UNIVERSITY OF CAPE COAST

FREE MATERNAL DELIVERY POLICY AND MATERNAL MORTALITY: EVIDENCE FROM BOLGATANGA MUNICIPALITY IN THE UPPER EAST REGION OF GHANA

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BY

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DISSERTATION SUBMITTED TO THE INSTITUTE FOR DEVELOPMENT STUDIES OF THE FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF CAPE COAST IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF MASTER OF ARTS DEGREE IN DEVELOPMENT MANAGEMENT

MAY 2011

DECLARATION

Candidate's declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: ……………………… Date: ……………………

Name: Achuliwor Aziz Abdallah

Supervisor's declaration

I hereby declare that the preparation and presentation of this dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's signature: …………………………… Date: ………………..

Name: Dr. E.K. Ekumah

ABSTRACT

The study was conducted on the premise that despite the introduction of free maternal delivery policy geared at reducing maternal mortality, the incidence of maternal mortality is still on the high side. The objectives of the study were to examine the causes and effects of maternal mortality, examine the challenges of the free maternal delivery policy, investigate the potentials of the free maternal delivery policy and also assess the effect of the free maternal delivery policy on maternal mortality.

The study made use of both exploratory and causal research design. Purposive sampling and simple random sampling methods were adopted. These were used to sample pregnant women who attended hospital for anti natal and delivery, midwives, medical doctors and personnel of the NHIS. One hundred and fifty (150) respondents were sampled for the study. Questionnaires and structured interviews were used to solicit the information. The study employed histograms, bar chart, pie chart and tables in analyzing the data.

The study revealed that haemorrhage, anemia, infections, eclampsia among others were the causes of maternal mortality while motherless babies, malnourished babies, are among the effects of maternal mortality in Bolgatanga Municipality. Free Maternal Delivery Policy in the Bolgatanga Municipality is bedeviled with a number of challenges which is hindering it from achieving its objective of reducing maternal mortality. It is therefore recommended that prompt postpartum care to pregnant women, regular antenatal attendance and adhering to doctors' advice among others would address these challenges.

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DEDICATION

To my family.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CHPS	Community Health Planning and Services
DFID	Department for International Development
DHS	Department of Health Services
EMOC	Emergency Obstetric Care
FANC	Fanconi Anemia
FGM	Female Genital Mutilation
FMDP	Free Maternal Delivery Policy
FP	Family Planning
GSS	Ghana Statistical Service
HIRD	High Impact Rapid Delivery
HIV	Human Immunodeficiency Virus
HRP	High Risk Plaque
ICPD	International Conference on Population and Development
IPT	Intermittent Preventive Treatment
JHS	Junior High School
JSS	Junior Secondary School
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MMR	Maternal Mortality Rate
MVP	Millennium Villages Project

NHIS	National Health Insurance Scheme
NPC	National Population Council
PNC	Postnatal Care
PNM	Pregnant and Nursing Mothers
PPH	Postpartum hemorrhage
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendants
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VVF	Vesico-Vaginal Fistula
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

Background to the study

The English word "health" comes from the old English word hale, meaning "wholeness, a being whole, sound or well". Health is something of an enigma. Like the proverbial elephant, it is difficult to define but easy to spot when we see it. According to World Health Organisation (1946) health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. It agrees that health is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector. According to Wikipedia, maternal death, or maternal mortality, also "obstetrical death" is the death of a woman during or shortly after a pregnancy.

According to World Health Organisation and United Nations Children's Fund (1996), Current best estimates indicate that more than 54 million women suffer from diseases or complications during pregnancy and childbirth and more than one-half million women die of causes related to pregnancy and childbirth each year. To a greater or lesser extent, the risk of death from complications arising during pregnancy affects women in every country in the world. In

developing countries, pregnancy and childbirth-related complications are the leading cause of disability and one of the leading causes of death among women aged 15-44. The World Development Report estimated that 18 percent of the burden of disease for these women is due to maternal causes.

Ghana, like other developing countries has a high maternal mortality rate. The Ghana Maternal Health Survey indicates that "maternal mortality ratio in Ghana remains unacceptably high at 451 deaths per 100,000 live births" (as cited in Yeboah, 2010). Some of the direct medical causes of maternal mortality include hemorrhage or bleeding, infection, unsafe abortion, hypertensive disorders, and obstructed labor. Other causes include ectopic pregnancy, embolism, and anesthesia-related risks. Conditions such as anemia, diabetes, malaria, sexually transmitted infections (STIs), and others can also increase a woman's risk for complications during pregnancy and childbirth, and, thus, are indirect causes of maternal mortality and morbidity.

When a woman dies or becomes ill or injured either during or shortly after giving birth, the consequences have the potential to affect not only the woman herself, but her family and her community in a variety of ways. Morbidity and mortality can have health effects and psychological costs for women, children, and other family or household members. In addition, children's schooling, supervision, and care may be affected by their mother's mortality. Loss of women during their most productive years also means a loss of resources for the family or household and the entire society.

Governments all over have put in measures to address the problem of maternal deaths through the enactment and implementation of policies, legislations and services. In September 2003, the Ministry of Health of Ghana introduced an exemption policy directed at making delivery care free. The thrust of these policies have been to improve uptake, quality and financial and geographic access to delivery care services. The services covered by the exemption policy are normal deliveries, assisted deliveries including Caesarean section and management of medical and surgical complications arising out of deliveries, including the repair of vesico-vaginal and recto-vaginal fistulae. The policy covered delivery services in public, private and faith-based health facilities.

According to Ministry of Health (2008), the major causes of maternal mortality in the Bolgatanga Municipality include hemorrhage (anti – partum and post partum), trama especially ruptured uterus, anemia, eclampsia and late arrival to hospital. Hence the free maternal delivery is just a blessing to the region in general and particularly to pregnant women since the above mentioned causes sometimes occurs as a result of poverty that leads to the delay in of pregnant women reaching the right places for the appropriate intervention. So now if a woman is confirmed pregnant her anti natal care and medical care are free. The transportation of pregnant women from the peripheries to hospital is taken care of by the national ambulance for free. The nursing mother and her baby are taken care of at least for duration of six months, after which she is advised to go for National Health Insurance card. Vitamin A supplement is given to women twice after delivery. Every woman who delivers in the hospital is detained for 24 hours

before she is discharged in order to be able to monitor her and her baby to correct emerging problems. The mothers are advised to visit any nearby clinic in the next 48 hours and six weeks time for post natal care. The policy also covers the training of midwives for safe motherhood protocols, comprehensive abortions care, exclusive breastfeeding, and management of anti partum and post partum bleeding.

Statement of the problem

Maternal mortality refers to those deaths which are caused by complications due to pregnancy or childbirth. These complications may be experienced during pregnancy or delivery itself, or may occur up to 42 days following childbirth. For each woman who succumbs to maternal death, many more will suffer injuries, infections, and disabilities brought about by pregnancy or childbirth complications, such as obstetric fistula. According to Biritwum (2006) “Globally, the health of women in the reproductive age group has engaged the attention of all governments especially in the developing countries where maternal mortality ratios range from 200 to 800 deaths per 100,000 live births. Though women in the reproductive age group form about 22% of the population in most developing countries, they carry the burden of pregnancy, childbirth and child care and therefore form a special vulnerable group” (as cited in Biritwum, 2006). Worldwide, over 500,000 women and girls die of complications related to pregnancy and childbirth each year. Over 99 percent of those deaths occur in developing countries such as Ghana.

According to Bulatao & Ross. (2002), Ghana's maternal mortality rate continues at an unacceptably high level. Ghana Health Service (2005), asserted that while maternal mortality figures vary widely by source and are highly controversial, the best estimates for Ghana suggest that roughly between 1,400 and 3,900 women and girls die each year due to pregnancy-related complications. Additionally, another 28,000 to 117,000 women and girls will suffer from disabilities caused by complications during pregnancy and childbirth each year. According to World Health Organisation (2007), fifteen percent of pregnant women may develop complications during pregnancy and childbirth as against 85 per cent who will go through pregnancy and childbirth without any complications. This means that out of every 100 pregnancies, there is a probability that 15 of them will develop complications. Maternal mortality represents the greatest health inequity in the world. Aside it, no other health indicator starkly illustrates global disparities in human development. The tragedies of maternal mortality are a key indicator of not only the value placed on women, and by extension, children's lives, but also a reflection of the level of development in the country.

The tragedy – and opportunity – is that most of these deaths can be prevented with cost-effective health care services. Reducing maternal mortality and disability will depend on identifying and improving those services that are critical to the health of women and girls in Ghana and particularly Bolgatanga including antenatal care, emergency obstetric care, adequate post partum care for mothers and babies, and family planning and STI/HIV/AIDS services.

Health care financing in Ghana has undergone a chequered history since independence till now. The cash and carry systems as well as the National Health Insurance Scheme (NHIS) are bedeviled with their own problems. The cash and carry for instance led to untoward effects of decreasing access to both rural and urban poor. Patients had to pay for cost of treatment from recording cards through laboratory investigation to drugs and medical supplies such as syringes, needles and cotton wool. According to Arhin (1994), the NHIS came as an option that has been put in place to promote community involvement in health financing while maintaining access to virtually free health care at times of illness. Some poor and vulnerable groups could still not afford to pay the levy charged for the NHIS, hence the free maternal delivery is thus one option of ensuring that all pregnant women are given equal opportunity to health care.

According to Ghana News Agency (2009), the Upper East Region recorded a sharp decrease in maternal mortality in 2003, recording 23 deaths out of every 1000 live births compared to 2002 with a record of 34 deaths out of every 1000 live births. Even though the decline in maternal mortality was encouraging, it is not satisfactory because whereas antenatal attendance is high, delivery at health facilities was low since some pregnant women prefer delivering at home due to high medical cost of delivery. Delivering at home increases their risk to complications resulting in disabilities and in worst cases death. The introduction of the free maternal delivery policy in September 2003 was therefore a policy in the right direction, exempting all users from delivery fees in health

facilities. Thus financial barriers to using antenatal and delivery care in public and private health facilities have been removed.

This not withstanding there are some emerging obstacles to overcome pertaining to the introduction of the free maternal delivery. Even though it has brought about improvement in maternal care, it also resulted in defeating to some extent family planning, since women are now willing to bear more children than before.

The situation described above thus arouses my interest to make a study into the free maternal delivery and maternal mortality in Bolgatanga and the country at large.

Objectives of the study

The general objective of the study was to examine the free maternal delivery policy and maternal mortality.

Specifically the study:

- Examined the causes and effects of maternal mortality.
- Examined the challenges of the free maternal delivery policy.
- Investigated the potentials of the free maternal delivery policy.
- Assessed the effect of the free maternal delivery policy on maternal mortality.
- Made appropriate policy recommendations

Research questions

- What are the causes and effects of maternal mortality?
- What are the challenges of the free maternal delivery policy?
- What are the potentials of the free maternal delivery policy?
- How does the free maternal health policy affect maternal mortality?
- What are the policy recommendations?

Scope of the study

The study area covers Bolgatanga Municipality of the Upper East Region. Basically, the content consists of issues on the free maternal health delivery policy and maternal mortality in Bolgatanga with the study period stretching from August 2010 to November 2010. The study focuses on the key players in maternal mortality issues as well as the free maternal delivery policy which was introduced in September 2003. This includes pregnant women, nursing mothers, nurses, doctors, and administrators of the policy.

Significance of the study

The major focus of the study is to find out how the maternal mortality state in Bolgatanga Municipality is amidst the free maternal delivery policy. It will provide a baseline data on the effectiveness or otherwise of the free maternal delivery policy. The data generated will serve as a useful source of data for future researchers and other organisations interested in the study.

Organisation of the study

The dissertation is organized into five chapters: Chapter One presents general introduction. It consists of background to the study, problem statement, objectives of the study, research questions, scope of the study, significance of the study and organisation of the study. Chapter Two gives the literature review of the study. Chapter Three consists of methodology of the study. This section is subdivided into data type and source, sampling methods, sample size and sampling procedures. Chapter Four is devoted to results and discussion. While Chapter Five comprises of summary, conclusions and recommendations of the study.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

This chapter focuses on existing literature on the maternal mortality and maternal delivery. The review enhances and facilitates the understanding of issues under discussion.

Concept of maternal mortality

According to Wikipedia, Maternal death, or maternal mortality, also "obstetrical death" is the death of a woman during or shortly after a pregnancy. More than 500,000 women die every year in childbirth or from pregnancy-related causes. Virtually all (99 percent) of these maternal deaths occur in low-income countries. (Paruzzolo, Mehra, Kes, & Ashbaugh, 2010). According to Museveni (2009), the situation of maternal health and child survival on the continent of Africa is a cause for concern and called for zero-tolerance of maternal deaths. A woman's risk of dying from treatable or preventable complications of pregnancy and child birth over the course of her life is high compared to her counterparts in developed countries. Lewis-Bell, disclosed that "reducing maternal mortality was also the responsibility of the woman" (as cited in Collinder & Writer, 2008). Some females, often failed to comply with the instructions of the doctor or

midwife, or did not pursue regular and early visits once they had missed two periods. The male counterpart must also know that they have a role to play if they want their women to survive especially during and after pregnancy.

Maternal morbidity

Maternal morbidity refers to serious disease, disability or physical damage such as fistula and uterine prolapse, caused by pregnancy-related complications. In general, maternal morbidity is categorized into three types: (a) direct obstetric morbidity resulting from complications of pregnancy during antenatal, natal and postnatal periods; (b) indirect obstetric morbidity resulting from conditions and diseases aggravated during pregnancy like anaemia, malaria, jaundice, tuberculosis, hypertensive disorders and other cardiovascular diseases or a combination of conditions/diseases; and (c) psychological obstetric morbidity that includes postpartum psychosis or depression and other mental health problems related to pregnancy and childbirth. During pregnancy, immunity is reduced for various reasons and there is a greater risk of infections than during the non-pregnancy period.

Free maternal delivery policy

Maternal mortality is a sad event because majority of the factors associated with the deaths are preventable. It has a follow up cost to the society and the health of the baby should the baby survive. Governments all over have put in measures to address the problem of maternal deaths through the enactment and

implementation of policies, legislation and services. In 1987, the World Health Organisation (WHO) and other United Nations' agencies like UNICEF launched the Safe Motherhood Initiative which was accepted in Ghana. Since then, several safe motherhood programmes have been and continued to be implemented in Ghana. In 1998, government of Ghana introduced free maternal care to all pregnant women and in September 2003, a policy of exempting all users from delivery fees in health facilities was introduced. The services covered by the exemption policy are normal deliveries, assisted deliveries including Caesarean section and management of medical and surgical complications arising out of deliveries, including the repair of vesico-vaginal and recto-vaginal fistulae. Thus financial barriers to using antenatal and delivery care in public and private health facilities have been removed. This is to compliment the role of dedicated and skilled health professionals to achieve a reduction in the maternal mortality rate.

Reproductive health situation in Ghana

Organized Maternal and Child Health (MCH) started in Ghana in the 1920s. By the end of 1972, there were 416 institutions comprising government hospitals, health centers, health posts, private clinics, private hospitals, missionary clinics and hospitals and others offering medical services to mothers and children. In the 1960s, the idea of birth spacing was placed in the context of Maternal and Child Health. In 1970, the Ghana National Family Planning Programme was established under the Ministry of Finance and Economic Planning with the belief

that it is a fundamental human right that couples should have the opportunity to decide freely the number and spacing of their children.

In the same year, 1994, in Cairo, the International Conference on Population and Development (ICPD) was held. As an outcome of the conference, Ghana endorsed the Programme of Action of ICPD and adopted the ICPD definition of reproductive health which has the following components: safe motherhood, family planning, prevention and management of unsafe abortion and post abortion care, prevention and management of reproductive tract infections including sexually transmitted diseases (STI) and HIV/AIDS, prevention and management of infertility, prevention and management of cancers of female and male reproductive system, responding to concerns about menopause, discouragement of harmful traditional practices, gender based violence and reproductive health care, sexual health and information, education and communication. Ghana moved from MCH/FP to the broader coverage of services of reproductive health. The objectives of reproductive health in Ghana were targeted to reduce maternal mortality rate from 214/100,000 (DHS 1993) live births to 150/100,000 live births by 2006, to reduce Infant mortality rate from 56.7/1000 (DHS 1998) live births to 50/1000 live births by 2006, to increase contraceptive prevalence rate from 13.1% (DHS 1998) to 28% by 2010 and reduce the total fertility rate from 4.6 (DHS 1998) to 4.0 by 2010.

In 1983, the Ministry of Health took over the responsibility for coordinating the information and education aspects of the family planning programme. The personnel of the Ministry and its facilities were used for the

design, production and distribution of educational materials, the preparation of materials for the media, outdoor publicity and group discussions. The Ministry of mobilisation and Social Welfare contributed to the interpersonal communications programme and the recruitment of new family planning clients. Family planning formed an integral part of the programme of the Department of Social Welfare and Community Department.

The Social Marketing Foundation Programme began in 1986 and introduced the sale of condoms, vaginal foaming tablets and oral contraceptives through retail outlets. The safe motherhood programme started with operations research in 12 districts in 1987. Another operations research on traditional birth attendants (TBAs) was also started in 1987. In 1988, the Prevention of Maternal Mortality (PMM) network started operating in Ghana conducting research into haemorrhage and obstructed labour as causes of maternal deaths in two districts. In January 1993, the first national consultative meeting on safe motherhood was held. The purpose was to share information and experiences among field researchers, programme planners/managers, academicians, obstetricians, midwives and donor agencies involved in safe motherhood activities.

Recommendations included an urgent need to improve the quality of services provided in health facilities, the development of a comprehensive, well-targeted health education programme to support safe motherhood at the community level. As a result, a National Task Force on safe motherhood was established. Two documents namely: "Safe motherhood Clinical Management Protocols" and "Health Education Guidelines on Safe Motherhood" were

developed by the task force. A second consultative meeting was held in November 1994 to outdoor the two documents and plans the training of health providers.

After ICPD, a review of documents on family planning situational analysis, household surveys, and DHS revealed a great variation in service delivery practices and different interpretations about service policies and standards. Medical and other barriers to service provision were revealed. It was also found out that there were an abundance of official circulars, manuals and memoranda, but they tended to be vaguely worded, out-of date, inconsistent and overlapping. The bits and pieces did not add up to comprehensive guidelines for service directors, managers, supervisors, providers and trainers. In December, 1994, a multi-sectoral, multidisciplinary task force was formed to develop a comprehensive national reproductive health service policy and standards. In 1996, the Reproductive Health Service Policy and Standards were developed. This effort received considerable support from various stakeholders, including NPC, USAID, DFID and UNFPA. The second edition of the Policy and Standards were developed in August 2003 to include other issues such as sexual health and gender based violence.

Other reproductive health policies/guidelines that have been developed and produced include: National HIV/AIDS and STI Policy, Adolescent Reproductive Health Policy, Policy and Strategies for Improving the Health of Children Under-Five in Ghana, Maternal Health/Death Audit Guidelines, and Ghana HIV/AIDS Strategic Framework. The National AIDS Commission

established by Parliament, in 2002, ACT 613 is a super ministerial body under the Office of the President. It advises the Government on policy issues relating to HIV/AIDS.

In late 2003, the Government of Ghana introduced a policy exempting women in the four poorest regions of the country (the three northern regions and the Central Region) attending public and private health facilities from paying user fees for delivery care. According to Bosu *et al* (2007) an amount of about USD 2 million was voted for this purpose. The 'fee-free' delivery policy aimed to improve levels of skilled attendance at birth and thereby reduce maternal morbidity and mortality. In 2005, the policy was extended to the remaining six regions of the country.

According to The Statesman (19th July 2008), the most recent is the introduction of free maternal healthcare delivery as a tributary to the original mutual health insurance policy which 50,924 pregnant women countrywide have already accessed. Ashanti region registered the highest with a whooping 12,164, followed by Greater Accra, Central, Eastern and the Western Region with 8,211, 6843, 5,870 and 5,012 respectively. The others are 2,473 and 3,608 for the Upper East and West, Northern 2,720, 2,434 for Brong Ahafo with the Volta region registering the lowest of 1589 registered pregnant women.

The recent movement towards making delivery care free to all women is a bold and timely action which is supported by evidence from within and beyond Ghana. However, the potential for this to translate into reduced mortality for

mothers and babies fundamentally depends on the effectiveness of its implementation.

The causes and effects of maternal mortality in Ghana

Maternal mortality remains a severe problem in many parts of the world, despite efforts to reach Millennium Development Goal five. In addition, underreporting is an issue especially in low income countries. According to World Health Organisation (2010), haemorrhage and hypertensive disorders together account for the largest proportion of maternal deaths in developing countries, according to an High Risk Plaque (HRP) study, believed to be the first to use the systematic review approach to analyze causes of maternal mortality.

WHO (2010), stated that the major direct causes of maternal morbidity and mortality include haemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labour. Inadequate personnel and the lack of obstetric services have been identified as the major causes of maternal deaths in Ghana. Other causes such as Sepsis, Ruptured Uterus and Sickle Cell related diseases also contribute to the high causes of maternal deaths. HIV, malaria, and anemia also take a huge toll on pregnant women living in areas of high prevalence.

Aboagye noted that “hypertension is the premier cause of maternal death – almost a fifth of all deaths are attributable to this condition. This data might be linked to the well-documented phenomenon of Ghanaian female obesity (a risk factor for hypertension)” (as cited in MOH, 2008)

Other major causes of maternal death include bleeding, infections, anaemia and unsafe abortion. This is presented in Figure 1.

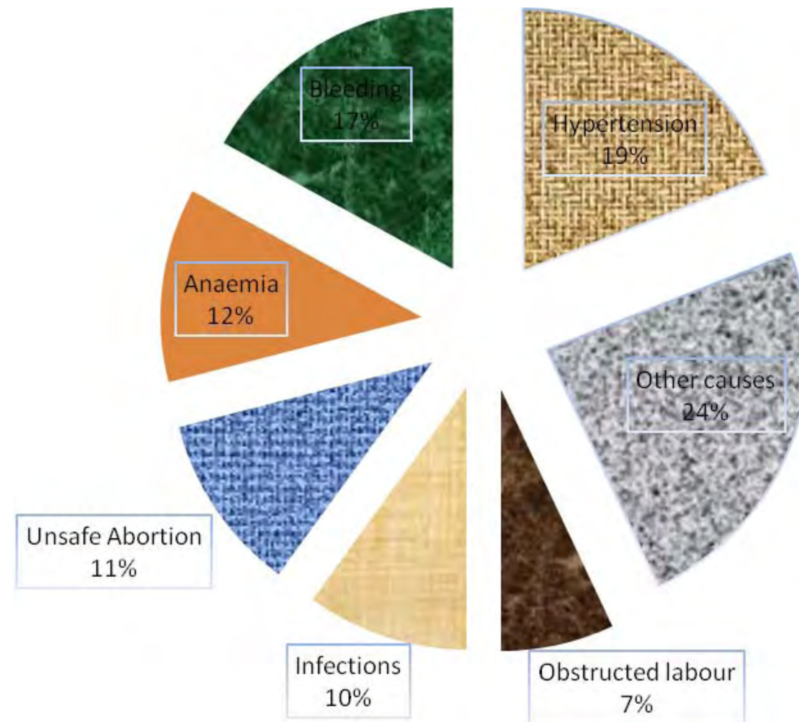

Figure 1: Causes of maternal mortality

Source: Adopted from Aboagye (2008)

Continued high levels of maternal morbidity and mortality have consequences that affect women, their children, their families, and even their communities. The consequences of maternal mortality are felt in diverse ways. Apart from the human tragedy associated with the death of any woman through preventable maternal causes, the family is deprived of a principal breadwinner and reduction in the survival of the existing children in the family. Children who lose their mothers are at an increased risk for death or other problems, such as

malnutrition. Loss of women during their most productive years also means a loss of resources for the entire society. According to Hanson "linkages between women's sexual and reproductive rights; inequality; lack of opportunities and choices; as well as poor sexual and reproductive health and its manifestation in high maternal mortality, made maternal mortality a recurring challenge affecting the pace of development in Ghana" (as cited in Yeboah, 2010). Maternal mortality is hypothesized to have significantly negative on the gross domestic product as well.

The majority of these deaths could be prevented with access to quality emergency obstetric care. Furthermore, family planning services can play a major role in preventing maternal deaths by reducing health risks associated with unplanned pregnancy. Some of the logistics needed for maternal care include oxygen cylinders, drips and hypertension drugs which help to control excessive bleeding or any other complications of pregnant women.

Cultural and ritual practices that perpetuate high maternal mortality

Food restrictions and taboos constitute a major area of cultural impact that creates problems for pregnant women. In some rural societies women eat food after men. Depending on the quantity and quality of food available, a pregnant woman who eats left-overs may also lack sufficient nutrition. Severe anemia plays a part in up to 40 percent of the estimated 600,000 maternal deaths each year in the developing world (Chukuezi, 2010). In northern Ghana and southern Nigeria pregnant women are not encouraged to eat snails, which are rich in calcium, to

avoid their babies drooling. Denial or avoidance of such foods can adversely affect the health of pregnant women by increasing their chances of suffering from anemia. Cultural beliefs, practices and taboos organized according to mainstream societal values dominated by patriarchal values of male superiority and preference exacerbate difficulties of pregnancy and childbirth often leading to maternal mortality or morbidity.

Early age at marriage as a demographic as well as cultural, compounds reproductive health of women by introducing long period of exposure to pregnancy. According to UNICEF (2010), "culturally-based limitations on the exercise of women's reproductive rights are among the key factors underlying the high levels of maternal, infant and under-five mortality"(as cited in Chukuezi, 2010). In northern Ghana it is common practice for parents to arrange the marriage of their young daughters, particularly to older men. Marrying out children of ten to fifteen years is premised on the value to protect them from falling victim to teenage pregnancy. In northern Ghana age of marriage and of sexual activity in some cases is culturally determined. Childhood marriage has many implications. It robs girls of power over their bodies and their freedom to make decisions about their own reproductive health. Early childbirth has negative demographic, socioeconomic and socio-cultural consequences. It compounds the general inability of girls and women to claim their constitutional and universal right to education. More severe is the harmful effects of child pregnancy on the health of the mother. Early pregnancy accounts for high incidences of maternal mortality and for very bad conditions such as Vesico-Vaginal Fistula (VVF),

which results in incontinence of the bladder and bowel. VVF occurs because the pelvic bones have not developed enough to cope with childbirth. Corrective operations often require the consent of the spouse, and more often than not the sufferers are abandoned by their husbands and ostracized by their communities.

According to Chukuezi (2010), dominance and fallacy of son preference is another cultural factor resulting in high maternal mortality, In Nigeria, there are patriarchal values that stress the importance of male children for various kinship, family succession and old age insurance even some of these expectations do not stand the test of reality. Women, who have no male children in the bid to satisfy this traditional value, go on bearing children even when their health is at risk. High parity is linked to both complications of pregnancy and childbirth and eventual death. Al-Meshari et al (1995), asserted that "the pattern of maternal mortality with parity showed a relatively less number of deaths of females in their second through to sixth pregnancies and a greater number of deaths in females in their seventh pregnancy and above…….and age 35 years and over."

Female Genital Mutilation (FGM), commonly known as Female Circumcision involves the cutting off of part or whole of a girl's clitoris and some other parts of her sex organs for cultural or any other non-therapeutic reasons. The WHO Technical Committee in 1995 classified female genital mutilation into four main categories namely: Type I – Excision of the prepuce (the fold of skin above the clitoris) with or without excision of part or all of the clitoris. (This is referred to as "Sunna"). Type II – Excision of the prepuce and clitoris (clitoridectomy) together with partial or total excision of the labia minor (inner lip). Type III –

Excision of part or all of the external genitalia and stitching/narrowing of the vagina opening (infibulation). Type IV – Unclassified: includes pricking, piercing, or incision of the clitoris and/or labia cauterization by burning of the clitoris and surrounding tissue, scrapping of tissues surrounding the vaginal wall (gishiri cuts); introduction of corrosive substances into the vagina with the aim of tightening or narrowing it. The procedures described above are irreversible and their effects last a lifetime. The reasons given to justify FGM include custom and tradition, purification, family honour, hygiene, aesthetic reasons, protection of virginity and preventing promiscuity.

A study by WHO in 1995 showed that women who have had FGM are significantly more likely to experience difficulties during childbirth and that their babies are more likely to die as a result of the practice. Serious complications during childbirth include the need to have a Caesarean section, dangerously heavy bleeding after the birth of the baby and prolonged hospitalization following birth. The study showed that the degree of complications increases according to the extent and severity of FGM.

According to Chukuezi (2010), religious factors also affect maternal mortality in a large scale. Religion is a problem not only due to its effect on women's societal position but also because of harmful beliefs and traditions relating to childbirth. The Islamic custom of Purdah – the seclusion of women from the sight of men is practiced in many countries. Purdah generally applies to married women and girls who have reached puberty; although the practice varies from country to country and region to region. Purdah takes various forms but in

essence it prohibits women from interaction with strangers inside and outside the home.

The women are required to ask for their husbands' permission when they need to seek medical assistance. Although evidence suggests that the practice in its most fundamental form has declined, it nonetheless exists. Healing Churches also are favored place for delivery as it is believed that the holy setting will protect both the mother and the child from malicious spirits and witchcraft. Chukuezi (2010), asserted that up to 50% of health care services are provided by religious organisations and in case of delivery, most of the childbirth is attended without any skilled personnel. Also certain religions do not encourage blood transfusion and this most times leads to the death of some women after childbirth.

Maternal mortality and the millennium development goal (5)

According to Rasch (2007), maternal health is one of the main global health challenges and reduction of the maternal mortality ratio, from the present 0.6 mio. per year, by three-quarters by 2015 is the target for the fifth Millennium Development Goal (MDG 5). However this goal is the one towards which the least progress has been made. There is not a simple and straight-forward intervention, which by itself will bring maternal mortality significantly down; and it is commonly agreed on that the high maternal mortality can only be addressed if the health system is strengthened. There is a common consensus about the importance of free maternal delivery and skilled attendance at delivery to address the high, maternal mortality.

The United Nations' fifth Millennium Development Goal (MDG 5) aims to improve maternal health. This goal is structured around two key targets: (1) to reduce maternal mortality rates by 75% between 1990 and 2015; and (2) to achieve universal coverage of skilled care at birth by 2015. Graham (2008) noted that "MDG5 is 'off track' globally, with several countries failing to meet both targets" (as cited in Ministry of health report 2008).

Inequitable access to maternal care is a big challenge globally. Only half the world's women currently give birth with a skilled professional. In many countries, including African countries, there is a rural-urban divide: most urban women deliver with a professional; only a third of rural women have a professional at birth. Successful maternal health interventions in countries in Asia (Sri Lanka, Thailand, Malaysia, India, Bangladesh), Latin America (Honduras) and Africa (Egypt) suggest three areas of action to improve maternal health and reduce maternal mortality: Family Planning to prevent pregnancy and reduce fertility rates; Skilled Care at Delivery to prevent pregnancy complications; and Emergency Obstetric Care to prevent death by timely management of life-threatening complications. Graham argued that these three responses can be further "strengthened by ante-natal and postnatal care, built upon a functioning health system, political commitment, finance and support for status and rights of women." An essential strategy for achieving MDG 5 is to ensure that all births are managed by skilled health professionals. This strategy requires high population coverage and an enabling environment, including 24-hour access to effective emergency obstetric care.(MOH, 2008)

According to (Mills, John, Williams, Wak, & Hodgson, 2007). Maternal mortality ratio is difficult to measure, imprecise and has wide confidence intervals. Even in developed countries with relatively complete vital registration systems, maternal death are sometimes misclassified or under reported. In Ghana as in most developing countries in sub Sahara Africa with no adequate vital registration systems official government maternal mortality estimates differ substantially from the WHO/ UNICEF/ UNFA maternal ratio estimates. These discrepancies pose challenges in ascertaining the attainment of the UN Millennium Development Goal on maternal health with a target of reducing the maternal mortality ratio by three quarters from 1990 to 2015.

However, with only five years left until the 2015 deadline to achieve the Millennium Development Goals, Ban Ki-moon called for concerted efforts to end what he described as the "scandal" of women dying in childbirth.

The Ghanaian perspective on millennium development goal 5

Aboagye observed that Ghana, like many countries, is off-track with respect to MDG5. The national target was to reduce the 1990 maternal mortality rate of 214 per 100,000 live births (national) by 3/4 to 54 per 100,000 live births by 2015. This target has not been achieved. Local evidence suggests there are problems for the three core areas identified as essential to improving maternal health, comprising family planning, skilled care at delivery and emergency obstetric care. (MOH, 2008)

There is inequality of access to skilled care at delivery. Access is dependent on regional location and income status. The three northern regions have worst access to skilled birth attendants (0- 30%) and Greater Accra Region has best access (71% - 80%). Urban women in the richest and richer 7 categories have best access to highly skilled birth attendants such as doctors (>61% of women) and nurses/midwives (>41%).

Emergency Obstetric Care (EMOC) is poor in many regions, with the three northern regions facing the greatest challenges. A 2005 study of EMOC in the northern sector of the country observed a lack of basic infrastructure such as water and power supplies, blood transfusion services and theatres, poor geographical access to facilities and referral services. Some or all of these challenges undermines EMOC in other parts of the country. According to Aboagye "three sets of challenges to meeting MDG5 in Ghana are funding and policy, health systems challenges, and Socioeconomic and socio-cultural factors" (MOH, 2008).

Addai noted that "effective quality of care depended on an ideal set of five factors: Availability (physical access); Availability (essential commodities); Accessibility (human resources); Initial utilization; and Timely continuous utilization" (as cited in MOH, 2008). Identified bottlenecks suggested that these factors were not fully operational. Improving maternal health services would require extra financial investment in the health sector. This posed a significant challenge because the health sector is financed through a complex system – with money coming from donors, out of pocket payment, the national health insurance

scheme, loans and other sources - that is not always aligned. Thus to improve the quality of maternal health services two important strategies had to co-exist with financial investment; being innovative with what already exists (e.g. reallocation of staff and resources), and commitment to sustained resource mobilization.

The number of health service personnel in the major categories has increased over recent years. Despite these gains there is a general consensus that Ghana's health sector has serious manpower constraints. A critical problem that impinges on maternal health services is inequitable distribution of the health workforce. Doctors, nurses, pharmacists, technical and other staff are disproportionately distributed across the country with a significant proportion based in Greater Accra and Ashanti Regions. A second problem is one of training a critical mass of skilled health workers. For example Ghana will need 5,000 newly trained midwives if it is to attain MDG5. This requires significant financial investment.

Local responses to Ghana's maternal mortality burden

Aboagye outlined current structural level interventions that aim to address Ghana's maternal mortality burden. These interventions include: the Safe Motherhood program, which aims to improve access to Emergency Obstetric Care; Family Planning Program; High Impact Rapid Delivery (HIRD); policy oriented data gathering using Maternal Mortality Surveys, Maternal Death Notification and Maternal Death Audits. (MOH, 2008)

Deganus presented findings on the impact of Fanconi Anemia, Complementation Group (FANC) at three health facilities in the Greater Accra Region (Tema General Hospital, TGH), Eastern Region (New Juaben Hospital in Koforidua) and the Northern Region (Tamale General Hospital). (MOH, 2008). FANC aims to improve the quality of maternal health services through a range of practices including: providing comprehensive, focused individualized care, continuous care by the same provider, emphases on birth preparedness and complication readiness, promoting partner/ support and person involvement and linking ANC, PNC and Family Planning Services. At each facility the introduction of FANC had led to concrete positive outcomes for maternal services. At Tamale General Hospital, key positive outcomes included: increased ANC attendance; increased use of hospital delivery facilities; decreased still birth rates; enhanced use of postnatal services; a reduction in client waiting time by 1hour 40 minutes; and improved client provider interaction. At the Tamale General Hospital institutional deliveries increased by 54% (from about 2500 in 2000 to 3850 in 2002) and there was a steep reduction in MMR in the northern region.

Adomako discussed the impact of the Millennium Villages Project's (MVP) experiment in integrated rural development on the maternal health profile of the Amansie West District (MOH report, 2008). Prior to the introduction of MVP the profile of maternal healthcare in Amansie West was poor. Problems included late ANC registration, low ANC attendance, high drop out rate Intermittent Preventive Treatment (IPT1-IPT3) 60%, late detection of pregnancy

related complications such as anemia, malaria and eclampsia, high rate of abortions and a high mortality rate. The MVP initiative introduced a broad range of interventions targeting human resources (e.g. introducing a new cadre of community-based health workers) and service delivery (e.g. building new clinics manned by qualified midwives and offering outreach services). The interventions led to concrete improvements in maternal health services in the district: family planning acceptor rates increased, ante-natal registration increased, IPT2 coverage increased and most importantly maternal mortality rates dropped to zero in 2007.

Maternal health delivery in other countries

According to Chukuezi (2010), with only two percent of the world's population, Nigeria contributes ten percent of the world's maternal death. Each year as many as 60,000 Nigerian women die due to pregnancy related complications. Globally only India has a larger number of maternal deaths from pregnancy-related complications as many as 136, 000 annually. Seclusion for example was found to have a compounding effect on the high maternal mortality of 1000 deaths per 100,000 live births among Hausa women in Northern Nigeria.

The practice of FGM is also wide spread in Nigeria and varies from one state and cultural setting to another. In some cultures it is carried out at infancy or childhood as a "rite of passage" to adulthood. In some other it is at first pregnancy and in some at death. The UNICEF (2010), situation assessment reported that given the size of Nigeria's population, Nigerian women constituted one quarter of the 115 – 130 million circumcised women throughout the world – the highest

number of cases in absolute terms in the whole world. Infibulation the most extreme form of mutilation is conducted in the north, which accounts for 10 % of all FGM practiced in Nigeria. FGM can be considered vital in maintaining the high numbers of maternal mortality in Nigeria as it is a major risk factor for obstructed labour.

In sub-Sahara Africa and Nigeria in particular the increase in the rates of maternal mortality is not only due to inadequate health services; none medical factors such as socio-cultural practices have turned out to be intractable problems even in situations where modern health-care facilities and personnel are available. The consequences of maternal mortality and morbidity are felt not only by women but also by their families and communities.

According to Witter et al (2009), there is a growing movement, globally and particularly in the Africa region, to reduce financial barriers to health care generally, but with special emphasis on high priority services and vulnerable groups. In Burundi, for example, free services for pregnant women and the under-fives were introduced in 2006, and utilisation appears to have increased as a result, though no formal evaluation has been undertaken. In Zambia, fees were suspended for rural districts in 2006. In Burkina Faso, an 80% subsidy policy for deliveries was launched in 2006. Other countries have followed suit, though with varying target groups, and all still at the stage of being elaborated. In Kenya, for example, various changes have been made to the user fee regime – most recently, in 2007, deliveries were announced to be free, though there is no evidence yet. Liberia suspended fees for primary care in 2007. Niger announced free care for

children late in 2007. Sudan announced free care for caesarean sections and children in January 2008. It is, however, too early to assess how these policies have been implemented and the size and nature of their effects.

Nepal is recovering from a decade of conflict with devastating consequences for the delivery of basic services. One third of its population lives below the poverty line and one woman dies every two hours during pregnancy and childbirth, this is the equivalent to a fifth of the population of Falmouth being wiped out in a year. The impact of a woman's death is devastating, for her family and community, as well as her surviving children. Globally a newborn baby is at least three times more likely to die within its first two years without its mother.

Aid has clearly helped Nepal make impressive progress. In just 5 years the under five mortality rate was reduced by around a third and since 1996 the maternal mortality rate has fallen by 50%. Nepal is on target to meet the Millennium Development Goal on child mortality before 2015 if present trends can be sustained.

According to World Health Organisation (2009), Indonesia is one of the few countries that have implemented initiatives to provide midwifery care in the community. In 1989, the Indonesian Government launched a safe motherhood programme that aimed to assign a midwife to every village. Within seven years, more than 54 000 midwives had been posted, and the proportion of births managed by a midwife or other health professional had nearly doubled (from 35% in the late 1980s to 69% in 2000).

Health care financing

When Ghana attained internal self rule, the Nkrumah government in its 10 years Development plan made investment in the social development of this country. It expanded a number of existing health facilities whilst cost to users of these facilities was made very low or in most cases, completely free. Private practices were abolished in government hospitals as private professional fees were banned whilst government paid an annual allowance for those fees.

In 1969, the issue of health financing had become so sensitive that immediate measures had to be taken to resolve it. The Konotey – Ahulu committee was set up to investigate all issues relating to hospital fees in the country. In its report, it recommended that outpatient treatment, including antenatal care, should no longer be free and that a nominal amount had to be charged for drugs dispensed. Based on these recommendations, the government health facilities with the aim off reducing excessive demand and contributing to recovering part of the cost of curative services. However, the charges imposed were so low that only a minimal percentage of total cost were recovered. (Waddington, 1989)

An important landmark in Ghana's health policy took place in the late 1970's when the Government of Ghana adopted the primary health care strategy as the vehicle for achieving health for all the year 2000. But the economic crisis that drastically reduced available to the health sector in the 1980's resulted in the deterioration of the population's health status, the primary health care goal was never achieved. Until the mid 1980's when the World Bank and International

Monetary Fund's structural adjustment programme became a major feature of Ghana's economic policy reforms in the health sector, it introduced user fees in public health care facilities in 1985 and full cost recovery for drugs. This was institutionalized as the hospital fee law, other wise known as Legislative Instrument 1313.

In order to deal with the problems of the cost recovery system introduced in the 1985, the regulation was restructured in the 1992 under a scheme dubbed "cash and carry". From that time, health institutions were made to pay for drugs they collected from the medical stores. The rationale behind the programme was to make health institutions more efficient in management of the drugs at sub district level.

Although the scheme led to some improvement in the drug supply situation, there were problems with the way it was implemented, particularly in relation to issues involving availability and affordability for – low – income patients, paupers and Indigents as well as for emergency treatments. Other problems related to operational pressures, which made its capacity to revolve a difficult exercise for managers and the consequent negative exercise impact on quality of health care. To date the problem for user fees for most households as Akosa (2001), summarizes, it has been diminution in uses of health facilities because of affordability resulting in 60% population unable to attend or use the health services. The majority has resorted to self medications, herbal or traditional medicine or healing crusades or prayers or resigned themselves to their fate not by

choice but purely because they can not afford health care. (as cited in Arhinful, 2003)

Accordingly, one of the critical health care challenges for Ghana has been the obtainment of additional resources for financing of health without deterring the poor and the vulnerable from seeking care when they need it.

Other struggles have been to improve quality and access as well as manage resources efficiently. The search for alternative and or supplement means health care financing became focused on health insurance. It has been regarded with hope and enthusiasm as far back as the mid 1980's. The main thrust of the government for a social health insurance in Ghana is that Ghanaian social and cultural system has an inbuilt social insurance scheme through the family system where by the family members have collective responsibilities for the welfare of members of family (Addo, 1995).

Most government officials (past and present) and many outside the government seem to believe the social insurance will help solve the government health insurance problems and that its introduction will release substantial resources from government revenue for preventive services. Indeed in 1997, the idea was taken a step further with an attempt by the government to implement a national health insurance scheme particularly suited to rural informal sectors on a pilot basis in four districts in Ghana. The policy relevance of health insurance to the Ghanaian context therefore suggests the innovation of the "risk sharing mechanism employed to harvest private funds to health care and reduce the financial barrier faced by vulnerable groups to obtain care" (Arhin, 1995). The

National Health Insurance Scheme (NHIS) was initiated by the government in 2001 and finally launched by the president in 2004. The NHIS now covers all the ten regions in the country.

In September 2003, the Ministry of Health of Ghana introduced an exemption policy directed at making delivery care free. The thrust of these policies have been to improve uptake, quality and financial and geographic access to delivery care services. The services covered by the exemption policy are normal deliveries, assisted deliveries including Caesarean section and management of medical and surgical complications arising out of deliveries, including the repair of vesico-vaginal and recto-vaginal fistulae. The policy covered delivery services in public, private and faith-based health facilities.

Some challenges of the free maternal delivery policy

Generally, while the policy was considered favorably by both service providers and users there were significant problems with its implementation. The implementation of the policy did not have adequate financial backing. Failure of prompt and adequate reimbursement to the clinical facilities led to near failure of the policy. Many facilities at one point reverted to collection of user fees. The evaluation clearly showed that quality of clinical care was consistently poor and was not affected by the implementation of the exemption policy. Other barriers to skilled delivery care identified included costs of transportation, medicines and other supplies, long distances to health facilities, cultural and social barriers and preference for services of Traditional Birth Attendant (TBA). An effective

monitoring system was not put in place and therefore many of the deficiencies in financial flows, quality of care and issues related to poverty were not documented before the impact evaluation.

Funding

In Ghana, as in many countries, user fees fund much of the recurrent non-salary costs of care. If this revenue stream is not adequately replaced, it is not realistic to expect providers to implement an exemptions policy effectively. A more rigorous system of monitoring and auditing was not in place and would be needed in the longer term for cost control.

The previous exemption scheme in Ghana was under-funded, causing debts at facility level and intermittent implementation of the scheme. This was exacerbated by the rapid scaling up of the exemptions policy, which was extended from four poorer regions in 2004 to the whole country in 2005, before an evaluation of early results could be conducted. There is a risk of this scenario being repeated under the new insurance-based approach. To ensure adequate funds requires not only realistic planning and budgeting, but also a reliable and long-term source of funding. This will require stronger inter-ministerial negotiations with the Ministry of Finance and also the ability to deliver and document policy success.

Sustainability of the free maternal delivery policy

According to Initiative for Maternal Mortality Programme Assessment (2005), Shortfalls and unpredictability of funding are affecting confidence in the government's policy of abolishing user fees for women who deliver at approved facilities. As at 2005 only two payments have been made to facilities since the policy was started in September 2003. By October 2005, all the funds had run out in some facilities and, as a result, some managers at the local level have had to resume charging fees.

If the free delivery policy is to survive, it needs swift additional funding, before all facilities revert to charging.

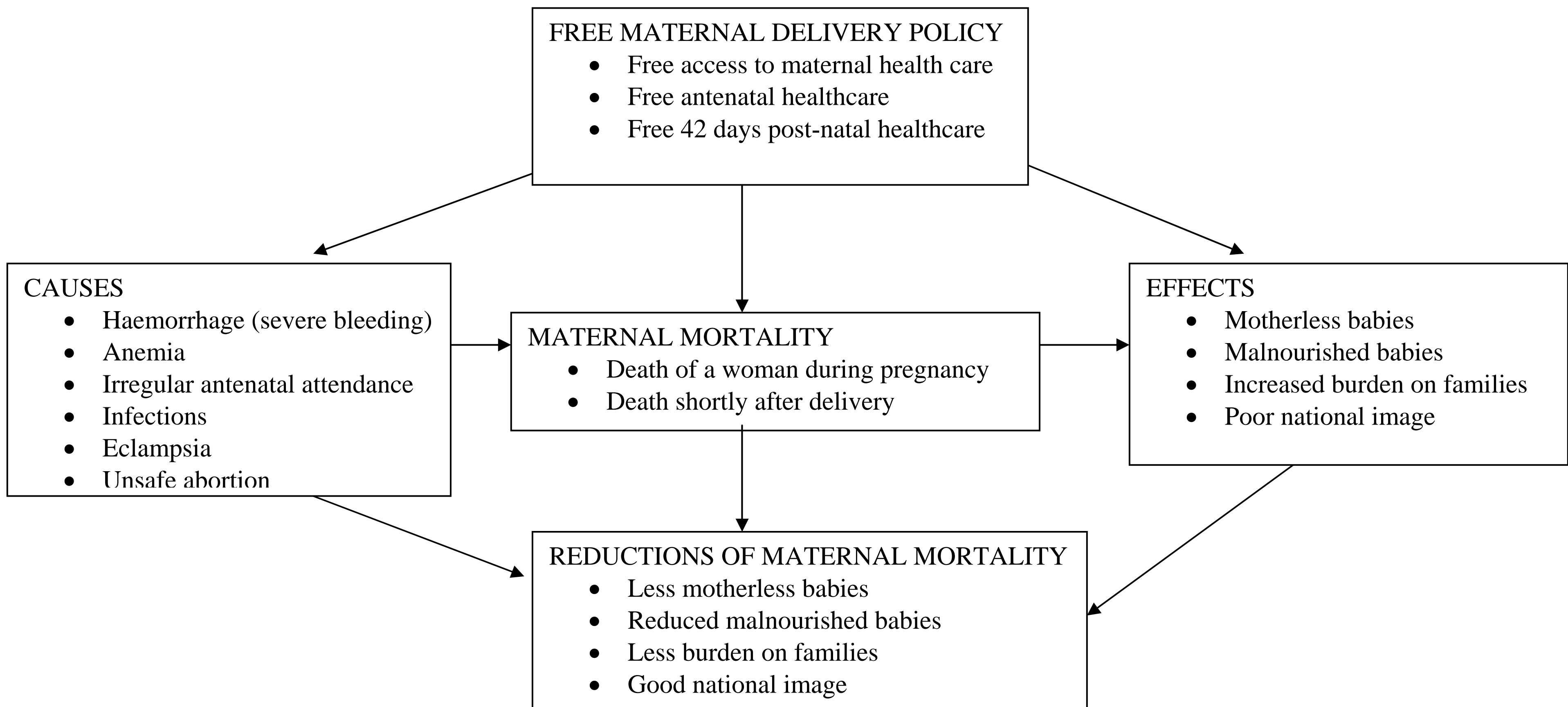

Figure 2: Conceptual model for free maternal health policy and maternal mortality

Source: Authors construct (2010)

Mothers and for that matter women play a very important role in national development. Meanwhile they are being destroyed by maternal mortality. Although maternal mortality accounts for the greatest proportion of deaths among women of reproductive age in most of the developing world including Ghana, its importance is not always evident from official statistics. According to the Ghana Statistical Service maternal mortality is the second highest cause of death in women, aged between 15 and 49, years and that more than 10,000 of such deaths have been documented in the last decade.(as cited in Boansi et al, 2008)

That is why the government of Ghana has put in place the Free Maternal Delivery Policy with the objective of ensuring free maternal health care, free antenatal healthcare, free cesarean section, free 42 days post-natal healthcare among others. This aims to drastically reduce the causes of maternal mortality which involves; haemorrhage (severe bleeding), anemia, irregular antenatal attendance, infections, eclampsia, and unsafe abortion. The FMDP will also go long way to reduce the effects of maternal mortality which include; motherless babies, malnourished babies, increased burden on families, and poor national image in terms of the achievement of the MDG 5. If the causes which lead to the effects are addressed then reduction in maternal mortality will be achieved.

CHAPTER THREE

METHODOLOGY

Introduction

This study desired to assess free maternal delivery policy and maternal mortality in the Bolgatanga Municipality in the Upper East Region of Ghana. This Chapter presents the structure within which the study was conducted using carefully selected; methods, techniques, and tools to collect, organize, analyze data and finally present the findings. It discusses the research design, study population, sampling methods, sample size, data type and source and data analysis.

Research design

A research design is a suitable fact finding plan for collecting descriptive data, and portrays the strategic sequence of activities lined up for the collection, organisation and analysis of data in order to adduce empirical evidence to support or refute an assertion or hypothesis, answer research questions to realize the objectives of a study (Crotty, 1998; Creswell, 1999).

The study has opted for a case study survey research design, which focuses on examining the free maternal delivery policy and maternal mortality; the causes and effects of maternal mortality, the challenges of the free maternal

delivery policy, the potentials of the free maternal delivery policy and the effect of the free maternal delivery policy on maternal mortality.

A case study design, according to Williamson (2006), is used when studying a social group, community, organisation, a phenomenon, an event or even a person. It is convenient to pick one example from a small list and study that single example in detail for purposes of assessment and comparison. The study, has, therefore, adopted the case study survey research design that offers an excellent opportunity to study free maternal delivery policy and maternal mortality in the Bolgatanga Municipality in the Upper East Region of Ghana which according to the Ghana Living Standards Survey (2000), is the poorest region in Ghana. Robson (1993), emphasises use of the case study where the requirement is for the detailed, intensive knowledge about a single case or a small number of related cases. Apart from their use as a means of studying particular phenomena, case studies can be employed to develop general theoretical statements about social structure and processes (Becker, 1970). Case studies can lead to 'analytic' generalisation as opposed to 'statistical' generalisation. Analytic generalisation is achieved through a process of replication whereby two or more cases support the same theory (Yin, 2003:31-32).

The survey method is adjudged most appropriate because of its versatility and pragmatic credentials (Schutt 1999). Survey research design also has the ability to identify the incidence of an attribute and interaction among various subjects under a study, and can focus on vital facts about people and their opinions and provide information on which to base sound conclusions or

decisions. Surveys interpret, synthesize and point to integrations and interrelationships among the various factors under study, (Crotty, 1998; Punch, 2000).

However, the survey research design has some limitations. Survey results can vary significantly depending on the exact wordings of questions (Marshall and Rossman, 1999). Furthermore, the survey is not generally capable of testing specific hypothesis, although as a method of research, it represents a step of intermediate scientific sophistication through whose application senior crude relationships among phenomena can be explored, (Guba & Lincoln, 1994).

However, these limitations can be corrected by ensuring reliability and validity of the instrument used in the data collection, and by employing good sampling methods to choose the subjects for the study. The most important precaution to be taken by the researcher is to ensure that the measure being used is reliable and valid. One should also be sure that the individuals from whom responses are received are truly representative of the population to which the result would apply (Sarantakos, 1993).

Study area

Bolgatanga Municipality lies between latitude 10° 30" and 1° 55" north and longitude 0° 33" and 1° 00" west. It covers a total land area of 729sqkm. The population of the municipality is estimated at 147,729 in 2000 with a growth rate of 1.7% which is lower than the national rate of 2.7% (Ghana Statistical Service, 2003). However, according to geographical database of GeoNames (2006) the

population of Bolgatanga was 54,430 as at 2006. Health facilities in the Bolgatanga Municipality include one Hospital (Regional hospital Bolgatanga), two health centres: Bolgatanaga and Zuarungu health centres. There are eight clinics and six functionary CHPS (Community Health Planning and Services) centres. The doctor – patient ratio in the municipality is 1 to 28,000 while the nurse – patient ratio is 1 to 5000 as compared to the national figures of 1 to 17,733 and 1 to 1,510 respectively.

Study population

According to Bolgatanga Municipal projections for 2009 out of a total Municipal population of 68,956, females are 35168 and males are 28273. Out of the 68,956 females, 45,213 of them are between 15-49 years. This puts the fertility rate of Bolgatanga Municipality on the high side. The staffs of Ghana Health Service are 895 with 10 medical doctors including Cuban doctors. Forty able (40) midwives attend to pregnant women in the Bolgatanga regional hospital. The National Health Insurance Scheme office in Bolgatanga municipality also has 50 staff.

Sample size

Krejcie and Morgan (1970), recommend that a sample should be as close as possible to being truly representative of the population from which is drawn to be useful to a study. Krejcie and Morgan further proposed that a randomly chosen sample should also have a sample proportion of plus or minus 0.5 of the population at 95 per cent confidence level. However, due to time and other

resource constraints and the fact that the population is a homogenous one, a sample size of 150 to be proportionally distributed among the area councils was deemed adequate for the study. One hundred and fifty (150) respondents were sampled for the study. These include pregnant women, nursing mothers, midwives, medical doctors and personnel from the NHIS office. These were sampled at random from the regional hospital, health centres, clinics and NHIS office. The Table 1 shows in absolute numbers and in percentage, the respondents of the study.

Table 1: Sample size

Respondents	Frequency	Percentage
Pregnant Women	55	37
Nursing Mothers	50	34
Midwives	20	14
Medical Doctors	5	4
National Health Insurance Scheme (NHIS) personnel	15	11
Total	150	100

Source: Fieldwork (2010)

Sampling methods

The sampling methods adopted were purposive sampling and simple random sampling. These were used to sample pregnant women who attend

hospital for anti natal and delivery, beneficiaries, midwives, medical doctors and personnel of the National Health Insurance Scheme. In purposive sampling, the researcher samples with a purpose in mind. The researcher has a specific predefined groups he/she is seeking (pregnant women, midwives, medical doctors and personnel of the National Health Insurance Scheme). After identifying these groups using purposive sampling, a simple random sample was adopted in order to give each member of the group an equal chance of being chosen. The researcher used simple random technique by choosing randomly and entirely by chance the pregnant women, midwives, medical doctors and personnel of the National Health Insurance Scheme.

Data and sources

Data collected in this study included both quantitative and qualitative. These specifically were discrete and text data respectively, and gotten from both primary and secondary sources. Primary data were obtained from respondents using questionnaires and in-depth interview guides. Secondary data were also obtained from published and unpublished works, books, and annual reports on the scheme, internet and other relevant documents that relate to the scheme.

Data collection technique

Structured interviewer-administered questionnaire were used to collect the relevant primary data from the respondents for analysis. Personal face-to-face interview was chosen because it improves the response rate. In addition, there

was an in-depth interview with NHIS coordinator of the Bolgatanga Municipality. This helped to assess some of the challenges of the policy and the measures that management has put in place or is putting in place to ensure the success of the policy.

Key informant interviews

The manager of the Municipal Health Insurance and the Health Administrator were interviewed to confirm certain issues raised by the beneficiaries of the policy. Midwives and medical doctors were also interviewed. This enables the researcher to find out the challenges of the policy as well as the actual services given out to beneficiaries.

Data analysis

To assess such comprehensive information a combination of qualitative and quantitative analyses were employed. In addition to descriptive analysis, a cross tabulation of variables was done to assess the effect of the free maternal delivery policy maternal mortality and the respondents' demographics. The data was coded by an interpretive technique that both organized the data and provided a means to introduce the interpretations of it into quantitative methods. Microsoft excel and Statistical Package for the Social Sciences (SPSS) were used to input and analyze the data.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This Chapter establishes results and discussions from various sections of the study. These consist of demographic characteristics of respondents, causes of maternal mortality, effects of maternal mortality, impression about maternal mortality, status of maternal mortality in Bolgatanga, challenges of the Free Maternal Delivery Policy (FMDP), Implications of the challenges to the FMDP, Potentials of the FMDP, awareness of the FMDP, sustainability of the FMDP, and effects of the FMDP on maternal mortality.

Demographic characteristics of respondents

The demographic characteristics of the respondents are necessary in as much as they would relate, either directly or indirectly to the maternal mortality rate in the Bolgatanga municipality. The demographic characteristics to be considered include age distribution of respondents, marital status, religious affiliation and occupation of respondents.

Age and marital status of respondents

The age interval (15-49 years) of pregnant and nursing mothers is conveniently categorized into five year interval to make it easy for manipulations, and also to eliminate, to some extent the incidence of age misreporting that occurs with the reporting of ages in single years. This study will therefore adopt this convection.

Out of the 105 pregnant and nursing mothers interviewed, 13 of them are within the age range 15-19 years, comprising 12%, 44 of them are within the age bracket of 20-24 years making up 41%, 26 of them fall within the age bracket of 25-29 years consisting 25%, 10 of them fall within the age bracket of 30-34 years making up 10%, 6 of them are within the age range of 35-39 years consisting 6%, 4 of them are within the age bracket of 40-44 years comprising 4% and 2 of them fall within ages 45-49 years consisting 2% of the 105 pregnant and nursing mothers interviewed.

With regards to their marital status, there are six married and seven unmarried pregnant and nursing mothers within ages 15-19 years. There are 40 married and 4 unmarried pregnant women and nursing mothers within the age bracket of 20-24 years. Twenty five married and one unmarried pregnant and nursing mothers fall within 25-29 years age group. Eight married and two unmarried pregnant and nursing mothers are in the age range of 30-34 years. The age bracket of 35-39 years comprised 6 married and no unmarried pregnant and nursing mother. Four married and no unmarried pregnant and nursing mother are within ages 40-44 years and both 2 within age group 45-49 years are married.

Figure 3 shows the age distribution and marital status of pregnant and nursing mothers in the Bolgatanga Municipality.

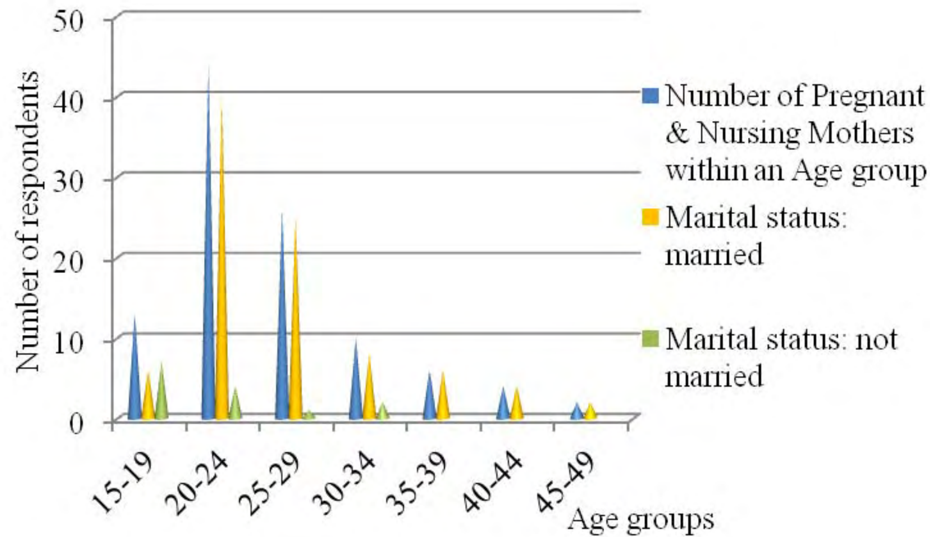

Figure 3: Age and marital status of respondents

Source: Fieldwork (2010)

From Figure 3 the number of PNM within the age bracket of 20-24 years who comprise forty four PNM are the most. This is followed by those within the age group of 25-29 years (twenty six PNM). The least number of PNM are within ages 45-49 (two PNM). The figure clearly shows a steep rise in number of PNM ages to a peak (age bracket 20-24) and a gentle decline as the ages increase. In other words, the most fertile age group is 20-24 years and 25-29 years but as they approach menopause the rate of reproduction reduces. All other things being constant since the birth rate of the age brackets 20-24 years and 25-29 years are high, they are in a way more vulnerable to maternal deaths.

Marital status is an important background variable that can be used to explain maternal mortality, especially in an African setting. In Africa birth outside

wedlock are usually frowned upon and as such, the majority of birth normally take place within marriage. Women who spend much of their reproductive years in marriage are more likely to be exposed to the risk of maternal death than their counterparts who marry late and spend few years of their reproductive life in marital union, assuming all other things equal. The married group decline as age rises.

Religious affiliation of the pregnant and nursing mothers

A good number of studies have reported fertility differentials by religion and this has been explained to come about as a result of differences in beliefs. The traditional religion, for instance, favors pronatalist beliefs by emphasizing the continuation of the clan and lineage. Hence, women of this faith may easily end up with higher fertility than their counterparts who have other religions, thereby exposing them to the risk of maternal death assuming all other things constant. Certain faiths also frown upon the use of birth control methods such as condoms and the use of the withdrawal method, and as a result women of such faith could easily end up recording a higher fertility there by exposing them more to the risk of maternal death than their counterparts of other religious groupings, assuming all other things are held constant. The Table 2 shows the religious affiliation of the pregnant and nursing mothers. Christians dominate accounting for about 48% of the total PNM followed by Protestants (29%), traditional religion 19% and others 4%.

Table 2: Religious affiliation of pregnant and nursing mothers

Religion	Frequency	Percentage
Christians	50	48
Protestants	30	29
Traditional believers	20	19
Others	5	4
Total	105	100

Source: Fieldwork (2010)

Occupation of the pregnant and nursing mothers

Dependence on men for economic survival has been a principal barrier to women's control over their reproductive behavior in developing countries. Empowering women with more economic participation and control in their households and communities might be the key to their achieving control over their own reproductive health.

Employment can increase women's economic autonomy and reproductive health status because it raises awareness and provides new ideas, behavior and opportunities through interaction with other people outside the home and community.

Antenatal care visits tend to start earlier for women in paid employment. They are likely to have greater knowledge about pregnancy and childbirth due to freedom of movement outside household. They also tend to seek information on services available for pregnancy care during work.

However, employment may not necessarily be associated with greater use of maternal health care because non-working women may be better off than working women. In the context of developing countries, women's work is largely poverty induced and is likely to have a negative impact on utilization of maternal health services.

Table 3 depicts the occupation of the pregnant and nursing mothers. Out of the 105 PNM interviewed majority of them were farmers (40), comprising 38% of the total PNM. The kind of farming done at Bolgatanga is strenuous since low technological methods and tools are used in farming. As a result this could result in making them prone to the risk of maternal mortality, assuming all other things equal. Twenty nine percent (29%) of the PNM are traders whiles teachers comprise 14% and the remaining 19% are made up of other occupations.

Table 3: Occupation of pregnant and nursing mothers

Occupation	Frequency	Percentage
Trading	30	29
Farming	40	38
Teaching	15	14
Others	20	19
Total	105	100

Source: Fieldwork (2010)

Educational level of pregnant and nursing mothers

A woman's level of education invariably affects her knowledge and use of contraceptives, her age at first marriage and her family size among others.

Table 4 shows the distribution of the level of education of PNM in the survey concerned. The “No education” category refers to those who never enrolled in any regular institution of formal education. The “Primary” category refers to those who ever enrolled in primary school up to those who actually completed at most the primary education. In the case of Ghana, the “Primary” category will include those who had up to some middle/JSS/JHS education. The “Secondary plus(+)” category refers to those who ever enrolled in senior secondary school or senior high school or any other institution of learning beyond that level.

The number of pregnant and nursing mothers who had no education was high accounting for 24% of the total PNM. This is not good because there is a positive relation between no education and maternal mortality, assuming all other things equal. Thirty three percent of PNM had secondary education whist most of the PNM had primary education comprising 43 percent.

Table 4: Educational levels of Pregnant and Nursing Mothers

Level of education	Frequency	Percentage
No education	25	24
Primary education	45	43
Secondary education	35	33
Total	105	100

Source: Fieldwork (2010)

Causes of maternal mortality

Medical doctors and midwives ranking of the causes of maternal mortality

The researcher asked the 25 medical doctors and midwives to list the causes of maternal mortality in Bolgatanga Municipality and they came out with the following; infections, hemorrhage, prolonged labour, anemia, unsafe abortion, irregular antenatal attendance, eclampsia, and other factors. The researcher then asked them to rank these causes according to those that kill pregnant women most. The 25 medical doctors and midwives interviewed, ranked the causes of maternal mortality in Bolgatanga Municipality as shown in Figure 4.

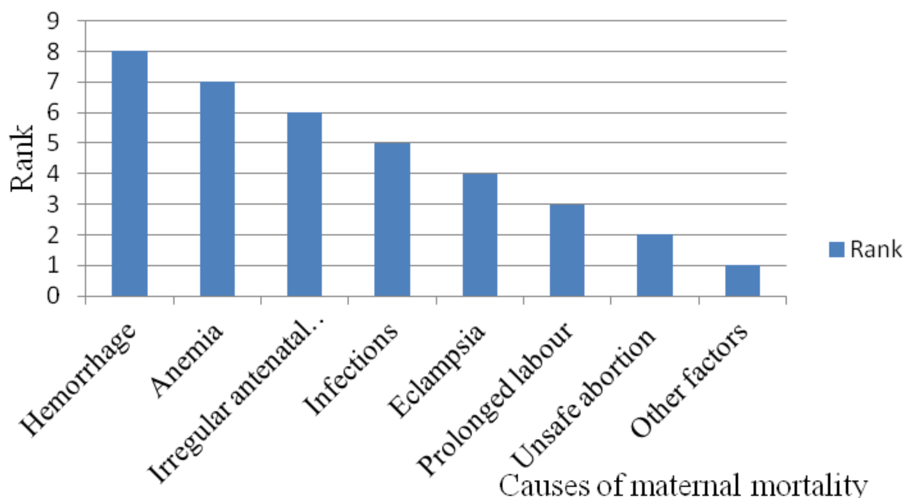

Figure 4: Ranking of the causes of maternal mortality in Bolgatanga Municipality

Source: Fieldwork (2010)

As shown in Figure 4, the leading cause of maternal mortality in Bolgatanga Municipality is hemorrhage, followed by anemia, irregular antenatal

attendance, infections, eclampsia, prolonged labour, unsafe abortion and other factors.

This supports Brightson (2008), assertion that hemorrhage (massive loss of blood) is among the leading or major causes of death among pregnant women. Also WHO (2007), asserted that Obstetric hemorrhage is the world's leading cause of maternal mortality, causing 24% of, or an estimated 127,000, maternal deaths annually. Postpartum hemorrhage (PPH) is the most common type of obstetric hemorrhage and accounts for the majority of the 14 million cases of obstetric hemorrhage that occur each year. While data are limited, studies have shown that PPH causes up to 60 percent of all maternal deaths in developing countries. According to Kumbuor "excessive bleeding contributed to a quarter of all maternal deaths and called for an aligned programme with blood donation campaigns so that the various blood banks would be adequately resourced for maternal emergencies" (as cited in Ghana News Agency, 2009).

Pregnant and nursing mothers' perceptions about maternal mortality

Out of 105 pregnant and nursing mothers interviewed thirty three percent of them said the main cause of maternal mortality in Bolgatanga Municipality is because nurses tell them they are not due to deliver when they complain the baby is coming. In some cases they deliver on their way back home or at home, whiles others deliver on the floor of the hospital. In cases like this the baby either dies or the mother or even both the baby and the mother die. Brightson (2008), mentioned that when labour is unduly delayed complications set in and eventually

results in the death of both mother and baby; a situation, he warned, must be prevented at all costs. Sixteen percent of the pregnant and nursing mothers said the high mortality in Bolgatanga is due to the fact that pregnant women who attend antenatal do not go strictly to advice given to them by nurses. This to them results in complications during and after birth. Thirteen percent of them said due to malnutrition pregnant women die during pregnancy and 45 days after delivery. This could be related to the high poverty situation of the region.

According to Ghana Living Standards Survey (2000), Upper East Region is the poorest region in Ghana. Eleven of the pregnant and nursing mothers are actually ignorant of the causes of maternal mortality in Bolgatanga Municipality. The high illiteracy rate (24%) among the PNM could be associated with the high ignorance (11%) of the causes of maternal mortality among the PNM, assuming all other things constant.

Table 5: Perception of pregnant and nursing mothers on maternal mortality

Reason (cause)	Frequency	Percentage
Nurses tell us we are not due to deliver when they complain the baby is coming.	35	33
Pregnant women who attend antenatal do not go strictly to advice given to them by nurses	17	16
Malnutrition	14	13
Ignorance	11	11

Pregnant women do not attend antenatal regularly	10	10
Pregnant women prefer to deliver at home,	7	7
Anemia	6	6
Other factors	5	4
Total	105	100

Source: Fieldwork (2010)

Ten percent of them said because pregnant women do not attend antenatal regularly, it results in high maternal mortality in Bolgatanga Municipality. Seven percent of them said pregnant women prefer to deliver at home a situation that cannot guarantee safer delivery at this world of modern medical care. Six percent of them believe anemia kills pregnant women and four percent of pregnant and nursing mothers went for other factors. Table 5 shows the view of pregnant and nursing mothers about the causes of maternal mortality in Bolgatanga Municipality.

Effects of maternal mortality

When medical doctors and midwives were asked the effects of maternal mortality in the Bolgatanga Municipality, the respondents were able to come out with the following; motherless children, malnourished babies, increased burden on family and poor national image in terms of the attainment of MDG5. Since the question was open, they were able to throw more light on it. Motherless children they said could result in poor upbringing of the children and such children

become deviants in the society. It also increases social vices such as arm robbery, prostitution among others. Malnourished babies they said would lead to the poor physical growth and development of the baby since it will not have access to the mothers' nutritious breast milk. Increased financial burden on the late mothers' family may result in high dependency. This goes to affirm Chukuezi (2010), assertion that the consequences of maternal mortality and morbidity are felt not only by women but also by their families and communities. Women are primary guardians of the health, education, nutrition and social well-being of their children and in many cases breadwinners of the family which makes the impact of maternal mortality in affected families traumatic. Maternal deaths perpetuate poverty in the family and represent a loss of potential income and increasing socio-economic burden on the family. On the international arena the Millennium Development Goal 5 will may not be achieved hence painting a nasty image of Ghana to the rest of the world.

When PNM were asked the effects of maternal mortality in Bolgatanga Municipality 85 of them comprising 81% of them were able to give the following reasons. According to them maternal mortality will make affected babies malnourished. It also brings about loss of human resources to the nation in that these women are in one way or the other contributing to national development which is lost. Maternal mortality they said increased the family burden since the late woman's family carries the baby's burden. The remaining 20 PNM making up 19% could not give any effect of maternal mortality, which could be the result of illiteracy. This is shown in Table 6.

Table 6: Awareness of PNM about the effects of maternal mortality

Pregnant and nursing mothers	Frequency	Percentage
The number of PNM who could give the effects of maternal mortality	85	81
The number of PNM who could not give the effects of maternal mortality	20	19
Total	105	100

Source: Fieldwork (2010)

Impression about maternal mortality

Child birth in Africa and in the Northern Ghana in particular is considered a joyous period in the lifetime of families and the society in general. Children are usually welcome with lots of smiles and celebrations both for the new born baby, the mother and the entire family. Child birth is such a cherish moments in families such that couples who fails to get one is negatively branded. Children in African homes are said to be gifts or blessings from God just as women are considered greater assets to families because it is the child who would continue the family tree while at the same time bringing unity and happiness to African-Ghanaian homes. However, such happy moments are turning sour these days due to deaths of either the child or the mother. All 25 medical doctors and midwives as well as the 105 PNM were not pleased about the canker of maternal mortality, however they were positive that the free maternal delivery policy would help reduced it.

Challenges of the Free Maternal Delivery Policy (FMDP)

When the 15 respondents from the National Health Insurance office in Bolgatanga Municipality were interviewed they came out with the following challenges the FMDP was encountering.

Operational challenges

The administrative operation of the scheme has been challenged with some difficulties such as:

- Untimely payment of bills by the scheme to health providers: Health providers usually complain of not receiving on time payment of medical bills expended on the beneficiaries of the scheme. This tends to affect their ability to purchase drugs and other supplies to run the scheme. In fact, this affirms Adjei (2007), assertions that failure of prompt and adequate reimbursement to the clinical facilities led to near failure of the policy.
- High charges and bills to National Health Insurance Scheme (NHIS) office by health providers: The Municipal Health Insurance offices who run the FMDP complain of higher charges given them by the health providers. This it claimed that if the hospital does not cut down it charges, it will not be able to afford thus compromising the success of the scheme.

Other challenges

- Ignorance: Five of the pregnant and nursing mothers said they were actually ignorant about the scheme. These five were actually visiting antenatal for the first time since they were just in the early part of their pregnancy.
- Long procedures involved during hospital attendance: Forty five of the PNM complained they have to go through long procedures in order to access health care unlike before the introduction of the FMDP. The problem was usually severe for those who are not already with the NHIS and are to use the FMDP. They usually experience this when they visit the hospital for the first time of the pregnancy.
- All 105 pregnant and nursing mothers complained of delay in issuing cards that are used to access the FMDP. Pregnant women who have not already registered for the national health insurance said they have to go through long procedures at the NHIS office before they are finally issued their cards which they will use to access health care free of charge.
- All 105 PNM also complained that most of the time the drugs they are suppose to receive free of charge from hospitals during antenatal are usually not available leaving them with no other option than to buy from their own pocket. They therefore complained saying it's "partially free".

Implications of the challenges to the Free Maternal Delivery Policy

Most of these challenges that have been enumerated above by the respondents go a long way to affect the success of the FMDP as well as its sustainability as far as illiteracy, inadequate awareness creation; long procedures and outrageous bills from service providers are concerned.

The untimely payment of bills by NHIS sterns from the fact that the NHIS complain the bills given to them by the service providers are too high and seem inflated. And because the bills are not early enough, it results in unavailability of drugs. The periodic unavailability of drugs and long procedures could results in loss of confidence in the policy and this could cause pregnant women to deliver with TBA's, assuming all other things are constant. There is therefore the need to device ways and means to address these challenges in order to ensure that the FMDP achieves its objective of reducing maternal mortality and hence achieving the Millennium Development Goal 5.

Potentials of the FMDP

The FMDP has certain potential that must be harnessed. The 25 medical doctors and midwives admitted that the FMDP has the potential of reducing maternal mortality especially Bolgatanga Municipality. According the medical doctor and midwives if the challenges of the policy such as late reimbursement of funds for the policy to run effectively and low awareness creation are addressed, then the policy will achieve its objective. All the midwives said frequent in service training for all midwives to update their knowledge and sharpen their skills in order to address more complex maternal issues will go a long way to help

reduce maternal mortality. They however asserted that since antenatal has increased as result of the FMDP nurses use that opportunity to educate the pregnant women on ways to live healthy lives in order to have safe delivery.

Irrespective of the challenges of the policy, 81% of the beneficiaries still commend the quality of health care provided since the introduction of the policy as they go for frequent laboratory tests to know their unborn baby and their own health status. Meanwhile 13% did not commend the quality of health care provided since the introduction of the policy and the remaining 6% were indifferent. This is represented on figure 5 below.

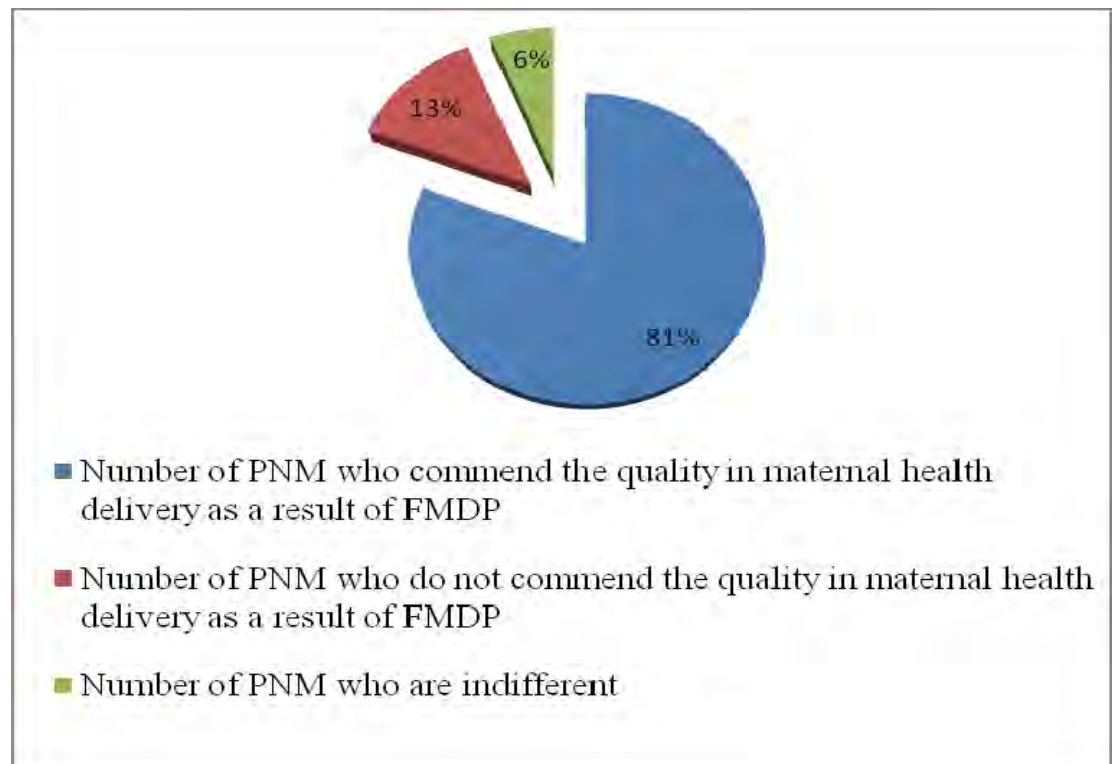

Figure 5: Views of pregnant and nursing mothers on quality health care

Source: Fieldwork (2010)

All 105 pregnant and nursing mothers were happy that they could easily access health care at any time even when out of money. This has come as a major relive to them especially being from the poorest region in Ghana. This has resulted in increased number of pregnant and nursing mothers attending antenatal. According to Ayisi (2010), there is broad agreement that antenatal care interventions can lead to improved maternal and new born health. Out of the 105 PNM eighty (76%) of them said the FMDP has encouraged their antenatal attendance, twenty (19%) said the FMDP has not influenced their antenatal attendance, and five (5%) were indifferent about it. The implication is that if as much as 76% of the PNM are influenced by the FMDP to attend antenatal, it mean there is even more room for improvement if more sensitization is carried out. This is depicted in Table 7 and figure 6.

Table 7: Number of PNM influenced by FMDP

Number of Pregnant and nursing mothers	Frequency	Percentage
Number of PNM who said FMDP encouraged their antenatal attendance	80	76
Number of PNM who said FMDP has no influence on their antenatal attendance	20	19
Number of PNM who were indifferent	5	5
Total	105	100

Source: Fieldwork (2010)

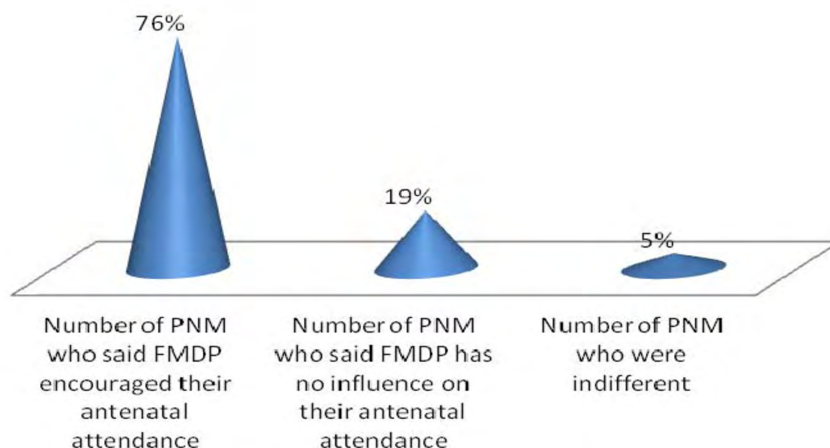

Figure 6: Number of PNM influenced by FMDP

Source: Fieldwork (2010)

All 15 respondents from the NHIS office said the FMDP stands a good chance of reducing maternal mortality in the municipality. They however added that the high bills they are giving them to pay could jeopardize the sustainability of the policy. Another important potential of the FMDP is that it aspires to meet the needs of a special vulnerable group (pregnant woman, nursing mothers and baby) in society.

Effects of the FMDP on maternal mortality

During the interview with the 25 medical doctors and midwives, respondents were asked whether maternal mortality is reducing in Bolgatanga Municipality or not. Twenty one (84%) of them agreed maternal mortality was reducing in Bolgatanga Municipality whilst the remaining four (16%) think the maternal mortality is not reducing. However, they all asserted that the maternal mortality situation must reduce far more than it is doing if the MDG 5 is to be

achieved. Table 8 shows the view of medical doctors and midwives, whether maternal mortality is reducing in Bolgatanga Municipality or not.

The following reasons were given for saying maternal mortality is reducing. The incidence of haemorrhage, anemia, irregular antenatal attendance, infection, eclampsia, prolonged labour, unsafe abortions, death of pregnant women during and shortly after pregnancy among others have reduced. As a result the number of motherless babies, malnourished babies among others in Bolgatanga Municipality have also reduced.

Table 8: Views of medical doctors and midwives on whether maternal mortality is reducing or not

Number of medical doctors and midwives	Frequency	Percentage
Medical doctors and midwives who said FMDP has reduced maternal mortality	21	84
Medical doctors and midwives who said FMDP has not reduced maternal mortality	4	16
Total	25	100

Source: Fieldwork (2010)

For the 16% of the medical doctors and midwives who said the FMDP has not reduced maternal mortality in Bolgatanga Municipality, to them haemorrhage, anemia, irregular antenatal attendance, infection, eclampsia, prolonged labour, unsafe abortions have not reduced in Bolgatanga Municipality.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter summaries the findings and discussions of the study. It tabulates the summary of each objective and follows by the conclusions arising from summary. The chapter ended with recommendations drawn from the conclusions with suggestions that will be useful for practitioners and policy makers given the urgency with which maternal mortality must be reduced to the barest minimum.

Summary

- It is revealed that the 24-24 age group is the most reproductive group and they are more married than all the other age groups. They are more vulnerable to the risk of maternal mortality than the other age groups since they go through the process of pregnancy and child birth more often.
- Farmers also dominate among the pregnant and nursing mothers, making them more vulnerable to the risk of maternal mortality since they stress themselves on the farm work.

- Illiteracy is also high among PNM, since 25% of them have no education, their level of knowledge about the causes and effects of maternal mortality is low.
- From the perspective of medical doctors and midwives, haemorrhage, anemia, irregular antenatal attendance, infections, eclampsia, prolonged labour among others is the causes of maternal mortality in Bolgatanga Municipality.
- The pregnant and nursing mothers also perceived the causes of maternal mortality on Bolgatanga Municipality to include; Nurses tell us we are not due to deliver when they complain they are due for delivery, Pregnant women who attend antenatal do not go strictly to advice given to them by nurses, malnutrition, ignorance, pregnant women do not attend antenatal regularly, pregnant women prefer to deliver at home, anemia and others.
- Motherless babies, malnourished babies, increased financial burden on family, poor national image are among the effects of maternal mortality in Bolgatanga Municipality.
- Untimely payment of bills, high charges and bills to NHIS office by service providers, ignorance, long procedures involved during hospital attendance, delay in issuing cards, frequent unavailability of drugs, among others are the challenges of the FMDP.
- Pregnant and nursing mothers were happy that they could easily access health care at any time even when out of money. This has come as a major relief to them especially being from the poorest region in Ghana. This has

resulted in increased number of pregnant and nursing mothers attending antenatal.

Conclusions

The study found out that FMDP in the Bolgatanga Municipality has really improved the antenatal attendance as confirmed by 76% of PNM. In other words there is a high degree of potential of maternal mortality being reduced in Bolgatanga Municipality. However, FMDP in the Bolgatanga Municipality is bedeviled with a number of challenges which is hindering it from achieving its objective of reducing maternal mortality in the Bolgatanga Municipality at a fast pace. This, therefore, implies that it is very unlikely the MDG 5 of improving maternal health by reducing maternal mortality (both causes and effects) by three-quarters by 2015 may be achieved.

Recommendations

The government through the policy of free delivery can not be a panacea to maternal mortality. International organisations, such as UNICEF, and World Health Organisation, have been complementing government efforts to implement relevant programs and interventions to reduce maternal mortality in the country, but it still remains high. It is hoped that the following recommendations if adopted, will help the FMDP achieve its objective of reducing maternal mortality in Bolgatanga and Ghana at large.

Government health institution should make a conscious effort to train more professional staff, especially medical doctors and midwives with inclinations toward maternal health. In this regard the government needs to make a conscious effort in that direction by budgeting for such training. This will ensure that medical doctors and midwives become totally equipped and fully loaded with medical skills to handle maternal related complications: This is very important because 30% of the nurses interviewed at the Regional Hospital, Bolgatanga indicated that most of the pregnant women who die there are referred to them with so many complications. To tackle this problem therefore the health facilities these patients are referred from must be well staffed with qualified midwives and equipment. According to Sory (2010) Sri Lanka has been recognized globally for stemming maternal and infant mortality based on the capacity of professionals and not infrastructure.

To deal with the high ignorance in the municipality government must strengthen health promotion activities. Mass media should be used to educate the public about pregnancy and delivery, and community-level organisations should assist this through systematic programs. An important step for health promotion, in order to prevent negative maternal health outcomes, is to have the Ministry of Health supply adequate educational materials regarding safe practices.

Medical doctors and nurses should provide prompt postpartum care, counseling to pregnant women. It is important to detect and immediately manage problems that may occur after delivery, such as hemorrhage, which is the leading cause of maternal deaths in Bolgatanga and the worldwide at large. Postpartum

care and counseling will help ensure the proper care and health of the newborn and mother. Counseling should include information on breastfeeding, immunization, among others

The study found out that irregular antenatal attendances as well as not strictly adhering to nurses' advice were some of the causes of maternal mortality. Pregnant and nursing mothers should therefore be encouraged to visit anti natal frequently and adhere to doctors and nurses advice. This can be done through radio stations, information vans, posters and television stations. Community nurses can also be resourced to go door to door in their various communities to disseminate the message to the people. According to Brightson (2008), religiously attending antenatal care would not only help save the lives of mothers but would go a long way to help them deliver healthy babies also.

Trained health staff needs to intensify the education of various families (including both husband and wife) about family planning since it relates closely to preventing maternal mortality. Family planning helps women prevent unintended pregnancies and space the births of their children. It thus reduces their exposure to risks of pregnancy, abortion, and childbirth. Reliable provision of a range of contraceptive methods can help prevent maternal deaths associated with unwanted pregnancies. This has been asserted by Mills (2009), family planning had been identified to reduce 30 percent of maternal deaths and therefore consistent efforts must be made in addressing such an important strategy of achieving the 2015 goals of maternal health.

Training Traditional Birth Attendants (TBA's) is also paramount to the reduction of maternal mortality. The idea is to integrate the work of the TBA's with that of the hospitals by complementing each other. Since some pregnant women would still consult the TBAs despite the fact that maternal delivery is free, then the TBAs should be well equipped to do their work. Highly qualified midwives need to fish out these TBA's in various communities and take them through series of workshops to ensure that they are well equipped and fully loaded with maternal related skills in order to handle complication.

Finally, maternal deaths in Bolgatanga would be reduced if qualified and dedicated nurses, midwifes and doctors are ready to serve humanity in a professional manner. Health care must be accessible to all with equal special care in a qualitative and professional manner. Standards in health care provisions must be strictly adhered to and they must equally be motivated in terms of remunerations. Until the road networks in the country are properly constructed and accessible to all parts of the country, the efforts to reduce maternal mortality would be a mirage. Beside the financial commitments of government towards the health sector thus if government's budget of health is inadequate as has often been the case, efforts would be baseless and wasteful. Efforts to improve the health sector must go hand in hand with education since without education as is often said, (for lack of knowledge my people parish), all would come to square one. Government indeed has a huge responsibility but individuals and cooperate entities have a role to play in this direction such that hopes would be achieved at the end of the tunnel.

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APPENDICES

APPENDIX 1

QUESTIONNAIRE FOR MEDICAL DOCTORS AND MIDWIVES

This research is seeking information on the free maternal delivery policy and maternal mortality in the Bolgatanga Municipality. The exercise is purely academic and any data generated will be to the benefit of Bolgatanga and the society at large. I therefore edge you to answer all questions as honestly as possible since your response will go a long way to assist in the formulation of sound policies. Confidentiality of your response is assured.

1. Sex: Male …………. Female ………….
2. Age: ……………
3. What are the causes of maternal mortality Bolgatanga Municipality?

   …………………………………………………………………………………

   …………………………………………………………………………………

   ………………………………………………………………………………
4. What are the effects of maternal mortality in Bolgatanga Municipality?

   ....

   ....
5. What was the status of maternal mortality before the free maternal delivery policy in Bolgatanga Municipality?

....

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6. What is the status now?

…………………………………………………………………………………

……………………………………………………………………………

7. Is maternal mortality reducing in Bolgatanga Municipality?

   a. Yes

   b. No

8. a. If yes above, what are the reasons for the maternal mortality reduction in Bolgatanga?

   …………………………………………………………………………………

   …………………………………………………………………………………

   b. If no above, what are the reasons for the maternal mortality increase in Bolgatanga?

   …………………………………………………………………………………

   …………………………………………………………………………………

9. In your opinion do you think the free maternal delivery policy can be sustained?

   a. Yes

   b. No

10. What are your reasons?

………………………………………………………………………………………

………………………………………………………………………………………

11. What do you recommend in relation to the free maternal delivery and maternal mortality in Bolgatanga Municipality?

………………………………………………………………………………………

………………………………………………………………………………………

APPENDIX 2

QUESTIONNAIRE FOR PREGNANT WOMEN AND NURSING MOTHERS

This research is seeking information on the free maternal delivery policy and maternal mortality in the Bolgatanga Municipality. The exercise is purely academic and any data generated will be to the benefit of Bolgatanga and the society at large. I therefore edge you to answer all questions as honestly as possible since your response will go a long way to assist in the formulation of sound policies. Confidentiality of your response is assured.

1. Sex: Male …………. Female ………….
2. Age: ……………
3. Marital status: Single………… Married …….. Divorced ………
4. How old is your pregnancy?

   ………………………………………………………………………………
5. How old is your baby?

   …………………………………………………

   Are you aware of the Free Maternal Delivery Policy?

   a. Yes
   b. No
   6. Are you benefiting from the Free Maternal Delivery Policy (FMDP)?
   a. Yes
   b. No

7. Does the FMDP solve all your maternal related problems?

    a. Yes

    b. No

8. If NO, then which of your maternal problems are outstanding?

   …………………………………………………………………………..………

   …………………………………………………………………………...…………

9. Do you face problems when you are trying to access the FMDP?

    a. Yes

    b. No

10. If yes, name them.

    ……………………………………………………………………………………

    …………………………………………………………………………………

11. In your opinion what are some of the causes of maternal mortality in Bolgatanga?

    ……………………………………………………………………………………

    ………………………………………………………………………..……………

12. In your opinion what are some of the effects of maternal mortality in Bolgatanga?

    ……………………………………………………………………………………

    …………………………………………………………………………………….

13. What are your impressions about the free maternal delivery policy?

a. Excellent
b. Very good
c. Good
d. Bad
e. Very bad

APPENDIX 3

QUESTIONNAIRE FOR NHIS PERSONNEL

This research is seeking information on the free maternal delivery policy and maternal mortality in the Bolgatanga Municipality. The exercise is purely academic and any data generated will be to the benefit of Bolgatanga and the society at large. I therefore edge you to answer all questions as honestly as possible since your response will go a long way to assist in the formulation of sound policies. Confidentiality of your response is assured.

1. Sex: Male …………. Female ………….
2. Age: ……………
3. What are the challenges of the free maternal delivery policy in Bolgatanga Municipality?

   ………………………………………………………………………………………

   ……………………………………………………………………………………
4. What are the potentials of the free maternal delivery policy in Bolgatanga Municipality?

   ………………………………………………………………………………………

   ……………………………………………………………………………………

5. How do you sustain the free maternal delivery policy?

   ………………………………………………………………………………………

   ……………………………………………………………………………………

6. In your opinion do you think the policy is sustainable?
   a. Yes
   b. No

7. What are the reasons for your response?

   …………………………………………………………………………………

   ……………………………………………………………………………

8. What do you recommend about the free maternal delivery policy?

   …………………………………………………………………………………

   ……………………………………………………………………………