswana.

4.3 The content of policy implementation

This study found that the implementation of the SMI policy was according to the revised 2005 policy guidelines. The key aim of the policy was to reduce maternal mortality by training health personnel in Safe Motherhood care procedures, create functional referral and supervisory system between the maternity units and integrate the HIV/AIDS and PMTCT programme into the SMI policy and to ensure the utilisation of skilled and knowledgeable personnel in the provision of care in the maternity units.

Another finding pointed to the successful training and integration of the HIV/PMTCT programme into the SMI policy process in Botswana. This success could be attributed to the high level attention paid by government to combating the HIV epidemic, as well as the collaboration and alliances among all the stakeholders in the national HIV/AIDS programme (NACA Botswana, 2009)

The magnitude of the HIV epidemic has had similar policy integration of PMTCT into the national maternal and child health programmes in other sub-Saharan African countries, notably South Africa, Malawi, Mozambique and Zambia (UNAIDS, 2010; DOH SA, 2008). The success story of the integration of the HIV/PMTCT programme into the SMI policy in Botswana may have been a contributing factor to the achievement of the coverage of more than 75% of PMTCT of HIV in sub-Saharan Africa in 2011 (UNAIDS, 2011).

4.4 The Policy implementation Process

The study found that the key successes of the SMI policy included: its integration into the midwifery curriculum; integration with the PMTCT policy; and development, standardisation and distribution of reference manuals or protocols. The integration of the SMI policy into the midwifery curriculum could be attributed to the commitment and teamwork of the midwifery teaching staff at the Institute. Other authors (Frost (2005) and Anning (2006), also found that teamwork has the benefits of creating synergy in service delivery and achieving enhanced efficiency and effectiveness (Frost, 2005; Anning, 2006).

Another positive facet of the SMI policy process found in the study was the development, standardisation and distribution of the manuals or protocols to all maternity units in the country. The availability of the protocols reportedly enhanced the early diagnosis of high risk pregnancies and facilitated early referrals. In a multi-model study for delivering essential obstetric services, it was found that professional birth attendance coupled with a strong referral system can achieve very significant reduction of MMRs (Koblinsky, MA. et al., 1999). Consequently, improving the obstetric referral system in Botswana is fundamental to reduction of maternal mortality in a health system which has meagre essential EmOC resources mostly available at the higher tertiary facilities.

The study found that the policy development and implementation was perceived by key informants as a 'top-down' approach. Recent experiences in Rwanda suggest that there may be a role for a top-down approach to achieve positive health outcomes by stand-alone policy implementing agency (Hilhorst, & Van Leeuwen, 2000). Nonetheless, the top-down approach has been criticised by many scholars who have pointed to the shortcomings of this approach as little consideration is given to the implementing actors or interest groups, who may resist policy implementation, thus impacting on policy success or outcomes (Buse et. al., 2005; Mazmanian & Sabatier, 1981; 1983; 1989; Ditlopo et. al., 2013; Van Meter & Van Horn, 1975).

Consequently, in this study it was evident that, all policy stakeholders were not involved in the formulation and the implementation process of the policy. The midwives and doctors in the maternity units were expected to be owners of the policy process that originated from the MOH. However, the support among the stakeholders varied from very weak to very strong. This was similarly found in other studies that focused on South African hospital management (Stack and Hlela (2002), and the implementation of the rural allowance in South Africa (Ditlopo, et al., 2011). It has been argued by some scholars that it is essential to involve all stakeholders in policy from its inception so as to avoid conflict of interest or resistance to change, which in turn may impact on policy implementation (Spratt, 2009). According to Hunter and Marks (2002), when policy implementation is not connected or synchronised with the formulation of the policy, and without proper planning, the policy stands a great risk of failure (Hunter & Marks 2002). It has also been pointed out by other authors (Siddiqi, et al., 2004) that the success of health sector policy implementation depends on the participation by all stakeholders in the tackling of the issues in the programmes or policy implementation process (Siddiqi, et al., 2004).

The success of the implementation of the SMI policy in Botswana therefore, would need the participation of all the stakeholders from policy formulation from the MOH trailing all the way to the implementation level.

The study found that there was insufficient coordination and communication of the implementation process of the policy between the MOH and LG, exacerbated by the early departure of the policy champion from the MOH, and no policy champion in LG. Other health policy studies similarly found that coordination and communication are key components of successful policy implementation process (Banfield, M. et al., 2013; Banfield, MA, 2012; Zuchowski, JL. et al., 2014). According to some studies, policy implementation is a continuous non-linear process and it must be managed (Grindle & Thomas, 1991). A study in Sudan reported health system challenges and weaknesses that constrained the delivery of health care and potentially limiting the country attaining the target level of MDGs due to general lack of coordination among the main stakeholders in the health system (Badr, et al., 2013:868). However, with the introduction of the coordination and facilitation process, there was achievement of improvements in the human resource for health (HRH) situation through the collective actions of the well-coordinated stakeholders (Badr, et al., 2013:868-873). In a study in three countries - Sudan, Zambia and Zimbabwe-, it was found that coordination was essential for effective delivery of health care services and implementation of policies (Bile, 2012).

Other studies (Crosby, 2002) found that coordination is a success factor for policy implementation (Crosby, 2002). According to Buse, et al., (2005), for an effectively implemented policy to occur, good coordination and communication among other conditions are important (Buse, et al., 2005). In other studies, it was observed that coordination

weaknesses impacted on the policy implementation process (Bakvis & Juillet, 2004), which in turn influenced the development of practical solutions to deal with staff shortages (Alexander, 1993; Schlossberg, 2008; Hudalah, et al., 2010). Gunn (1978) also found that one of the common barriers to effective health policy implementation is poor communication and coordination (Gunn, 1978).

The finding of dismal coordination experienced in this study may be explained probably from poor planning by the MOH and hasty delegation of the coordination after the initial coordinator left the employment at the MOH for better paying opportunity. Most likely the coordinator lacked the morale to drive the process for similar reasons.

Key informants reported that there was lack of consultation with the policy actors responsible for implementation. Swiderska (2001) has argued that "participation in policy implementation builds capacity so that policy can be readily applied without delays, provides means of identifying stakeholder concerns, build consensus and gather valuable information" (Swiderska, 2001:25). The combination of a top-down approach, lack of coordination and lack of consultation reportedly slowed down implementation and influenced the achievement of the desired outcomes. This has also been found in HPA studies in South Africa, Peru and India (Ditlopo, et al, 2011; Makinde, 2005; Swiderska, 2001). According to McLaughlin, (1987), effective policy "implementation requires a strategic balance of pressure and support for policy-directed change" (McLaughlin, 1987:171). This strategic balance of pressure was not available for the SMI policy process in Botswana and therefore in future policy implementation would need similar approach.

Further, Sutton (1999), has argued that policy implementation involves compromise and harmonisation of the process, consensus building, involvement of key stakeholders, settling of the different views, negotiation, and conflict resolution, compromise, planning for any unforeseen eventualities and mobilisation of resources (Sutton, 1999). These qualities would be most important for consideration when planning for the future SMI policy implementation.

The study found that there was lack of common understanding of the policy as some actors were not aware of the roles expected of the implementers at the time of the policy process. This was an area of weakness in the SMI policy implementation process as the implementers were expected to be aware of and or familiar with the policy. Some of the midwives trained before the inception of SMI policy training were not familiar with the SMI policy procedures. Similar findings were reported in a study in the implementation of the school health policy in South Africa where the implementers had "different levels of awareness and no common understanding" of the policy (Ramma, 2010: 34). In the same study, it was found that it was of necessity for the policy implementers to understand their tasks or roles in the policy process (Ramma, 2010). Theodoulou and Kofinis (2007) have pointed out that clarity of policy goals is important as lack of clarity can impede the effective implementation and monitoring of public policy (Theodoulou & Kofinis, 2007). Other studies have also found that the success of policy implementation depends on the understanding by policy implementers of their roles in the policy process (Ledger, 1998; Buse, et al., 2005). Furthermore according to Buse, et al. (2005), the poor understanding of policy and disagreement on objectives of the policy leads to gaps in the implementation process of policy (Buse, et al., 2005). In the current study, the lack of common understanding of the SMI policy by the implementers may have contributed to the weakness in the policy implementation process as some of the policy implementers were not aware of the

requirements and their roles in the policy process. This may have been arisen from the lack of involvement of the implementers and therefore no clear understanding of the policy right from the onset.

Other studies in the sub-Saharan Africa have also found policy implementation gaps when the frontline policy implementers were unaware of policies and not familiar with policy objectives (Alatinga, 2011, Nishimura, et al., 2009).

4.5 SMI Policy implementation Actors

In this study, numerous policy actors -MOH, consultant, the SMI policy coordinator, the ministry of LG, the midwives in the maternity units from the two ministries, the funds' donors (WHO, UNICEF, UNFPA), the junior doctors and the hospital administrators and obstetricians- were involved in the SMI policy implementation process. The stakeholder analysis found that the support for the SMI policy process ranged from weak to strong. There was strong support of the SMI policy process amongst the actors of the MOH, the SMI policy consultant and the midwives with mixed support of the SMI policy from the obstetricians and the hospital administrators. The support of the SMI policy weakened amongst the Ministry of LG and the junior doctors.

The study found that junior doctors had negative attitudes towards the SMI training and did not support the SMI policy process. This created a weakness in the policy implementation process, as they did not have the knowledge or skills to implement key strategies designed to prevent maternal deaths in Botswana. In another study, Kielstra, (2010) found that employee resistance is a barrier to successful policy change (Kielstra, 2010:3). Other studies have found that, the attitudes of some doctors to government officials and those of some officials to

doctors were not conducive to a constructive working relationship and therefore that by itself influenced policy implementation in the area of hospital restructuring and rationalisation in South Africa (Stack & Hlela, 2002). Spratt and Gilson in two separate studies similarly found that attitudes of key actors in the policy may play an important role in the policy implementation process (Spratt, 2009; Gilson, et al., 2007). Another study found that successful implementation depends on synergistic working relationships among all the stakeholders (Perry, et al., 1988; Lynagh, et al., 1997), and, doctors with specialised skills are critical for the reduction of the MMR (Abeykoon, 2005). The non-participation of some doctors in the SMI policy training counted as a huge drawback to the implementation of the policy and its aims of reducing maternal mortality in Botswana.

The support of the SMI policy by the obstetricians/gynaecologists was of a mixed nature. The obstetricians were tasked with the training of the midwives and providing professional care to the patients. The SMI policy process received strong support from the midwives, but this was hampered by the legislative barriers as the Nursing Act did not allow the midwives to perform some of the prescribed procedures. There was lack of cohesion or unity among the key SMI policy actors in this study and this could impact on the intended outcomes of the policy, namely the reduction of maternal mortality and the achievement of the target for the MDGS by 2015.

The WHO and UNICEF country offices in Botswana partly provided funding. This support was to influence the outcome of the implementation of the policy. The exhaustion of the funds affected further training activities in SMI policy process as similarly recognised by other authors who have pointed out that donor fatigue has the implications of reducing efficiency gains of programmes once the funding stops (Grepin, 2011).

The study found that the hospital administration (administrators) support for policy process was also mixed. The mixed support of the SMI policy training by the hospital administrators was not anticipated from the beginning of the SMI policy process. The administrators were responsible for provision of training venues in the maternity units. The senior administrators with power at maternity health institutions delegated alternative duties (hence influencing policy) to the SMI trained staff who could not therefore implement the SMI policy at their new work places as trained. Other studies have found that in policy implementation, the interests of the senior management can take precedence over those of other stakeholders" (Kielstra, 2010:3). Also according to Guth and Macmillan (2006), middle managers or policy implementers may intervene in organisational decision-making processes or redirect a strategy, or even totally sabotage the strategy, delay its implementation or reduce the quality of its implementation, or counter effort when there's perception that their self-interest is at stake or being compromised (Guth & Macmillan, 2006). Thus, by the administrators having mixed support for the SMI policy and their interests taking precedence over the SMI policy training process, they wielded their power and the implementation of the policy process was compromised and therefore influenced the reduction of maternal mortality in Botswana. According to other studies, power and authority from different actors or stakeholders in the policy-making process may influence every step of the policy (Sutton, 1999; Erasmus et al 2008), and thus influence the policy outcome (Kielstra, et al, 2010).

4.6 Conclusion

The study used explorative qualitative methods to analyse the implementation process of the 2005 guidelines of SMI policy, with a particular focus on the training component. There was high level political will for the policy process. The policy process achieved the integration of the HIV/PMTCT into the policy and also the SMI policy integration into the midwifery

students' curriculum. Some weaknesses emerged in the implementation process which included legislative and health system barriers, insufficient coordination and communication of the policy.

The next chapter discusses the recommendations.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

This study sought to evaluate or provide an analysis of the implementation process of the training component of the SMI policy guidelines of 2005 in the southern health region of Botswana using the contemporary model framework of Walt & Gilson (1994). The foregoing chapters have presented and discussed the results of the study.

5.1 Recommendations

Maternal deaths continue to be a major public health problem in Botswana. One of the main goals of the SMI policy was to improve maternal health care and reduce maternal mortality and morbidity, through the training of midwives and doctors. Notwithstanding the limitations of the study that have been outlined, the key recommendations are listed below.

***Summary of the Recommendations are**:*

- ***The Nursing Act***- should be amended so as to support the prescribed procedures and changes in the SMI policy. This will allow all the midwives to practise all the lifesaving procedures prescribed by the SMI policy.
- ***Staff shortages***- the health system should recruit adequate staff so as to reduce the staff shortages in maternity units. Lessons should be learned from the implementation of the PMTCT programme when there was increased funding and provision of additional key staff that developed and coordinated the activities of various actors for PMTCT. Prior to 2008 the hospital doctors and midwives were under employment by MOH while those in the maternity clinics were under the ministry of LG. This made planning for staffing rather difficult. In 2008 the MOH took over the administration of both the hospital

and the previously LG clinics. This should improve the coordination and functioning of the units effectively and in particular the maternity clinics.

- ***Upgrading of maternity units*** – resources are needed to enable the possible upgrading of some hospitals and maternity clinics and to ensure that they are equipped with the necessary EmOC facilities. The goal of these initiatives should be to reduce overall the levels of maternal mortality in Botswana.
- ***PMTCT and HIV/AIDS***- In spite of the achievement made in integrating PMTCT into the SMI policy process, the national government through National Aids Coordinating Agency (NACA) should continue to intensify the efforts against the scourge of the disease by scaling up funding and building capacity so as to reduce HIV/AIDS related maternal deaths (NACA, 2009).
- ***Sustainable funding***- the MOH should allocate or set aside adequate and sustainable budget or funding specifically tailored to the SMI policy implementation activities and reduce reliance on donor funding. This will also improve planning and organisation of the implementation of the policy.
- ***Implementation champion and policy coordinator***- The MOH should appoint or recruit a policy champion with stature who can steer and galvanise the policy process. This individual should be appointed with care and due attention should be paid to remuneration.
- ***Training of maternity staff***- ongoing in-service training should be mandatory for doctors and nurses working in maternity units in order to improve the capacity for SMI policy implementation. Also as a long term strategy, the government of Botswana should invest more in the appropriate training, and of more midwives, in order to improve the overall health system so as to reduce maternal mortality.

- ***Obstetrical manuals or protocols-*** The coordinator from the MOH should organise some seminars or workshops for various groups of midwives or all the users of the manuals at the clinics, (who have not had the chance to be trained formerly in SMI policy procedures) to induct them on the contents of the manuals. This will familiarise the users of the manuals or protocols and therefore strengthen or improve the patients' referral system.
- ***SMI policy advocacy and awareness -*** Key informants had indicated that some of the midwives were not fully aware of the policy they were to implement. In future all policy stakeholders should be involved in the revision of the SMI policy and their views should be taken on board, prior to policy implementation. All the policy implementers should be educated on the policy so that they are aware of their expectations about the policy prior to the implementation. This should include the hospital administrators and other who did not support the policy implementation.
- ***Remuneration incentives for midwives-*** The study found that staff moved to other hospital units because there was no additional remuneration. Consideration should be given to the provision of an incentive or extra remuneration to midwives in addition to their basic pay so as to motivate and retain them in the maternity units to implement the SMI policy.
- ***Address health system deficiencies, including human resources for health-*** The MOH should develop a long term plan to address health system deficiencies and tackle the health human resource challenges in Botswana by investing in quality and increased number of trained midwives and also the number of doctors available in the maternity units so as to reduce maternal mortality.

5.2 Conclusion

The study used the Walt & Gilson (1994) analytical framework which considered contextual, content and process factors and all the actors in the policy process.

The implementation of SMI policy was done in the context of high level government commitment. From the onset, the SMI policy enjoyed political will support as the President of the country was behind it. There was some progress success made in the policy implementation as the PMTCT was integrated into the policy.

However, some aspects of the policy did not go according to the envisaged plan as a result of some health system barriers which included the legislative barriers such as the Nursing Act and other structural health system barriers which included inadequate physical structures and inadequate staff and unsustainable funding for the policy process. Some of these wide range systemic bottleneck problems held back policy implementation, threatening to derail its implementation. Some of these problems require a national intervention approach to resolve the challenges in the implementation process.

Although the analysis of SMI policy was not designed to measure the impact of the policy on maternal mortality, the aim of the SMI policy content was overall to improve maternal health care and subsequently reduce maternal mortality in Botswana. Over the years, there has been a decline in the maternal mortality for the country.

The findings of this study further draw attention to the value of stakeholder involvement in policy formulation and implementation; the importance of addressing implementation

barriers and resource availability; and the need for effective coordination and communication. There is further emphasis on the need to bring aboard all the stakeholders or policy actors so that there is harmony or accord in the implementation process. The SMI policy process took a "top-down" approach in both the formulation and the implementation; however, there was insufficient coordination which derailed the process.

The study found that there were gaps in the implementation process as there was lack of alignment between the learned theory by the midwives and the actual practical experience. The SMI policy process much as it achieved some successes; it required a thrust for the complete implementation of the policy. In spite of these problems or challenges encountered, the midwives were by and large excited about the policy implementation as they acknowledged the SMI policy potential in improving maternal health care and reducing the country's maternal mortality.

The recommendations made in this study are within reach of realisation and the government of Botswana needs to make the right choices and further improve the health system and therefore reduce maternal mortality.

REFERENCES

Abeykoon, A.T.P.L. (1996). Maternal and Adult Mortality in Sri Lanka. In: Emerging Issues of Health and Mortality in the Asian and Pacific Region; Asian Population Studies Series No. 163. Monograph *Series No.4 Chapter V. Maternal and Adult Mortality* in *Sri Lanka*. Retrieved February 12, 2012 from http://www.unescap.org/esid/psis/population/popseries/apss163/apss163.pdf

AbouZahr, C. (2003). Safe Motherhood: A brief history of the global movement 1947–2002. Br Med Bull, 67 (1)*: 13-25. Retrieved from http://bmb.oxfordjour*nals.org/ by guest on January 23, 2012.

AbouZahr, C. & Wardlaw, T. (2004). Maternal mortality in 2000: Estimates developed by WHO, UNICEF and UNFPA. Geneva: WHO, 2004.

Alatinga, K.A. (2011). Alliances for health policy and systems research. Health Policy Analysis Institutes: Landscaping and Learning from Experience, Ghana. A Case Study on the Centre for Health and Social Services (CHESS), Ghana. Retrieved March 28, 2012, from http://www.who.int/alliance-hpsr/projects/universityghana_evidence/en/index.html

Alatinga, K.A. (2011). Health Reform Policy Process in Ghana. An Assessment of the Health Reform Policy Process in Ghana: The Case of the National Health Insurance Policy Process. World J Young Researchers. 1(4):45-53. Retrieved March 28, 2012, from http://www.rrpjournals.com/.

Alvarez, J.L., Gil, R., Hernández, V., & Gil, A. (2009). Factors associated with maternal mortality in Sub-Saharan Africa: an ecological study. *BMC Public Health. 14(9):462.*

Alexander, E.R. (1993). Interorganizational Coordination: Theory and Practice. *Journal of Planning Literature.* 7 (4):328-343. Retrieved February 26, 2012, from http://jpl.sagepub.com/content/7/4/328.short

Amalberti, R., Auroy, Y., Berwick, D. & Barach, P. (2005). Five System Barriers to Achieving Ultrasafe Health Care. Ann Intern Med 142:756-764.

Anning, A., Cottrell, D., Green, J., Frost, N., & Robinson, M. (2006). Developing multidisciplinary teamwork for integrated children's services. Retrieved on May 13, 2015 from http://clt.sagepub.com/content/24/3/351.extract

APA Plataforma SINC (2010, February 18). Most maternal deaths in sub-Saharan Africa could be avoided. ScienceDaily. Retrieved May 24, 2012, from http://www.sciencedaily.com /releases/2010/02/100218092852.html.

Atun, R.A., Samyshkin, Y.A., Drobniewski, F., Skuratova, N.M., Gusarova, G., et al. (2005). Barriers to sustainable tuberculosis control in the Russian Federation health system. *Bulletin of the World Health Organization, 83(3).* Geneva. Retrieved March 28, 2012 from *www.who.int/bulletin/volumes/83/3/217.pdf*

Avert International HIV and AIDS Charity. (2012). HIV & AIDS in Malawi. Retrieved January 15, 2012 from http://www.avert.org/aids-malawi.htm.Balakesslee, K. (1994). Human rights, violence against women, and development. Presented at Harvard School of Public Health Symposium on Violence and Human Rights, Boston, Apr. 8, 1994.

Badr, E., Mohamed, NA, Mahmood, M A & Bile, KM., (2013). Bulletin of the World Health Organization 2013; 91:868-873. Retrieved November 22, 2014 from http://dx.doi.org/10.2471/BLT.13.118950

Bakvis, H., & Juillet, L. (2004). The Horizontal Challenge: Line Departments. *Central Agencies, and Leadership, Canada School of Public Service*.

Banfield, M, Gardner, K, McRae, I., Gillespie, J., Wells, R., & Yen, L. (2013). Unlocking information for coordination of care in Australia: a qualitative study of information continuity in four primary health care models.

BMC Fam Pract. 2013 Mar 13; 14:34. doi: 10.1186/1471-2296-14-34.

Banfield, MA, Gardner, KL, Yen, LE, McRae, IS., Gillespie, JA, & Wells, RW. (2012). Coordination of care in Australian mental health policy.
Aust Health Rev. 36(2):153-7. doi: 10.1071/AH11049.

Baumgartner, F., & Jones, B.D. (1993). Agendas and Instability in American Politics. Chicago: University of Chicago Press.
Benagiano, G. and Thomas, B. (2003). Safe motherhood: the FIGO initiative. *Int. J. Gynaecology & Obstetrics, 82(3):263-274.*

Béland, D. & Orenstein, M. (2009). How Do Transnational Policy Actors Matter? Paper presented at the Annual Meeting of the Research Committee 19 of the International Sociological Association (Montreal). Retrieved April 8, 2012 from www.cccg.umontreal.ca/rc19/pdf/beland-d_rc192009.pdf

Benagiano, G., & Thomas, B. (2003). Safe motherhood: the FIGO initiative. *International Journal of Gynecology & Obstetrics*, *82*(3), 263-274.

Bicego, G.J., Boerma, T. & Ronsmans, C. (2002). The effect of AIDS on maternal mortality in Malawi and Zimbabwe. *AIDS: 16 (7): 1078-1081.*

Bile, K M., (2012). Rapid Assessment of the effectiveness of the country coordination and facilitation (CCF) process in Sudan, Zimbabwe and Zambia. WHO/ Workforce Alliance. Retrieved November 23, 2014 from http://www.who.int/workforcealliance/media/news/2012/CCFrapidassessment_SudanZambia Zimbabawe.pdf?ua=1

Brouwere, V.D., Tonglet, R. & Lerberghe, W.V. (1998). Strategies for reducing maternal mortality in developing countries: What can we learn from the history of the industrialized West? *Trop Med Int Health.; 3(10): 771-782.*

BNPH. (1998). Botswana Demographics Profile, 2012. Retrieved January 27, 2012 from http://www.indexmundi.com/botswana/demographics_profile.html.

Botswana Government, 2002. Registered midwives disciplinary and Ethical rules. Nurses and Midwives; 61:03 Part 1-3.

Buse, K., Mays, N., & Walt, G. (2005). Making Health Policy. Understanding Public Health Series. Open University Press.

Bustreo, F., Requejo, J. H., Merialdi, M., Presern, C., & Songane, F. (2012). From safe motherhood, newborn, and child survival partnerships to the continuum of care and accountability: moving fast forward to 2015. *International Journal of Gynecology & Obstetrics*, *119*, S6-S8. Retrieved on 13May 2015 from http://www.sciencedirect.com/science/article/pii/S002072921200149X

Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: a research note. *Qualitative research*, *8*(1), 137-152. Retrieved on May 13, 2015 from http://qrj.sagepub.com/content/8/1/137.short

Brownson, RC, Seiler, R., & Eyler AA. (2010). Measuring the impact of public health policy. Prev Chronic Dis 2010; 7(4):A77. Retrieved September 6, 2014 from http://www.cdc.gov/pcd/issues/2010/jul/09_0249.htm.

Campbell, O.M., & Graham, W.J. (2006). Strategies for reducing maternal mortality: getting on with what works. Review. *The Lancet, 368 (9543): 1284–1299.*

Campbell, O.M.R. (2001). What are maternal health policies in developing countries and who drives them? A review of the last half-century. In: Safe motherhood strategies: a review of the evidence, pps 415-448. Eds. De Brouwere, V. & Van Lerberghe, W.

Cherry, K. About.com Guide. What Is Reliability? Retrieved on 3, June 2012 from http://psychology.about.com/od/lindex/g/longitudinal.htm.

Chowdhury, M.E., Botlero, R., Koblinsky, M., Saha, S.K., Dieltiens, G., & Ronsmans, C. (2007). Determinants of reduction in maternal mortality in Matlab, Bangladesh: a 30-year cohort study. *The Lancet, 370(9595):1320-1328.*

Crosby, B.L. (1996). Managing Policy Implementation. In: Managing Policy Reforms: Concepts and Tools for Decision-makers in Developing and Transitioning Countries. Eds. Brinkerhoff, D.W. and Crosby B.L. Kumarian Press Inc. 2002, USA.

de Wet, K., Wouters, E., & Engelbrecht, M. (2011). Exploring task shifting practices in antiretroviral treatment in the Free State Province, South Africa. Journal of Health Policy 32.Supplement 1.

Ditlopo, P. Blaauw, D., Bidwell, P., & Thomas, S. (2011). Analysing the implementation of rural allowance in hospitals in North West Province, South Africa. Journal of Health Policy 32.Supplement 1.

Dieleman, M. & Harnmeijer, J.W. (2006). Improving health worker performance: In search of promising practices. A report by KIT – Royal Tropical Institute The Netherlands. WHO, Geneva.

DOH SA. (2008). Policy and Guidelines for the Implementation of the PMTCT Programme. National Department of Health. Retrieved February 26, 2012 from http://www.info.gov.za/view/DownloadFileAction?id=77877.

Donelan, K., Blendon, R. J., Schoen, C., Davis, K., & Binns, K. (1999). The cost of health system change: Public discontent in five nations. *Health Aff. 18(3): 206-216.*

Dye, T.R. (2001). Top down policy making. Chatham House Pub.

UNFPA Botswana-Reports. (2007). Botswana – Maternal Mortality Ratio (MMR) 2005 - 2007. Retrieved from www.botswana.unfpa.org/?reports

Erasmus, E. and Gilson, L. (2008). How to start thinking about investigating power in the organizational settings of policy implementation. *Health Policy Plan. 23 (5): 361-368*.

Esanga, JRL. (2011). Exploring the complex contributions of a community based safe motherhood program to comprehensive primary health care. Health Africa; Final Report 2011.

Fako, T.T., Force, N., & Ncube, E. (2004). Prospects of safe motherhood in Botswana: midwifery training and nurses' ability to complete the Botswana obstetric record. *Soc Sci Med.; 58(6):1109-20.*

FCI. (2007). A Historical Review of Safe Motherhood: 20 Years and Counting. Retrieved September16, 2011 from http://www.familycareintl.org.

Farley, M. (2001). *HIV* & AIDS in *Botswana.* Los Angeles Times, 27 June 2001. Retrieved from http://www.aegis.com/news/lt/2001/LT010621.html.

Freedman, L.P.J.D., Graham, W.J., Brazier, E., Smith, J.M., Ensor, T. Fauveau, V., Themmen, E., Currie S., & Agarwal, K. (2007). Practical lessons from Global Safe Motherhood initiatives: time for a new focus on implementation. *The Lancet. 370 (9595):1383-1391*.

Freedman, L.P. (2005). Achieving the MDGs: Health systems as core social institutions. Palgrave Macmillan.

FWCW. (1995). Action for Equality, Development and Peace 4-15 September 1995 - Beijing, China. Retrieved March 24, 2012 from http://www.un.org/womenwatch/daw/beijing/official.htm.

Gilson, L., Erasmus, E., Kamuzora, P., Mathews, V., Ngulube, TJ. & Scott, V. (2006). Applying Policy Analysis in Tackling Health-equity Related Implementation Gaps. Equinet Discussion Paper No. 28.

Gilson, L., Buse, K., Murray, S.F. & Dickinson, C. (2008). Future directions for health policy analysis: a tribute to the work of Professor Gill Walt. *Health Policy Plan. 23(5): 291-293.*

Gilson, L. & Raphaely, N. (2008). The terrain of health policy analysis in low and middle income countries: A review of published literature 1994–2007. *Health Policy Plan. 23 (5): 294-307.*

Gilson, L. & Erasmus, E. (2008). Tackling implementation gaps through health policy analysis. Edit: R Loewenson R Pointer (TARSC) DTP: Blue Apple Published by: EQUINET, TARSC, Harare, Zimbabwe.

Gilson, L., & McIntyre, D. (2008). The interface between research and policy: experience from South Africa. *Social Science and Medicine* 67; 748-758.

Grepin, KA. (2011). Efficiency considerations of donor fatigue, universal access to ARTs and health systems. Retrieved on October 22, 2014 from http://www.nyudri.org/wp-content/uploads/2012/04/efficiencyconsiderationsofdonorfatigue.pdf

Guest, G., Bunce, A., & Johnson, L. (2006). "How Many Interviews Are Enough? An Experiment with Data Saturation and Variability". *Field Methods; 18(1): 59-82.*

Gunn, L.A. (1978). "Why is implantation so difficult?" Management Services in Government, 33: 169-76. Hunter DJ (2003). Public Health Policy. Cambridge: Polity ...

Guth, W.D., & Macmillan, I.C. (1986). Strategy implementation versus middle management self-interest. (*Article first published online: 8 Nov 2006*). Strategic Management Journal, 7(4): 313–327. Retrieved March 24, 2012 from http://onlinelibrary.wiley.com/doi/10.1002/smj.v7:4

Hildebrand, M.E. & Grindle, M.S. (1994). Building sustainable capacity: challenges for the public sector. Paper prepared for the United Nations Development Programme Pilot Study of Capacity Building. Harvard University, Cambridge: Harvard Institute of International Development; 1994. Retrieved from *www.healthpolicyjrnl.com/article/S0168.*

Hill, J., & Kazembe, P. (2006). Reaching the Abuja target for intermittent preventive treatment of malaria in pregnancy in African women: a review of progress and operational challenges. *Trop Med Int Health, 11 (4): 409–418.*

Hill, K., Thomas, K., AbouZahr, C., Walker, N., Say, L., Inoue, M., & Suzuki, E. (2007). On behalf of the Maternal Mortality Working Group. Estimates of maternal mortality worldwide between 1990 and 2005: An assessment of available data. *The Lancet, 370(9595):1311-1319.*

Hogan, M.C., Foreman, K.J., Naghavi, M., Ahn, SY, Wang, M., Makela, S.M., et al. (2010). Maternal mortality for 181 countries, 1980—2008: a systematic analysis of progress towards Millennium Development Goal 5. Retrieved on February 13, 2012.*The Lancet, 375(9726): 1609 - 1623.*

Holdstock, D., & Rowson, M. (2005). Achieving the Millennium Development Goals. *The Lancet, 365(9464):1030.*

Hunter, D.J., & Killoran, A. (2002). Tackling health inequalities: turning policy into practice? Health Development Agency. Retrieved May 5, 2012 from http*://www.who.int/rpc/meetings/Hunter_Killoran_Report.pdf.*

Hudalah, D., Winarso, H., & Woltjer, J. (2010). Policy networking as capacity building: An analysis of regional road development conflict in Indonesia. Retrieved March 2012 from http://plt.sagepub.com/content/9/4/315.refs.

Hughes, RL, Ginnett, R.C., & Curphy, G.J. (2002). Leadership, enhancing the lessons of experience. New York, McGraw-Hill/Irwin.

Human rights Matrix: http://www.policyproject.com/matrix/SafeMotherhood.cfm (Retrieved February 16, 2012).

Huque, Z.A., Leppard, M., Mavalankar, D., Akhter, H.H. & Chowdhury, T.A. (2000). Safe motherhood programmes in Bangladesh. In: Safe motherhood initiatives: Critical issues - Reproductive Health Matters: 53–61. Berer, M., & Ravindran T.K.S, eds. London, Blackwell Science.

Hussein, J., Newlands, D., D'Ambruoso, L., Thaver, I., Talukder, R. and Besana, G. (2010), Identifying practices and ideas to improve the implementation of maternal mortality reduction programmes: findings from five South Asian countries. BJOG: An International Journal of Obstetrics & Gynaecology, 117: 304–313. doi: 10.1111/j.1471-0528.2009.02457.

Hunter, D.J., & Marks, L. (2002). Decision-Making Processes for Effective Policy Implementation. Retrieved March 2012 from http://www.nice.org.uk/aboutnice/whoweare/aboutthehda/evidencebase/keypapers/conferenceandseminarproceedings/tacklinghealthinequalitiesturningpolicyintopractice/hdaseminarseriespapers/p90.jsp

Hussein, J., & Clapham, S. (2005). Message in a bottle: sinking in a sea of safe motherhood concepts. *Health Policy, 73*(3), 294-302. Retrieved on May 13, 2015 from http://www.sciencedirect.com/science/article/pii/S0168851004002799.

IFPP Digest, (2008). Maternal Mortality Has Declined Substantially in Rural Bangladesh. International Family Planning Perspectives 34(1), March 2008. Retrieved December 8, 2014, from http://www.guttmacher.org/pubs/journals/3405508.html

IMPACT Bangladesh: Maternal Deaths Decline by 40 Percent in Less Than 10 Years. Retrieved March 2012 from http://blog.usaid.gov/2011/03/bangladesh-maternal-deaths-decline-by-40-percent-in-less-than-10-years
http://www.unaids.org/globalreport/global_report.htm

International Commitments to Safe motherhood. Retrieved on February 13, 2012 from http://www.safemotherhood.org/priorities/international-commitments.html

Jönsson, K., Phoummalaysith B., Wahlström R., & Tomson, G. (2014).

Jowett, M. (2000). "Safe motherhood interventions in low-income countries: An economic justification and evidence of cost-effectiveness." *Health Policy; 53(3), 201-228*.

Katzenellenbogen, J.M., Joubert, G., & Karim, S.S.A., (editors) 2004. Sampling. In Epidemiology; a manual for South Africa. Oxford University Press, p79.

Kielstra, P., Kim Andreasson, K., & Kenny, M., (2010). Enabling efficient policy implementation: A report from the Economist Intelligence Unit. Retrieved September 14, 2014 from http:// http://www.oracle.com

Kimalu, P.K., Nafula, N.N., Manda, D.K., Bedi, A., Mwabu, G., et al. (2004). A Review of the Health Sector in Kenya. Social Sector Division, Kenya Institute for Public Policy Research and Analysis KIPPRA Working Paper No. 11.

Ki-Moon, B. (2010). Global strategy for women's and children's health. *New York: United Nations*. Retrieved on 13 May 2015 from http://www.do1thing.org.nz/assets/Uploads/Global-Strategy.pdf

Kingdon, J. W. (1994). Agendas, ideas, and policy change. *New perspectives on American politics*, 215-229.Retrieved on May 13, 2015.

Koblinsky, M.A., Campbell, O., & J. Heichelheim. (1999). Organizing delivery care: What works for Safe Motherhood? Policy and Practice: Bulletin of the World Health Organization; 77 (5). WHO, Geneva.

Koblinsky, M., Anwar, I., Mridha, M.K., Chowdhury, M.E., & Botlero, R. (2008). Reducing maternal mortality and improving maternal health: Bangladesh and MDG 5. *J Health Popul Nutr.; 26(3):280-94.*

Kwast, B. E. (1993). Safe Motherhood—the first decade. *Midwifery*, *9*(3), 105-123. Retrieved on May 13, 2015 from http://www.sciencedirect.com/science/article/pii/026661389390018N

Kobue, M., & Tacon, S. (1993). Botswana Safe Motherhood Programme. Safe Motherhood Task Force The road to safe motherhood: a guide to discussion: Causes of maternal deaths and options to prevent them in Botswana. *MOH, Botswana, 1993.*

Leger, S. (1998). Australia teachers' understanding of the health promoting school concept and implications for development of school health. Health Promotion International; 13(3), 223-235.

Lewis, R.J. (1999). Reliability and Validity: Meaning and Measurement. Presented at the 1999 Annual Meeting of the Society for Academic Emergency Medicine (SAEM) in Boston, Massachusetts. Retrieved February 12, 2012 from *http://www.umdnj.edu/idsweb/idst6121/ReliabilityandValidity.pdf*.

Liljestrand, J., & Sambath, M. R. (2012). Socio-economic improvements and health system strengthening of maternity care are contributing to maternal mortality reduction in Cambodia. *Reproductive health matters*, *20*(39), 62-72. Retrieved on 13may 2015 from http://www.sciencedirect.com/science/article/pii/S0968808012396201

Luck, M. (2000). Safe Motherhood Intervention Studies in Africa: A Review. *East Afr Med J, 77 (11).*

Lynagh, M., Schoefield, M.J., & Sanson-Fisher, R.W. (1997). School Health Promotion Programs over the past decade: a review of the smoking, alcohol and solar protection literature. *Health Promotion International, 12*, 43-60.

Maine, D. (2000). What's So Special about Maternal Mortality? In: Safe Motherhood Initiatives: *Critical Issues - Reproductive Health Matters.* Edited by Berer, M. & Ravindran, T.K.S.

Maine, D., & Rosenfield, A. (1999).The Safe Motherhood Initiative: Why has it stalled? Am J Public Health. 89(4): 480–482.

Makinde, T. (2005). Problems of Policy Implementation in Developing Nations: The Nigerian Experience. J. Soc. Sci., 11(1): 63-69. (Retrieved 15, January 2012).

Mavalankar, D.V. (1999). "Promoting Safe Motherhood Programme in India: Issues and Challenges", in Implementing Reproductive Health Agenda in India: The Beginning, Saroj Pachauri (Ed.). Population Council, New Delhi, pp 531-549.

Mavalankar, D.V., & Rosenfield, A. (2005). Maternal mortality in resource-poor settings: policy barriers to care. *Am J Public Health, 95:200-3.*

Mavalankar, D., Vora, K., & Prakasamma, M. (2008). Achieving Millennium Development Goal 5: Is India serious? *Bull WHO. 86(4):243-243A.*

Mazmanian, D.A. & Sabatier, P.A. (1989). Implementation and Public Policy. New York. USA: University Press of America.

McLaughlin, MW. (1987). Learning From Experience: Lessons from Policy Implementation. Educational evaluation and policy analysis 9(2): 171-178. Retrieved on September 14, 2014 from http://epa.sagepub.com.

McCourt, W. (2001). Political commitment to reform: Civil service reform in Swaziland (report Government of Swaziland). Institute for Development Policy and Management, University of Manchester.

McIntyre, J. (2003). Mothers infected with HIV. Br Med Bull; 67: 127-135.

MOH & UNICEF/ Botswana. (1993): The Road to Safe Motherhood; Guide to Discussion.

MOH Botswana. (1994): Botswana Safe Motherhood Initiative: National Project 1995-1997.

MOH, 2014. 5 year Maternal Mortality. Report (2007-2011).

Mogobe, K.D.M., Tshiamo, W., & Bowelo, M., (2007).
Monitoring Maternity Mortality in Botswana. Reproductive Health Matters
15(30):163-171.

Mtonya, B., & Chizimbi, S., (2006). Systemwide Effects of the Global Fund in Malawi: Final Report September 2006. USAID 2006, Partners for Health Reform*plus.* Retrieved on April 20, 2012 from www.PHRplus.org.

Mufubenga, P. (2003). Prevention and control of malaria in pregnancy: the Ugandan experience. PREMA-EU newsletter. http://www.prema-eu.org/iss2mufubenga.htm. Retrieved April 28, 2012.

Hilhorst, D., & Van Leeuwen, M. (2000). Emergency and development: The case of Imidugudu, Villagization in Rwanda. *Journal of Refugee Studies*, *13*(3), 264-280. Retrieved on 13 may 2015 from http://jrs.oxfordjournals.org/content/13/3/264.short.

NACA. (2009). The Second National Strategic Framework for HIV and AIDS 2010-2016.

NACA, Ministry of State President, Government of Botswana. Retrieved December 7, 2014 from http://www.bbca.org.bw/Botswana%20Nat%20Strat%20Fram%202010.pdf

Nishimura, M., Ogawa, K., Sifuna, DN., Chimombo, J., Kunje, D., et al., (2009). A Comparative Analysis of Universal Primary Education Policy in Ghana, Kenya, Malawi, and Uganda. Journal of International Cooperation in Education, 12 (1):143-158.

Ngwisha, C. (2011). Daily News; 28 September 2011. Tanzania (Dar es Salaam) Tanzania: Inadequate Medical Staff Challenge to Safe Motherhood.

Parsons, W. (1995). Public Policy: An Introduction to the Theory and Practice of Policy Analysis. Edward Elgar Publishing, Inc. Cheltenham, U.K.

Paxton, A., Maine, D., Freedman, L., Fry, D., & Lobis, S. (2005). The evidence for emergency obstetric care. *Int J Gynaecol Obstet, 88:181-193*.

Perry, C.L., Luepker, R. V., Murray, D.M., Kurth, C., Mullis, R., Crockett, S., & Jacobs Jr, D.R. (1988). Parent Involvement with Children's Health Promotion: The Minnesota Home Team. *American Journal of Public Health, 78(9),* 1156-1160.

Philpott, A., Maher, D., & Grosskurth, H. (2002). Translating HIV/AIDS research findings into Policy: Lessons from a case study of 'the Mwanza trial'. *Health policy Plan. 17 (2), 196-201*.

Plataforma SINC. (2010). "Most maternal deaths in sub-Saharan Africa could be avoided." *ScienceDaily*, 2 March 2010. Retrieved May 27, 2012 from http://www.sciencedaily.com/releases/2010/02/100218092852.htm.

Porter, R. W. (1995): Knowledge utilization and the process of policy formation: Toward a Framework for Africa. Washington, DC: USAID: Academy for Educational Development, Support for Analysis and Research in Africa Project; 1995.

Post, M. (1997). Preventing Maternal Mortality through Emergency Obstetric Care. Public Health Advisor Support for Analysis and Research in Africa (SARA) Project.

Policy implementation: What USAID has learned 2001 (PN-AH-ACH-306). Center for Democracy and Governance Bureau for Global Programs, Field Support, and Research U.S. Agency for International Development. Washington, DC 20523-3100Center for Democracy, USA.

Post, L.A., Amber, N. Raile, W., & Raile, E.D. (2010). Defining Political Will. Politics & Policy, 38(4): 653-676.

Purdon, S., Lessof, C., Woodfield, K., & Bryson, C. (2001). Research Methods for Policy Evaluation. Department for Work and Pensions Research Working Paper No 2. Retrieved 27 January, 2012, from http://www.dwp.gov.uk/asd/asd5/WP2.pdf.

Ramma, L. (2010). Evaluation of the Implementation of the school health policy in two schools in Cape Town. MPH Thesis University of the Witwatersrand.

Reid, D. J., Killoran, A. J., McNeill, A. D., & Chambers, J. S. (1992). Choosing the most effective health promotion options for reducing a nation's smoking prevalence. *Tobacco Control*, *1*(3), 185.

Ridde, V. (2008). "The problem of the worst-off is dealt with after all other issues": The equity and health policy implementation gap in Burkina Faso. Soc. Sci. Med. 66 (6):1368-1378.

Robinson, S. E., & Eller, WS. (2010). Participation in Policy Streams: Testing the Separation of Problems and Solutions in Sub-national Policy Systems. Policy Studies Journal, 38 (2).

Ronsmans, C., Wendy, J., & Graham, W.J. (2006). Maternal mortality: who, when, where, and why. The Lancet, 368 (9542): 1189-1200. Retrieved on February 12, 2012 from http://www.thelancet.com/journals/lancet/article.

Rogo, K.O., Oucho, J, J., & Mwalali, P. (2006). Maternal Mortality. In: Disease and Mortality in Sub-Saharan Africa. 2nd edition. Jamison DT, Feachem RG, Makgoba MW, et al., editors. Washington (DC): World Bank; 2006.

Rosenfield, A., & Maine, D., (1985) Maternal mortality—a neglected tragedy. Where is the M in MCH? *The Lancet, 326 (8446), 83–85.*

Sabatier, P., & Mazmanian, D., (1980). The Implementation of Public Policy: A framework of analysis. Policy Studies Journal, 8: 538–560. Retrieved January 29, 2012 from http://onlinelibrary.wiley.com/doi/10.1111/j.1541-0072.1980.tb01266.x/pdf

Sabatier, PA. (1986). Top-Down and Bottom-Up Approaches to Implementation Research: a Critical Analysis and Suggested Synthesis. *Journal of Public Policy, 6(1):21-48.*

Schlossberg, M. (2008). Coordination as a Strategy for Serving the Transportation Disadvantaged; A comparative Framework of Local and State Role. *Public Works Management & Policy 12: 568-577.*

Spratt, K. (2009). Policy Implementation Barriers Analysis: Conceptual Framework and Pilot Test in three Countries. *USAID, 2009.*

Shiffman, J. (2003). Generating political will for safe motherhood in Indonesia. Soc Sci Med.; 56(6):1197-207. Retrieved from www.ncbi.nlm.nih.gov/pubmed/12600358

Shiffman, J., & Okonofua, F. (2007). The state of political priority for Safe motherhood in Nigeria. *BJOG; 114:127–133.*

Shiffman, J. (2007). Generating Political Priority for Maternal Mortality Reduction in 5 Developing Countries. *Am J Public Health; 97(5):796-803.*

Shiffman, J., & Smith S. 2007. "Generation of Political Priority for Global Health Initiatives: A Framework and Case Study of Maternal Mortality," *The Lancet;* 370 (9595): 1370-1379.

Siddiqi, S., Haq, I.U., Ghaffar, A., Akhtar, T., & Mahaini, R. (2004). Pakistan's maternal and child health policy: Analysis, lessons and the way forward. *Health Policy, 69(1):117-130.*

Silal, S.P., Penn-Kekana, L., Harris, B., Birch, P., & McIntyre, D. (2012). Exploring inequalities in access to and use of maternal health services in South Africa. BMC Health Services Research 12:120. Retrieved December14, 2014 from http://www.biomedcentral.com/1472-6963/12/120

Singh, S., Myburgh, N.G., & Lalloo, R. (2010). Policy analysis of oral health promotion in South Africa. *Glob Health Promot. 17(1):16-24*.

Stack, L., & Hlela, K. (2002). Enhancing policy implementation: Lessons from the health sector: 'Closing the gap between policy and implementation in South Africa. Centre for Policy Studies, Johannesburg. Retrieved February 2012 from http://www.cps.org.za/cps%20pdf/RR94.pdf

Starrs, A. (1998). The Safe Motherhood action agenda: priorities for the next decade. Report on the Safe Motherhood Technical Consultation 18-23 October 1997 Colombo Sri Lanka. Retrieved on 13, May 2015 from http://www.popline.org/node/526231

Starrs, A.M. (2006). Safe motherhood initiative: 20 years and counting. The Lancet, 368(9542):1130-1132. Retrieved January 29, 2012 from www.thelancet.com/.

Safe Motherhood at 10, (2012): Retrieved January 20, 2012 from http://www.safemotherhood.org/

Simwaka, L.K. (2008). 'How power relations affect the implementation of policy on equity in access to anti-retroviral therapy: The case of rural health centres in Malawi,' EQUINET Discussion Paper 69. EQUINET: Harare.

Sutton, R. (1999). The Policy Process: An Overview. Working Paper 118. Overseas Development Institute. Retrieved on March 23, 2012 from http://www.odi.org.uk/resources/docs/2535.pdf

Swiderska, K. (2001). Stakeholder Participation in Policy on Access to Genetic Resources, Traditional Knowledge and Benefit-sharing. Biodiversity and Livelihoods Issues No.4 Retrieved on March 12, 2014 from http://pubs.iied.org/pdfs/9096IIED.pdf

Teodorović, J., (2008). "Why education policies fail: Multiple streams model of policymaking." *Zbornik Instituta za pedagoška istraživanja* 40.1: 22-36.

Tongco, MDC. 2007. Purposive sampling as a tool for informant selection. Ethnobotany Research & Applications 5:147-158.Retrieved on May, 20 2015 from http://hdl.handle.net/10125/227

United Nations. (2000). Millennium Development Goals. Retrieved April 21, 2012, from http://www.un.org/millenniumgoals/maternal.shtml.

United Nations General Assembly. (2000). United Nations Millennium Declaration, G.A. Res. 55/2, U.N. GAOR, 55th Session. Retrieved April 21, 2012 from http://www1.umn.edu/humanrts/instree/millennium.html

UNAIDS. (2013). HIV & AIDS estimates (2013). Retrieved October 19, 2014 from http://www.unaids.org/en/Regionscountries/Countries/Botswana/

UNDP. (2013). Maternal mortality ratio (deaths per 100,000 live births). Human Development Reports. Retrieved December 7, 2014 from http://hdr.undp.org/en/content/maternal-mortality-ratio-deaths-100000-live-births

UNDP/MOH. (2013). MDG Acceleration Compact. Improving Maternal Health. Retrieved October 19, 2014 from http://www.bw.undp.org/content/dam/botswana/docs/Publications/MDG%20Acceleration%20Compact_Botswana%202013.pdf

USAID. (2011). IMPACT Bangladesh: Maternal Deaths Decline by 40 Percent in Less Than 10 Years. Retrieved March 2012 from http://blog.usaid.gov/2011/03/bangladesh-maternal-deaths-decline-by-40-percent-in-less-than-10-years

United Nations. (2000). Millennium Development Goals. Retrieved April 21, 2012, from http://www.un.org/millenniumgoals/maternal.shtml

UNFPA. (2007). Safe Motherhood http://www.unfpa.org/public/mothers. Retrieved February 18, 2012.

UNICEF. (2010). 'Botswana: PMTCT' Retrieved February 8, 2012 from http://www.avert.org/pmtct-hiv.htm.

UNICEF (2008). Millennium Development Goals; about the goals. Retrieved December 19, 2008, from http://www.unicef.org/mdg/28184_28230.htm

UN, ICPD (1994). Summary of Programme of Action. Retrieved March 10 2012 from http://www.un.org/ecosocdev/geninfo/populatin/icpd. html

UNAIDS & NACA. (2010). Progress report of the national response to the 2001 declaration of commitment on HIV and AIDS. Botswana country report 2010 Reporting Period: 2008-2009. Retrieved March 2012 from http://www.unaids.org.

UNAIDS. (2010). UNAIDS report on the global AIDS epidemic. Retrieved from USAID, (2011).

UNAIDS. (2011). Regional Fact Sheet 2012; Sub-Saharan Africa. Retrieved December 14, 2014 from http://www.unaids.org/sites/default/files/en/media/unaids.

United Nations General Assembly. (2000). United Nations Millennium Declaration, G.A. Res. 55/2, U.N. GAOR, 55th Session. Retrieved February 19, 2012 from http://www.umn.edu/humanrts/instree/millennium.html.

Utomo, B. (2005). Challenges in addressing safe motherhood issues in Indonesia. In: Emerging Issues of Health and Mortality in the Asian and Pacific Region Asian: *Population Studies Series No. 163.* Retrieved from http://www.dfid.gov.uk/R4D/Output/177028/Default.aspx

Varvasovszky, Z., & Brugha, R. (2000). How to do (or not to do) . . . A stakeholder analysis. *Health Policy Plan, 15(3): 338–345*. Retrieved on August 12, 2014 from http://dess.fmp.ueh.edu.ht/pdf/Zsuzsa_Varvasovsky_2000_stakeholder_analysis.pdf

Walt, G., & Gilson, L. (1994). Reforming the health sector in developing countries: The Central role of policy analysis. *Health Policy Plan. 9(4): 353-370*. Retrieved March 8, 2012 from http://info.worldbank.org/etools/docs/library/122031/bangkokCD/Bangkok

Walt, G. (1994). Health policy: An introduction to process and power. Zed Books, London.

Walt, G., Shiffman, J., Schneider, H., Murray, S.F., Brugha, R., & Gilson, L. (2008). Doing health policy analysis: methodological and conceptual reflections and challenges. *Health Policy Plan. 23 (5): 308-317*. Retrieved March 8, 2012 from *http://www.ncbi.nlm.nih.gov/pubmed/18701552.*

Weber, R.P. (1990). Content Analysis: Basic content analysis. Sage, Newbury Park, Cal.
Millennium Development Goals. http://www.undp.org/mdg/basics.shtml.
WHO, UNICEF, UNFPA, et al., (2014). Trends in Maternal Mortality: 1990 to 2013: Estimates by WHO, UNICEF, UNFPA, the World Bank and the United Nations Population Division. Retrieved 5 October 2014 from http://www.unfpa.org/public/home/publications/pid/17448

WHO/UNAIDS/UNICEF. (2010). 'Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector', Geneva.

WHO | Millennium Development Goals: progress towards the health. Retrieved February 19, 2012 from http//.www.who.int/mediacentre/factsheets/fs290/en/

WHO. (2007). Maternal mortality ratio falling too slowly to meet goal. Joint News Release WHO/UNICEF/UNFPA/World Bank. Retrieved February 13, 2012) from http://www.who.int/

WHO. (2008). Social determinants of health; Commission on Social Determinants of Health - final report. Retrieved on February 15, 2012 from http://www.who.int/social_determinants/thecommission/finalreport/en/index.html

WHO, UNICEF, UNFPA & World Bank. (2012). Trends in maternal mortality: 1990 to 2010. Retrieved March 8, 2012 from http://www.unfpa.org/public/home/publications/pid/10728.

WHO/UNAIDS/UNICEF. (2010). Towards Universal Access: Scaling up priority HIV/AIDS interventions in the health sector. Geneva.

WHO. (2012). Global Health Observatory (GHO): Maternal and reproductive health. Retrieved June 20, 2012 from http://www.who.int/gho/maternal_health/en/index.html

WHO, (2013). The Global Health Workforce Alliance 2013 Annual Report: Rising to the grand challenge of Human Resources for Health. Retrieved December 7, 2014 from http://www.who.int/workforcealliance/knowledge/resources/ghwa_anual_report_2013.

WHO. (2014:1) *World Health Statistics 2014.* Geneva, World Health Organization; 2014. Retrieved September 23, 2014 from: http://www.who.int/mediacentre/factsheets/fs348/en/

WHO. (2014:1). Health Topics. Health Policy. Retrieved September 7, 2014 from www. http://www.who.int/topics/health_policy/en/

WHO. (2014:1). Maternal mortality. Fact sheet N°348 Updated May 2014. Retrieved December 19, 2014 from http://www.who.int/mediacentre/factsheets/fs348/en/

Wouters, E., van Rensburg, H.C.J., & Meulemans, H. (2009). The National Strategic Plan of South Africa: What are the prospects of success after the repeated failure of previous AIDS policy? *Health Policy Plan. 25 (3): 171-185*.

Wyss, K. (2004). An approach to classifying human resources constraints to attaining health-related Millennium Development Goals. Hum Resour Health. 2(1):11

UNDP. (2013). Maternal mortality ratio (deaths per 100,000 live birth**s**): UNDP development 2013. Retrieved September 23, 2014 from http://hdr.undp.org/en/content/maternal-mortality-ratio-deaths-100000-live-births.

Zimmerling, R. (2005). *Influence and Power. Variations on a Messy Theme*. Dordrecht, The Netherlands: Springer.

Zuchowski, JL., Rose, DE, Hamilton, AB., Stockdale, SE, Meredith, LS, Yano, EM, Rubenstein, LV., & Cordasco, KM. (2014). Challenges in Referral Communication between VHA Primary Care and Specialty Care. J Gen Intern Med. 2014 Nov 20. [Epub ahead of print]. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/25410884

APPENDICES: Appendix 1. Ethics Clearance Certificate

R14/49 Dr HMA Osore

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M140986

NAME: (Principal Investigator)	Dr HMA Osore
DEPARTMENT:	School of Public Health Maternity Units, Southern Health Region of Botswana
PROJECT TITLE:	Policy Analysis of the Implementation Process of the Safe Motherhood Training Component in Botswana
DATE CONSIDERED:	03/10/2014
DECISION:	Approved unconditionally
CONDITIONS:	Application originally submitted in 2007 through the Office. of the Administrator at the School of Public Health. Application did not reach the HREC (Medical) until investigated in 2014.
SUPERVISOR:	Prof Laetitia Rispel
APPROVED BY:	Professor P Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	13/10/2014

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report.**

Principal Investigator Signature

Date 13th Oct. 2014.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX 2: Permission letter from MOH Botswana

Telephone: (267) 3632000
FAX (267) 353100
TELEGRAMS: RABONGAKA
TELEX: 2818 CARE BD

MINISTRY OF HEALTH
PRIVATE BAG 0038
GABORONE

REPUBLIC OF BOTSWANA

REFERENCE No: PPME 13/18/ 1 PS Vol IV (53) **30 December 2008**

Health Research and Development Division

Notification of IRB Review: New application

Dr Hezekiah Osore
P O Box 40451
Gaborone

Protocol title:	**Implementation Process of Training in Safe Motherhood Policy in Botswana**
HRDD Protocol number:	HRU 00435
Sponsor:	Self Sponsored.
HRDD Review Date:	December 30, 2008
HRDD Review Type:	HRDD reviewed
HRDD Review Determination:	Approved
Risk Determination:	Minimal risk

Dear Dr Hezekiah Osore

Thank you for submitting an application for the above referenced protocol to Health Research and Development Division (HRDD) for review and approval. We have noted that all HRDD concerns had been addressed satisfactorily.

Permission is therefore granted to conduct the above mentioned study. This approval is valid for a period of 1 year effective December 30, 2008.

This approval includes the following:

1. Application form
2. Consent forms
3. Protocol
4. Data collection tools

The permit does not however give you authority to collect data from selected sites without prior approval from the management. Consent from the identified individuals should be obtained at all times.

The research should be conducted as outlined in the approved proposal. Any changes to the approved proposal must be submitted to the Health Research and Development Division in the Ministry of Health for consideration and approval.

Furthermore, you are requested to submit at least one hard copy and an electronic

APPENDIX 3: Permission from Gaborone City Council

All correspondence should be addressed to the
TOWN CLERK
Private Bag 0089
Telephones: 3657400
Tel. Add.: 'CIVIC'
GABORONE
BOTSWANA
Fax: 3900141

GABORONE CITY COUNCIL

Date: 27th August, 2009

Dr. Hezekiah Osore
P.O. Bag BO 40451
Gaborone

RE: PERMISSION TO CONDUCT RESEARCH

Reference is made to your request for permission to conduct research on Implementation Process of Training in Safe motherhood Policy in Botswana.

In view of the approval of the study protocol by Ministry of Health Research Unit, you are hereby authorized to undertake the same study at health clinics in Gaborone. Your adherence to the study protocol will be appreciated.

Area matrons, doctors, nurses and all other health workers are informed and request to give you access and support.

Yours faithfully,

.....
Dr. G. Simoonga
For Town Clerk.

GABORONE CITY COUNCIL
PRIVATE BAG 0089 GABORONE
2009 -08- 27
TEL: 3653521 / 3974468
PUBLIC HEALTH SPECIALIST

APPENDIX 4: Information Sheet for Key Informants & Consent

Policy analysis of the Implementation Process of the Safe Motherhood Training component in Botswana.

Good day. My name is Hezekiah Osore. I am student from the School of Public Health at the Witwatersrand University in Johannesburg South Africa. The school of Public health conducts research and trains students of Public Health for improving public health as a whole.

Introduction

As part of the fulfillment for my degree (Masters in Public Health), I am conducting a study on the Implementation process of Training in Safe Motherhood Policy in Botswana. The aim of the study is to explore the process of who were the actors, how they influenced or were influenced in the training during the SMI policy implementation in Botswana. The study will look at the barriers and factors facilitating the training element in the implementation process of the SMI. It will explore the obstacles faced in the health system in influencing the training process in the implementation of the SMI policy in Botswana. It is hoped that the study will help inform the MOH on what were the achievements and constraints that faced the training implementation process and find out what can be done to re-strategize for the achievement of improving policy in maternal health care in Botswana so as to reduce maternal mortality.

I intend to use In-depth interviews with key informants in the MOH, and health care providers and trainers in the maternal health services.

I am therefore inviting you to participate in this study by giving me an interview regarding your perspectives on the actors, their influences any challenges faced by the training in SMI implementation process.

Consent

Ethical approval for this study was been given by the University of the Witwatersrand Ethics Committee and the Research Unit in the Ministry of Health in Botswana.

If you agree to be interviewed, I would like to request you to sign a written consent form. I will then request your permission to tape the interview. If you agree (and you may opt to decline) then I will ask you to sign a separate consent form to tape the interview. There is no direct compensation for participation in the interview. There are no punitive or negative consequences for non-participation and there are no personal details taken which can identify you. If you do not participate it will not be reported to anyone. During the interview, you have the right to decline to answer certain questions or you may stop the interview any time.

Selection for Interview

I intend to carry out about 15 to 20 in-depth interviews with key informants in this study. You have been selected as it was thought that you would have useful insights into the issues in this study. If you agree please kindly respond to the questions as honestly as you can.

Confidentiality

The information obtained from this interview will be treated with utmost confidentiality and that nothing learned from the interview will be revealed to other participants in the study or other members of the community. There are no personal details recorded for use in the report. No individual names will be used or assigned to the data collected. However I do realize that there are a limited number of people working in SMI in Botswana and even if there are no names used some people might be identifiable. If I or the interviewee is worried that they will be identified then this will be discussed and the interviewee will be sent the report in advance of it being published or submitted to see if he/she is happy with what has been written.

If you consent to participate then I will sent a copy of the report to you before it is published to check that you are happy with the comments and views that have been attributed to you.

Interview

This will take about one hour and it will be carried out at a time and place that is convenient to you.

Contact Details of the student and the supervisors:

Any further questions or concerns of the study, you may contact the undersigned below:

Prof. Laetitia Rispel
School of Public Health
University of the Witwatersrand
Johannesburg
South Africa
Tel no 011 242 9920

APPENDIX 5: Consent for In-Depth Interviews – Key Informants

I have been given the information sheet on the research project "Policy Analysis of the Implementation Process of the Safe Motherhood training Component in Botswana."

I have read and understood it. Any questions that I had about the study have been answered.

I understand that it is my choice to do the interview or decline it.

I understand that it is my choice during the interview not to answer any questions and that it is my choice to terminate the interview at any time.

I understand that I do not have to do this interview, and that it is entirely voluntary.

I understand that during the interview I have the right not to answer any questions, and may finish the interview at any time.

I do consent to or not consent to my name and organization being used in the report, and wish any information given in this interview to be treated in strictest confidence.

Interviewee's signature:……Date:……

Interviewer's signature: ……Date:……...

Consent Form- Obtaining informed consent before an in-depth interview

Dear Sir/ Madam

My name is Hezekiah Osore.

I am a student of Masters in Public Health at the Witwatersrand University in South Africa. As part of the fulfillment for my degree, I am conducting a study on the Implementation process of Safe Motherhood Policy in Botswana. The aim of the study is to explore the process of how the SMI Policy was formulated and implemented in Botswana. It is hoped that the study will help inform the MOH on what were the achievements and constraints that faced the policy implementation process and find out what can be done to re-strategize for the achievement of improving maternal health care in Botswana so as to reduce maternal mortality.

I would like to assure you that all the information obtained from this interview will be treated with utmost confidentiality and that nothing learned from the interview will be revealed to other participants in the study or other members of the community.

Approval for this study has been sought from the Research Unit of the Ministry of Health in Botswana and Ethical clearance from the Ethical Committee of the University of the Witwatersrand.

The interview is voluntary and if you agree please kindly respond to the questions as honestly as you can.

Date…….. Researcher…….

APPENDIX 6: Consent to Tape-Record In-Depth Interviews – Key Informant Interviews

I have read the research information sheet, and I understand that it is my choice whether or not the interview is recorded. It will not be affected in any way that the interviewer treats me if I decline to have the interview taped.

I understand that if the interview is taped, the recording will be destroyed as soon as the interview has been transcribed.

I understand that I can stop the interview, and the recording or taping all together at any time.

I understand that the information that I give will be treated in the strictest confidence, unless I have agreed otherwise, and that my name will not be used when the interviews are typed up.

Interviewee's signature:……Date:…….

Interviewer's signature:…….. Date……

Interviewer's name: (please print):……Date:……..…

APPENDIX 7: Guide Questions and Probes

1. What is your position and what are your duties at your workplace?
    - If not clear yet, do you have any particular role or responsibilities with regard to implementing SMI? Please elaborate.
2. What has been done to implement SMI in Botswana?
    - Have any particular areas been prioritized? Why?
    - How have they gone about implementing the SMI policy? What processes or strategies have been followed?
3. Training was one of the key elements in the contents in the implantation of SMI policy in Botswana. Do you know of any actors or individuals or organizations that have played a role in influencing the training in SMI policy?
    - What role did they play in the training? How did they influence the training of the health personnel for implementation of SMI?
4. Have there been any difficulties in the implementation of the training in the SMI policy? Any there any actors you are aware of that were in support or in opposition to the training in the SMI policy? Please elaborate.
    - Could you explain if any the factors in your opinion that distracted attention from the training in the implementation of SMI?
5. Please could you explain the factors that facilitated or contributed to training in the implementation process of the SMI policy?
6. Any actors who have provided support to the policy? If any, in your opinion what made them act like so? Please elaborate.
7. The SMI strategies were revised in 2005.
    - How did these changes come about? Explain what prompted the revision of these changes.
    - What changes came about as a result of this?
    - How did the changes affect the training element in the SMI policy?
    - What are people's feelings about these changes? Please elaborate
    - Can you explain how the training in ARVs has been linked to the SMI policy in Botswana?
    - Explain in your view what could be done differently and how in order to improve the SMI implementation process of training.
8. If there is time at the end of the interview, perhaps briefly ask the respondent about key elements of the implementation strategy not mentioned in the interview. Why were these not mentioned?