

**SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES,
UNIVERSITY OF GHANA**

**INFLUENCE OF MUTUAL HEALTH INSURANCE SCHEME ON SKILLED
ATTENDANCE AT BIRTH IN THE UPPER WEST REGION OF GHANA**



**THIS THESIS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN
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DECLARATION

I, Grace H. Dongoo, do hereby declare that except for the references to works of other authors and assistance received, which have been duly acknowledged, this thesis, INFLUENCE OF MUTUAL HEALTH INSURANCE SCHEME ON SKILLED ATTENDANCE AT BIRTH IN THE UPPER WEST REGION OF GHANA, is the result of my own research efforts and that, it has neither in whole nor in part been presented for any degree elsewhere.

.....

GRACE H. DONGOO

This work has been submitted for examination with my approval as supervisor.



.....

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DEDICATION

This piece of work is dedicated to the following people:

My late mother, Madam Nihasiwii Bayong for the unique role she played in my life.

My sister, Fatima Basuglo for her immeasurable support.

My children, Rabi N. Ganiu and Rashad W. Ganiu, for all the odds they went through in the course of putting this work together.

All the women who lost their lives for lack of access to skilled care at birth.



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To the Almighty God be the glory for His unceasing grace.

GRACE H. DONGOO

ABSTRACT

BACKGROUND: The financial burden of user fees on poor rural households negatively affects the uptake of health services, especially for childbirth. Only 40% of deliveries in Ghana and 27.5% in the UWR took place with the assistance of skilled attendant (GHS 2005; GHS/UWR, 2006). To guarantee financial protection and enhance utilization of healthcare services especially in deprived rural areas, a National' Health Insurance Scheme under which the Mutual Health Insurance Scheme operates in every district in Ghana was introduced by the government of Ghana in 2004.

OBJECTIVE: to investigate the influence of the MHIS on skilled attendance at birth in the Upper West Region.

METHODS: A cross-sectional community-based study was conducted in three districts in the Upper West Region using both qualitative and quantitative approaches. Six FGDs and 20 in-depth interviews were conducted and 400 questionnaires administered to women who had delivered in the years 2006 and 2007 in the districts. Data was collected the demographic, socio-economic and health related characteristics of on the women's, knowledge and perceptions on MHIS and skilled care at birth, utilization skilled care at birth, and cultural beliefs and practices that discourage women from delivering under skilled care. Data analysis was carried out using SPSS 16.0 and thematic approach for qualitative data. The association and strength of association between health insurance status and skilled birth was estimated as using the Pearson chi-square test and the Phi coefficient of determination. Other variables that contributed to health facility delivery in the study were also determined.

KEY FINDING: The study found a weak but positive linear relationship ($\varphi = 0.15$) between MHIS cover and health facility delivery at $p=0.000$. Overall, the study shows 81% of insured women and 63% of uninsured women delivered in a health facility; indicating an 18% increase in utilization of skilled delivery services among mothers who were insured with the MHIS compared to mothers who were uninsured with the scheme. Also, the MHIS cover among women in the study was as high as 86% at their time of delivery.

CONCLUSION: the results of this study reveals that the MHIS has significantly improved access to skilled attendance at birth in the Upper West Region and supports the use of health insurance as a health financing tool to provide affordable maternal health services and protect households from out-of-pocket expenditures for women seeking delivery care in health facilities within the context equitable access to health facilities with required enabling environment.

OPERATIONAL DEFINITIONS OF CONCEPTS

CONCEPT	DEFINITION
Skilled birth attendant	The WHO, International Confederation of Midwives (ICM) and the International Federation of Gynecology and Obstetrics (FIGO) jointly define Skilled Birth Attendant (SBA) as an accredited health professional such as a midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns(WHO, 2004). For the purpose of this study, Community Health Nurses (CHNs) and Nurse Assistants are also recognized as skilled attendants.
Skilled attendance/skilled care	A skilled attendant operating within an enabling environment or health system capable of providing adequate competent care for normal deliveries as well as appropriate emergency obstetric care for all women who develop complications during, pregnancy, labour, childbirth and the postpartum period (MacDonald and Starrs, 2002). In the study the phrases skilled birth, skilled delivery and health facility delivery has been used in the same context.
Enabling Environment	A well-functioning health system that provides a skilled attendant with the backup support (equipment and supplies; infrastructure and transport; electrical, water and communication systems; human resources policies, supervision and management; and clinical protocols and guidelines) to perform routine deliveries and make sure that women with complications receive prompt emergency obstetric care (MacDonald and Starrs, 2002).
Midwifery Skills	Midwifery skills include the capacity to initiate the management of complications and obstetric emergencies, including life-saving measures where needed (MacDonald and Starrs, 2002).
Maternal Morbidity	This refers to serious disease, disability or physical damage such as fistula and uterine prolapse, caused by pregnancy-related complications. Maternal morbidity is widespread, but not accurately reported (MacDonald and Starrs, 2002).
Maternal Mortality	According to the Tenth International Classification of Diseases (ICD-10), a maternal death is defined as “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, (WHO/UNICEF/UNFPA, 2000). Recently the ICD-10 redefined maternal death “as the death of a woman from direct and indirect obstetric causes more than 42 days but less than one year after termination

	of pregnancy” (WHO, 2007).
Maternal Mortality Rate	Is the measure of the impact of maternal deaths on the population of women as whole, not just on pregnant women. The statistic is affected by two factors: the risk of death among pregnant women and the proportion of women who become pregnant each year. (WHO/UNICEF/UNFPA, 2000).
Maternal Mortality Ratio	This refers to the number of maternal deaths per 100,000 live births. It measures the risk of maternal death among pregnant or recently pregnant women. (WHO/UNICEF/UNFPA, 2000).
Health Insurance	A health insurance scheme has been defined as an arrangement in which contributions are made by or on behalf of individuals or groups (members) to a purchasing institution (a fund) which is responsible for purchasing covered services from providers on behalf of the members of the scheme (Kutzin, 1997) thereby protecting the insured against the risk of financial consequences of uncertain illness or accident (Schneider and Dmytraczenko, 2003).
National Health Insurance Scheme (NHIS)	A social health insurance scheme that demands by law citizens of a nation to contribute towards financial risks of the nation due to illness based on means and utilization of the scheme for health care based on need. This is done with the opinion that the NHIS will probably solve the problem of inequality in the provision of healthcare services and help to improve the accessibility to healthcare, Ibiwoye and Adeleke (2007).
Mutual Health Insurance(MHIS)	It is the decentralization of NHIS for effective implementation and administrative management at the district /community level (NHIS Act 630, 2003).

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
OPERATIONAL DEFINITIONS OF CONCEPTS	v
TABLE OF CONTENTS	vii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF ABBREVIATION/ACRONYMS	xv
CHAPTER ONE	1
1.0 INTRODUCTION	1
1.1 BACKGROUND TO THE STUDY	1
1.2 PROBLEM STATEMENT	5
1.3 JUSTIFICATION FOR THE STUDY	6
1.4 CONCEPTUAL FRAMEWORK OF THE STUDY	7
1.4.1 Demographic Factors	9
1.4.2 Socio-economic Factors	9
1.4.3 Health Related Factors	9
1.5 RESEARCH QUESTIONS	9
1.6 STUDY OBJECTIVES	10
1.6.1 General Objectives	10
1.6.2 Specific Objectives	10
1.7 TESTING FOR AN ASSOCIATION BETWEEN MHIS COVER AND HEALTH FACILITY DELIVERY	11
1.7.1 Assumptions	11
1.7.2 Hypothesis	11

1.8 SIGNIFICANCE OF THE STUDY	11
1.9 LIMITATIONS OF THE STUDY	12
1.10 ORGANIZATION OF THE REPORT	13
CHAPTER TWO	14
2.0 LITERATURE REVIEW	14
2.1. HISTORICAL BACKGROUND OF GHANA’S NATIONAL HEALTH INSURANCE SCHEME.....	14
2.1.1 Funding of the Scheme	15
2.1.2 Exemptions under the Scheme	16
2.1.3 Benefit Package of the Scheme	16
2.1.4 Accreditation of providers and Provider Payment Mechanisms	17
2.2 KNOWLEDGE AND PERCEPTIONS ON HEALTH INSURANCE AND HEALTH FACILITY DELIVERY.....	17
2.2.1 Knowledge and Perceptions on Health Insurance	17
2.2.2 Knowledge and Perceptions on Health Facility Delivery	19
2.3 ROLE OF HEALTH INSURANCE ON THE UTILIZATION OF HEALTH SERVICES.....	22
2.4 SKILLED BIRTH ATTENDANTS AT DELIVERY	23
2.5. DETERMINANTS OF THE USE OF SKILLED BIRTH ATTENDANTS	25
2.5.1 Demographic Determinants.....	25
2.5.2 Socio-economic Determinants.....	28
2.5.3 Health Related Determinants.....	30
2.6 CULTURAL BELIEFS AND PRACTICES THAT DISCOURAGE WOMEN FROM SEEKING SKILLED CARE AT BIRTH	33
2.6.1 Taboos on Medical Diagnostic Examinations	34
2.6.2 Fidelity Proof.....	34
2.6.3 Magico-Religious Beliefs	35
2.6.4 Placenta Disposal.....	36

2.7 CONCLUSION ON LITERATURE REVIEW	36
CHAPTER THREE	38
METHODOLOGY	38
3.0 INTRODUCTION.....	38
3.1 TYPE OF STUDY	38
3.2 STUDY AREA.....	38
3.3 POPULATION OF THE STUDY	40
3.3.1 Population for Quantitative Data	40
3.3.2 Population for Qualitative Data	41
3.3.2.3 Reasons for Choosing the Site for the Study	41
3.4 SAMPLE AND SAMPLING TECHNIQUE	42
3.4.1 The Sample	42
3.4.2 The Sample Size	42
3.4.3 Sampling Process for Quantitative Data.....	42
3.4.4 Qualitative Sample and Sampling	43
3.5 VARIABLES SPECIFICATION	44
3.5.1 Dependent Variable	44
3.6 DATA COLLECTION TECHNIQUES AND TOOLS	47
3.7 QUALITY CONTROL MEASURES TO ENSURE RELIABLE DATA.....	48
3.7.1 Pretesting the Instrument for Validation	49
3.8 DATA COLLECTION PROCEDURE.....	49
3.9 DATA ANALYSIS	50
3.10 ETHICAL CONSIDERATION	51
CHAPTER FOUR.....	52
4.0 RESULTS	52
4.1 CHARACTERISTICS OF INSURED AND UNINSURED WOMEN.....	52
4.1.1 Demographic characteristics.....	52
4.1.2 Socio-Economic Characteristics.....	55

4.1.2.4 Reported Monthly Income	56
4.1.3 Health Related Characteristics.....	57
4.2. CULTURAL BELIEFS AND PRACTICES AFFECTING HEALTH FACILITY DELIVERY	62
4.2.1 Cultural Beliefs that Discourage Women from Health Facility Delivery	62
4.2.2 Cultural Practices that Discourage Women from Health Facility Delivery	62
4.3 KNOWLEDGE LEVELS AND PERCEPTIONS OF INSURED AND UNINSURED	64
WOMEN ON MHIS AND HEALTH FACILITY DELIVERY	64
4.3.1 Level of Knowledge Perceptions of the Women on the MHIS	64
4.3.2 Perceptions of Women on Skilled Delivery	69
4.4 UTILIZATION OF HEALTH FACILITY FOR DELIVERY	72
4.4.1 Skilled Attendant at Health Facility Delivery	73
4.4.2 Reasons Women Gave for Delivering at a Health Facility	74
4.4.3 Types of Transport Women Used to the Health Facility for Delivery	75
4.4.4 Test of Hypothesis	76
4.5 FACTORS ASSOCIATED WITH THE UTILIZATION OF HEALTH FACILITY DELIVERY SERVICES	76
4.5.1 Demographic Factors Associated with Health Facility Delivery among Insured Women.....	77
4.5.2 Demographic Factors not associated with Health Facility among insured women.	78
4.5.2 Demographic Factors Associated with Health Facility Delivery among Uninsured Women.....	78
4.5.4 Demographic Factors not Associated with Health Facility Delivery among uninsured women.....	79
4.5.5 Socio-economic Factors Associated with Health Facility Delivery among Insured Women.....	79
4.5.6. Socio-Economic Factors Associated with Health Facility Delivery among Uninsured women.....	81

4.5.7 Socio-economic Factors not Associated with Health Facility Delivery among uninsured women.....	82
4.5.8 Health Related Factors Associated With Health Facility Delivery among Insured women.	82
4.5.9 Health Related Factors not Associated with Health Facility Delivery among Insured Women.....	84
4.5.10 Health Related Factors Associated with Health Facility Delivery among Uninsured Women.....	84
4.5.11 Health Related Factors not Associated with Health Facility Delivery among Uninsured Women.....	86
4.6 SUMMARY OF MAIN FINDINGS.....	86
CHAPTER FIVE	88
5.0 DISCUSSION	88
5.1 INTRODUCTION.....	88
5.2 CULTURAL BELIEFS AND PRACTICES AFFECTING HEALTH FACILITY DELIVERY	89
5.3 KNOWLEDGE AND PERCEPTIONS ON THE MHIS AND HEALTH FACILITY DELIVERY	91
5.3.1 Knowledge and Perceptions of Insured and Uninsured Women on the Mutual Health Insurance Scheme (MHIS).....	91
5.3.2 Knowledge and Perceptions on Skilled Delivery Services	93
5.4 UTILIZATION OF HEALTH FACILITY SERVICES FOR DELIVERY AMONG INSURED AND UNINSURED WOMEN	95
5.5 FACTORS ASSOCIATED WITH UTILIZATION OF SKILLED HEALTH CARE SERVICES FOR DELIVERY.....	98
5.5.1 Demographic Factors Associated with Health Facility Delivery	98
5.5.2 Demographic Factors not Associated with Health Facility Delivery	100
5.5.3 Socio-economic Factors Associated with Health Facility Delivery	102
5.5.4 Health Related Factors Associated with Health Facility Delivery.	104
5.5.5 Health Related Factors not Associated with Health Facility Delivery.	108

CHAPTER SIX.....	110
6.0 CONCLUSION AND RECOMMENDATIONS	110
6.1 CONCLUSION	110
6.2 RECOMMENDATIONS	113
6.2.1 MHIS officers	113
6.2.2 Health care providers.....	113
6.2.3 Chiefs and elders at the community level	114
6.2.4 Researchers	115
REFERENCES	117
APPENDICES	128
APPENDIX A: CONSENT FORM	128
SIGNATURE OF PARTICIPANT	129
APPENDIX B: NATIONAL AND UWR MATERNAL HEALTH CARE SERVICE COVERAGE COMPARED: 2003-2006	130
APPENDIX C: QUESTIONNAIRES FOR WOMEN WHO DELIVERED BETWEEN THE PERIOD OF 2006 –2007	131
SECTION A: DEMOGRAPHIC AND SOCIO-ECONOMIC INFORMATION	131
B: THE PERCEPTIONS OF WOMEN ABOUT SKILLED DELIVERY.	132
D. THE INFLUENCE OF MHIS REGISTRATION ON SKILLED BIRTH ATTENDANCE	133
APPENDIX D: FOCUSED GROUP DISCUSSION GUIDE FOR MOTHERS AND FATHERS.	136
SECTION A: THE PERCEPTIONS OF WOMEN ABOUT SKILLED DELIVERY.	136
SECTION B: THE PERCEPTIONS OF WOMEN ABOUT THE MHIS	136
APPENDIX E: IN-DEPTH INTERVIEW QUESTIONS FOR NHIS-OFFICERS	137
APPENDIX F: IN-DEPTH INTERVIEW QUESTIONS FOR HEALTH CARE PROVIDERS.....	138

LIST OF TABLES

TABLE3.1 DISTRIBUTION OF THE SAMPLED COMMUNITIES WITH THEIR SAMPLE SIZES	43
TABLE4. 1 DEMOGRAPHIC CHARACTERISTICS OF INSURED AND UNINSURED WOMEN	54
TABLE4. 2 SOCIO-ECONOMIC CHARACTERISTICS OF INSURED AND UNINSURED WOMEN ..	57
TABLE4. 3 HEALTH RELATED CHARACTERISTICS OF INSURED AND UNINSURED WOMEN	61
TABLE4. 4 MAIN SOURCES OF WOMEN’S KNOWLEDGE ON MHIS	65
TABLE4. 5 DEMOGRAPHIC FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG INSURED WOMEN	77
TABLE4. 6 DEMOGRAPHIC FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG UNINSURED WOMEN	78
TABLE4.7 SOCIO-ECONOMIC FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG INSURED WOMEN	80
TABLE4. 8 SOCIO-ECONOMIC FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG UNINSURED WOMEN	81
TABLE4. 9 HEALTH RELATED FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG	83
TABLE4. 10 HEALTH RELATED FACTORS ASSOCIATED WITH HEALTH FACILITY DELIVERY	
AMONG UNINSURED WOMEN	85

LIST OF FIGURES

FIGURE 1. 1: CONCEPTUAL FRAMEWORK OF INFLUENCE OF MHS ON SKILLED DELIVERY.....	8
FIGURE 4. 1 CULTURAL PRACTICES THAT DISCOURAGE WOMEN FROM HEALTH FACILITY DELIVERY	64
FIGURE 4. 2 KNOWLEDGE OF WOMEN ON THE HEALTH CARE PACKAGE OF MHS	66
FIGURE 4. 3 PERCEPTIONS OF WOMEN ON THE BENEFITS OF MHS.....	67
FIGURE 4. 4 REASONS FOR WOMEN'S PREFERENCE FOR HEALTH FACILITY DELIVERY	71
FIGURE 4. 5 WOMEN'S DISLIKES FOR HEALTH FACILITY DELIVERY.....	72
FIGURE 4. 6 UTILIZATION OF HEALTH FACILITY FOR DELIVERY.....	78
FIGURE 4. 7 SKILLED ATTENDANTS AT HEALTH FACILITY DELIVERY	74
FIGURE 4. 8 REASONS WOMEN GAVE FOR DELIVERING AT HEALTH FACILITY	75
FIGURE 4. 9 TYPES OF TRANSPORT WOMEN USED TO HEALTH FACILITY FOR DELIVERY	76

LIST OF ABBREVIATION/ACRONYMS

AIDS: Acquired Immune Deficiency Syndrome.
ANC: Ante-natal Clinic
BEOC: Basic Emergency Obstetric Care
C/S: Caesarean Section
CHAG: Christian Health Association of Ghana
CHNs: Community Health Nurses
CPD: Cephalo-pelvic Disproportion
CWIQ: Core Welfare Indicator Questionnaire
DMHIS: District Mutual Health Insurance Schemes
EmOC: Emergency Obstetric Care
FFS: Fee-For-Service
FGDs: Focus Group Discussions
FIGO: International Federation of Gynaecology and Obstetrics
FM: Frequency Modulation
G-DRG: Ghana-Diagnosis Related Group
GHDS: Ghana Health and Demographic Survey
GHS: Ghana Health Service.
GILBT: Ghana Institute of Literacy and Bible Translation
HF: Health Facility
HI: Health Insurance
HIV: Human Immune deficiency Virus.
ICD-10: Tenth International Classification of Diseases
ICM: International Confederation of Midwives
ID: Identification
IMF: International Monetary Fund
IMR: Infant Mortality Rate
JHS: Junieur High School
JMFGD: Jirapa Men Focus Group Discussion
JWFGD: Jirapa Women Focus Group Discussion
L.I.: Legislature Instrument
LB: Live Births
MAMaZ: Mobiliztion of Access to Maternal in Zambia
MDGs: Millennium Development Goals

MHIS: Mutual Health Insurance Scheme
MICS: Multiple Indicator Cluster Survey
MOH: Ministry of Health
NAFDAC: National Agency for Food and Drugs Administration and Control
NCHP: Nkoranza Community Health Plan
NHIC: National Health Insurance Council
NHIF: National Health Insurance Fund
NHIL: National Health Insurance Levy
NHIS: National Health Insurance Scheme
NHIS: National Health Insurance Scheme
NMC: Nurses and Midwives Council
OPD: Out Patient Department
PCHIS: Private Commercial Health Insurance Schemes
PHC: Primary Health Care.
PMHIS: Private Mutual Health Insurance Schemes
PNDC: Provisional National Defense Council
RHMT: Regional Health Management Team.
SBA: Skilled Birth Attendant
SHS: Senior High School
SPSS: Statistical Package for Social Sciences.
SSNIT: Social Security and National Insurance Trust
TBAs: Traditional Birth Attendance.
TV: Television
U5MR: Under 5 Mortality Rate.
UNFPA: United Nations Population Fund
UNICEF: United Nations Children's Fund
USAID: United States Agency for International Development
UWR: Upper West Region.
VE: Vaginal Examination
WFV: Welfare Visitor
WHO: World Health Organization.
WIFA: Women in Fertility Age
WOMAC: Western Ontario and McMaster

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Reducing maternal mortality has been a global priority for more than two decades now, and Millennium Development Goal 5 targets a 75% reduction in maternal mortality ratios between 1990 and 2015. While some countries in sub-Saharan Africa have shown modest success in lowering their maternal mortality ratios, overall progress in reducing maternal mortality in the region has been negligible (Starrs, 2006; World Health Report, 2005; de Bernis et al, 2003). Slightly more than half of all maternal deaths occur in Sub-Saharan Africa (Breen, 2010; Umurungi, 2010; World Health Report, 2005) home to 12% of the world's population. In Ghana, for instance, the maternal mortality ratio in 2005 was estimated at 560 maternal deaths per 100,000 live births by WHO, UNICEF and UNFPA (WHO, 2007). A Ghanaian woman's risk of dying from treatable or preventable complications of pregnancy and childbirth over the course of her lifetime is about 1 in 45, compared to 1 in 7,300 in the developed regions (USAID, 2009). Complications during pregnancy and child birth are leading causes of death and disability among women of reproductive age in many developing countries. A woman's death during childbirth often means death for the newborn, and both deaths and disabilities translate into emotional, social and economic hardships for women's older children, their entire families and even their communities (Lewis, 2003). Maternal and infant deaths can be prevented by ensuring that high quality maternal and newborn health care is accessible and that maternal health complications are recognized, referred and treated by a skilled health care worker (Bos, 2004; de Bernis et al, 2003; Ransom and Yender, 2002).

In childbearing, women need a continuum of care from conception to parturition to ensure the best possible health outcome for them, their newborns, families, communities and the nation

as a whole. The MDGs serve yet as another reminder to planners and policy makers that for the world poor, motherhood still carries a high risk of morbidity and mortality (World Health Report, 2005). Focus on skilled attendants at birth as a progress indicator for monitoring maternal health is very essential in a number of ways. Firstly, most maternal deaths occur close to and immediately after delivery, underscoring the need for timely interventions (de Bernis et al, 2003; Ransom and Yinger, 2002). Secondly, the major causes of these deaths require medical intervention that can be appropriately provided by a health professional with the requisite midwifery skills (WHO, 2007, MacDonagh, 2005; Bos, 2004). Additionally, historical and epidemiological data provide convincing evidence to support the emphasis on skilled attendance at birth. Sri Lanka and Malaysia experienced significant decrease in their maternal deaths only after improving access to health care in rural areas and introducing professional midwifery (de Bernis, *et al*, 2003). More recently, China, Costa Rica, Egypt, Indonesia, Jamaica, Jordan, Mexico and Thailand have reduced maternal mortality by increasing the availability of skilled attendance and improving the referral system for emergencies. Moreover, providing skilled care at birth goes concurrent with MDG-4 to reduce child mortality, which is strongly influenced by disproportionate rates of neonatal mortality (GDHS, 2003; de Bernis, *et al*, 2003). Increasing rates of skilled care during childbirth is widely recognized as one of the priority strategies for reducing maternal mortality and morbidity, and the rate of skilled attendance at birth is used as the indicator to measure progress toward the fifth MDG of improving maternal health (MacDonagh, 2005; Bos, 2004). However, many women lack the financial means to pay for basic medical care, or they are deterred from seeking care by cultural barriers such as the status of women within the family and in society. Such women may postpone their own treatment when sick in order to pay for care for family members, or they may not seek care at all (World Health Report, 2005; Save the Children, 2003; Global Health Council, 2002). Analyzing data on published studies and health surveys from 53 countries between 1990-2005, WHO (2007) estimated

that 63% of all births were attended by a skilled attendant, 99% of which were in developed regions compared to 59% in developing countries. Various reasons have been identified for the low, stalling or declining coverage (WHO, 2007; DFID, 2007; Save the Children; 2003) of skilled care at birth, especially in poor rural sub-Saharan Africa. Increasing access to skilled birth attendance and emergency obstetric care is widely viewed as the key strategy for preventing maternal deaths (World Health Report, 2005; de Bernis et al, 2003). However, empirical findings support that a variety of barriers impede this access. Health systems constraints such as shortages of skilled workers and health facilities, particularly in rural areas; poor quality care; lack of adequate transport systems (GHS, 2007; D'Ambrouso et al, 2005; Ngula, 2005; Ghana/SAPRI, 2001) and cultural barriers including lack of women's autonomy within the household, preferences for home-based births, traditional birth practices (Stephenson et al 2006, Davis-Floyd et al, 2001), and economic barriers for example, high out-of-pocket costs associated with facility-based deliveries as well as transportation (Arhin-Tenkorang, 2001; Oppong, 2001).

Before, 2004, patients were in a 'cash-and-carry' structure established in 1985 which required them to pay for their health care; an arrangement that inherently restricted the access to health facilities for large parts of the population. The introduction of these fees had caused a decline of health facility utilization across the country (USAID, 2009; Sulzbach, 2008; Arhin-Tenkorang, 2001). Adverse effects of user fees on health facility utilization have been observed in many other regions (Lagarde and Palmer, 2008) and user fees for health facilities have indeed contributed to the inequality of access to health facilities and led to considerable disadvantages for poor people (James et al. 2006). Abolition of fees led to an increase in health facility utilization in South Africa and in Uganda (Nabyonga-Orem et al, 2008). Conservative estimates derived from mathematical modeling indicate that 153 000 child fatalities might safely be prevented in Africa if access to health care was free of charge

(James et al, 2006). The cash-and carry system could best be described as "stinking and dehumanizing" because, patients who did not have the ability to pay for medical services

were turned away from hospitals only to die at home. As a result, many poor households regularly postponed medical treatment, resorted to self-treatment, or used alternatives provided by unregulated healers, spiritualists, and itinerant drug vendors, often with disastrous results (Oppong, 2001).

In recent decades, health organizations and programs around the globe have dedicated appreciable resources to improve women's and children's health, including their access to effective care. Continuing high maternal mortality ratios suggest that despite these efforts, maternal health care is not effectively reaching the poor due in part to the way it has been financed and delivered. To address economic barriers to skilled delivery care, policymakers have begun experimenting with health financing interventions such as vouchers and health insurance. Against this background, the government of Ghana designed a National Insurance Health Scheme. The National Health Insurance Act, 2003 (Act 650) established the National Health Insurance Scheme (NHIS) with the aim of increasing access to health care and improving the quality of basic health care services for all citizens, especially the poor and vulnerable. According to Sarpong et al (2009), membership in community-based health insurances has, in no doubt, raised utilization rates of maternal health services in Mali, Senegal and Ghana. However, there has been little research to date on the impact of the NHIS in relation to household healthcare seeking and expenditures, particularly as the NHIS has increased in scale. Three recent studies address a similar research question. Sulzbach et al (2005) compared baseline data in two districts in Ghana, before the NHIS (in 2004) and after (in 2007). Its findings suggest that there has been an increase in access to formal care amongst members, as well as a significant decrease in expenditure. However, there was no

difference in use of maternal care between women who were enrolled and women who were not. On the contrary, Mensah et al (2010) address a similar research question and find that the NHIS has yielded some verifiable positive outcomes: women who were enrolled were more likely to seek maternal health care and less likely to have complications during and after delivery. This study however, was not nationally representative and could therefore not be generalized since both studies used purposively selected data. On the other hand, this finding was contrasted by Brugiavini and Pace (2010), when they conducted a study throughout the country. They concluded that the NHIS has increased utilization of health care services, especially during the perinatal period.

1.2 PROBLEM STATEMENT

According to the GHS (2007), Ghana's total institutional maternal deaths were 995 representing a 4.0% increase over the 957 maternal deaths reported in 2006. The institutional maternal mortality ratio has increased from 187 per 100,000 live births in 2006 to 229.9 per 100,000 live births in 2007. In the Upper West Region, the institutional maternal mortality ratio was 140.7/100,000 live births in the year 2007. The audit report shows that the major direct causes of maternal death remain haemorrhage, pregnancy induced hypertension, obstructed labour and sepsis. One of the underlying factors includes delay in seeking skilled care at birth. In the light of these, the Government of Ghana introduced the fee exemption policies for antenatal care (in the year 1996) and delivery services (in the year 2003) (Odoi-Agyarko, 2003). However, these policies did not do much good in reducing financial barrier and improving utilization of maternal health care services due to poor flow of funds, equipment and supply as well as inadequate information about its benefits to the population. Hence the target population, the poor, did not benefit from the policies (Asante et al, 2007). In order to forestall these problems, the government of Ghana in 2003 introduced the National Health Insurance Scheme policy which among other things was to provide free

maternal health care services to women, especially the poor and vulnerable. Following this, the researcher's preliminary observations suggest that there has been an increase in the utilization of maternal health care services in the Region. The study is therefore to investigate whether or not the NHIS has influenced the level of utilization of skilled health care at birth in the Upper West Region.

1.3 JUSTIFICATION FOR THE STUDY

Every pregnant woman is at risk of developing a serious complication, and therefore disability and death, during childbirth. About 15% of all pregnant women suffer a complication that cannot be predicted or prevented (Ransom and Yinger, 2002). Also, it is commonly understood that 80% of all maternal deaths results from one of the five well-understood and relatively common obstetric complications that can be treated readily with existing inexpensive medical or surgical interventions (Ransom and Yinger, 2002). This is possible by ensuring that those women have access to skilled attendance at birth with timely access to effective emergency obstetric care in the event of a complication (Zere et al, 2011).

Research shows that women's lives can be saved and their sufferings reduced by ensuring women receive skilled care at delivery (Kruk et al, 2008; de Bernis, *et al*, 2003). Further, skilled care has advantages in terms of value for money as providing women with the appropriate skilled care especially at birth, has the potential of reducing the incidence of mortality. The costs of implementing a skilled attendant strategy can be offset by savings gained from averting complications, providing quality low-technology skilled care at basic facilities and strengthening the whole health care system for the effective management of other conditions (Lule et al, 2005; de Bernis et al, 2003). Unfortunately however, sufficient numbers of skilled attendants and skilled attendance at birth remain unavailable in many rural communities in Ghana. The GHS (2007) *Annual Report* shows that the proportion of deliveries conducted by skilled personnel declined from 44.5% in 2006 to 34.9% in 2007.

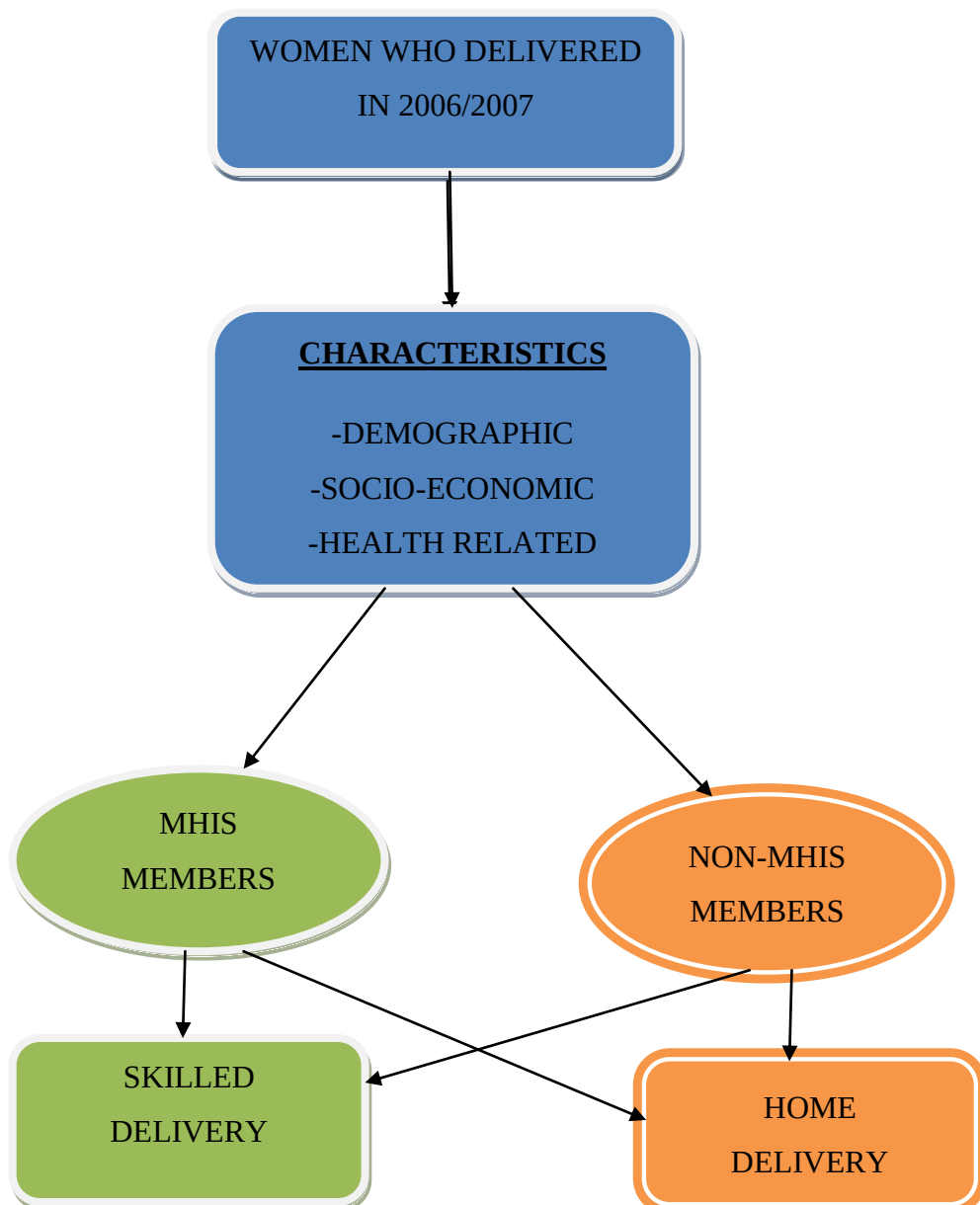
However, proportions of skilled deliveries in the region were 27.5% in 2006 and 34.5% in 2007 (GHS/UWR, 2007), indicating a marginal increase of 7.5% utilization of skilled care services at birth. On the contrary it was observed the level of utilization of skilled care at birth dropped by 7.2% within the period 2003-2006 calendar years. The marginal increase in utilization within the 2006-2007 year period suggests that the MHIS may increase maternal utilization of skilled care services at birth. Yet the region remains uninvestigated in the field of skilled attendance at birth especially with interventions (MHIS) put in place to reduce financial barrier and to increase utilization of skilled health care at birth. The only research carried out was by Osei-Bonsu (2005) which was limited to the Wa municipality. Hence, the study is necessary to investigate the influence of the MHIS in scaling up skilled delivery coverage in the region in order to reverse the current trend of poor and declining maternal and child health indicators.

1.4 CONCEPTUAL FRAMEWORK OF THE STUDY

The study adopts and modifies Andersen's Health Behavioural Model assumes that certain characteristics contribute to, or determine, an individual's use of health services and classified these in to three categories: predisposing, enabling and need factors (Anderson and Newman, 2005). This study however, categorized these factors in demographic, socio-economic and health related factors. The conceptual framework used to guide the analysis is presented in Figure 1.1. The outcome of interest is facility delivery; the exposure of primary interest is the Mutual Health Insurance Scheme (MHIS). Nearly all variables which are associated with a woman been enrolled into the MHIS were of interest. The framework considered the demographic factors, Socio-economic factors and health related factors of women who delivered within the early years (2006/2007) of the introduction of the MHIS and utilization of skilled care at delivery as insured or uninsured members of the MHIS. Furthermore, this framework considers cultural beliefs and practices that discouraged a woman from health

facility delivery. Basically, the conceptual framework is looking at the characteristics of both insured and uninsured members of the MHS that will influence them to deliver in at health facility.

FIGURE1. 1: CONCEPTUAL FRAMEWORK OF INFLUENCE OF MHS ON SKILLED DELIVERY.



1.4.1 Demographic Factors

Reflect the tendency of individuals to use services. In this study, they measure the ability of the individual to cope with the problem and the resources available in the individual and interpersonal levels. Demographic factors in the model include age, parity, marital status, residence, household size, and number of wives per husband.

1.4.2 Socio-economic Factors

These factors in present at both personal and organizational levels create an enabling environment for service utilization (Andersen and Newman, 2005). Thus, these represent the actual ability of the individual to obtain health services. Socio-economic factors considered in the model included level of education, religion, income, occupation and cultural beliefs and practices.

1.4.3 Health Related Factors

These factors describe the presence of functional health care organizational structures and policies and immediate cause of health services utilization. Health related factors included, health insurance status (used as a dummy variable), distance and means of transportation to nearest health facility, foetal loss (miscarriage/abortion/stillbirth), availability of health facility with trained midwife, antenatal visits, and previous health facility service use for delivery, health status during the index pregnancy, health care decision maker and dislikes about use of health facility services for delivery.

1.5 RESEARCH QUESTIONS

The study sought to answer the following questions:

1. What are the demographic, socio- economic and health related characteristics of insured and uninsured women seeking skilled health care services at birth?

2. What cultural beliefs and practices discourage women from using health facility services at birth?
3. What is the level knowledge and perceptions of the insured and uninsured women on MHIS and health facility delivery?
4. What are the levels of utilization of health facility for delivery among insured and uninsured women?
5. Which demographic, socio-economic and health related factors are associated with utilization of skilled health care services among insured and uninsured women?

1.6 STUDY OBJECTIVES

1.6.1 General Objectives

The general objective of this study is to determine the influence of MHIS on the level of utilization of skilled health care at birth in the Upper West Region.

1.6.2 Specific Objectives

In line with this general objective, the study attempted to:

1. Examine demographic, socio- economic and health related characteristics of insured and uninsured women seeking skilled health care services at birth.
2. Describe cultural beliefs and practices that discourage women from using skilled health care services at birth.
3. Examine the knowledge level and perceptions of participants on the MHIS and health facility delivery.
4. Determine the levels of utilization of health facility services for delivery among insured and uninsured women.
5. Identify demographic, socio-economic and health related factors associated with utilization of skilled health care services among insured and uninsured women.

1.7 TESTING FOR AN ASSOCIATION BETWEEN MHIS COVER AND HEALTH FACILITY DELIVERY.

1.7.1 Assumptions

Using the Pearson Chi-square test the researcher assumes that:

1. The subjects and the observations in the various categories were independent of each other.
2. Again, the computed chi-square (χ^2) value was based on all observations in the sample.
3. With one degree of freedom; all expected frequencies (f_e) were at least equal to 5.

1.7.2 Hypothesis

H_0 : There is no association between insurance cover and skilled attendance at birth ($\phi = 0$).

H_1 : There is an association between insurance cover and skilled attendance at birth ($\phi > 0$)

Decision rules: given 0.05 level of significance, 1 degree of freedom (df), the critical value from chi-square table = 3.84. Therefore, retained H_0 if observed $\chi^2 < 3.84$, or reject H_0 if observed $\chi^2 \geq 3.84$.

1.8 SIGNIFICANCE OF THE STUDY

It is expected that the findings of this study would be of significance in a number of ways.

1. Depending on the findings, suggestions from the study would serve as valuable information for both the MHIS managers and health care providers in developing strategies aimed at improving skilled delivery coverage and contribute to better maternal and child health in the Upper West Region.
2. Findings from the study could also be a working document for policy makers in addressing issues of both MHIS and access of women to skilled attendance at birth in the study areas..

3. It would also add to existing knowledge on demographic, socio-economic and health related determinants of skilled birth attendance in the Upper West Region and perhaps in the country.
4. It is also hoped that the findings of the study would serve as a base-line study for future research into the linkage between health care financing and utilization of skilled health care for delivery.

1.9 LIMITATIONS OF THE STUDY

1. The study was focused mainly on the influence of MHIS on skilled attendance at birth. Therefore, other health services related issues were not covered.
2. Also, findings of the study are limited to the three of the nine districts in the Upper West Region.
3. The study was conducted one to two years after the event (delivery), therefore it was almost impossible to get first-hand information on the event. Therefore, the researcher relied heavily on the memories of the women for the collection of the needed data. Consequently, most of the data provided were difficult to cross-check. However, based on the fact that there was no gross distortion of data provided by respondents during field checks, it can be said that respondents provided credible data needed for this study.
4. Also, interviewer bias was a major challenge as data was collected using face-to-face interviews with respondents. However, efforts were put into the training of research assistants to make sure that the data collected was credible.
5. Again, since the selection of the samples was not by simple random sampling, there was no way of completely eliminating incidence of biases.

1.10 ORGANIZATION OF THE REPORT

The rest of the research is organized as follows: chapter two: a review of related literature; chapter three: research design and methodology; chapter four: results; chapter five: discussions of results and chapter six: Summary of findings, conclusion and recommendations.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. HISTORICAL BACKGROUND OF GHANA'S NATIONAL HEALTH INSURANCE SCHEME

The National Health Insurance Scheme (NHIS) in Ghana was established by the National Health Insurance Act, 2003 (Act 650) and National Health Insurance Regulations, 2004 (L.I. 1809) with the view to improving financial access of Ghanaians, especially the poor and the vulnerable, to quality basic health care services and to limit out-of-pocket payments at the point of service delivery Gobah and Laing (2011). Prior to 2003, Ghana financed its health care system through tax revenues and user fees charged to patients at the time of service. User fees, however, were found to substantially decrease access to health services, particularly among the poor, and exemptions for vulnerable and priority populations were unevenly applied (Frempong et al, 2009). Community-based health insurance schemes began to emerge; growing from 47 in 2001 to 168 by 2003; but these schemes only covered about 1 percent of the population by 2003 and often excluded antenatal care and normal deliveries (Gobah and Laing, 2011). Against this background, the government of Ghana considered replacing user fees with a national health insurance scheme to be implemented at the district level. In September 2003, the government introduced a policy of exempting women from delivery fees in public, private, and mission facilities in the four most deprived regions of Ghana; and expanded the policy to the remaining six regions in April 2005 (USAID, 2009). An evaluation of the fee exemption policy in two regions found that there was an increase in facility deliveries, earlier care seeking for complications, and a decrease in out-of-pocket expenditures for delivery; whereas there was no change or worsening of service quality (Asante et al, 2007). Ghana's National Health Insurance Scheme (NHIS) is a fusion of the traditional Social Health Insurance and Mutual Health Insurance schemes and administered peripherally through 145 district-wide mutual health insurance schemes with a central system

at the national level to collect formal sector contributions. The scheme is designed to promote social health protection through risk equalization, cross subsidization, solidarity, equity and quality care (Agyepong and Adjei, 2008; Ahuja, 2004; Government of Ghana, 2004). The Health Insurance law (Acts 650) makes provision for the establishment and operation of three types of health insurance schemes in Ghana. These include the District Mutual Health Insurance Schemes (DMHIS), Private Commercial Health Insurance Schemes (PCHIS) and Private Mutual Health Insurance Schemes (PMHIS). However, it is only the DHMIS that shall be provided with subsidy from the National Health Insurance Fund (Government of Ghana, 2003).

2.1.1 Funding of the Scheme

The scheme is financed by a National Health Insurance Levy (NHIL) of 2.5% tax on selected goods and services, a 2.5% Social Security and National Insurance Trust (SSNIT) deductions from the formal sector, premiums from the informal sector and government budget allocations (Gobah and Laing, 2011; Frempong et al, 2009; Government of Ghana, 2004). The informal sector annual premium was set by national regulation between GH¢7.20- GH¢48.0 (approximately US\$5.0- US\$34.0) per person based on assessed income and ability to pay. No coinsurance, copayment, or deductible is required at the point of service. There exists a National Health Insurance Fund (NHIF), financed from the NHIL, SSNIT deduction from the formal sector employees, funds allocated to the scheme by Parliament, returns on investments made by the National Health Insurance Council (NHIC) and others such as grants, donations and gifts made to the fund. The NHIF provides funds for reinsurance to the DMHIS, subsidy or outright pre-payment for the core poor and vulnerable who do not have the ability to pay and to support programs that improve access to health services. The NHIL accounted for about 61.5% and 61.0% of total income of the NHIS in 2008 and 2009

respectively. Formal sector contributions made up 16.9% and 15.6% while the informal sector premium constituted only 5.0% and 3.8 % respectively (NHIA, 2010).

2.1.2 Exemptions under the Scheme

Children under 18 years, adults 70 years and above, formal sector employees contributing to the Social Security and National Insurance Trust (SSNIT), and indigents are exempted from paying annual premiums. In July 2008, the Government of Ghana announced a free maternal care policy exempting all pregnant women from paying premium and processing fees. The package was to improve access to skilled attendance at delivery to help reduce maternal and child mortality rates and to improve attainment of MDGs 4 and 5. Mothers have access to the full package of antenatal, deliveries and postnatal care at accredited health facilities free of charge (NHIA, 2008; MOH, 2009). As of 2009, the exempt group constituted 70.6% of the total registrants, comprising of: children under 18 years (49.44%), aged above 70 years (6.67%), SSNIT contributors (6.10%), pregnant women (5.54%), indigents (2.32%) and SSNIT pensioners (0.53%). Total non-paying member accounted for about 65% (NHIA, 2010).

2.1.3 Benefit Package of the Scheme

The minimum benefits package under the NHIS includes general out-patient and in-patient care, oral health, eye care, comprehensive delivery care, diagnostic tests, generic medicines and emergency care. In all over 95% of the most common disease conditions reported in healthcare facilities in Ghana are covered under the scheme (USAID, 2009). Additionally, the scheme does cover highly specialized care such as dialysis for chronic renal failure, organ transplants and services provided under government vertical programs (example: Antiretroviral for the treatment of HIV/AIDS, immunization and family planning), and drugs not listed in the NHIS drug. In order to access healthcare under the NHIS, the National

Health Insurance Regulations, L.I. 1809, requires a beneficiary to first report to a primary care facility, and subsequently to a second and third levels of care by way of referral.

2.1.4 Accreditation of providers and Provider Payment Mechanisms

In order to provide the basic package of services, the NHIS covers both public and private health care providers at all levels of the health system, subject to their accreditation by the NHIA. At present all public and Christian Health Association of Ghana (CHAG) facilities (about 4000) have been given a provisional accreditation and 1551 private providers including (hospitals and clinics, maternity homes, pharmacies, licensed chemical shops and diagnostic facilities) have been accredited to provide service and to make the service more easily accessible to beneficiaries (NHIA, 2009). Claims are made by service providers and then submitted to the district schemes for payment using the Ghana-Diagnosis Related Group (G-DRG) rates for services and Fee-For-Service (FFS) for medicines (NHIA, 2010).

2.2 KNOWLEDGE AND PERCEPTIONS ON HEALTH INSURANCE AND HEALTH FACILITY DELIVERY.

2.2.1 Knowledge and Perceptions on Health Insurance

Health insurance has been proposed as an effective alternative to address financial barriers aiming at increasing individual use of health interventions and to protect them from being pushed further into poverty as a result of illness (Carrin et al, 2006; World Health Report, 2005; Ransom and Yinger, 2002). When properly designed, health insurance has been found to be successful in decreasing financial barriers to health services and increasing utilization of health services especially among the poor, and to contribute to increasing efficiency and quality of care overtime (Schneider and Dmytraczenko, 2003). However, some other factors, such as individual perceptions, militate strongly against these positive attributes of health insurance schemes. Accordingly, perceptions on mutual health insurance schemes (MHIS)

are primarily based on personal experiences and the experiences and reports of neighbours. A study conducted by Okaro et al (2010) to assess the knowledge and attitude towards the NHIS among radiographers in South East of Nigeria using a cross-sectional prospective survey design found that there was high level of awareness of the existence of NHIS in Nigeria among the radiographers (100%). The Radiographers also showed positive attitude towards the scheme and agreed that NHIS is capable of improving healthcare delivery in Nigeria. The study however concluded that the awareness of the existence of the scheme was not translated into knowledge of principle of operation of the scheme. In another study, Mohammed et al (2009) investigated the perceptions of formal-sector employees on the health insurance scheme in Nigeria using both quantitative and qualitative research methods. Findings revealed that respondents' knowledge on the basic benefit package of the scheme was a little below average though a higher percentage (74%) of the respondents agreed that the NHIS had helped to solve their health expenditure problems. Again, clients' satisfaction with health services under the scheme was affected by the unavailability of drugs in the hospital and poor attitudes of health personnel. Furthermore, Bruce et al (2007) in a study of community satisfaction, equity in coverage and implications for sustainability of the Dangme West health insurance scheme found that clients had both positive and negative perceptions about the scheme. The findings of the study revealed that community members found the scheme to have been financially useful to them as they could access health care services without the need to worry over money, especially in emergency cases. On the other hand, Bruce et al (2007) found that the negative experiences with provider attitudes and low quality of care for clients of the few households who had ever-registered in the scheme seemed to outweigh the positive experiences and was a source of discouragement to some households which had never registered with the scheme. In addition, it was found that information, education and communication about the health insurance scheme was inadequate. They found

that high percentage of households had never heard about the scheme that was in its third year of operation.

2.2.2 Knowledge and Perceptions on Health Facility Delivery

Studies conducted across the world found that while many women do not have access to good quality health services, especially in developing countries, the few that have access to health facilities have many challenges, including health system barriers to battle with. Women who seek skilled care, especially for childbirth, expect kind, courteous and professional treatment from health workers and anything less than that force them to look elsewhere the next time they are pregnant and may not recommend those health services to other women (D'Ambruso et al, 2005). Documentation of studies conducted in Ghana suggested that women did not receive the care they expected from skilled attendants as some women had to deliver on their own in the same unhygienic manner as in the home due to inadequate care from health personnel (Geurts, 1997). Other women, including family members, also see hospital delivery as dangerous because of caesarean section and episiotomy (Seljeskog et al, 2006; Geurts, 1997). In an explorative study in rural Malawi, Seljeskog and colleagues indicated that fear of having an operation was one of the reasons women did not go for a hospital delivery. Caesarean sections were in general considered as negative because "*a woman is born to deliver vaginally.*" It was also mentioned that it was dangerous and that the reason for having an operation was being lazy. In addition, "*those who have an operation, they get fluids and blood which is a threat to our culture*" (Seljeskog et al, 2006). In another study in Ghana, health facility delivery was also seen by women as a lone fight devoid of social support resulting in an increase in the pain and fear already associated with delivery (Geurts, 1997). Health professionals are also unable to assure women of confidentiality of information given as well as the privacy needed to express their feelings and emotion. Evidence available revealed that health professional are perceived by women as people who

do not respect medical confidentiality, especially in smaller communities where personal relationships among patients and clinic personnel existed in social network outside the clinic setting (Cook and Dickens, 2001).

Another qualitative study (Ngula, 2005) involving 40 purposively sampled women from two rural clinics of Okakarara district in Namibia was conducted to assess the knowledge of women on the benefits of delivery in a hospital, barriers to skilled delivery services and their perception of the skilled delivery services rendered in the maternity ward of Okakarara hospital. Findings from the study revealed that the pregnant women knew and appreciated the benefits of delivering in health facility though sometimes they found it difficult to access skilled delivery services due to socioeconomic, cultural and service related factors. Socioeconomic and cultural factors identified included long distances and lack of transportation to health facility and availability of TBAs nearby. Women equally expressed concerns about the negative attitude of nurses, lack of communication, inadequate health education and shortage of medicines in health facilities. D'Ambruoso, Abbey and Hussein (2005) investigated women's accounts of interactions with health care providers during labour and delivery and also assessed the implications for acceptability and utilization of maternal health services in Greater Accra, Ghana. They conducted 21 individual in-depth interviews and two focus group discussions with women of reproductive age who had delivered five years prior to the study. They investigated women's perceptions and experiences of care in terms of factors that influenced place of delivery, satisfaction with services, expectation of care and whether they would recommend services. The findings of the study indicated that staff attitude was of great importance to women and had considerable influence on acceptability and utilization of services. Also, a successful labour outcome and non-medical factors such as perceived quality of care and proximity of skilled care were instrumental on women's decision to seek skilled care. Their findings further revealed that

women expected humane, professional and courteous treatment from health professionals and a reasonable standard of physical environment. Therefore women consciously changed their place of delivery and recommendations to others if they experienced degrading and unacceptable behaviour. These findings suggest that interpersonal aspects of care, which governs satisfaction, are paramount to women's expectation of quality of skilled care.

Patient satisfaction of care is increasingly gaining recognition as an important component of quality care. Often, satisfaction with care determines patient willingness to seek skilled care and to comply with treatment and referral recommendations (Andaleeb, 2000). According to Andaleeb, growing evidence suggest that perceived quality of care may have considerable influence on childbirth care-seeking than do access and cost. In the developed countries, it is widely accepted that quality maternity care should be both woman- and family-centered, considering women's and family views on their rights to choice, control and continuity of care (Moore et al, 2002). Documented research findings suggest that although women recognized the safety and other advantages of health facility-based delivery with skilled attendant, they still chose home birth with a TBA because they valued the caring and supportive behaviour available in that environment (Moore et al, 2002; Geurts, 1997). Though increasing skilled care at birth is recognized as the single most crucial intervention to improve maternal health (World Health Report, 2005; Ransom and Yinger, 2002), negative client perceptions about skilled care coupled with discourteous, inattentive and inhumane staff behaviour deter women from utilizing skilled childbirth care. There is increasing documentation of intentional humiliation of women during childbirth, neglect and verbal or physical abuse, affecting access, compliance with treatment, quality and effectiveness of maternity care (D'Ambrouso et al, 2005; Gleib, Goldman and Rodriguez, 2003). Studies conducted in Ghana (GHS, 2007; D'Ambrouso et al, 2005; Ghana/SAPRI, 2001; Geurts, 1997) strongly show that quality of health services in Ghana is woefully inadequate and

unacceptable. Prominent among factors contributing to the poor quality of health care delivery is poor staff attitude though there are also concerns about inadequate infrastructure, inadequate equipment and supplies as well as inadequate and aged staff (GHS, 2007; D'Ambrouso et al, 2005; Geruts, 1997).

Concerns about quality of care often differ between clients and health care providers (GHS, 2007). The authors noted that clients based their satisfaction on the quality of healthcare on issues such as affordable fees, promptness of attention, good staff attitude, respect for patients and their rights, provision of privacy and confidentiality, provision of adequate information, availability of drugs and other logistics and clean environment. Key informant interviews conducted by GHS (2007) revealed that informants consistently lamented the poor attitude of staff towards patients while members of the field team involved in carrying out the study reported directly witnessing instances where clients were denied better attention, including inadequate explanation on drugs given them. Providers' perspective of quality care on the other hand focused on whether services were rendered according to the standards and ethics of the health profession. Health care providers were indicated to have based their assessment of quality care on the availability of standards, outcomes of treatment, a conducive environment (safety and team work), human resource development, adequate drugs, logistics and other inputs.

2.3 ROLE OF HEALTH INSURANCE ON THE UTILIZATION OF HEALTH SERVICES.

Labour and delivery is the shortest and most critical period of the pregnancy-childbirth continuum because most maternal deaths arise from complications during delivery. Even with the best possible antenatal care, any delivery can become a complicated one and, therefore, skilled assistance is essential to a safe delivery (Brugiavini and Pace, 2010). Since

cost is often a main barrier to accessing skilled health care, health insurance serves to mitigate the cost of care (Breen, 2011). In recent years health institutions and programmes worldwide have dedicated appreciable amount of resources to improve women's and children's health, including their access to effective quality health care. In many countries, health insurance has proven to be a valuable tool to improve access to care and respond to overall equity and sustainability goals (World Health Report, 2005; Ransom and Yinger, 2002). Also, experiences in Bolivia and Rwanda show that financial reforms, particularly in the form of health insurance, can lessen constraints to financial access to health care and increase utilization of maternal health services by poor households (Carrin et al, 2006).

2.4 SKILLED BIRTH ATTENDANTS AT DELIVERY

The presence of SBAs during delivery is crucial. Research findings suggest that although all women and babies need pregnancy care, care at childbirth is most important for the survival of pregnant women and their babies (Thind et al, 2008; World Health Organization; 2004). Li-Mei Chen et al (2001) examined the impact of the implementation of a national health insurance plan in 1995 on the utilization of prenatal and intra-partum care services using nationally representative surveys of all pregnant women in Taiwan in 1989 (1,662 participants) and in 1996 (3,626 participants) by first comparing the distribution of birth characteristics between the two surveys. Thereafter, they calculated the rate of utilization of various prenatal and intra-partum care services in the two surveys in the overall sample and in subsamples, stratified by maternal education, age, and parity. Results showed that the utilization of most prenatal and intra-partum care services, especially the complicated laboratory tests, increased in 1996 compared to 1989. For example, the proportion of women who received amniocentesis increased from 1.62% in 1989 to 5.60% in 1996 and German measles testing increased from 5.96% to 27.11%. For family planning services however, consultation declined from 33.21% to 27.00%. These changes in utilization over time were

consistently observed across different maternal education, age, and parity groups. One can therefore conclude that the utilization of prenatal and intra-partum care services, especially for the more expensive services, has substantially increased in Taiwan since the implementation of the national health insurance plan. Again, a study carried out by USAID in 2009 on *Maternal Health in Ghana: Investigating the Impact of the National Health Insurance Scheme on Maternal Health Indicators* observed an increase in the proportion of skilled delivery among insured women. In another study by Mensah et al, (2010), on *Ghana's National Health Insurance Scheme in the Context of the Health MDGs – An Empirical Evaluation Using Propensity Score Matching*, concluded that the NHIS women were more likely to receive prenatal care, deliver at a hospital, have their deliveries attended to by trained health professionals, and experience less birth complications. Hence, they stated that NHIS is an effective tool for increasing health care access and improving health outcomes.

Evidence also establishes a strong association between having a SBA at delivery and reducing maternal mortality. For example, by providing professional midwifery care at child birth, industrialized countries halved their maternal mortality ratios in the early 20th century (WHO, 2007). Similarly, in the 1950s and 1960s, Malaysia, Sri Lanka, and Thailand halved their maternal mortality ratios within 10 years by increasing the number of midwives (World Health Organization, 2007). International community agreed at the special session of the United Nations General Assembly in 1999, that globally 80%, 85% and 90% of all births should be assisted by SBA by 2005, 2010 and 2015, respectively, World Health Organization (2008). The WHO strongly advocates for skilled care at every birth to reduce the global burden of 358,000 maternal deaths, 3 million stillbirths and 3.7 million newborn deaths each year (WHO; 2006).

2.5. DETERMINANTS OF THE USE OF SKILLED BIRTH ATTENDANTS

The use of health services is influenced by the characteristics of the health delivery system for example, accessibility, quality, and cost of the services (Seljeskog et al, 2006; D'Ambruoso et al, 2005; Ngula, 2005). However, even where there is a good supply of services, those services may not be fully used. Even under the same circumstances of availability, some women are more likely to use services than others. Therefore, a health services delivery system is not the only factor that determines the level of use of health care services. Other factors such as social characteristics and structure influence the use of health care services (Mrisho et al, 2007; Gyimah et al, 2006). Several studies emphasize factors like cultural beliefs, socio-demographic characteristics, economic conditions, and physical and financial accessibility to be important determinants of the use of maternal health care services (World Health Report, 2005; Shaikh and Hatcher, 2004; AbouZahr, 2003; Moore et al, 2002; Ransom and Yinger, 2002).

2.5.1 Demographic Determinants

Demographic determinants of the use of skilled attendant at birth reviewed in this study include: maternal age, marital status, polygamy, household size and residence.

2.5.1.1 Maternal Age

According to Yanagisawa et al, (2006), women's age is an important factor which may influence the use of maternal health care services. The association between a woman's age and the use of medical services has been found to be inconsistent across studies. Because of greater exposure to and knowledge of modern healthcare, younger women may make more use of modern health care facilities than older women. Several studies show older women are less likely to use skilled delivery assistants (Thind et al, 2008; Mrisho et al, 2007; Celik and Hotchkiss, 2000). A women's age, however, may act as a proxy for the woman's

accumulated knowledge of health care services. Moreover, women acquire experience and skills with age. Therefore, older women may use more health care services than their younger counterpart. A study in Bangladesh suggests a U-shaped relationship between mother's age and use of skilled assistance (Chakraborty et al, 2003). Additionally, in the words of Yanagisawa et al (2006) women who have had previous, successful deliveries without a skilled attendant are less likely to seek such assistance in further births.

2.5.1.2 Marital Status

According to (Breen, 2011), Marital status has been shown in qualitative research carried out on maternal health in Zambia to have an important impact on access to healthcare services during pregnancy, with those who were married more likely to receive health care access during pregnancy.

2.5.1.3 Polygamy

Many studies have confirmed that, polygamous relationships have a negative effect on a mother's receipt of adequate care during pregnancy and childbirth. For instance, in the study on Mobilizing Access to Maternal Health Services in Zambia (MAMaZ), females who were in polygamous marriages, particularly if they were the older wives tended to be excluded and had a higher likelihood of being the victim of domestic violence (Breen, 2011). This may lead to a lack of confidence to seek the necessary care for themselves and their children.

2.5.1.4 Parity

Similarly, several studies indicate a negative association between higher birth order and the use of maternal health care services (Babalola and Fatusi, 2009; Gabrysch and Campbell, 2009; Ekale and Tunau, 2007). A study from India affirms that women with more than two children are less likely to deliver at health facilities (Thind et al, 2008). A study from Nigeria

also indicates that women with three or more children are less likely to use SBAs at delivery (Babalola and Fatusi, 2009). An analysis of the 1993 Turkish Demographic Health Survey showed that women having their first childbirth were significantly more likely to use professional delivery assistance from skilled personnel than women in the higher birth order (Celik and Hotchkiss, 2000).

2.5.1.5 Place of Residence

Place of residence is also a well-recognized factor that can affect a woman's use of health care service. Living in urban areas increases the probability of pregnant women using skilled assistance at delivery (GDHS, 2007; CWIQ, 2003). A systematic review of inequalities in the use of maternal health care in developing countries states that urban women are more likely to deliver with assistance from skilled health personnel than rural women (Say and Raine, 2007). Similarly, a study in Bangladesh suggests that the use of SBAs is higher among urban women compared to rural women (Anwar et al, 2008). Urban women tend to be more educated than rural women, which broadens their knowledge about the benefits of modern health care services (Gabrysch and Campbell, 2009). Thus, the urban women may make use of more health care facilities compared to their rural counterparts.

2.5.1.6 Household Size

Household size is an important determinant of health care utilisation. Living with an extended family may influence decision-making power of the woman; and the number of small children at home may also be an indicator for socioeconomic status of the household (Gabrysch and Campbell, 2009). Women from large families underutilize various health care services because of excessive demands on their time. Larger families also cause resource constraints, which have a negative effect on health care utilisation (Gage and Calixte, 2006; Chakraborty et al, 2003; Mekonnen and Mekonnen, 2003).

2.5.2 Socio-economic Determinants

Socio-economic factors such as education, occupation, income, decision making and religion, are also known to have influence on women behaviour towards seeking health facility delivery services in various settings.

2.5.2.1 Maternal Education

It is well-recognized that parental education, especially mother's education, plays an important role in the use of skilled assistance at delivery. Association between women's education and the use of maternal health care services is evident (Babalola and Fatusi, 2009; Gabrysch and Campbell, 2009; Stephenson et al 2006). The mother's education emerged as an independent factor in determining the choice of delivery under skilled supervision in a study from Tanzania (Mrisho et al, 2007). Educated women have better knowledge on current health practices, as they are more accessible to resources than their less educated counterparts (Gabrysch and Campbell, 2009). This, in turn, may influence educated families to use proper medical care whenever they perceive it to be necessary. A study of analysis of choice of delivery location reveals that parental education is a predisposing factor in determining the choice of facility for delivery with skilled attendants (Mekonnen and Mekonnen, 2003).

2.5.2.2 Income

Furthermore, studies find a positive association between economic status and the use of skilled assistance at delivery (Kupari, 2005; DFID, 2004; Lewis 2003). A study from India indicates that low use of maternal health care services is due to low level of household income (Shariff and Singh, 2002). A similar study in Nigeria points out a significant association between household socio-economic status and the use of skilled assistance at delivery. The study affirms that the use of skilled assistance at delivery is more than four times higher among women from rich and very rich households compared to the women from

very poor households (Babalola and Fatusi, 2009). Likewise, evidence from Ghana shows that household economic status is an important factor associated with the use of professional assistance at delivery (USAID, 2009). However, some studies argue the association between economic status and the use of skilled assistance at delivery (Falkingham, 2003; Gleit and Goldman, 2000).

2.5.2.3 Occupation

Additionally, the occupation of the woman or husband also plays an important role in the use of maternal health care services by the pregnant women. The occupation of the husband may also serve as a proxy for family income and status, which serves as a significant factor in the use of skilled assistance at delivery (Gabrysch and Campbell, 2009; Chakraborty et al, 2003).

2.5.2.4 Religion

Religion and the gender of the household head influence the pregnant women in using services to treat and prevent maternal morbidity and mortality. A study from Bangladesh reveals that the use of skilled attendants at birth is higher among women from Hindu religion compared to women from Muslim religion (Anwar et al, 2008). On the other hand, studies in India claim that Muslim women are more likely to deliver with skilled assistance compared to women from Hindu religion (Thind et al, 2008).

2.5.2.6 Decision Making

For instance, in most African settings, men's decision-making authority over women impedes their use of reproductive health-care services (Jansen, 2006). This fact was clearly revealed by Jibo (2004), who studied women in Shekar Maidaki village in Kano state where he found that the two main reasons for non-utilization of maternity care services amongst the women are spousal inhibition and access to experience traditional birth. Evidence from Bangladesh

(Lule et al, 2005), revealed that poor households turn to rely on free and low-cost services for women as husbands are unwilling to spend their household income on preventive care and treatment for women and especially for family planning. Recent studies in Northern Nigeria suggest that it is often men rather than women who make the decision to have more children, that is, men's views are more influential than women's views in making family decisions (Gazali et al, 2012). Similar findings were revealed by studies among some of the major ethnic groups in Borno State by Waziri, (2004) and among the Hausa of Kano state by Adamu (2001). In their studies they indicated that men, because of their position in a patriarchal society, make it difficult for the women to adopt family planning without the consent of their husbands who usually oppose the idea. For instance, among some of the major ethnic groups in Borno state, particularly the Kanuri, Shuwa and Ba'aru, large family symbolizes higher status for members of the family. Politically, it makes the family more relevant and religiously, it gives them the satisfaction of fulfilling an obligation – to marry and reproduce, so that the *ummah*-(followers of Prophet Mohammed) will increase (Waziri, 2004).

2.5.3 Health Related Determinants

Health related factors that influence maternal health behaviour of women reviewed in this study are: quality of care, availability of a functioning health facility, distance and means of transport to health facility, use of ANC services, previous health facility delivery and health status and birth complications.

2.5.3.1 Quality of care

Perceived quality of care, which only partly overlaps with medical quality of care, is thought to be an important influence on health care-seeking. Assessment of quality of services depends largely on people's own experiences with the health system and the experiences of

people they know (D'Ambruoso et al, 2005). In many cases, the medical 'culture' may clash with the woman's, for example, when family members are not allowed to be present, supine birthing position is imposed or privacy not respected; this may lead to perceptions of poor quality (D'Ambruoso et al, 2005; Mrisho, 2004). Some studies mention that women report better quality of care in private facilities, but that cost deters them from using those health facilities (D'Ambruoso et al, 2005; Mrisho, 2004; Griffiths and Stephenson, 2001). Quality of care is believed to be an important factor in service utilization, with individuals even travelling further than necessary in order to reach a facility that they believe to be of superior quality (Kruk et al, 2009; Anson, 2004).

2.5.3.2 Availability of a Functioning Health Facility

The availability of a functioning health facility allows women greater access to information and knowledge regarding modern health care facilities, which influences them to use the facility. This is supported by studies showing that women who live more than five kilometers from the health facility are significantly less likely to receive skilled assistance at delivery (Anwar et al, 2008; Ngula, 2005).

2.5.3.3 Distance and Means of Transport to Health facility

Distance to health services acts in two ways to affect health care seeking behaviour. Firstly, it discourages women from making a decision to seek skilled care in the first place (Ramson and Yinger, 2002) and as an actual obstacle to accessing care after an individual has decided to seek it (Ngula, 2005). The obstacle provided by distance is magnified when combined with lack of transport and poor roads, but this disincentive is believed to be less pronounced when women have serious complications or the reputation of the provider is good (Yanagisawa et al, 2006). Despite this, qualitative studies often cite distance as an important barrier in stopping delivering in facilities, which may be particularly salient when labour starts

unexpectedly or at night. Quantitative studies have also concluded that longer distances to a facility are positively related to lower utilisation rates. In studies where distance did not seem to have an effect on delivery attendance, the authors concluded that health care and transport infrastructure in the area were good (Duong et al, 2004; Paul et al, 2002); which meant that distance differentials became small and relatively unimportant. Despite the clear importance of distance or travel time to health facilities, it is often not included in studies on the determinants of skilled attendance, partly due to inadequate data (Stephenson and Tsui, 2002; Gage and Callixte, 2006).

2.5.3.4 Previous health facility delivery use of services

Prior use of health services for delivery has been found to be positively associated with subsequent usage (Breen, 2011). A study conducted on *Delivery Practices and Associated Factors among Mothers Seeking Child Welfare Services in Selected Health Facilities in Nyandarua South District, Kenya* by Wanjira et al (2011) shows that there was a significant association between the first place a mother delivered and the last place (OR 3.9, 95% CI 2.3-6.6, $P < 0.001$) among the mothers who had delivered more than once. During her subsequent deliveries, a mother was 3.9 times more likely to deliver in the same place they delivered during their first delivery.

2.5.3.5 Use of Antenatal Care

The relationship between use of ante-natal care (ANC) and further maternal health care services such as skilled attendant at delivery or delivery in a facility is complex. A study in Mali found that the level of ante-natal care uptake was highly predictive of women's health facility use for delivery (Stephenson et al, 2006). In another study, women who did not use ANC were described to be mishandled and abused by nurses when they sought skilled delivery services. This was shown to deter women without ANC records from seeking

delivery services (Amooti-Kaguna and Nuwaha, 2000). In Ghana however, some documentation shows that ANC attendance is not positively associated with skilled delivery (GHS, 2007).

2.5.3.6 Health Status and Birth Complications

Health service utilization is found to be associated with the individual's perception of illness and its severity or the probability of an illness occurring and needs as evaluated by a health professional (Anderson and Newman, 2005; Burgard, 2004; Rebhan, n.d.). A woman's need for skilled health care may be influenced by past experiences in pregnancy and childbirth or personal preferences. Thus, perceived need serves as a stimulus for the use of health services. Perceived illness can be measured by the number of disability days and symptoms experienced by the individual during a specified time frame (Anderson and Newman, 2005).

2.6 CULTURAL BELIEFS AND PRACTICES THAT DISCOURAGE WOMEN FROM SEEKING SKILLED CARE AT BIRTH

As social beings the determinants of an individual's health extend beyond individual and household risk factors to community influences on individual health. Many women carry and bear children under difficult conditions, which, over the long term, compromise their health or even their life. This begs for ethical solutions of which biomedical knowledge and technical intervention would form a part. Although the cultural/moral stakes involved in childbirth are less easily gauged via public health statistics than are the physical stakes, birth can go 'wrong' in the cultural/moral realm as well as in the physical realm, causing yet other kinds of pain and suffering (Gazali et al, 2012; Davis-Floyd et al, 2001). There exists a wealth of studies not only on local birthing customs, but also of the negotiations that take place among birthing women, their families, birth attendants and health care professionals trained in biomedicine (Stephenson et al 2006, Davis-Floyd et al, 2001). Local cultural norms

that govern women's reproductive lives have profound effect on their health and mortality. Some of these cultural norms include men's decision making authority, beliefs about health risks, desired high fertility, early marriages, son preference and male health care providers.

2.6.1 Taboos on Medical Diagnostic Examinations

Socio-cultural norms also influence inappropriate and ineffective health seeking behaviours and health delivery. For example, male village-level health providers in India reported that taboos prohibit them from conducting physical examinations or invasive diagnostic and therapeutic procedures on rural women, a situation that resulted in them providing care that was ineffective and more expensive (e.g. pills and shots) and can delay correct diagnosis and access to appropriate facility-based care (Johntson et al, 2003). In rural Indonesia, it is reported that husbands generally disapprove of their wives having their reproductive health checked by male medical professionals, which was a difficult situation when there were no female trained health care workers available. This situation was compounded when rural women also report that they do not feel comfortable receiving reproductive care and treatment from a male doctor (Umar et al, 2006).

2.6.2 Fidelity Proof

According to Seljeskog et al (2006) in a study on *factors influencing women's choice of place of delivery in rural Malawi*, other important factor women choose home birth is to prove fidelity to the husband so the child can be accepted as legitimate in the family. Most of the women narrated that if they could choose, they would prefer to deliver in a health institution assisted by a professionally skilled person. The reasons given by the women for choosing to deliver at health facilities included; solving health problems associated with labour and delivery as a safety measure to ensure a positive outcome. Nevertheless, the decision to have skilled delivery was strongly influenced by other members of the household. Older women in

the family like mothers, grandmothers and mothers-in-law as well as the husband, were mentioned as decision-makers (Seljeskog et al, 2006). If someone from the family did not witness the delivery, they might reject the child: *"If a woman delivers at hospital, the husband says:-that's not my baby"* (Seljeskog et al, 2006).

2.6.3 Magico-Religious Beliefs

Socio-Cultural factors are associated with the traditions, norms and values of people that affect the way and manner in which they seek medical help on health related problems. Culture incorporates belief system that underlies the perception and interpretation of diseases and illness in societies (Gazali et al, 2012). In Africa and most developing countries, diseases and sickness are attributed to witchcraft, sorcery and mystical forces; hence illness and diseases are perceived, evaluated and acted upon in line with these beliefs that are why they seek medical help from assorted traditional healers. Patients want to use traditional medicines or the services of traditional healers at the onset of ill health. More importantly due to the attitude of relating diseases and sickness to magico-religious factors the people in such communities or societies appear to have greater confidence in the therapeutic skills of traditional healers (Mairiga, 2003). According to Raju (2000) some of the socio-cultural practices and superstitious beliefs and practices relating to the concept of causality in which illness and other misfortunes are attributed to evil spirits are wide spread among many ethnic groups in Nigeria. As a result women in many communities in Nigeria seek medical treatment only as a last resort, after first attempting to appease these evil spirits. Also, in a study of rural childbirth practices in Ghana, Geurts (1997) found out that performance of rituals to reverse a curse or an attack of evil spirit was an important component of home birth even in the case of emergency situation.

2.6.4 Placenta Disposal

A study conducted by Sychareun et al (2009) *on Cultural Beliefs and Traditional Practices on Child Birth in Lao PDR* found that the placenta was buried deep down into the earth by the husbands behind the house because they thought it was dirty and they could not just draw it away. Additionally, he reported that fire was started around the burial place in order to prevent spirits and animals from reaching the placenta. The study population believed that if any of them touches the placenta, the lochia might dry up and the baby could be afflicted with diarrhoea. One participant in the study narrated: *“I buried the placenta in the ground floor near the stairs and made a fire near that place. It is believed that if we bury the placenta away from the house, the child would go away. The fire is related to the belief of expelling the umbilical cord quickly”*. Embedded in these findings are both positive and negative cultural practices that inevitably affect the health status of women and newborns. Therefore, women should be educated on the harmful effects of some cultural practices, and village influential leaders persuaded to discontinue such harmful cultural practices; particularly those that effect the health of the family and the community at large.

2.7 CONCLUSION ON LITERATURE REVIEW

Extensive review of literature revealed that much work has been done on perceptions, patterns and determinants of maternal health care utilization among rural women in other settings. Various explanations were available for the few women delivering under skilled care and included demographic, socio-economic, physical and cultural and negative staff attitude. It is also evident that the determinants are not consistent in different regions and countries; they vary within and between regions and countries. Additionally, the MHIS under the NHIS is relatively new concept of health care financing in Ghana and little literature is available on the influence of MHIS on skilled delivery in Ghana. Therefore, gaps existed on the perceptions of women of the UWR on skilled delivery and the influence of the MHIS in

improving women's' access to and utilization of skilled delivery services. It is hoped that findings from this study may throw more light on how the MHIS has influenced the use of skilled care at birth among women in the Upper West Region.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

This chapter provides an insight into the study type, the methods, the population, the sample and sampling technique. It further presents the interventions used to improve quality of data, the data collection procedure and finally the data analysis.

3.1 TYPE OF STUDY

A descriptive and cross-sectional design with both qualitative and quantitative approaches was used for this study. This approach allowed the researcher to collect information on and analyze researchable subjects or situations in a retrospective manner. Primary data was collected by face-to-face interview using structured and pretested questionnaire. In addition to the primary data collected from the participants under study, key persons such as healthcare providers and scheme managers were interviewed to obtain complementary information about the scheme and healthcare delivery. Again, focused group discussions were organized at that community level to complement information gathered from the participants been studied. However, annual health reports of the districts were not available for assessment for trends in health services utilization.

3.2 STUDY AREA

The study was conducted in the Upper West Region. Upper West Region is situated in the north- western part of Ghana. It is bordered to the south by the Northern Region, to the north and west by Burkina Faso and to the east by the Upper East region. It covers a geographical area of about 18,476km², which constitute 12.7 percent of the total land area of Ghana. The projected population from the 2000 census is 627,578. The population of women in the fertility age (15-49 years) is 127,516 in the Upper West Region. The region is divided into

nine (9) districts. The main occupation of the people is farming. This is just for the short period of the rainy season from May-October. This leads to seasonal migration of mostly the able youth from the region to the south, especially to the Brong-Ahafo, Ashanti and Eastern regions during the long dry season. This mobility has implication for communicable disease spread and control as well as access to skilled care at birth by pregnant women (GHS/UWR, 2007).

The women in the area are mostly engaged in *pito* (locally brewed alcoholic beverage) brewing as a secondary occupation in order to strengthen their coping strategies of their livelihoods. The area is one of the most deprived regions, in terms of social services, and development in the country. Majority of the people have no regular source of income. They depend on their farm produce and the animals they rear (GHS/UWR, 2007). The region has the smallest number of kilometers of tarred roads. Only two of the district capitals are linked to each other and to the regional capitals by tarred roads. During the rainy season travelling within and out of the region by road becomes a nightmare. However, the region has three FM radio stations that broadcast in English and in two local languages (Dagaare and Sissali). The telecommunication situation is generally poor. Christianity, Islam and Traditional religions are the predominant religions.

Traditional life and beliefs, like elsewhere in the country, are more prominent in the rural communities. The three major ethnic groups in the region are the Dagaabas, the Sissalas and the Walas. Marriage is generally polygamous, with the extended family system of living, making sharing of resources the order of the day. According to GHS/UWR (2007) the family organisation in the region reflects male dominance and a relatively low status of women. There are four district hospitals and one Regional Hospital. The Regional hospital operates more or less as a district hospital because of lack of requisite personnel and facilities. There

are also three private Maternity homes/clinics, three private hospitals and five private clinics providing services in the region. From the 2007 annual health report of the region, there are 966 trained Traditional Birth Attendants. However, the hospitality of the people can be experience across the length and breadth of the region (GHS/UWR, 2007).

3.3 POPULATION OF THE STUDY

3.3.1 Population for Quantitative Data

Women in the fertility age (WIFA) in the UWR constituted the target population. However, the accessible population was made up of women in the WIFA group in the three selected districts (Jirapa, Nadowli and Wa) who had delivered in the years 2006 and 2007 in the Upper West Region. The population of WIFA in the region was 129,760 in 2007 with 25,952 expected deliveries. In the three selected districts the WIFA was 91,036 and expected deliveries were 18,208 (GHS/UWR, 2007).

3.3.1.1 Inclusion Criteria for the Study

The inclusion criteria considered all women who delivered in the region in the years 2006 and 2007 and were resident in the region at least six months prior to their delivery within the specified period. Additionally, women in the above category indicated their willingness to participate in the study by signing or thumb-printing a written informed consent form.

Therefore, the terms ‘respondents’ and ‘women’ are used interchangeably in the study.

3.3.1.2 Exclusion criteria for the Study

The study excluded all women who delivered outside the region in the years 2006 - 2007. Also, women who were resident in the region less than six months prior to their delivery within the specified period were excluded from the study. Women who indicated their

unwillingness to participate in the study by refusing to sign or thumb-print a written informed consent form were excluded from the study.

3.3.2 Population for Qualitative Data

3.3.2.1 Key Informant Interviews with Health Workers and MHIS Officers

In this category, the key informant interviews were conducted with the regional coordinator for reproductive health, two Medical Directors and two Deputy Directors of Nursing Services in-charge of the selected districts hospitals. Additionally, the Public Health Nurses in-charge of reproductive health and Maternity ward in-charges of the three district hospitals were also interviewed. Key informant interviews were also administered to Managers, MIS officers of the MHIS and Claims managers in the three districts.

3.3.2.2 Focus Group Discussions (FGDs)

Three FGDs for men, one in each district, were held with a maximum number of 10 men per group (total of 29 men). The selection of participants was purposeful and included men who were 25-55 years, were fathers and showed interest to be part of the study. Further, the same number of FGDs was conducted for women (total of 30 women) who were 15-55 years, were mothers and indicated their consent to be part of the study in the same manner.

3.3.2.3 Reasons for Choosing the Site for the Study

The region was selected for this study for a number of reasons. These included the fact that language will not be a barrier to the researcher, maternal and child health indicators are consistently shown to be poor in the region (GHS, 2007; MICS, 2007; GDHS; 2003) and the observed high illiteracy (74.6%) and unemployment rates (CWIQ, 2003). The researcher also noted that very little research work has been done on utilization of skilled care at birth in the region. Finally, as a rural settlement it is appropriate that pro-poor policies such as the MHIS

meant to address inequities in access to and utilization of health care are monitored within such already vulnerable population for progress.

3.4 SAMPLE AND SAMPLING TECHNIQUE

3.4.1 The Sample

The two districts (Jirapa/Lambussie and Nadowli) and Wa municipality were selected for the study using the lottery method of the simple random sampling technique. Using the same method three communities were selected in each district.

3.4.2 The Sample Size

The sample size was determined using the formula: $N = [Z^2 / e^2] pq$.

The letter N in the equation represents the minimum sample size needed to make statistically inferential analysis and conclusions from the study. The letter Z (with a value of 1.96) is fraction of area under a normal distribution curve covered by 2 standard deviations on either side of normal distribution. The letter e describes the absolute level of error tolerated (5% chance of error). The letter P represents the average proportion of women who received skilled care at delivery (31%) at the region for the years 2006 (27.5%) and 2007 (34.5%). It was also anticipated that 20% of the sample might not respond to the questionnaire. Consequently, the sample size was estimated to be 400 participants.

3.4.3 Sampling Process for Quantitative Data.

The multistage cluster sampling technique was adopted in the sampling process. Each of the nine administrative areas (clusters) in the sampling frame were given a unique number, the first being 0 and the second 1 and so on. Three sample clusters (Jirapa, Nadowli and Wa) were selected from the sampling frame of the local administrative areas using the lottery method with replacement. In each of the selected clusters (local administrative areas), the

lottery method was once again used to select three communities. Then, in each of the selected communities a systematic sampling technique was used to select households where a respondent each was interviewed. Where a household had more than one illegible respondent, one was randomly selected. Where there was no eligible respondent in a selected household, the next household within the systematic sampling frame was selected. To start with, in each of the selected districts, all households were labeled and every third household was selected until the required numbers were obtained. The details are shown in table 3.1.

TABLE3. 1 DISTRIBUTION OF THE SAMPLED COMMUNITIES WITH THEIR SAMPLE SIZES

District/ municipal	Community 1	Community 2	Community 3	Total
Jirapa(Jirapa , Gbaare and Ullo)	70	34	34	138
Nadowli(Nadowli, Sombo and Yiziiri)	60	29	29	118
Wa(Zongo, Kabanye and Kpaguri)	48	48	48	144
Total	178	111	111	400

The sample size per the district and communities was approximately proportional to the populations of the districts and communities based on available records at the district health directorate on the number of expected pregnancies in each community.

3.4.4 Qualitative Sample and Sampling

In all, six FDGs were conducted, two in each of the three districts. Again, in each of the districts, one FGD was conducted for males and one for females. A purposive sample of 56 respondents was selected for six FGDs (7-10 in each group). Additionally, 13 key informants from the health sector and 7 key informants from the MHIS offices in the region were selected using purposive sampling approach for the in-depth interview.

3.5 VARIABLES SPECIFICATION

3.5.1 Dependent Variable

A categorical dependent variable was created based on the location of the most recent live birth. It was categorized as 'home' if the mother reported that the most recent live birth occurred at home or 'health facility' if the most recent live birth occurred in a government or private hospital, health center, or clinic.

3.5.2.1. Demographic Variables

The demographic characteristics of the participants included in the model were parity, age, marital status, marriage type, household size and residence.

Parity was categorized into four levels as below. Women with: one delivery (1) two to three deliveries (2-3), four to five deliveries (4-5) and six or more deliveries (6⁺).

Age was also grouped into four level categories such as: 15-24 years, 25 – 34 years, 35-44 years and those who were 45⁺ years.

Marital status was entered as single if respondent had never married, married if respondent was living with the husband and divorced/widowed/ separated if respondent had ever married but was living alone due to any of the three stated reasons.

Number of wives per husband was categories into one (1) if respondent indicated the husband had no additional wife, two (2) if respondent indicated the husband had an additional wife, three or more (3⁺) if respondent indicated the husband had two or more additional wives and single if respondent was not married.

Household size was also entered at four levels: women living in a group of: two to three (2-6) individuals, seven to eleven (7-11), individuals, twelve to fifteen (12-15), individuals and those living with more than 15 (16⁺) individuals.

Residence was categorized into rural (Jirapa, Nadowli) and urban (Wa).

3.5.2.2 Socio-economic Variables

Socio-economic variables included education, occupation, income, religion and cultural beliefs and practices relating to child birth.

Based on the highest level of education completed, the mother's education was categorized into four levels: no schooling, primary education, junior/senior secondary education and tertiary education (higher than secondary).

Occupation: Usual activity status during the last one year: broadly classified as unemployed, formal jobs (teaching/nursing), brewer (pito brewing), trader (petty trading), seamstress /weaver/hairdresser (dressmaking/hairdressing) and farmers.

Income level referred to the amount of fiscal cash earned from an income generating activity per month. This was grouped into the following levels.

Less than GH¢10, GH¢ 10 – GH¢200, GH¢201 – GH¢400 and GH¢ 401⁺

Religion was coded into three categories, Christianity, Islam and Traditional.

3.5.2.3 Health Related Variables

The health related variables used in this study were health insurance status, distance to nearest health facility, means of transportation to health facility, presence of health facility with trained midwife, number of antenatal visits, previous health facility delivery, health

status during pregnancy, previous miscarriages/abortions/stillbirths, full/part payment for prior health facility delivery and health care decision maker.

Health insurance status (dummy variable) was dichotomized into “insured” if a woman reported to have been duly registered with the scheme and entitled to the scheme package for delivery care at the period in question and “uninsured” if the woman reported otherwise.

Availability of a health facility with a trained midwife was categorized into two levels: “yes” if a woman indicated there was a health facility with a trained midwife in the community she lives and “no” if the woman reported that there was no health facility with a trained midwife in the community she lives.

Antenatal attendance was grouped into three levels: zero (0) if a woman reported she did not attend antenatal clinic during pregnancy, less than four visits (1-3) and those who visited the clinic four or more times (4⁺).

Previous health facility delivery was grouped into fives: none for those who did not experience health facility delivery before the index delivery, one (1) for those who had at least one health facility delivery before the index delivery, two- three (2-3) for those who had experience two to three health facility deliveries before the index delivery, four –five(4-5) for those who have had at least four-five health facility deliveries before the index delivery and six or more (6⁺) for those who had experience health facility delivery six or more times the last delivery.

History of fetal loss (miscarriages/abortions/stillbirths) was categorized into none, 1, 2 and 3⁺ as per respondent’s indication.

Health status during the last pregnancy was also assessed and participants' responses categorized as "unfit" if they experienced any ill health during the index pregnancy and "fit" if they did not experience any ill health during the index pregnancy.

Part/full payment for maternal health service utilization was measured and participants' responses categorized as "yes" they indicated part/full payment for maternal health service utilization before the index delivery and "no" if they indicated nonpayment for maternal health service utilization before the index delivery.

Distance to nearest health facility was estimated and categorized into "less than a kilometer", 1-5km and 5⁺km.

Healthcare decision-maker was also grouped into six categories: self, husband, jointly (respondent and husband), in-laws and parents as indicated by respondent on who was the major influence in the decision making on place of delivery.

Availability of means of transportation was categorized into three levels: "always" if a woman indicated that availability of transport was regular and frequent; "sometimes" if a woman indicated that means of transportation was erratic and "not available" if a woman indicated that means of transport was very rare in the community.

3.6 DATA COLLECTION TECHNIQUES AND TOOLS

Four main techniques were used in this study to collect the relevant data in this study.

A 45-item questionnaires were administered to women for the quantitative data and in-depth interviews conducted with health workers and MHIS officers using structured interview guides. Further, focus group discussions were held with men and women who were parents using structured discussion guides. The researcher also had an opportunity to observe procedures at health and scheme facilities levels. The questionnaires were in five sections.

Section A contained demographic and socio-economic data of respondents. Section B addressed women perceptions on skilled delivery. Section C dealt with women's perceptions on MHIS. Section D treated the influence of MHIS registration on skilled delivery. Finally, section E which treated issues on the influence of socio-cultural factors on women's negative attitude towards seeking skilled care and registration with MHIS. The FGD guide (structured questionnaire) for men and women investigated issues surrounding registration with the MHIS and utilization of services for skilled delivery. Included are in-depth interview guides for MHIS officers and health workers which also examined key issues affecting the implementation of the MHIS and skilled birth attendance in the region. Other tools used in the data collection and management include; audio tape recorder and a computer. The researcher also observed procedures at the insurance scheme offices and the health facilities for validation of information gathered from the respondents. The data collection covered the period 21st October, 2008 to 29th March, 2009. In-depth interviews with health workers and insurance scheme officials were conducted concurrently. Following that, the focus group discussions were conducted and finally, the questionnaires were administered to the respondents. Once completed, the data on the questionnaire were entered within a period of 17days using SPSS version 16. The FGDs were also transcribed from the local dialect into English with a help of staff of Ghana Institute of Languages and Bible Translation (GILBT), who were involved in the training and data collection processes and therefore understood the concepts entailed in the study. The data was then cleaned to further ensure completeness and validity.

3.7 QUALITY CONTROL MEASURES TO ENSURE RELIABLE DATA

To ensure the reliability and validity of the instrument, the questionnaires, in-depth interview guides and the FGD guides were given to friends and lecturers for validation. The corrected items were then presented to the supervisor for scrutiny and the necessary corrections were

made based on his suggestions. As in most surveys, question order and non-sampling sources of error can sometimes affect results. Steps were therefore taken to minimize these errors. These included pre-testing the survey instrument and modifying questionnaire to facilitate easy understanding and accurate responses. Three experienced research assistants were taken through a day's training on how to administer the questionnaires and conduct the FGDs. The research assistants were involved in the pretesting of the instrument and in collecting the needed data for this study. All administered questionnaires were examined for completeness and consistency at the close of each day of the data collection. Summary analysis was run after the data was entered and the data verified before the actual analysis was initiated. Data from the FGDs were translated and compared using notes from the rapporteur and the audio recorder within 48 hours to enhance accuracy. The same was done for the in-depth interviews conducted.

3.7.1 Pretesting the Instrument for Validation

The questionnaires were administered to 60 nursing mothers who were within the inclusion criteria in Tizza, a suburb of Jirapa district prior to the actual survey. One FGD each was conducted with men and women in the same community. Again, one in-depth interview each was conducted with a health worker at the Jirapa sub-district health centre and a MHIS worker in-charge of issuing insurance identity cards at the Jirapa district. This provided the opportunity to restructure questionnaires, FGDs guides and structured in-depth interview guides for better understanding and clarity of the issues involved in the study.

3.8 DATA COLLECTION PROCEDURE

To ensure that all questionnaires got to the respondents, they were administered personally by the researcher and trained research assistants, and retrieved on the same day using face-to-face interviews approach because most of the women involved in the study could neither read

nor write on their own. Depending on the level of concentration and understanding of the respondent, an average period of 45 minutes to 1 hour was spent on each respondent. In-depth interviews were conducted at offices and work places of key informants at their own convenience. Almost all declined to have their voices recorded and audio tape recording of interviews was not done. Each interview lasted between 30- 45 minutes. Focus group discussions were held at social gatherings such as pito drinking points, groundnut cracking points, draft playing grounds and a marriage ceremony grounds. Participants' responses were recorded in writing and on tapes. Health institution and MHIS reports on the area of interest could not be reviewed and compared with data from the population for lack of properly documented records.

3.9 DATA ANALYSIS

The data was analyzed using the software of Statistical Package for Social Sciences (SPSS, version 16.0). The analysis was conducted by splitting the data set into insured and uninsured members of the MHIS and the finding compared between the two groups. Descriptive statistics were the main tools used in analysis of the quantitative data whilst qualitative data were analyzed using the thematic approach where qualitative data were used to support quantitative data where the two were considered to be closely linked, therefore allowing for recurrent use of qualitative data from the same data source. Frequency tables, bar charts and pie charts were used to describe findings under the themes outlined below;

- The demographic, socio-economic and health related characteristics of both insured and uninsured women;
- cultural beliefs and practices affecting health facility delivery;
- women's knowledge and perceptions on the MHIS and health facility delivery and
- the utilizations of health facility for delivery by insured and uninsured women

Bivariate analysis was also carried out to identify the demographic, socio-economic and health related factors that were significantly associated with the utilization of skilled care at birth using Pearson Chi-square test at $p > 0.05$. The Pearson Chi-square statistical tool was also used to test the hypothesis that proportion of skilled attendance at birth was the same among insured and the uninsured groups. The Test statistic: Phi coefficient (ϕ) was estimated from the equation: $\sqrt{\frac{\chi^2}{N}}$. The value ϕ (0 to 1) was used to determine the strength of the association between MHIS status and skilled delivery.

3.10 ETHICAL CONSIDERATION

The study protocol was made available to the University of Ghana's IRB based in Noguchi Memorial Institute of Medical Research committee for ethical clearance. All respondents selected for the study were granted the opportunity to make an informed decision through a written consent. Verbal consent was also sought from participants in the FGDs before the discussions were recorded. They were told that the recording of the discussions was necessary to help the researcher remember important issues that were raised in the discussions without linking such issues to any specific individual. Also there was no invasive procedure involved in data collection. Confidentiality and privacy were assured and subjects were free to withdraw from the study at any point when they felt disinterested to participate in the study.

CHAPTER FOUR

4.0 RESULTS

4.1 CHARACTERISTICS OF INSURED AND UNINSURED WOMEN

The results on the characteristics of insured and uninsured women are categorized into demographic, socio-economic and health related characteristics.

4.1.1 Demographic characteristics

The demographic characteristics consist of maternal age (age), marital status, household size, residence, parity and number of wives of husband as presented in table 4.1.

4.1.1.1 Maternal Age

The study included 400 women of which 343 (86%) were insured and 57 (14%) were not insured. Of the 343 women who were insured at the time of delivery, 96 (28%) of them stated they were within 15 -24years, 184 (54%) of them indicated they were within 25-34 years, 59 (17%) reported they were within 35-44 years and 4 (1%) of them indicated they were within 45⁺ years. The study also found that of the 57 uninsured participants, 12 (21%) were within 15 -24 years, 32 (56% were) within 25-34 years, 11 (19%) were within 35 -44 years and 2 (4%) were within 45⁺ years. It was also observed that 81% of all the respondents were within the active reproductive age group of 15-35 years.

4.1.1.2 Marital Status

Responses of women on their marital status indicated that majority of the 343 insured women, 309 (90%), were in active marriage union. Single mothers and women who were either divorced or separated also constituted 14 (4%) and 20 (6%) of the participants respectively. Similarly, majority of the uninsured women, 45 (79%) were in active marriage

union. Single uninsured mothers and women who were either divorced or separated also constituted 7 (12%) and 5 (9%) of the participants respectively.

4.1.1.3 Parity

The women were asked to indicate the number of times they had ever given birth (children alive + children dead). Their responses showed that 178 (52%) of the insured women had given birth once, 112 (33%) had given birth 2-3 times, 47 (14%) had given birth 4-5 times and only 6 (1%) had given birth 6+ times. On the other hand, 25 (44%) of the uninsured women had given birth once, 21 (37%) had given birth 2-3 times, 1 (17%) had given birth 4-5 times and only 1 (2%) had given birth 6+ times.

4.1.1.4 Household Size

The data collected from the women's response on the number of individuals per household indicated that 167 (49%) of the insured women were living in a household size of 2-6 persons, 129 (38%) were living in a household size of 7- 11 persons, 22 (6%) were living in a household size of 12-16 persons and 25 (7%) were living in household size of 17⁺. The data also showed that 26 (46%) of uninsured women were living in a household size of 2-6 persons, 23 (40%) were living in a household size of 7- 11 persons, 6 (11%) were living in a household size of 12-16 persons and 2 (3%) were living in household size of 17⁺.

4.1.1.5 Number of Wives of Husband

The women were asked to indicate the number of additional wives their husbands had. Of the 343 insured women who were married, 247 (72%) of them indicated they were involved in monogamous marriage, 65 (19%) of the women indicated their husbands had two additional wives and 11 (3%) stated that their husbands had three or more additional wives. However, 20 (6%) of the women stated they were without husbands were single mothers. Again, of the 57 uninsured women who were married, 37 (65%) of them indicated they were involved in

monogamous marriage, 12 (21%) of the women stated that their husbands had two additional wives and none (0%) had three or more additional wives. Again, 8 (14%) were single mothers.

4.1.1.6 Residence

The results from the study showed that 212 (62%) of insured women were resident in the rural districts of Jirapa and Nadowli whilst 131 (38%) were resident in the urban area of Wa municipality. Also, the study indicated that 44 (77%) of uninsured women were resident in the rural districts of Jirapa and Nadowli whilst, 13 (23%) were resident in the urban area of the Wa municipality.

Table4. 1 Demographic Characteristics of Insured and Uninsured Women

Variable	Insured Women n(%)	Uninsured Women n(%)	Total n(%)
Age			
15-24	96 (38)	12 (21)	108 (100)
25-34	184 (54)	32 (56)	216 (100)
35-44	59 (17)	11 (19)	70 (100)
45+	4 (1)	2 (4)	6 (100)
Marital status			
Single	14 (4)	7 (12)	21 (100)
Married	309 (90)	45 (79)	354 (100)
Divorced/widowed	20 (6)	5 (9)	25 (100)
Household size			
2-6	167 (49)	26 (46)	193 (100)
7-11	129 (38)	23 (40)	152 (100)
12-15	22 (6)	6 (11)	28 (100)
16+	25 (7)	2 (3)	27 (100)
Residence			
Rural(Jirapa, Nadowli)	212 (62)	44 (77)	256 (100)
Urban(Wa)	131 (38)	13 (23)	141 (100)
Parity			
1	178 (52)	25 (44)	203 (100)
2-3	112 (33)	21 (37)	133 (100)
4-5	47 (14)	10 (17)	57 (100)
6+	6 (1)	1 (2)	7 (100)
Number of wives of husband			
1	247 (72)	37 (65)	284 (100)
2	65 (19)	12 (21)	74 (100)
3+	11 (3)	0 (0)	11 (100)
Single	20 (6)	8 (14)	28 (100)
Total	343 (100)	57 (100)	400 (100)

4.1.2 Socio-Economic Characteristics

This section presents results on the level of education, occupation, religious and the reported monthly income of both insured and uninsured women as presented in table 4.2.

4.1.2.1 Education

The women in the study were requested to state the highest level of education they ever attained in life. Of the 343 insured women in the study, 115 (34%) responded they had no formal education, 92 (27%) of them indicated they had attained primary education, 123 (36%) of them stated they had attained secondary education and only 13 (4%) of them indicated they had attained tertiary education. On other hand, of the 57 uninsured women who responded to the question, 26 (46%) of them indicated they had no formal education, 16 (28%) of them stated they had attained primary education, 14 (24%) said they had attained secondary education and only 1 (2%) reported they had attained tertiary education.

4.1.2.2 Occupation

Analyzing information provided by the women on the regular income generating activities they were engaged in, it was observed that of the 343 insured women, 20 (6%) of them said they were farmers, 83 (24%) them indicated they were engaged in pito brewing, 69 (20%) stated they were engaged in petty businesses (sales), 64 (19%) indicated they were engaged in dressmaking and hair dressing and only 22 (6%) indicated they were engaged in formal jobs (mostly nursing and teaching). However, 85 (25%) of them said they were unemployed and had no regular source of income and these were mostly apprentices. On the part of the 57 uninsured women, 1 (2%) indicated she was engaged in commercial farming on a small scale, 19 (33%) of them said they were engaged in pito brewing, 11 (19%) of them indicated they were engaged in petty businesses (sales), 7 (12%) stated they were engaged in dressmaking

and hair dressing, and only 2 (4%) said they were engaged in formal jobs (mostly nursing and teaching). Again, 17 (30%) of the uninsured were unemployed and had no form of regular source of income.

4.1.2.3 Religious Background

Responses by the women in the study on their religious background revealed that of the 343 insured women, 225 (66%) of them were Christians, 101 (29%) were Muslims and 17 (5%) were Traditionalists. Additionally, it was observed that among the 57 uninsured women, 38 (67%) of them were Christians, 15 (26%) were Muslims and 4 (7%) were Traditionalists. The Muslims were dominant in the urban area of Wa municipality whilst Christians dominated the rural districts of Jirapa and Nadowli. It was however observed that the women from the Jirapa district were more traditionally inclined.

4.1.2.4 Reported Monthly Income

The women were asked to report on the monthly income generated from the regular income generating activities they were engaged in. The results of study indicated that of the 343 insured women, 121 (35%) of them indicated they earned income less than GH¢ 10 per month, 202 (59%) reported they earned between GH¢ 10 to GH¢ 200, 16 (5%) said they earned GH¢ 201 to GH¢ 400 and only 4 (1%) stated they earned GH¢ 400⁺. However, of the 57 uninsured women, 25 (44%) of them reported income level of less than GH¢ 10 per month while 32 (54%) of them reported income level GH¢ 10 to GH¢ 200. No participant within this level reported income level above GH¢ 200.

Table4. 2 Socio-economic Characteristics of Insured and Uninsured Women

Variable	Insured women (%)	Uninsured women (%)	Total n(%)
LEVEL OF EDUCATION			
No schooling	115 (34)	26 (46)	141 (100)
Primary	92 (27)	16 (28)	108 (100)
JHS/SSS	123 (36)	14 (24)	137 (100)
Tertiary	13 (4)	1 (2)	14 (100)
OCCUPATION			
Unemployed	85 (25)	17 (30)	102 (100)
Teaching/nursing	22 (6)	2 (4)	22 (100)
Pito brewing	83 (24)	19 (33)	102 (100)
Petty trading	69 (20)	11 (19)	80 (100)
Dress making/hair dressing	64 (19)	7 (12)	71 (100)
Farmers	20 (6)	1 (2)	21 (100)
RELIGION			
Christianity	225 (66)	38 (67)	263 (100)
Islam	101 (29)	15 (26)	116 (100)
Traditional	17 (5)	4 (7)	21 (100)
REPORTED MONTHLY INCOME			
< GH¢10	121 (35)	25 (44)	25 (100)
GH¢10 - GH¢200	202 (59)	32 (56)	32 (100)
GH¢ 201- GH¢ 400	16 (5)	0 (0)	0 (0)
GH¢ 400 ⁺	4 (1)	0 (0)	0 (0)
Total	343 (100)	57 (100)	400 (100)

4.1.3 Health Related Characteristics

The characteristics described under this section included Antenatal Care clinic Attendance (ANC visits), distance to health facility, availability of means of transport, presence of a trained midwife in a health facility, health status during pregnancy, history of previous foetal loss, history of previous health facility delivery, full/part payment for maternal health care services before the index delivery and the decision maker in relation to the place of delivery. Table 4.3 illustrates the summary of the health related characteristics of both insured and uninsured women in the study.

4.1.3.1 Antenatal Care Clinic Attendance

The women were asked to indicate the number of times they attended the ANC clinic before delivery. The results showed that 312 (91%) of the 343 insured women made more than 4

antenatal visits whilst 25 (7%) of them had attended antenatal care clinics less than 4 times as recommended by WHO. However, 6 (2%) of the women indicated they did not attend the antenatal clinic at all. Similarly, the study showed that 26 (46%) of the 57 uninsured women made more than 4 antenatal visits whilst 25 (44%) of them had attended antenatal care clinics less than 4 times as recommended by WHO. Finally, 6 (10%) of the women said they did not attend antenatal clinic at all.

4.1.3.2 Distance to Health Facility

On estimating the distance to be covered in order to reach the nearest health facility, it was estimated that of the 343 insured women, 174 (51%) of them resided within a walking distance of less than a kilometre to the nearest health facility. Those who had to cover between 1-5km before reaching the nearest health facility were 159 (46%) and only 10 (3%) had to go beyond 5km to reach the nearest health facility. On the other hand, it was found that 24 (42%) the 57 uninsured women resided within a walking distance of less than a kilometre. Those who had to cover between 1-5km were 22 (39%) and only 10 (19%) had to go beyond 5km to reach the nearest health facility.

4.1.3.3 Availability of Means of Transport

Responding to the question on availability of transport, 170 (51%) of the 343 insured women indicated that means of transport was always available in their communities, 81 (24%) of them indicated that the availability of means of transport was irregular in their communities whilst 92 (26%) of the insured women indicated that means of transport was not available in their communities. In response to the same question on availability of transport, 27 (48%) of the 57 uninsured women indicated that means of transport was always available in their communities, 19 (33%) of them indicated that the availability of means of transport was

irregular in their communities whilst 11 (19%) of them indicated that means of transport was not available in their communities.

4.1.3.4 Health Facility with Trained Midwife

The women were requested to indicate whether there was a health facility with a trained midwife in their communities. Of the 343 insured women in the study, 102 (30%) mentioned that the health facilities in their communities had a trained midwife whilst 241 (70%) said the health facilities in their communities never had a trained midwife. Of the 57 uninsured women, 42 (74%) indicated the presence of a trained midwife in their community health facility whilst 15 (26%) said the health facilities in their communities never had a trained midwife.

4.1.3.5 Health Status during Pregnancy

Analysing responses on the health status of the women during pregnancy, the study indicated that of the total of 343 insured women, 241 (70%) of the women reported they were fit during pregnancy and 102 (30%) reported they experienced some ill health during pregnancy. Again, of the total of 57 uninsured members, 44 (77%) of them said they were fit whilst 13 (23%) said they were not fit during the period of pregnancy.

4.1.3.6 Previous Foetal Loss

The women were asked to indicate the number of foetal losses they ever had before the index delivery. The study results indicated that out of the 343 insured members of the MHIS, 282 (82%) said they had never experienced any form of foetal loss whilst 51 (15%) had experienced at least one foetal loss. Furthermore, 8 (2%) mentioned they had experienced 2 forms of foetal loss. Finally, 2 (1%) mentioned they had experienced 3⁺ foetal losses. Again, of the 57 uninsured women, 46 (81%) said they had not experienced any foetal loss whilst 8 (14%) said they had experienced 1 form of foetal loss. Also, 1 (2%) of them mentioned that

she had experienced 2 forms of foetal loss and finally, 2 (3%) said they had experienced 3 forms of foetal loss.

4.1.3.7 Previous Health Facility Delivery

The women were asked to state the number of health facility delivery they ever had before the index delivery. Out of the 343 insured women, 186 (54%) stated that they had delivered once at the health facility, 98 (29%) said they had delivered 2 to 3 babies at the health facility. Furthermore, 12 (4%) said they had delivered 4 to 5 babies at the health facility. None delivered 6⁺ babies at the health facility. However, 47 (14%) reported no health facility delivery experience before the index delivery. On the other hand, of the 57 uninsured women, 29 (51%) of them delivered once at a health facility, 11 (19%) delivered 2 to 3 babies at the health facility and 2 (4%) said they had delivered 4 to 5 babies at the health facility. Furthermore, 1 (2%) delivered 6⁺ babies at a health facility. Finally, 14 (25%) mentioned that they had never delivered any baby at the health facility.

4.1.3.8 Full/Part Payment for Prior Maternal Health Care Services

Further, the women were requested to indicate whether or not they had made full/part payment for any maternal health services before the index delivery. The study found that of the total of 343 insured women, 173 (50%) of the women reported they ever made full/part payment for some form of maternal health care prior to the index delivery and 170 (50%) reported they did not make full/part payment for any form of maternal health care prior to the index delivery. The study also found that of the total of 57 uninsured women, 45 (79%) of them reported they ever made full/part payment for some form of maternal health care prior to the index delivery whilst 12 (21%) reported they did not make full/part payment for any form of maternal health care prior to the index delivery.

4.1.3.9 Decision Maker on Place of Delivery

Eliciting responses from 343 insured women on who decided where the delivery took place, 153 (45%) of them indicated they decided on their own, 29 (9%) reported their husbands made the decision, 141 (41) it was a joint agreement with their husbands, 8 (2%) said their in-laws decided for them and 12 (3%) stated their parents made the decision. On the part of the 57 uninsured women who responded to the question, 40 (7%) of them indicated they decided on their own, 2 (4%) reported their husbands made the decision, 11 (19%) it was a joint agreement with their husbands and 4 (7%) said their parents made the decision.

Table4. 3 Health related characteristics of insured and uninsured women

Variable	Insured Women n (%)	Uninsured Women n(%)	Total n(%)
Distance To Health Facility			
Less than a km	174 (51)	24 (42)	198 (100)
1-5km	159 (46)	22 (39)	181 (100)
5+km	10 (3)	10 (19)	20 (100)
ANC VISITS			
None	6 (2)	6 (10)	12 (100)
Less than 4	25 (7)	25 (44)	50 (100)
4+	312 (91)	26 (46)	338 (100)
Health Status During Pregnancy			
Fit	241(70)	44 (77)	285 (100)
Not fit	102 (30)	13 (33)	115 (100)
Previous Health Facility Delivery			
None	47 (14)	14 (25)	61 (100)
1	186 (54)	29 (51)	215 (100)
2-3	98 (29)	11 (19)	109 (100)
4-5	12 (3)	2 (3)	14 (100)
6+	0 (0)	1 (2)	1 (100)
Previous Foetal Loss			
None	282 (82)	46 (81)	328 (100)
1	51 (15)	8 (14)	59 (100)
2	8 (2)	1 (2)	9 (100)
3+	2 (1)	2 (3)	4 (100)
Decision Maker			
Self	153 (45)	40 (70)	193 (100)
Husband	29 (9)	2 (4)	31 (100)
Jointly	141 (41)	11 (19)	152 (100)
In-laws	8 (2)	0 (0)	8 (100)
Parents	12 (3)	4 (7)	16 (100)
Total	343 (76)	57 (14)	400 (100)

4.2. CULTURAL BELIEFS AND PRACTICES AFFECTING HEALTH FACILITY DELIVERY

4.2.1 Cultural Beliefs that Discourage Women from Health Facility Delivery

In in-depth interviews with health workers and focus group discussions with both men and women groups in the selected communities where the study was conducted views on the cultural beliefs that discourage women from delivering in a health facility were discussed. Samples of the views on cultural beliefs negatively affect health facility delivery are presented as follows.

“Recently at a meeting in one community, it was disclosed that some people have “bad eyes” and the new born child is not suppose to be seen by such people or the child will die. When women come to deliver at the hospital, it is not only the family members who are there. There are so many visitors including people with such “bad eyes” which may lead to the death of the new born” (Health worker, Jirapa).

“Some of women unless the pregnancy or labour is advanced, they are not supposed to disclose it for cultural reasons. When there is even bleeding or any danger at that time, they will still not disclose it they want to avoid any evil attack on the progress of the pregnancy or labour. Some even lose their lives because of that. Disclosure of information from emergency cases is a problem. They don’t give the correct history and this leads to neonatal and perinatal deaths” (Health worker, Jirapa).

4.2.2 Cultural Practices that Discourage Women from Health Facility Delivery

The participants were asked to state the socio-cultural beliefs and practices that discourage women in their communities from seeking skilled health at birth. Of the 343 insured, 102 (30%) of them indicated it was illiteracy and unemployment, 56 (16%) of them said it was the low value placed on women, 51 (15%) of them indicated the need to prove fidelity of the women and 43 (12%) of the women said it was due to the multiple demands on women’s time in family life. Additionally, some of the women indicated that large family size, 10 (8%) masculine decision making, 23 (7%), polygamy, 22 (6%) and the need for birth rites, 4 (1%) also had negative influence on health facility delivery. In comparison to the 57 uninsured women, 18 (31%) of them indicated illiteracy and unemployment, 9 (16%) of them said it was due to the low value placed on women, 9 (16%) of them said it was due to the demand to prove fidelity and 7 (12%) of the women said it was because of the multiple demands on women’s time in family life. Additionally, some of the women indicated that large family size, 10 (8%) masculine decision making, 23 (7%), polygamy, 22 (6%) and the need for birth rites, 4 (1%) also had negative influence on health facility delivery. See figure 4.1 for cultural

practices that negatively affect health facility delivery. These findings were supported by the views from focus group discussion and in-depth interviews by the following submissions:

“Polygamy has also compelled women to prove their fidelity to their husbands by self delivery /home delivery” (Health worker, Jirapa).

“Women should deliver at home to prove their maturity because hospital delivery is a recent phenomenon. Women who delivered at home before the advent of hospital delivery are still strong and active” (Wa Women’s Focus Group Discussion).

“Yes those practices still exist. I know a woman nearby who locked herself in the room and delivered alone because the rival insulted her that she was not matured before entering into marriage” (Wa Women’s Focus Group Discussion).

“If a woman frequently delivers at hospital, they are considered not strong women, so the women try to stay at home to deliver to prove their womanhood and this leads to complications and sometimes death” (Health worker, Jirapa).

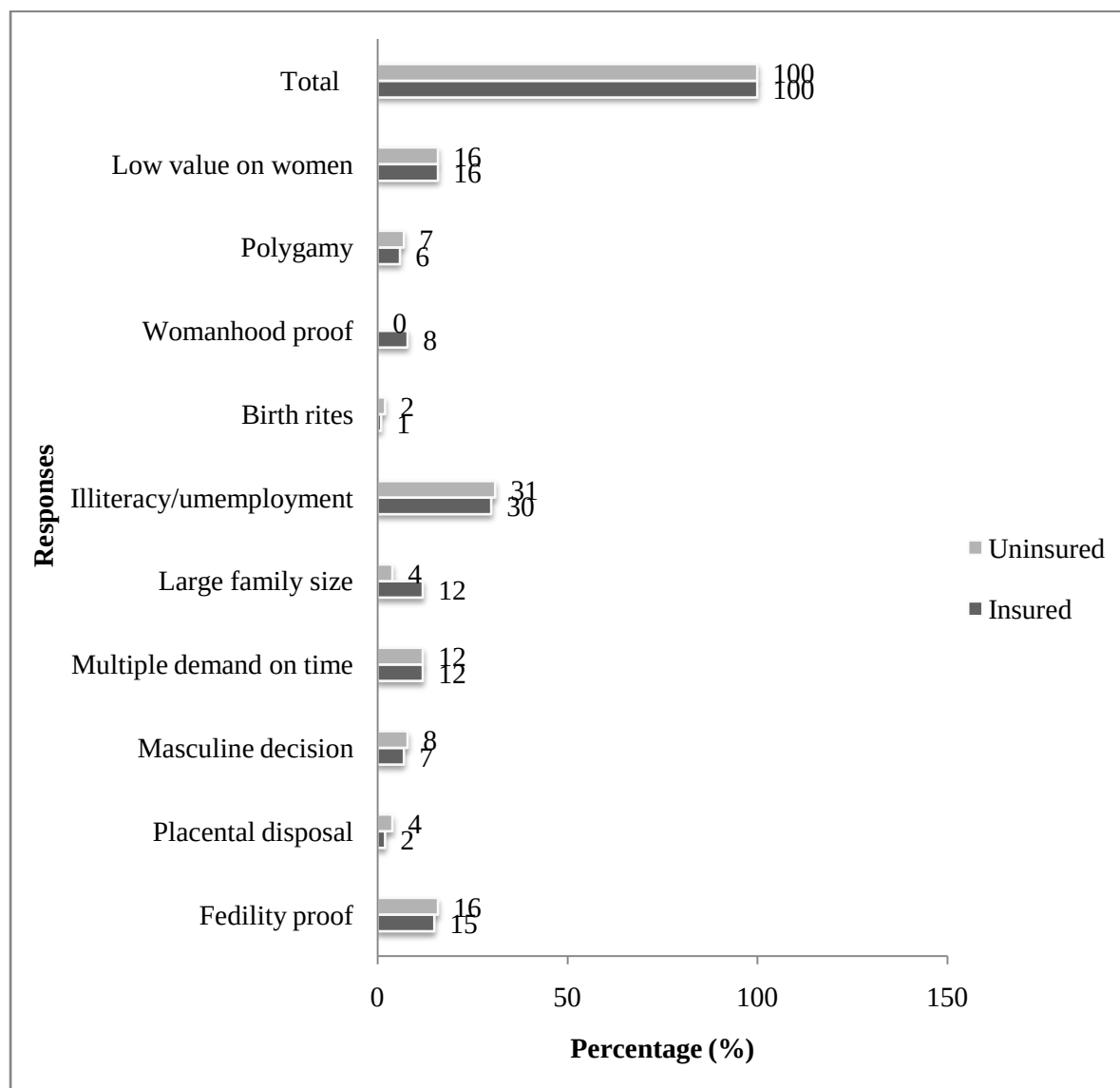
“Some people think that delivering alone or at home is a sign of bravery and so choose to deliver at home despite the health education given them. (Health worker, Nadowli).

“Recently at a meeting in one community, it was disclosed that some people have “bad eyes” and the new born child is not supposed to be seen by such people or the child will die. When women come to deliver at the hospital, it is not only the family members who are there. There are so many visitors including people with such “bad eyes” which may lead to the death of the new born” (Health worker, Jirapa).

“Some of them unless the pregnancy or labour is advanced, they are not supposed to disclose it for cultural reasons. When there is even bleeding or any danger at that time, they will still not disclose it. Some even lose their lives because of that. Disclosure of information from emergency cases is a problem. They don’t give the correct history and this leads to neonatal and perinatal deaths” (Health worker, Jirapa).

“Use of the local oxytocin (“mansugo”) to hasten labour. The woman starts the contractions without rest which leads to ruptured uterus, bladder and fistula or even loss of the unborn baby especially primiparae, CPDs and mal-presentation cases (Health worker, Jirapa).

Figure 4.1 Cultural practices that discourage women from health facility delivery.



4.3 KNOWLEDGE LEVELS AND PERCEPTIONS OF INSURED AND UNINSURED WOMEN ON MHIS AND HEALTH FACILITY DELIVERY

4.3.1 Level of Knowledge Perceptions of the Women on the MHIS

This section covers their level of knowledge on the MHIS, main sources of the knowledge on the MHIS, knowledge on the health care package of the MHIS, perceptions on the major benefits of the scheme, their perceptions on the influence of the scheme on health facility delivery and their perceptions on the medicinal package of the scheme.

4.3.1.1 Level of Knowledge on MHIS

When the women were asked on whether they knew about the MHIS, all the women (both insured and uninsured) in the study indicated they had knowledge about the MHIS.

4.3.1.2 Main Sources of Knowledge of Women on MHIS.

The women were requested to indicate the main sources of information on the MHIS. Of the 343 insured women, 91 (27%) of them indicated they received the message on the MHIS through campaigns organized by the MHIS officers, 100 (29%) of them said they got the message through the radio stations in the region, 13 (4%) reported they had the message through radio and TV and 62 (18%) said they learned about the scheme through friends/relatives and 77 (22%) of them indicated it was from the health workers. Also, of the 57 uninsured women, 15 (26%) of them indicated they received the message on the MHIS through campaigns organized by the MHIS officers, 20 (35%) of them said they got the message through the radio stations in the region, 10 (18%) of them indicated they learned about the scheme through friends/relatives and 12 (21%) of the them indicated it was from the health workers. See table 4.4 on the main sources of women's knowledge on the MHIS.

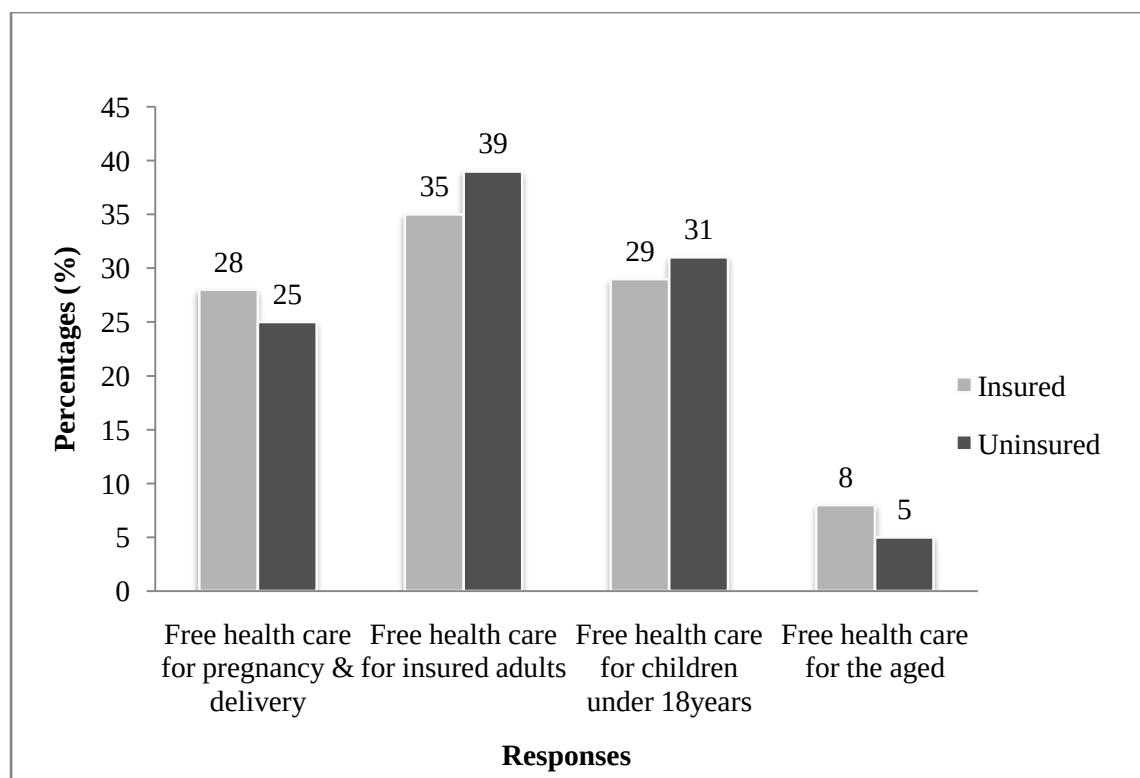
Table4. 4 Main sources of women's knowledge on MHIS

Sources	Insured (%)	Uninsured (%)	Total
Campaigns	91 (27)	15 (26)	106 (100)
Radio Only	100 (29)	20 (35)	120 (100)
Radio and TV	13 (4)	0 (0)	13 (100)
Friends/Relatives	62 (18)	10 (18)	72 (100)
Health Workers	77 (22)	12 (21)	89 (100)
Total	343 (100)	57 (100)	400 (100)

4.3.1.3 Knowledge of Women on the Health Care Package of MHIS

The women were also investigated on their knowledge on the benefits of the MHIS as presented on figure 4.2. The results revealed that of the 343 insured women, 97 (28%) of them said they were aware of free pregnancy /delivery care as a benefit for registered members with valid membership card holders, 120 (35%) stated they knew about free health care for insured adults, 98 (29%) indicated they knew about the free health care for children under 18years and 28 (8%) of them reported they were aware that the aged were exempted from the premium just like those under 18 years. On the other hand the study results showed that of the 57 uninsured women, 14 (25%) of them were aware of the free pregnancy /delivery care as a benefit for registered members with valid membership card holders, 22 (39%) said they knew about free health care for insured adults, 18 (31%) indicated they knew about the free health care for children under 18years and 3 (5%) said they were aware that the aged were exempted from the premium just like those under 18 years.

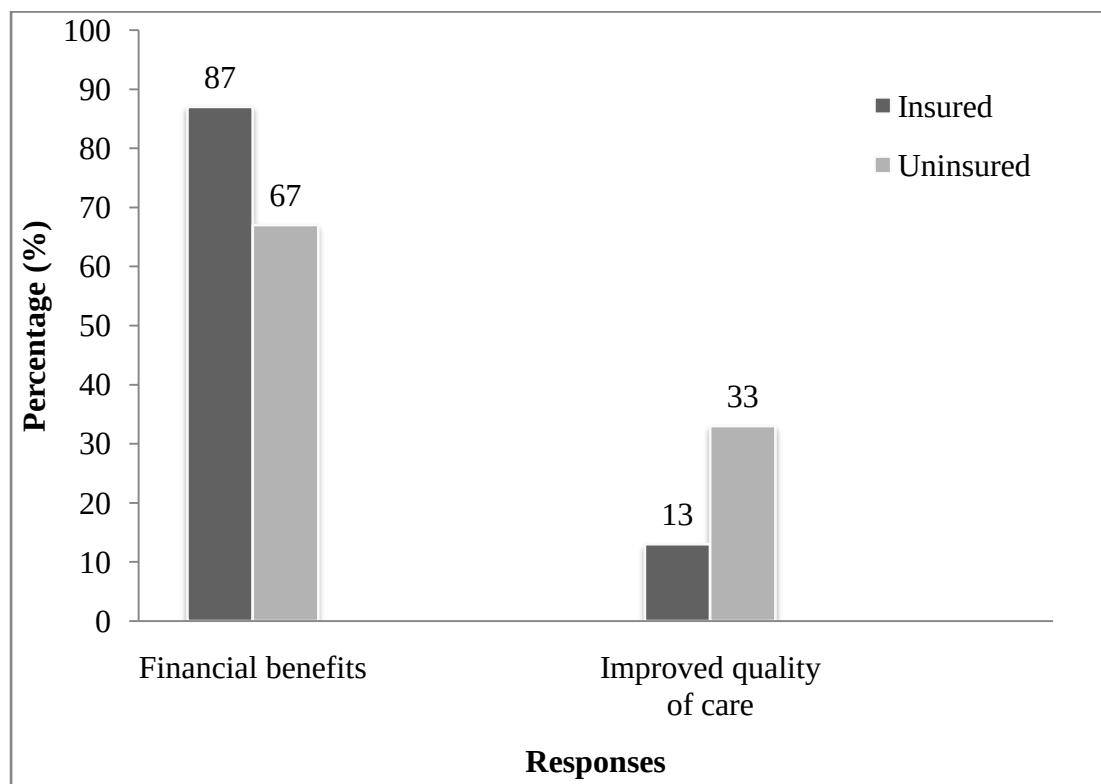
Figure 4.2 Knowledge of women on the health care package of MHIS



4.3.1.4 Perceptions of Women on the Benefits of MHIS

The women were asked to indicate what they perceived to be the major benefit of MHIS to its members. Of the 343 insured women, 297 (87%) of them indicated they were of the perception that they would benefit financially from the scheme through the free health care for registered members whilst 46 (13%) of them had the perception that quality of care would improve under the scheme. Also, responses from the 57 uninsured women indicated that, 38 (67%) of them were of the perception that valid card holders of the MHIS would benefit financially from the scheme through the free health care for registered members whilst 19 (33%) of them had the perception that quality of care would improve under the scheme as shown in figure 4.3.

Figure 4.3 Perceptions of women on the benefits of MHIS



4.3.1.5 Perceptions of Women on the Influence of MHIS on Health Facility Delivery

All 400 women included in the study described the MHIS as an effective tool in increasing health facility delivery in the region. Participants in FGDs and key informant interviews also expressed similar views on the topic stated as follows.

“With the health insurance, a woman can go to hospital whenever she is sick or in labour, but without it she may go only when there is money” (Wa Men’s Focus Group Discussion).

“MHIS by minimizing financial barrier encourages and enhances early reporting thereby facilitating early detection of complications and prompt management; averting possible deaths” (Health worker, Wa).

“Everybody is willing to go for hospital delivery and early reporting is now assured: reducing maternal mortality and morbidity” (Health worker, Nadowli).

“I think the introduction of the MHIS is a very good decision because even the poor can now access health facility care for delivery because the financial barrier has been greatly reduced” (Jirapa Women Focus Group Discussion).

4.3.1.6 Perceptions on the Medicinal Package of MHIS on Health Facility Delivery

Again, all the women in the study could not tell which medicines were covered by the MHIS. However, most of them expressed the view that from their experiences with the health facility care, medicines prescribed for insured women were of cheaper quality compared to those prescribed for the uninsured women. This, the women believed was because uninsured women were paying cash for the services. Below are some of the views of participants in the focus group discussions.

“My problem is with the cheap drugs they normally give us but writing the most expensive ones for us to go and buy. Sometime ago, when I had ache in my back, I went there and they gave me paracetamol but wrote some drugs for me to buy outside. When I got to the drug store, I was asked to pay GH¢10.00, which I did not have. I resorted to buying only ‘para’ and chewing whenever I have the ache. Recently too, my child was sick and I took him there, I was given another prescription to buy drugs outside which amounted to GH¢5.00 for that one, I was able to afford” (Jirapa Women Focus Group Discussion).

“In a way, I will say they are cheating us because we are not educated. When you are sick and you get to the health facility, they will never give you a drug that can cure your sickness: rather they normally prescribe for us to buy outside. That thing is not helping us at all” (Nadowli Men Focus Group Discussion)

“A situation I don’t like about the health insurance is the paracetamol and amodiaquine they normally give to us, the insured. Does it mean it is because of the health insurance these drugs are there? Some times when you are sick and you have GH¢0.50 or GH¢2.00, the drug sellers give you better drugs compared to what you could get from the health facility because of health insurance” (Nadowli Men Focus Group Discussion).

“The health insurance is good. But when they tell us that some drugs are not covered by the HI, it makes us feel bad” (Nadowli Men’s Focus Group Discussion).

“Another problem is with some of the drugs they normally ask us to go and buy outside. They sometimes even direct us to some particular chemical shops to go and buy such drugs. Why can’t they always keep them at the hospital? Those with cash are normally given the drugs at the health facility but those with the HI are asked to go and buy outside with their own money” (Wa Women Focus Group Discussion).

“We also have to know the drugs and the ailments that are covered and those that are not covered. Even all drugs must be made available so that if they are not covered by the health insurance, you can buy from the health facility” (Wa Men’s Focus Group Discussion).

4.3.2 Perceptions of Women on Skilled Delivery

Issues investigated under this section included the women’s preference for place of delivery, reasons for women’s preference for health facility delivery and women’s dislike about health facility delivery.

4.3.2.1 Women’s Preference for Health Facility Delivery

The women were asked to indicate where they preferred to deliver their babies. An overwhelming 333 (97%) of insured the 343 insured women and 54 (95%) of the 57 uninsured women believed the health facility delivery was a safer to deliver because of the good quality of care available at the health facility compared to home conditions and therefore, preferred to have their babies at a health facility with a skilled attendant.

4.3.2.2 Reasons for Women's Preference for Health Facility Delivery

On the reasons given for their health facility delivery preference by the 333 insured women who preferred health facility delivery, 190 (57%) of them mentioned perceived good quality of care, 66 (20%) of them indicated education received at ANC, 23 (7%) of insured women mention previous Caesarean section/stillbirth, 2 (1%) of the insured women mentioned proximity to a health facility and 38(11%) of them mentioned affordable health services because of their MHIS status. Again indicating the reason given by the 54 uninsured women who preferred health facility delivery, 32 (59%) of them indicated perceived good quality of care, 13 (24%) of them indicated education received at ANC, 4 (7%) of them mentioned previous Caesarean section/stillbirth and 3(6%) of them mentioned proximity to a health facility. Below are some of the statements obtained from the focus group discussions that supported their perceptions on health facility delivery.

"I think it is unsafe to deliver at home because of complications. If there are no complications, we can say it is safe to give birth at home, but how do you know?" (Wa Men's Focus Group Discussion).

"The benefits of health facility delivery are uncountable. For instance, at the health facility, they have antiseptics and all their instruments are sterilized. In the home they don't sterilize the tools" (Wa Men's Focus Group Discussion).

"Honestly, women are supposed to deliver at a health facility. If by mistake, the delivery takes place at home, it will still be recommendable to take her and the baby to the health facility for further examination" (Nadowli Men's Focus Group Discussion).

"We prefer to deliver at the hospital because , there , the nurses are able to determine whether you have lost blood or water and they will give you the blood if you lack blood or the water if you don't have water in your body" (Jirapa Women's Focus Group Discussion).

"It is necessary to deliver at a health facility because, sometimes your vulva might be too narrow to allow a bigger baby to come out and the nurse can help by cutting the vulva and the baby will come out well"(Jirapa Women's Focus Group Discussion).

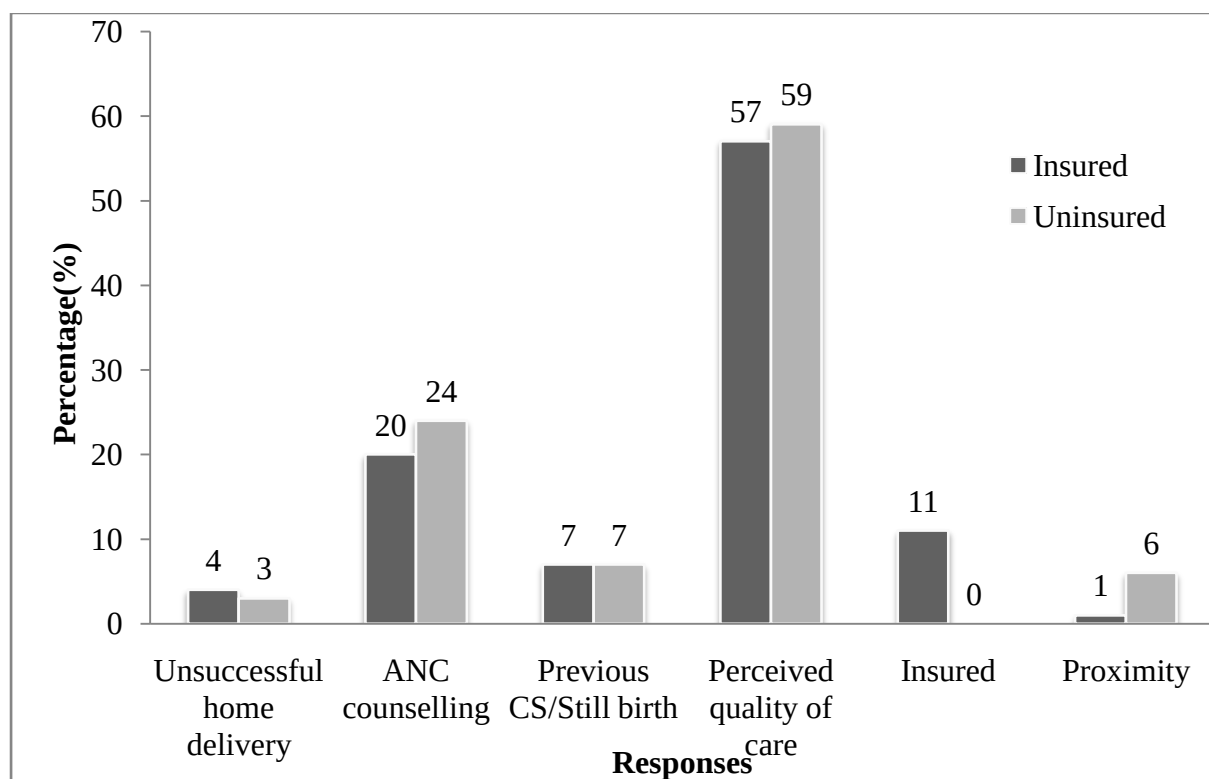
"I was having difficulty in giving birth and was operated upon. I was safe and likewise my baby. Perhaps if it were at home, we could have died" (Wa Women's Focus Group Discussion).

“Some old ladies do not know what to do to the woman after delivery. They will not allow the blood to come out; instead, they will push rags inside your vagina. Some of the blood will remain there and make you sick” (Jirapa Women’s Focus Group Discussion).

“Sometimes if you give birth to a premature baby who cannot breathe properly, they put it in a machine which will help it to live, if this happens at home, the baby will die” (Jirapa Women’s Focus Group Discussion).

“Even some time ago, home delivery used to affect some women’s urinal bladder. But these days, health facility delivery has come to curb all those things” (Wa Women’s Focus Group Discussion).

Figure 4.4 Reasons for Women’s Preference for Health Facility Delivery

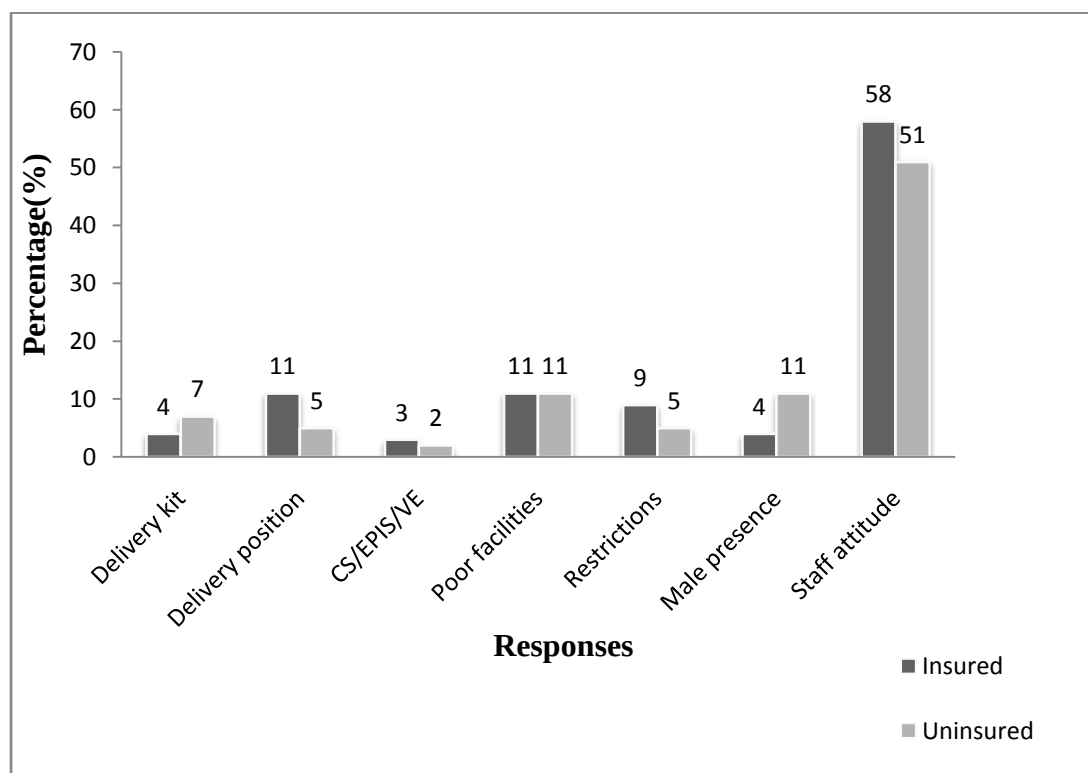


4.3.2.3 Women Dislikes on Health Facility Delivery

Analyzing the responses of the insured women on what they dislike about health facility delivery, a little over half of them 200 (58%) indicated poor staff attitude, 36 (11%) each mentioned delivery positions and poor facilities. Additionally, 30 (9%) indicated restrictions and 15 (4%) each stated the need for delivery kit and male presence during delivery as reasons they dislike health facility delivery. In relation to the 57 uninsured women, 29 (51%)

of them said they did not like health facility delivery because of the bad attitude of the staff toward women in labour and 11 (19%) said they did not like it because of the presence of male staff in the labour/delivery room. Also, 3 (5%) of the uninsured said they disliked health facility delivery because of the many restrictions given to women in labour. Furthermore, 6 (11%) said they disliked health facility delivery because of the poor facilities at their community health facilities. Moreover, 1 (2%) said because of the C/S and 3 (5%) of them said they disliked it because of the kind of delivery position the midwives put them onto. Finally, 4 (7%) of them said they disliked it because of the delivery kit that they are requested by staff to bring to the facility during labour/delivery period.

Figure 4.5 Women dislikes on health facility delivery

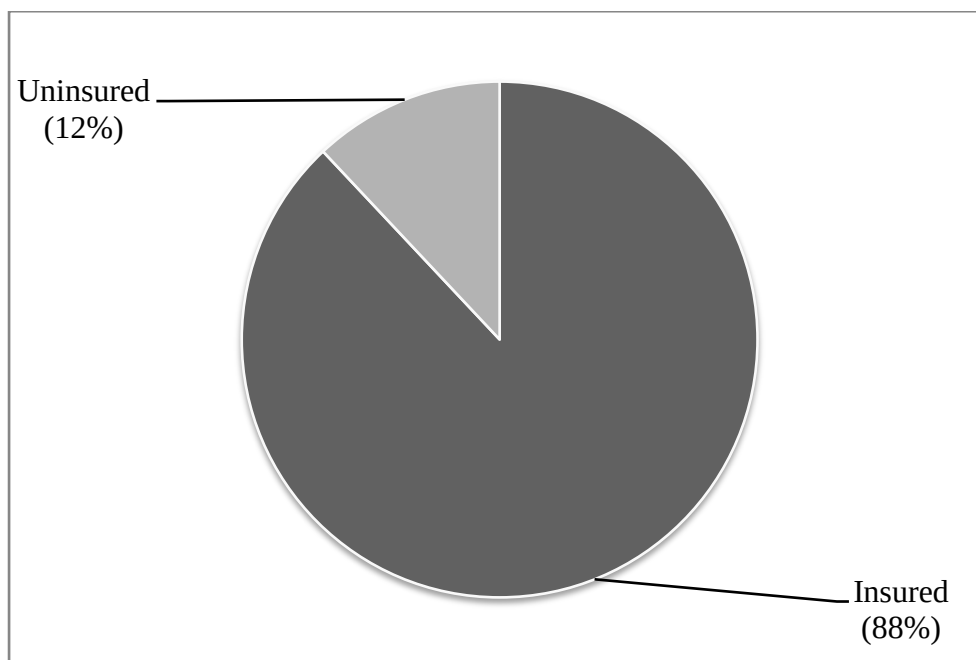


4.4 UTILIZATION OF HEALTH FACILITY FOR DELIVERY

Generally, as high as 313 (78%) of the women in the study indicated that they delivered at health facility of which 277 (88%) were insured and 36 (12%) were uninsured. In proportion

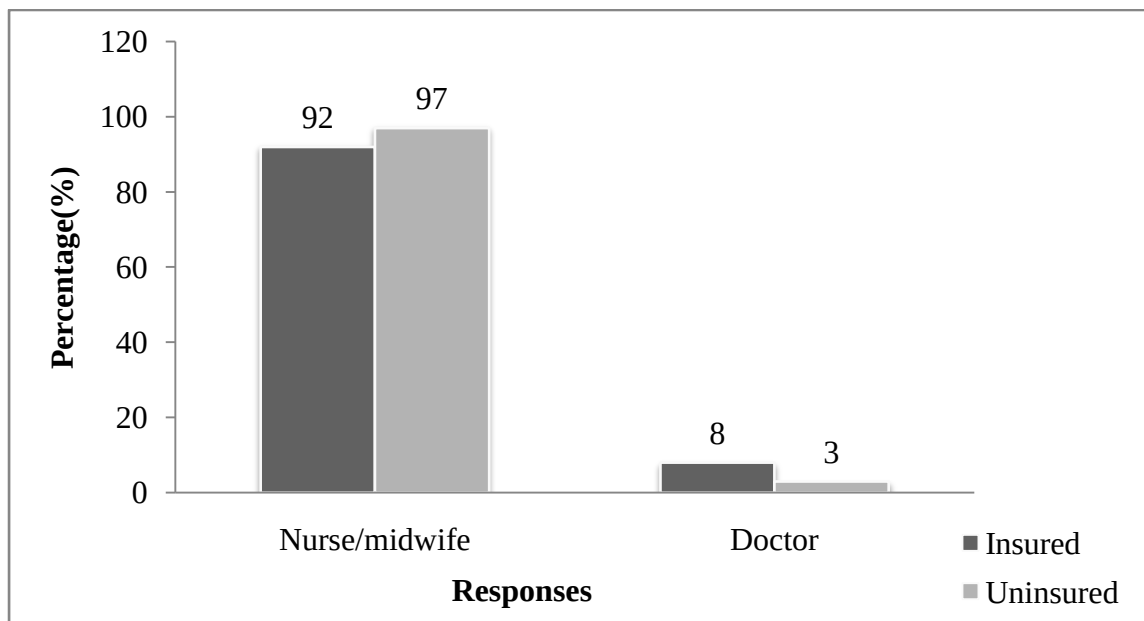
to health insurance status, the 277 insured women represented 81% of them who delivered at a health facility compared to 36 (63%) of the uninsured women who delivered at a health facility as shown in figure 4.6.

Figure 4.6 Utilization of health facility for delivery



4.4.1 Skilled Attendant at Health Facility Delivery

Majority of the women who delivered at the health facility were attended to by a nurse/midwife 285 (91%) whilst the rest were attended to by a doctor. Further, the analysis indicated majority of insured women 250 (92%) as well as uninsured women 35 (97%) were attended to by a nurse/midwife whilst only 27 (8%) of insured women and 1 (3%) of uninsured women who were attended to by a doctor during delivery as illustrated in figure 4.7.

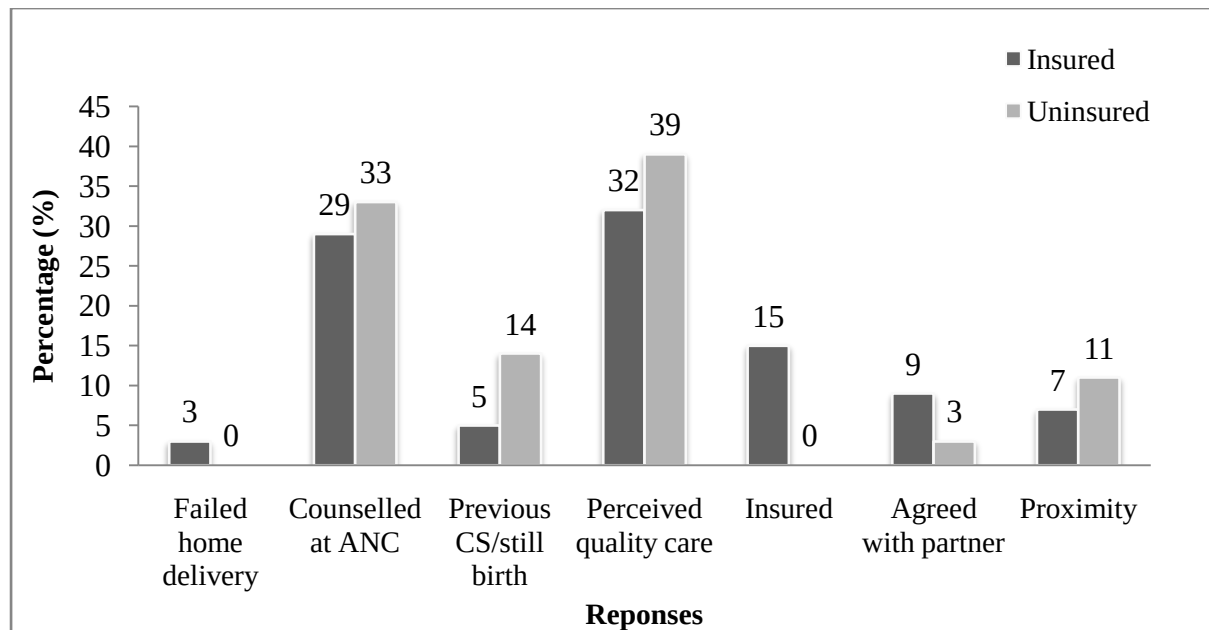
Figure 4.7 Skilled attendants at health facility delivery

4.4.2 Reasons Women Gave for Delivering at a Health Facility

Reasons women gave for choosing health facility delivery were varied. Of the 277 of insured women who delivered at the health facility, 89 (32%) of them stated it was due to the quality of care given at the facility, 10 (3%) of them said it was because of an unsuccessful home delivery and 80 (29%) of them said it was because they were counseled during ANC attendance. Furthermore, 13 (5%) said they delivered at the health facility because they previously had C/S due to delivery complications, 41 (15%) of them indicated it was because they were already insured by the MHIS and 25 (9%) of them said it was because they had agreed with their partners that they should give birth at the health facility. Finally, 19 (7%) of them said it was because they lived very close to the health facility. In relation to the 36 uninsured women who delivered at a health facility, 14 (39%) of them said it was because of the quality of health care services at the facility, 12 (33%) of them said they chose health facility for delivery because of the ANC counseling they received at the health facility and 5 (14%) of them mentioned that it was because of their previous Caesarean section (C/S) with the medical officer and 1 (3%) of them said it was because she already agreed with the

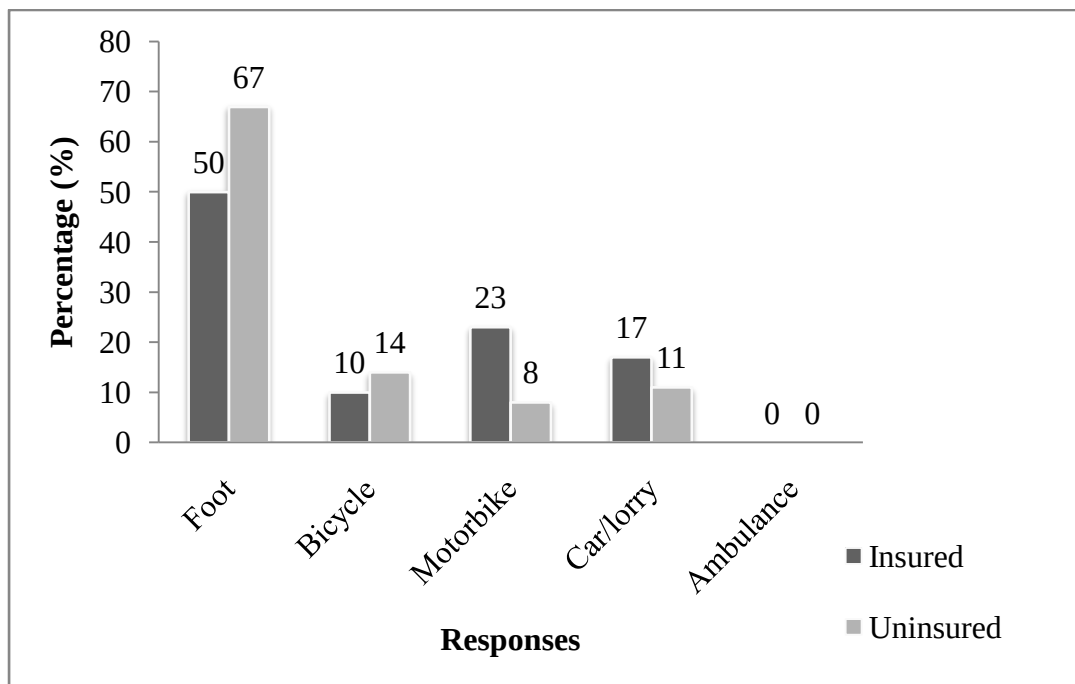
partner to give birth at the health facility. Finally, 4 (11%) of them said it was because they resided very close to the facility. However, none of the uninsured women indicated unsuccessful home delivery as a reason for delivering at the health facility. See figure 4.8.

Figure 4.8 Reasons women gave for delivering at health facility



4.4.3 Types of Transport Women Used to the Health Facility for Delivery

The women were requested to indicate the type of means of transport the used to health facility during delivery. The results show that 138 (50%) of insured women and 24 (67%) of uninsured women went to the facility on foot whiles 27 (10%) of insured women and 5(14%) of uninsured used bicycle as means of transport to the health facility. Also, 63 (23%) of insured women and 3 (8%) of uninsured used motorbikes as against only 49 (17%) of insured and 4 (11%) of uninsured women who used car/lorry as means transport to the facility (see figure 4.9).

Figure 4.9 Types of transport women used to the health facility for delivery

4.4.4 Test of Hypothesis

The study found that there was a significant higher proportion of health facility delivery among insured women (81%) than the uninsured women (63%) at $p \leq 0.05$ (Pearson χ^2 (1) = 8.896 $p = 0.003$). Therefore, the hypothesis that there is no association between MHIS cover and health facility delivery was rejected. Using Phi (ϕ) coefficient of determination, the strength of the association between MHIS cover and health facility delivery was measured to be 0.15. This indicates that the effect of MHIS cover on health facility delivery in this study is small but positive.

4.5 FACTORS ASSOCIATED WITH THE UTILIZATION OF HEALTH FACILITY DELIVERY SERVICES

These were categorized into factors that were associated with health facility delivery and those that were not associated with health facility delivery and under demographic, socio-economic and health related factors.

4.5.1 Demographic Factors Associated with Health Facility Delivery among Insured Women.

Parity, number of wives per husband and residence were the demographic factors associated with health facility delivery among insured women as shown in table 4.5.

Table4. 5 Demographic Factors Associated with Health Facility Delivery among Insured Women

Variables	Health facility delivery (%)	Total	Chi-square value (χ^2)	df	p-value
Age					
15-24	74 (77)	96	4.673	3	0.197
25-34	115(84)	184			
35-44	44 (75)	59			
45+	4 (100)	4			
Marital status					
Single	14 (100)	14	3.812	2	0.149
Married	248 (80)	306			
Divorced/widowed	15 (75)	20			
Parity					
1	145 (82)	178	19.934	3	0.000
2-3	100(89)	112			
4-5	29(62)	47			
6+	3(50)	6			
Wives per husband					
1	203 (83)	247	10.656	3	0.014
2	45 (69)	65			
3+	9 (82)	11			
Single	20 (100)	20			
Household size					
2-6	142 (85)	167	3.835	3	0.280
7-11	99 (77)	129			
12-16	17 (77)	22			
17+	19 (76)	25			
Residence					
Rural(Jirapa, Nadowli)	156 (74)	212	18.835	1	0.000
Urban(Wa)	121 (92)	131			
Total	277 (81)	343			

The study measured the place of residence of the participants and utilization of health facility for delivery. The results indicated that insured women who were residents in the urban area (Wa municipality) were more likely to deliver at a health facility than their counterparts in the rural communities (Jirapa and Nadowli districts). This observation was statistically significant at $p < 0.05$ (Pearson χ^2 (1) = 18.835 $p = 0.000$). Additionally, Women with higher parity were negatively associated with health facility delivery compared to women with lower

parity $p < 0.05$ (Pearson $\chi^2 (3) = 19.934$ $p = 0.000$). Again, women who were in monogamous marriages were highly associated with health facility delivery than those whose husbands had other wives in addition to them (Pearson $\chi^2 (3) = 10.656$ $p = 0$).

4.5.2 Demographic Factors not associated with Health Facility among insured women.

The utilization of health facility for delivery was not found to be associated with age (Pearson $\chi^2 (3) = 4.673$ $p = 0.197$), marital status (Pearson $\chi^2 (2) = 3.812$ $p = 0.149$) and house hold size (Pearson $\chi^2 (3) = 3.835$ $P < 0.014$).

4.5.2 Demographic Factors Associated with Health Facility Delivery among Uninsured Women.

Place of women's residence was the only demographic factor associated with health facility among uninsured women as illustrated in table 4.6.

Table 4.6 Demographic factors associated with health facility delivery among uninsured women

Variables	Health facility delivery (%)	Total	Chi-square value (χ^2)	df	p-value
Age					
15-24	9(75)	12	1.961	3	0.581
25-34	18(56)	32			
35-44	8(73)	11			
45+	1(50)	2			
Marital status	2(29)		5.974	2	0.050
Single	32(71)	7			
Married	2(40)	45			
Divorced/widowed		5			
Parity	13(52)		4.786	3	0.188
1	16(76)	25			
2-3	7(70)	21			
4-5	0(0)	10			
6+		1			
Wives per husband	23(62)		4.378	3	0.112
1	10(83)	37			
2	0(0)	12			
3+	3(38)	0			
Household size	16(62)		0.252	3	0.969
2-6	15(65)	26			
7-11	6(68)	23			
12-16	1(50)	6			
17+		2			
Residence	27(61)		18.835	2	0.000
Rural(Jirapa, Nadowli)	9(69)	44			
Urban (Wa)		13			
Total	36(63)	57			

The results indicated that uninsured women who were residents in the urban area (Wa municipality) were highly associated with health facility delivery than their counterparts in the rural communities (Jirapa and Nadowli districts) at $p < 0.05$. (Pearson $\chi^2 (1) = 18.835$ $p = 0.000$).

4.5.4 Demographic Factors not Associated with Health Facility Delivery among uninsured women.

The utilization of health facility for delivery was not found to be associated with age (Pearson $\chi^2 (3) = 0.961$ $P < 0.581$), marital status (Pearson $\chi^2 (2) = 5.974$ $P < 0.050$), house hold size (Pearson $\chi^2 (3) = 0.252$ $P < 0.969$), parity (Pearson $\chi^2 (3) = 4.786$ $P < 0.188$) and number wives per husband (Pearson $\chi^2 (2) = 4.378$ $P < 0.112$). See table 4.6 for details on demographic factors of uninsured women associated with health facility delivery.

4.5.5 Socio-economic Factors Associated with Health Facility Delivery among Insured Women.

All four socio-economic factors in the study were associated with health facility delivery among insured women as indicated in table 4.7.

Table 4.7 Socio-economic factors associated with health facility delivery among insured women

Variables	Health facility delivery (%)	Total	Chi-square value (χ^2)	df	p-value
Level of education					
No schooling	77 (67)	115	26.974	3	0.000
primary	74 (80)	92			
JHS/SSS	113 (92)	132			
Tertiary	13 (100)	13			
Occupation					
unemployed	60 (71)	85	31.407	6	0.000
teaching/nursing	22 (100)	22			
pito brewing	57 (69)	83			
petty trading	63 (91)	69			
dressmaking/hairdressing	60 (94)	64			
farmers	15 (75)	20			
Religion					
Christianity	182 (81)	225	26.136	2	0.000
Islam	89 (88)	101			
Traditional	6 (35)	17			
Reported monthly income					
> GH¢10	89 (74)	121	9.562	3	0.023
GH¢10- GH¢200	168 (83)	202			
GH¢201- GH¢400	16 (100)	16			
GH¢400 ⁺	4 (100)	4			
Total	277 (81)	343			

The percentage of women delivering in health care facilities increased with education. All insured women with tertiary education delivered at a health facility compared to 67% of insured women with no schooling at all (Pearson χ^2 (3) = (26.97 p=0.000). A higher percentage of women who were Muslims delivered at a health facility than those who were non-Muslims in the study (Pearson χ^2 (2) = (26.136 p=0.000). Insured women who were engaged in formal jobs, dressmaking/hairdressing and petty trading were highly likely to delivery at a health facility than those who were into farming and pito brewing (Pearson χ^2 (6) =(31.407 p=0.000). Higher percentage (100% versus 74%) of insured women who earned income above 200 Ghana cedis delivered in a health facility than those women who earned below 10 Ghana cedis (Pearson χ^2 (3) =(9.562 p=0.023).

4.5.6. Socio-Economic Factors Associated with Health Facility Delivery among Uninsured women.

Religious affiliation of the uninsured women was the only socio-economic factor associated with health facility delivery among uninsured women as shown in table 4.8.

Table4. 8 Socio-economic factors associated with health facility delivery among uninsured women

Variables	Health facility delivery (%)	Total	Chi-square value (χ^2)	df	p-value
Level of education					
No schooling	15 (58)	26	1.332	3	0.722
Primary	10 (63)	16			
JHS/SSS	10 (71)	14			
Tertiary	1 (100)	1			
Occupation					
Unemployed	10 (59)	17	5.775	6	0.329
Teaching/nursing	2 (100)	2			
Pito brewing	10 (53)	19			
Petty trading	9 (82)	11			
Dressmaking/hairdressing	5 (71)	7			
Farmers	0 (0)	1			
Religion					
Christianity	22(58)	38	6.518	2	0.038
Islam	13(87)	15			
Traditional	1(25)	4			
Reported monthly income					
> GH¢10	15 (60)	25	0.191	3	0.662
GH¢10- GH¢200	21 (66)	32			
GH¢201- GH¢400	0 (0)	0			
GH¢400+	0 (0)	0			
Total	36(63)	57			

A higher percentage of uninsured women who were Muslims delivered at a health facility than those who were non-Muslims in the study (Pearson χ^2 (2) =(6.518 p=0.038).

4.5.7 Socio-economic Factors not Associated with Health Facility Delivery among uninsured women.

Among uninsured women it was found that the utilization of health facility for delivery was not associated with level of education (Pearson χ^2 (3) =1.332 p=0.722), occupation (Pearson χ^2 (6) =5.775 P<0.329) and their reported monthly income (Pearson χ^2 (3) =0.191, p=0.662). See table 4.8 for details on demographic factors of uninsured women associated with health facility delivery.

4.5.8 Health Related Factors Associated With Health Facility Delivery among Insured women.

Distance to health facility, availability of means of transport, presence of a health facility with trained midwife, previous health facility delivery, previous foetal loss and decision maker on place of delivery were associated with health facility delivery among insured women as illustrated in table 4.9.

Table4. 9 Health Related Factors Associated with Health Facility Delivery among**Insured Women**

Variables	Health facility delivery (%)	Total	Chi-square value (χ^2)	df	p-value
Distance to HF					
Below a km	160 (92)	173	45.065	2	0.000
1-5km	115 (72)	159			
5+km	2 (20)	11			
ANC visits					
None	5 (80)	6	2.834	2	0.242
Below 4	17 (68)	25			
4+	255 (82)	312			
Health during pregnancy					
Fit	197 (81)	241	0.130	1	0.911
Not fit	82 (80)	102			
Previous HF delivery					
None	2 (4)	47	2.067	4	0.000
1	169 (91)	186			
2-3	95 (97)	98			
4-5	11 (92)	12			
6+	0 (0)	0			
Previous foetal loss					
None		245	13.736	3	0.003
1	223 (91)	90			
2	46 (51)	8			
3+	8 (100)	0			
Decision maker					
Self	113 (74)	153	19.368	4	0.002
Husband	22 (76)	29			
Jointly	128 (91)	141			
In-laws	4 (50)	8			
Parents	0 (0)	0			
Total	277 (81)	343			

As expected higher percentages of women delivering at health facilities were found among insured women who indicated that means of transport was always available in their communities than those who stated otherwise (Pearson $\chi^2 (2) = 47.624$ $p=0.000$).

The fact that the woman had previously experienced foetal loss was associated with delivery at a health facility. Women with previous foetal loss were more likely to deliver at a health facility (Pearson $\chi^2 (3) = 10.656$ $p=0.003$). Women who reported the presence of a health facility with a trained midwife in their communities were more likely to deliver at health facility compared to those who reported that they did not have a health facility with a trained midwife (Pearson $\chi^2 (1) = 60.399$ $p=0.000$). The percentage of women delivering in health care facilities was highly associated with previous health facility delivery increased with increasing number of health facility delivery (Pearson $\chi^2 (3) = 32.642$ $P<0.000$). Insured women who jointly decided with their husbands on place of delivery were most likely to deliver at a health facility (Pearson $\chi^2 (4) = 19.368$ $P<0.002$). The percentage of women delivering in health care facilities decreased with an increase in distance from 92% at <1km to 20% at >5km (Pearson $\chi^2 (2) = 45.065$ $P=0.000$). Women who had ever made full/part payment for maternal health services before the index delivery were less likely to deliver at health facility compared to those who did not (Pearson $\chi^2 (1) = 57.634$ $P=0.000$).

4.5.9 Health Related Factors not Associated with Health Facility Delivery among Insured Women.

Despite the high percentage of ANC attendance among the women in the study this was not associated with health facility delivery (Pearson $\chi^2 (2) = 2.834$ $P=0.242$). Additionally, the women's health status during pregnancy was not related with health facility delivery (Pearson $\chi^2 (1) = 57.634$ $P=0.000$).

4.5.10 Health Related Factors Associated with Health Facility Delivery among Uninsured Women.

Presence of health facility with a trained midwife, previous health facility delivery and full/part payment for prior maternal health facility before the index delivery were associated with health delivery among uninsured women as indicated in table 4.10.

Table4. 10 Health Related Factors Associated with Health Facility Delivery among Uninsured Women

Variables	Health facility delivery (%)	Total	Chi-square value(χ^2)	df	p-value
Distance to HF					
Below a km	17 (71)	24	2.091	2	0.351
1-5km	14 (64)	14			
5+km	5 (46)	11			
ANC visits					
None	0 (0)	2	5.313	2	0.070
Below 4	3 (43)	7			
4+	33 (69)	48			
Health during pregnancy					
Fit	26 (59)	44	1.371	1	0.242
Not fit	10 (77)	13			
Previous HF delivery					
None			32.642	4	0.000
1	0 (0)	0			
2-3	23 (79)	29			
4-5	10 (97)	11			
6+	11 (92)	2			
	1 (100)	1			
Previous foetal loss					
None	29 (63)	46	0.734	3	0.865
1	5 (90)	8			
2	1 (100)	1			
3+	1 (50)	2			
Decision maker					
Self	25 (63)	40	4.305	4	0.230
Husband	1 (50)	2			
Jointly	9 (82)	11			
In-laws	1 (25)	4			
Parents	0 (0)	0			
Total	36 (63)	57			

The percentage of uninsured women delivering in health care facilities was highly associated with previous health facility delivery increased with increasing number of health facility delivery (Pearson χ^2 (3) =32.642 P=0.000). Uninsured women who reported the presence of a health facility with a trained midwife in their communities were more likely to deliver at health facility compared to those who reported that they did not have a health facility with a trained midwife (Pearson χ^2 (1) =4.692 P=0.030). Women who had ever made full/part payment for maternal health services before the index delivery were less likely to deliver at health facility compared to those who did not (Pearson χ^2 (1) =8.867 P=0.000).

4.5.11 Health Related Factors not Associated with Health Facility Delivery among Uninsured Women.

Distance to health facility (Pearson χ^2 (2) =2.091 P=0.351), availability of transportation (Pearson χ^2 (2) =0.494 P=0.351), number of ANC visits (Pearson χ^2 (2) =5.313 P=0.070), history of previous foetal loss (Pearson χ^2 (3) =0.734 P=0.865), health status during pregnancy (Pearson χ^2 (1) =1.371 P=0.242) and decision maker on place of delivery (Pearson χ^2 (4) =4.305 P=0.230) were not associated with health facility delivery among uninsured women.

4.6 SUMMARY OF MAIN FINDINGS

The main findings of the study in relation to the objectives of the study are summarized as follows:

- I. In this study, cultural beliefs such as the effect of “bad or evil eyes” and practices such as proof of fidelity to the husband and strong womanhood as well as the use of locally prepared oxytocin (*masugo*) were reported as common cultural barriers to seeking skilled care at birth. However, an average proportion of 30.5% of both

insured and uninsured women blame these cultural barriers on the high level of illiteracy and unemployment among women in the study area.

- II. Women's knowledge on the health care package regarding pregnancy and delivery was low though this was slightly higher among the insured (28%) than the uninsured (25%). The expectation on the financial benefit from the scheme in terms of cost for health care was particularly higher among insured women (87%) than uninsured women (67%).
- III. The over fifty percent of both insured and uninsured women recognized the health facility as a safer place to deliver because of the perceived good quality of care, but described staff attitude as a deterrent to women seeking skilled care at birth.
- IV. Eighty-eight percent (88%) of all women who reported a health facility delivery were insured. Additionally, 81% of insured women reported a health facility delivery as against 63% of uninsured women. The study found that MHIS cover had a weak but positive linear association ($\varphi = 0.15$) with health facility delivery.
- V. Furthermore, the study found that factors such as: education above primary level, urban dwellers, low parity, monogamous marriage, higher earning jobs, Islamic religion and Christianity, proximity to health facility, regular means of transport, previous foetal loss, previous health facility delivery and women decision making were positive drivers for seeking skilled care at birth among insured women.
- VI. On the other hand, uninsured women who had health facility delivery were urban Muslims or Christians who had experienced previous health facility delivery and indicated the availability of health facility with trained wife in their communities.

CHAPTER FIVE

5.0 DISCUSSION

5.1 INTRODUCTION

When the Government of Ghana announced that that MHIS be implemented at all districts in place of user fees and exemption policies in 2004 there was widespread skepticism, particularly by health care providers about whether the MHIS could influence skilled deliveries in the upper West Region probably because of their experience with the then existing fee exemption policy for maternal health care. In 2007, two years after the scheme has fully been implemented in the region, unempirical reports suggest that pressure had mounted on health staff, particularly midwives because more women were seeking skilled delivery services. This study examined the influence of the MHIS on utilization of skilled delivery services in the region within the immediate two years (2006-2007) of the implementation of the scheme using primary data collected from a community- based administered questionnaire, in-depth interviews and focus group discussions in three selected districts. Therefore, this chapter discusses the main findings in line with the objectives, literature review, and the key variables of the study under the following headings.

1. Cultural beliefs and practices affecting health facility delivery.
2. Knowledge levels and perceptions on MHIS and health facility delivery.
3. Level of utilization of health facility services for delivery among insured and uninsured women.
4. Demographic, socio-economic and health related factors associated with utilization of skilled care services for delivery.

5.2 CULTURAL BELIEFS AND PRACTICES AFFECTING HEALTH FACILITY DELIVERY

Local cultural norms that govern women's reproductive lives have profound effect on their health and mortality. According to Gazali et al (2012), culture incorporates belief systems that underlie the perception and interpretation of diseases and illness in societies. This study found that though most of the women would have preferred skilled care at birth some cultural beliefs and practices had a negative influence on the utilization of health facility for delivery. Such include the belief that women in labour and newly born babies, are not to be seen in public as a way of protecting them from people with "bad eyes" or evil spirits who can negatively affect the pregnancy, progress and outcome of labour as well as the health of the newly born babies. Consequently ... *"unless the pregnancy or labour is advanced, they are not supposed to disclose it for cultural reasons. When there is even bleeding or any danger at that time, they will still not disclose it"* (Health worker, Jirapa). Most health workers in the rural districts of Jirapa and Nadowli reported that some women who are rushed in as emergency cases during pregnancy and labour do not give the correct history leading to neonatal and perinatal deaths". Similarly in Nigeria, a research conducted by Raju (2000) concluded that some socio-cultural practices and superstitious beliefs relating to the concept of causality in which illness and other misfortunes are attributed to evil spirits were wide spread among many ethnic groups resulting in women in many communities in Nigeria seeking medical treatment only as a last resort, after first attempting to appease these evil spirits. Again, 15% of insured women and 16% of uninsured women reported that some women delivered at home as traditionally required to prove their fidelity to their husbands. It was stressed that this was particularly necessary in polygamous marriages to prove the legitimacy of the particular baby in question as supported by 6% of insured and 7% of uninsured women. These findings are also in line with studies conducted by Seljeskog et al (2006) in Malawi and Mrisho et al (2007) in rural Tanzanian where some women choose

home birth to prove fidelity to the husband so the child could be accepted as legitimate in the family. However, in the focus group discussions some participants express their disguise about the existence of such negative cultural practices in the era of modernization saying that “...these things are giving way of late due to modernization ...” (Wa Men’s Focus Group Discussion).

Another disturbing finding was that some women were reported by 18% of insured women to have chosen home delivery just to prove to their rivals that they were matured enough to be recognized as wives and mothers. Reacting to this, some participants were of the view that delivery was a natural phenomenon for every matured woman requiring no medical intervention unless there is a serious complication. In a focus group discussion women in the Wa Municipality, a participant submitted that “...women who delivered at home before the advent of hospital delivery are still strong and active” in her support for home delivery. This belief has compelled some women in the study area to even delivery at home without any form of assistance as submitted by a participant: “ I know a woman nearby who locked herself in the room and delivered alone because the rival insulted her that she was not matured before entering into marriage”((Wa Women’s Focus Group Discussion). In Uganda, Kyomehendo (2003) documented a similar finding that birth was believed to be a test of endurance, and that skilled care-seeking was a sign of weakness. Therefore women who deemed themselves brave delivered alone. On the other hand 12% each of insured and uninsured reported home delivery in order to care for their children and older family members and take charge over their small scale businesses since there was no external support. Studies conducted in rural Malawi (Seljeskog et al, 2006), in rural Vietnam (Doung et al, 2004), in rural Tanzania (Kowaleski et al, 2002) and in India Stephenson and Tsui (2002) all documented similar evidence and indicated the need to promote smaller family sizes that enhances alternative care arrangement by women seeking skilled delivery. This

again highlighted the need to promote family planning services under the MHIS as desired by the women in this study. Additionally, negative cultural practices such as the use of herbal preparation (“*mansugo*”) as local oxytocin, placental burial, and birth rites that affect health facility delivery were mentioned in the study. Whilst the health workers were of the view that herbal medicine should not be used during labour and delivery due to their potentially negative effects on the health of both mother and child, some participants submitted that the use of traditional medicine in delivery is good because “*our great grandparents have used them and have testified their potency*. She also added that “*even today, we cannot do away with them totally, because they sometimes help even the orthodox medicine to function properly*” (*Nadowli Women’s Focus Group Discussion*). Thus, the researcher agrees with the assertion by the USAID (2009) that if non-financial factors, including cultural preferences for home delivery, social barriers related to ethnic group or gender discrimination, are the primary drivers of a woman's choice to deliver at home, this new policy (MHIS) may have limited role in increasing the proportion of deliveries with skilled care. This calls for effective engagement of the chiefs and elders of the communities, who are the custodians of culture in the region on dealing with cultural barriers for women seeking skilled care at birth.

5.3 KNOWLEDGE AND PERCEPTIONS ON THE MHIS AND HEALTH FACILITY DELIVERY

5.3.1 Knowledge and Perceptions of Insured and Uninsured Women on the Mutual Health Insurance Scheme (MHIS)

The findings from the study indicated that the message on health insurance was widely spread among the women in the area of study. The high level of awareness had been translated into their level of participation in the scheme as 86% of the respondents were valid identity card holders of the scheme. The finding agrees with Asante and Aikins (2008) finding in Ghana that 81.9% of respondents were valid card holders when they researched on the topic, *Does*

the NHIS Cover the Poor? This however contradicts the findings of a study conducted in Nigeria by Okaro et al (2010) that the high level of awareness of the existence of the NHIS was not translated into participation as more than half of the respondents did not register with the scheme. Both insured and uninsured women indicated that radio discussions, campaigns and education given by health workers on the scheme were the major sources of information on the scheme as in shown by table 4.4 on the main sources of women's knowledge on the scheme. This finding tends to underscore the importance of using effective tools of communication in dissemination of information as demonstrated in this study. Assessing their knowledge on the health care package, a little lower than a third of insured women (28%) and 25% of the uninsured women knew that the package covers cost of care for pregnancy and delivery. This could be attributed to the fact that at the time of respondents' delivery, the MHIS was still at its early stages of implementation. Also, there was no formal information on who catered for the cost of delivery care as the fee exemption policy was not formally withdrawn from the system. Additionally, the respondents had very low knowledge level (8% versus 5%) on the fact that the scheme provides free health care for the aged at no cost of premium payment. Again, this finding is in line with Okaro et al (2010) and Osuorji (2006) that the respondents in Nigeria had low knowledge on various aspect of the NHIS.

Assessing women's perceptions on the benefits of the MHIS, 87% of insured women and 67% of uninsured women were of the view that insured members would benefit financially from the scheme. Participants recognized and appreciated the fact that *"...it is not every illness that can be treated easily at home, drugstore, or even OPD level. Some require admissions for long periods and serious management. It is therefore better to be insured against such eventualities because the premium does not come anywhere close to the cost of treatment of such illness"* (Wa Women's Focus Group Discussion). Again, 13% of insured women and 33% of uninsured members expected an improvement in the quality of care under

the implementation of the scheme. However, participants were quick to add that their one of their concerns with the MHIS was “... *the cheap drugs they normally give us but write the most expensive ones for us to go and buy...*” (*Jirapa Women’s Focus Group Discussion*). Some health care providers also acknowledged that the provisions made for medicines, and laboratory investigations under the scheme needed to be reviewed to make the package more comprehensive and to improve quality of health care delivery. It is therefore very important that the authorities of the MHIS revise regularly the range of services provided for maternal health care in consultations with the health workers who provide such services in order to steadily and significantly improve the quality of maternal health care. These findings agree with Bruce et al (2007) findings when they studied on the *Community Satisfaction, Equity in Coverage and Implications for Sustainability of the Dangme West Health Insurance Scheme* in Ghana. Additionally, this finding is supported by Mohammed et al study in Nigeria in 2009 when they documented that client’s satisfaction was affected by unavailability of drugs in the hospital. This bears a drastic consequence on the utilization of health care services by valid card holders since services are perceived to be of low quality. All participants in the study however agreed that the MHIS is an effective tool for increasing health facility delivery among insured women as concluded by Asante and Aikins (2008) and submitted that “ *with health insurance, women have more access to ANC, screening has improved and health facility delivery has also increased*” (*Health worker, Nadowli*).

5.3.2 Knowledge and Perceptions on Skilled Delivery Services

Findings from this study indicated that 97% of insured women and 95% of uninsured women know that health facility delivery is safer and therefore, preferred to deliver their babies at the health facility with a skilled attendant. The major reasons for the high preference for health facility delivery were the perceived good quality care by insured (57%) and uninsured (59%) as well as the good counseling given to the women (20% versus 24%) at the ANC clinics as

shown in figure 4.4 on reasons for women's preference for health facility delivery. Participants in focus group discussions and in-depth interviews presented clear understanding of the importance of health facility delivery and indicated that “...it is *unsafe to deliver at home because of complications*” (Wa Men's Focus Group Discussion). The high level of positive perception towards skilled delivery among the women is commendable and could be attributed to the good works of skilled attendants at the ANC clinics. This finding is not an isolated case as Ngula (2005) reported that Namibian women knew and understood the importance of health facility delivery and by de Bernis et al, (2003) findings that given the options women in both developed and developing countries would choose the most skilled carers (skilled attendants) they can find if these are available, acceptable and affordable.

However, the study found that poor attitude of health professionals was the major reason both insured (58%) and uninsured (51%) women dislike about health facility delivery as illustrated in figure 4.5 on women's dislikes about health facility delivery. Bad experiences by women or their relatives with health staff was seen as a great disincentive for health facility delivery. Participants in all focus discussion groups stressed that “...the *greatest problem is the attitude of nurses*”. Some women in the focus group discussions stated that health workers poorly communicated important information, verbally and/or physically abused some of them and did not respond to calls by women who needed argent attention often times. Participants reported their observation that asking for nursing care by insured clients was viewed by health workers as a form of manipulation of health workers because of their MHIS status. Some women submitted that “*when you are in pain and call for the nurse, she tells you to carry your noise away from her*”. At times when your baby is coming and you call the nurse, she will ignore you and your baby might even fall” (Wa Women's Focus Group Discussion). The health workers however attributed this to the increased workload due the MHIS without a corresponding improvement in health resources, adding that “*because there is too much*

work load..., critical cases do not receive the care and counseling they need from the midwife.” (Health worker, Jirapa). It is very important that the GHS secretariat in the region increases the numbers of skilled attendants in the region by taking advantage to retain and develop most of the midwives that are trained in the region and equitably distribute them. The findings in this study are similar to other studies which report that women prefer the care of a TBA or relatives (D’Ambruoso et al, 2005: Duong, Binns and Lee, 2004: Kyomuhendo, 2003: Paul and Rumsey, 2002) due to their dissatisfaction with rude, arrogant and neglectful behaviour at health facilities. Therefore, interventions that address issues on customer care and client-friendly attitude need to be implemented by both management of health facilities and that of the MHIS to enhance the achievement of the purpose of the MHIS for maternal health in the area of increasing skilled delivery especially in deprived regions like the upper west region. Restrictions, positioning, frequent vaginal examination, presence of male attendants, demand for delivery episiotomy and Caesarean section were also mentioned by some participants as reasons they disliked health facility delivery (See figure 4.5). This evidence agreed with the findings of several studies that other women, including family members; saw hospital delivery as dangerous because of caesarean section and episiotomy, unfamiliar procedures/practices, restrictions and harsh treatment from staff (Seljeskog et al, 2006: Umar et al, 2006: D’Ambruoso et al, 2005: Geurts, 1997).

5.4UTILIZATION OF HEALTH FACILITY SERVICES FOR DELIVERY AMONG INSURED AND UNINSURED WOMEN

The study found that MHIS cover had a positive association with health facility delivery. The study has identified that the MHIS has increased health facility delivery services among women by 18%, thus from 63% among uninsured women to 81% among insured women (figure 4.6). The levels of utilization within both groups are higher than regional proportions of health facility deliveries recorded in the years 2006 and 2007 (27.5% to 34.5%) as well as

national levels of utilization within the same period (44.5% to 34.9%). The high level of utilization of skilled delivery services could be largely attributed to the corresponded high MHIS coverage (86%) among the women in the study. This affirmed conclusions of Koenig et al, (2007) that cost concerns are an important barrier to seeking emergency obstetric care in Bangladesh. Participants in the in-depth interviews and focus group discussions agreed that the MHIS had increased the demand for health facility delivery in the area of study, attesting that “*before the health insurance, one hindrance was finance, which the health insurance has eliminated*” (Health worker, Nadowli). This high level of health facility delivery among insured women is in line with the finding of National Development and Planning Commission (NDPC) in 2008 when they conducted a research on the *Citizens’ Assessment of the NHIS* in Ghana. The study found that 82.2% of NHIS valid card holders in the Upper West Region had a health facility delivery. In the same study, nearly 98% of insured households’ interviewed from Upper West confirmed that the cost of treating an ailment was no more a problem resulting in the high utilization of health care services. This is an important observation in view of the fact that the NHIS is primarily aimed at making health care more affordable; particularly for the poor. This finding also confirmed the USAID, (2009) study in Ghana which mentioned that the NHIS has increased the proportion of skilled delivery among insured women. It has also supported Mensah et al, (2010) study, on *Ghana’s National Health Insurance Scheme in the Context of the Health MDGs – An Empirical Evaluation Using Propensity Score Matching*, which concluded that with the NHIS women were more likely to receive prenatal care, deliver at a hospital, have their deliveries attended to by trained health professionals, and experience less birth complications. Hence, they stated that NHIS is an effective tool for increasing health care access, and improving health outcomes. On the contrary, another research conducted by Liabsuetrakul and Oumudeein 2011 on the *Effect of Health Insurance on Delivery Care Utilization and Perceived Delays and Barriers Among Southern Thai Women* found that though the effect of health insurance

was not significant on determining place of delivery, it was significant in relation to the perceptions of delays and barriers.

Again, the study found that almost the same proportions of insured and uninsured women were attended to by a nurse/midwife (92% versus 97%) whilst the doctor attended to only 8% of insured and 3% of uninsured women at delivery. All the related literature reviewed in this study did not specify the skilled attendant at birth. However, similar to the finding of this study, is the general understanding in the Ghanaian obstetrical setting that most deliveries are attended to by nurse/midwife except complicated situations that need advanced obstetrical intervention such as a Caesarean section.

On reasons given for the high level of utilization of health facility for delivery, 39% insured and 32% of uninsured women stated perceived quality of care. Again, 29% of insured and 33% of uninsured women attributed it to the good counseling they had received from the antenatal care attendants (see figure 4.8). Some studies mention that women report better quality of care in private facilities, but that cost deters them from using those (D'Ambruoso et al, 2006; Griffiths and Stephenson, 2001). This strongly suggests that the good status of most of the women with the MHIS in the study was the main driven force for the high patronage of health facility services for deliveries.

Finally, using Pearson chi-square, the null hypothesis that there is no association between MHIS cover and health facility delivery was rejected at $p=0.003$. With a phi (ϕ) value of 0.15, the strength of the association between MHIS membership and skilled delivery was evaluated to be weak. This was probably so because the period of the index delivery was just one to two years after the MHIS was implemented when more women in the study were not aware that the scheme covers cost of health facility delivery. Notwithstanding, the established positive linear association between MHIS and health facility delivery further stressed the

point that the MHIS had positively influenced the increased proportions of health facility deliveries among insured women in the study.

5.5 FACTORS ASSOCIATED WITH UTILIZATION OF SKILLED HEALTH CARE SERVICES FOR DELIVERY.

Determinants under demographic, socio-economic and health related factors on health facility delivery among insured and uninsured women are discussed under this heading.

5.5.1 Demographic Factors Associated with Health Facility Delivery

5.5.1.1 Residence

A woman's place of residence was positively associated with health facility delivery among both insured women and uninsured women. In this study, urban women of Wa were significantly associated with delivering with skilled assistance than women in rural areas of Jirapa and Nadowli among both insured ($p=0.000$) and uninsured ($p=0.000$) women. This finding reflects the finding of several previous studies which have reported a significantly higher use of skilled assistance at delivery by urban women compared to rural women in Ghana (USAID, 2009: GDHS, 2007: CWIQ, 2003) and elsewhere (Say and Raine, 2007). A reason for this may be the availability of health facilities, because health facilities are much more available and convenient to access in the Wa municipality than the rural districts of Jirapa and Nadowli. This proximity allows the urban women greater access to information and knowledge regarding modern health care facilities, which influences them to use these facilities. This is supported by Anwar et al (2008) who indicated that women who live more than five km from the health facility are significantly less likely to receive skilled assistance at delivery. Other reasons may be that the urban women are from the families who have a higher level of education and have a higher level of household economic status. In this study,

more than half (69%) of urban women had more than primary education, whilst the percentage was 43% for the rural women.

5.5.1.2 Parity

Also, the number of children a woman had ever delivered was positively associated with health facility delivery among insured women but not so with uninsured women. The study unearthed that parity of women was one of the paramount determinants for health delivery services. Women who were insured and had given birth for the first to third times were significantly more likely to use health services for delivery than multiparous (4⁺ deliveries) women at $p=0.000$. Women who are pregnant with their first child are more likely to experience difficulties during labour and delivery. Therefore, fear of a complication or lack of confidence in the face of problems may motivate these inexperienced women to use health services for delivery (Ekale and Tunau, 2007). Women of higher parity believe themselves to be more experienced in pregnancy and childbirth and hence are less likely to deliver at hospitals (Babalola and Fatusi, 2009). Similar to findings of other studies, lower utilization of skilled care among women of higher parity in this study might also be confounded by larger family size (Mekonnen and Mekonnen, 2003) and low level of education and polygamy (Breen, 2011). In this study about 74% of the insured and 56% of uninsured women within the class of primary or higher education level had less than three deliveries. Additionally, a little over half of the uninsured women (52%) who indicted the index delivery as their first experience, delivered in a health facility at $p=0.188$. In contrast, Letamo and Rakgoasi (2003) in Botswana found that low parity women, mainly teenage mothers, were more likely to have a non-facility delivery. However, this study failed to report the proportion of teenagers compared to other age groups. Furthermore, insured women who were in monogamous marriages were more likely to deliver at a health facility than those in polygamous marriages

at $p=0.014$ but there was no association among uninsured women. In poor polygamous households like those in the area of study, preference is often given to the younger wives to the disadvantage of the older ones leaving them with no other choice than to utilize TBAs where cost and terms of settlement can be negotiated. One study conducted by Stephenson et al in 2006 on the *Contextual influences on the use of health facilities for childbirth in Africa* found no association in Tanzania, Ghana and Burkina Faso found that monogamous women sought skilled care more often than the other groups in Ivory Coast and Kenya.

5.5.2 Demographic Factors not Associated with Health Facility Delivery

5.5.2.1 Maternal Age

Age of the mother as a demographic characteristic did not have any significant effect on the use of skilled delivery among both insured ($p=0.197$) and uninsured ($p=0.581$) women in this study. All the six (6) women who were 45⁺ years used skilled delivery services irrespective of their MHIS status. Though there was a relatively fair proportional distribution of health facility delivery among all categories of age groups, a significant percentage (25%) of insured women within the age group of 35-44 years did not deliver at the health facility. This might be because, they were more likely to be confident in their ability to have a successful home delivery due to accumulated experience in birthing and might also be more traditionally inclined (Burgard, 2004: Bell et al, 2003: Gleib, Goldman and Rodriguez, 2003: Navaneetham and Dharmalingam, 2002). On the other hand, the proportion of health facility delivery was lowest among uninsured women within the age groups of 25-34 years (56%) compared to those within 15-24 years (75%) and 35-44 years (73%) in the study. Younger women, who are more likely to be single, have better parental support to enable them access health facility delivery and older women are told by health workers to deliver in a facility since older age is a biological risk factor (Burgard, 2004: Bell et al, 2003: Gleib, Goldman and Rodriguez, 2003). Most studies on determinants of delivery service use (i.e. controlling for parity) find either no effect of age or

a higher use of skilled attendance among older mothers compared to younger mothers (Gabrysh and Campbell, 2009).

5.5.2.2 Marital status

In this study there was no significant association between marital status and health facility delivery ($p=0.050$). All single women and 80% of married women who were insured delivered at a health facility compared to 75% of women who were either divorced or widowed. This finding is similar to evidence in rural Rwanda that single women were almost three times more likely to deliver at a health facility than married women (Umurungi, 2010). Again, a higher proportion of married uninsured women (71%) reported health facility delivery compared 29% of single women and 40% of women who were either divorced or widowed. This might be due to the stigmatization that, single mothers, widows and divorcees go through at the societal level; informing their preference to deliver at home because they may anticipate a negative provider interaction. A study in rural Vietnam by Doung et al, 2004 on the *utilization of delivery services at the primary health care level* found that higher proportion of single mothers delivered at home because they were stigmatized and skilled care providers had negative attitude towards single mothers. This evidence contrasts the finding of Umurungi (2010) that most married women and women living in a permanent relationship did not use health facilities for their delivery compared to single women in a study on *determinants of the utilisation of delivery services by pregnant women in Rwanda*.

5.5.2.3 Household size

Though there was no association among insured women ($p=0.280$) and uninsured women ($p=0.969$), utilization of health facility for delivery was highest among insured women with the small household size of 2-6 individuals (85%) and lowest among uninsured women with largest household size of 16⁺ (50%) in the study. Some studies found that women in larger

families reported low utilization of skilled delivery services due to lack of alternative care for other children during the time and lower socio-economic status (DOUNG et al , 2006: GAGE et al, 2006: MEKONNEN and MEKONNEN, 2003).

5.5.3 Socio-economic Factors Associated with Health Facility Delivery

5.5.3.1 Religion

The religious affiliation of the women was associated with health facility delivery among both insured and uninsured women. The study found that both insured ($p=0.000$) and uninsured ($p=0.038$) Muslim women were more likely to use skilled assistance at delivery compared to their counterpart non-Muslim women in the study. Our finding contrasts the study by ANWAR et al in Bangladesh in 2008 indicating that Muslim women are less likely to use skilled assistance at delivery compared to women from other religions. Other studies find that indigenous women are less likely to have skilled attendance at delivery (GABRYSH and CAMPBELL, 2009: BRENTLINGER et al, 2005: GLEI, GOLDMAN and RODRIGUEZ, 2003). In Ghana, studies conducted on determinants of maternal health service utilization found that members of traditional religions and Muslims are less likely to use delivery services as compared to Christians (GYIMAH ,TAKYI and ADDAI, 2006: ADDAI ,2000). Possible reasons for the finding in this study may be because; most of the Muslims were resident in the urban area with better opportunities than those in the rural area.

5.5.3.2 Education

Maternal education was associated with health facility delivery among insured women ($p=0.000$) but was not associated with health facility delivery among uninsured women ($p=0.722$). Similar to many other studies, this study showed a significant positive association between education of the women and the use of skilled attendance at delivery for both insured and non-insured women (WHO, 2010). It found that as the women level of education

among the women (both insured and uninsured) increased, their propensity to deliver in the health facility also increased. For instance it was found that 100% of the women who had tertiary education delivered at a health facility whilst only 58% of the insured women with no formal education delivered at a health facility. Education serves as proxy for information and knowledge of available health care services (Babalola and Fatusi, 2009) as well as a proxy for women's higher socio-economic status that improves the ability of educated women to afford the cost of health care services (WHO, 2009). Education also enhances level of autonomy and increases female decision-making power (Bloom et al, 2001).

5.5.3.3 Occupation/ Reported monthly Income

Again, occupation of the women was associated with health facility delivery among both insured and uninsured women. The study found a strong relationship between occupation and health facility delivery among insured women ($p=0.000$). However, all women with formal employment such as teaching and nursing, and a higher proportion of women engaged in other better income generation activities such as petty trading and dressmaking and hairdressing utilized health facility for delivery than women engaged in pito brewing and the unemployed. This was however not statistically significant among the uninsured women ($p=0.329$). This gives an indication that the earning ability of women is an important factor for utilization; as found by other studies (Gabrysh and Campbell, 2009; USAID, 2009; Babalola and Fatusi, 2009; Kupari, 2005; DFID, 2004; Chakraborty et al, 2003; Lewis 2003). Also, the study found that all insured women who earned income GH¢201⁺ delivered at a health facility whilst only 74% of the insured women and 60% of uninsured women who earned less than GH¢10 delivered at a health facility at $p=0.023$.

Additionally, proportion of skilled delivery among insured women dropped from 97% for those who did not make any payment for maternal health services before the recent delivery to 65% among women who made some payment for maternal health service utilization before

the recent delivery ($p=0.000$). Similarly, the proportion of skilled delivery among uninsured women dropped from 100% for those who did not make any payment for maternal health services before the recent delivery to 53% among women who made some payment for maternal health service utilization before the index delivery ($p=0.000$). This may not be unconnected to the level of absolute poverty recorded in the region as reports indicate that the Upper West region has a poverty incidence of between 72% and 84% (Sowa, 2010). According to the World Bank, about 44.8% of the Ghanaian population survived on less than US\$1 a day (World Bank, 2006). Though the MHIS may have reduced the burden of financial access to service delivery, other hidden costs to maternal health services, such as transport and feeding, affect service access to the poor rural and urban women as demonstrated in this study. For example in the study area, transport costs to health centres, especially for critical cases, often exceed the average daily wage of women in the rural area due to extremely poor intra district road and transport systems.

5.5.4 Health Related Factors Associated with Health Facility Delivery.

5.5.4.1 Distance to health facility/Availability of means of transport

In the study, the distance to be covered by laboring women to reach the nearest health facility was associated with health facility delivery among insured women ($p=0.000$) but not so with the uninsured women ($p=0.351$). Nevertheless, the study observed that proximity to health care facilities was an underlying issue for selecting delivery health care services among both insured and uninsured women. As distance to a health facility increases from less than a kilometer to above 5kms, the proportion of skilled deliveries in the study decreased from 92% to 20% among insured women and from 17% to 5% among uninsured women. This finding is supported by previous literature (Gabrysh et al, 2011; Ngula, 2005; Gleit, Goldman and Rodriguez, 2003). Poor road conditions and lack of transportation are associated with increased costs of visits to health care providers. An earlier study by Ramson

and Yinger (2002) mentioned the problem of distance as a reason for women use of traditional birth attendants compared to midwives. This may be aggravated by the inability of a midwife to make a long trip to the communities that are very far away from delivery health care facilities, partly due to staff shortages, lack of transport at the facility level and poor road network. It was found that a more insured women who had means of transport regularly available in their communities delivered at health facility whilst less insured women who did not have means of transport regularly available in their communities delivered at a health facility at $p=0.000$. This situation was not different among the uninsured women since the predominant means of transport to a health facility during labour was on foot, bicycles and motorbikes (see figure 4.9). This findings confirmed Seljeskog et al (2006) assertion that access of health services to pregnant women who live beyond 5km from the nearest hospital is sub-optimal. Again, Gabrysh et al (2011) on their study on *the Influence of Distance and Level of Care on Delivery Place in Rural Zambia*, concluded that for each doubling of distance to the closest delivery facility, the odds of facility birth decreased by 29%, while each step increase in level of obstetric care led to 26% higher odds of facility birth.

5.5.4.2 Availability of health facility with a trained midwife

The study found that the non-availability or lack of trained midwife in a health facility discouraged women from skilled attendance at birth. From the study, only 41% each of both the insured women ($p=0.000$) and uninsured women ($p=0.030$) who indicated that there was no health facility with a trained midwife in their community had a health facility delivery. A trained delivery attendant during childbirth was perceived as one of the most important tools that should be present during childbirth. Therefore, 88% of the insured women and 71% of uninsured women who had health facility with a trained midwife delivered at a health facility. Absence of a functioning health facility in a community serves as a major barrier to skilled care at birth by creating a social and psychological distance between community and health

professionals. This can be due to the shortage of health professionals in large and remote areas, a frequently absent midwife, or one who does not live in the village (Titaley et al, 2010). Therefore, there is the need to strengthen the CHPS compounds and other primary health facilities as one of the major interventions towards scaling up skilled delivery services utilization in the region. Almost all literature reviewed during the course of this study did specify the functional status of the health facility, probably because distance to the nearest health facility might be used as a proxy for the availability of a functioning health facility.

5.5.4.3 Previous health facility delivery

The study revealed that women previous health facility delivery experience has a positive relation with utilization of health facility delivery services among the women irrespective of their MHIS status ($p=0.00$). It was found that 91% of insured women with at least one previous health facility delivery and 97% of those with 2-3 previous health facility deliveries delivered their index babies at the health facility. This deduction affirms Breen (2011) study on *'Delivery practices and associated factors among mothers seeking child welfare services in health facilities in Kenya'* which shows a positive relationship between the first place a mother delivered and the last place of delivery. However, other factors such as quality of care, accessibility, and other health conditions could lead to this positive association between previous health facility delivery and current health facility delivery. Similar to the findings of this study, earlier studies by Duong, Binns and Lee (2004) in rural Vietnam, D'Ambruoso et al (2005) in Ghana and (Bell et al, 2003; Stephenson et al, 2006) all indicated that women tend to deliver with the same provider if a previous delivery went well and tend to change when they are dissatisfied.

5.5.4.4 Previous foetal loss

Furthermore, the study unearthed that, women's previous experiences of foetal loss have a positive association with health facility delivery services among insured women ($p=0.003$) but was not associated with health facility delivery among uninsured women ($p=0.865$). It was discovered that 90% to 100% of insured women who had experienced one to two forms of foetal loss before the recent delivery, delivered at health facility. The finding in this study is in line with many other studies (D'Ambruoso, et al, 2005: Telfer, Rowley and Walraven, 2002: Afsana and Rashid, 2001). Problems experienced during the previous pregnancies and / or deliveries, depending on the severity, may influence women to seek health care services on their own or base on health workers recommendation of the need for health facility delivery. Therefore, many women in the study reported that they delivered in the health facility because of the counselling received at the ANC (see figure 4.8).

5.5.4.5 Decision maker

The findings of this study also provided evidence that decision maker on the place of delivery was associated with health facility delivery among insured women ($p=0.002$) but was not so with uninsured women ($p=0.23$). Higher proportions of insured women who either took a sole decision (91%) or did so with their husbands (74%) as well as uninsured women (82% versus 63%) delivered at the health facility. At all levels of decision making, MHIS holders were more likely to use health facility for delivery compared to non-holders of the MHIS. Unlike in the past, the MHIS has high potential to remove the first delay in seeking skilled care for delivery due to the higher level of women engagement in decision making especially for the insured women. During a focus group discussion with men in the Wa municipality, they submitted that “... now with health insurance women can go to hospital and deliver because it is free and no man in this case will say the woman should wait on him to decide that for her”(Wa Men's Focus Group Discussion). Though earlier studies associated women's

positive decision-making power with their control over resources within the household and educational background (Furuta and Salway, 2006; Burgard, 2004; Raghupathy, 2003), the researcher has not come across a study that measures NHIS status and women decision making power.

5.5.5 Health Related Factors not Associated with Health Facility Delivery.

5.5.5.1 Antenatal Care Clinic Attendants (ANC Visits)

The study found ANC attendance did not influence health facility delivery among the both insured and uninsured women in the study. Proportion of health facility delivery was about the same among insured women who made 4⁺ ANC visits (82%) and those who did not attend at all (80%) at $p=0.242$. However, more uninsured women (69%) who made 4⁺ visits delivered at the health facility than those who visited the ANC less than four times (43%) at $p=0.070$. It is often expected that women who attend ANC will display a better appreciation and understanding of the benefits of skilled care for childbirth through the utilization of health facility services for delivery, particularly because of the counselling opportunities packaged in ANC services. This study did not find an association between ANC visits and health facility delivery probably because all the women in the study were already aware of the benefits of skilled delivery at the community level as stated on their knowledge and perceptions of women on health facility. Therefore, other factors either than education and counseling on health facility delivery from ANC visits would have more power over the women's decision to have a health facility delivery. However, studies in Rwanda (Umurungi, 2010) and in Mali (Stephenson et al, 2006) found that the level of antenatal care uptake was highly predictive of women's health facility use for delivery. In another study, women who did not use ANC services were described to be mishandled and abused by nurses when they sought skilled delivery services. This was shown to deter women without ANC records from seeking delivery services (Amooti-Kaguna and Nuwaha, 2000).

5.5.5.2 Health Status during Index Pregnancy

The health status of the women during the index pregnancy was not associated with health facility delivery as about 80% each of insured women who reported being fit and those who reported some form of ill had a health facility delivery ($p=0.911$). The high level of utilization of health facility delivery services especially by women who reported being fit throughout the index pregnancy is commendable in this study. The women in the study indicated that health facility delivery is necessary because “...*when it becomes difficult for you to deliver the doctor will operate you to remove the baby*” (*Jirapa Women’s Focus Group Discussion*). Contrary to this finding however, other studies in settings with low levels of skilled care reported that a large proportion of women had have facility deliveries because they experienced complications (Telfer et al, 2002: Asfsana and Rashid, 2001).

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusion and recommendations based on important findings of the study. The main objective of the study was to investigate the influence of MHIS on skilled attendance at birth in the Upper West Region. Additionally, the study sought to achieve the four sub-objectives as follows.

1. Describe cultural beliefs and practices that discourage women from using skilled health care services at birth.
2. Examine the knowledge level and perceptions of participants on the MHIS and health facility delivery.
3. Determine the levels of utilization of health facility services for delivery among insured and uninsured women.
4. Identify demographic, socio-economic and health related factors associated with utilization of skilled health care services among insured and uninsured women.

6.1 CONCLUSION

The findings of this study clearly show that MHIS cover had a positive linear association with health facility delivery. Therefore the null hypothesis that there is no association between MHIS cover and skilled attendance at birth is rejected. The study established that MHIS cover was associated with an increase in health care utilization for childbirth in the selected three districts.

The study found that certain cultural beliefs and practices such as “people with bad eyes”, proof of fidelity to husband and strong womanhood as well as the use of locally prepared oxytocin (*mansugo*) prevented some women from seeking assistance at the health facility for delivery. These cultural beliefs and practices were particularly common and considered as

important variables in determining the use of skilled care at birth among participants in the Jirapa district, many of whom were Traditionalists and pito brewers with very low income.

In the study, knowledge of MHIS package covering pregnancy and delivery services which is a prerequisite for utilization of skilled care services was found to be very low even among insured women. Surprisingly, nearly all participants in the study have adequate knowledge on the importance of skilled care at birth and preferred to have health facility delivery. Much as participants perceived the MHIS as an effective tool in accessing affordable health care during pregnancy and delivery, they raised concerns about the quality of health care services provided under the scheme. Service availability problems such as drugs being frequently out of stock, limited or no diagnostic equipment, insufficient skilled staff and service acceptability challenges such as poor staff attitude were main factors affecting the benefits of utilization skilled attendance at birth among insured women.

The levels of utilization of skilled attendance for childbirth by both insured and uninsured women in this study, if they reflect the reality as reported by the women, were higher than national and regional figures. The sample in this study was limited to three of the nine districts in the region. The three selected regions also appeared to have better geographical access and well structured administrative services in both the health and MHIS institutions, contributing greatly to the high levels of skilled care utilization for delivery in the study. The study revealed that many uninsured women in the study also reported health facility delivery. This is another strong indication that MHIS as a tool to achieving universal access to and utilization of skilled care for delivery has great prospect, if interventions are directed towards bridging inequities in MHIS coverage and health care services availability among the rural poor.

Demographic factors associated with health facility delivery among insured women were low parity, monogamous marriage and urban residence. On the other hand, multiparous women with accumulated birthing experience and self confidence in the study did not utilize skilled care delivery services even though they were insured. The strongest association for the use of SBAs in this study was education of women above primary level. In this study, education of women above JHS/SHS level was strongly linked with formal and other high jobs as well as high utilization of health facility for delivery. Health related factors that were strongly associated with the health facility delivery were distance and transportation to health facility, full/part payment for any maternal health service during the index pregnancy, previous health facility delivery and decision making. MHS cover empowers a woman to either make a joint or an autonomous decision on place of delivery and this was generally acceptable among all participants in the study. Thus, more women with this empowerment on decision making had a health facility delivery. This is contrary to the popular practice where women, especially in poor rural areas are excluded from the decision making process even on issues concerning their own health.

Finally, the objectives of this study have been achieved and the findings revealed that MHS' has a positive effect on the utilization of health services for childbirth by providing some financial protection for insured. Based on the findings some recommendations are made towards addressing significant barriers to utilization of skilled care for childbirth among women in the three selected districts in the study. It is hoped that addressing these barriers will contribute greatly to progress towards achieving the target for MDG-5.

6.2 RECOMMENDATIONS

6.2.1 MHIS officers

1. The current provision made by the Ghana government to absorb MHIS premiums of pregnant women is in the right direction to increasing MHIS enrolment and skilled delivery among poor rural women such as those in the Upper West region. MHIS officials in the various districts should use their agents especially in the rural communities to maximize the enrollment of pregnant women into the scheme and what services are offered them, paid for by the scheme. For instance are pregnancy related ultrasound examinations, now almost universally requested by physicians, covered?
2. More education on the package of the MHIS specially designed for pregnancy and child birth needs to be done by the MHIS officials whilst Ghana Health Service staff could also disseminate consistent messages promoting the use of skilled delivery services by all pregnant women.

6.2.2 Health care providers

3. The management of the health system in the region should effectively deal with health related and system barriers such poor staff attitude through in-services training of staff on professional adjustment, customer care and effective monitoring and evaluation of quality health care service delivery whilst at the same time ensuring the availability of optimum equipment and supplies for quality reproductive health care.
4. Health workers at both static and mobile ANC clinics should repackage their education on preparation of couples for health facility delivery using the focused antenatal care approach in order to attract primiparae- and multiparous women to

deliver under skilled care providers. This package could also be integrated into the home visiting schedule of Community Health Officers.

5. The campaign on the promotion of girl-child education, especially beyond primary level, needs to be strongly partnered by health workers through the school health programme under the District Health Management Teams in the districts.
6. Additionally, the District Health Management Teams should collaborate with the District Assemblies to develop a proposal and a scheme for attracting and retaining professional midwives in the Community Health and Planning Services (CHPS) compounds to serve as a strong for early detection and referral of pregnant women that needs emergency and special care. This is feasible since there are already professional midwives working in rural clinics and health centers with similar settings as those in the CHPS compounds.

6.2.3 Chiefs and elders at the community level

7. The chiefs and elders as custodians of culture in the various communities should play active leadership roles in the national drive to achieve MDG-5 by collaborating and negotiating with health care providers and MHIS officers in addressing peculiar cultural birthing practices that have prospects of improving skilled delivery coverage in the study areas.
8. Women living in remote areas with poor road network, who as a result lack ready access to means of transport, are unable to reach a health facility during labour and other emergency situations, resulting in complications and loss of lives. Therefore, the community leaders should collaborate with the Catholic Missions and other interest groups to reintroduce the “maternity waiting homes” project that were established by Caritas/Catholic missions in the 1970s. These homes on mission

hospital compounds enabled high risk pregnant women with special needs to live close to a functioning health facility for short periods prior to expected delivery dates to facilitate proper management of their cases as and when the need arises. They saved lives and can do so again.

9. Lastly, interventions that further eliminate or minimize other direct costs of seeking skilled delivery, such as provision means of transport through community transport mobilization are likely to scale up health facility delivery especially for MHIS members. Therefore the chiefs and elders of the communities in the study areas should collaborate with the transport associations in their communities to develop a practicable transport plan and motivational package for conveying pregnant and labouring women speedily to the nearest functioning health facility especially in emergency cases.

6.2.4 Researchers

10. There is the need to examine the impact of free NHIS enrolment of pregnant women on the utilization of skilled care at birth, especially in the three northern regions where maternal and child mortalities are worse than the national average, on a larger scale than was done in this study.
11. There was low utilization of skilled attendants for birth among some categories of insured women. Particularly surprising is the fact that many women who reported to have made either part/full payment for using maternal health services during the index pregnancy did not deliver under skilled care service provider. This unusual situation needs to be further studied for a fuller explanation to emerge.
12. One of the interesting findings in this study is that the decision making pattern appears to have changed from a solely masculine role to the involvement of women. In some cases, women reported making an autonomous decision on the

place of delivery alone by themselves. This is a significant departure from past traditional behaviour and a positive step in the struggle to empower women to be able to take crucial decisions, with adequate consultations, in issues that affect their lives. The extent to which this is beginning to happen in other spheres of life is worth finding out and documenting. Therefore, there is the need to investigate the influences of NHIS on household decision-making dynamics and women's use of maternal and child health services.

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APPENDICES

APPENDIX A: CONSENT FORM

HEALTHCARE FINANCING AND MATERNAL HEALTH SERVICE UTILIZATION STUDY

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Study: The Influence of MHIS on Skilled Attendance at Birth in the Upper West Region, Ghana.

Investigating Institutions

School of Public Health, University of Ghana, Legon, Ministry of Health (MOH), Ghana and Wa Regional Health Directorate.

INTRODUCTION AND BACKGROUND TO THE STUDY

We are students from School of Public Health, University of Ghana, Legon and are here to conduct studies into the MHIS and skilled attendance at birth as part of the University of Ghana's requirement for the award of a Master of Philosophy Degree in Public Health.

In childbearing, women need a continuum of care to ensure the best possible health outcome for them, their newborns, families, communities and the nation as a whole. Unfortunately however, sufficient numbers of skilled attendants and skilled attendance at birth remain unavailable in many developing countries, Ghana included, resulting in serious negative implications, particularly to poor rural women. Also, the UWR continues to record high rates of maternal and child mortalities. We are therefore here to find out your opinions on some pertinent issues on MHIS and skilled birth attendance. All women in the fertility age group will be invited to take part in the study. In all, we shall be talking to about 400 women who are eligible and are staying in this region. Taking part in this study is voluntary, that is, you have every right to refuse or accept to participate. Though the study will be carried out between March and April, 2008 in this community, the duration of your participation is the time that we will spend talking to each other. The study is sponsored by the School of Public

Health, University of Ghana, Legon; RHMT of UWR and MOH. You may ask questions about anything you do not understand concerning this study and you will receive satisfactory answers. There will be no medication, diagnostic test or any form of exposure in this study. The only risk in this study to you is your small time lost as you respond to these questionnaires. Also you will not be paid any compensation for taking part in this study. However, we believe that the knowledge we are going to gain from this study will help us to plan and develop new and better ways of financing and providing maternal health services that will benefit all of us. Any information by you is anonymous and highly confidential since no names or photo IDs are needed. It shall be used only for the purposes of this study. The study was reviewed and cleared by the University of Ghana's IRB based in Noguchi Memorial Institute of Medical Research. You are encouraged to ask questions at any time during our discussion. However if you have any question bordering on your mind concerning the study later, you may contact me through this address: Grace H. Dongoo

School of Public Health, University of Ghana, P. O. Box LG13 Legon-Accra
Tel.0246233390

SIGNATURE OF PARTICIPANT

I have read all of the above, asked questions, received answers concerning areas I did not understand and willing to give my consent to participate in this study. Upon signing this form, I will receive a copy of this consent document for my personal records

Signature of participant:

Name and signature of investigator.....

Date consent signed.....



Left Thumb Print (LTP) of Participant (only for participants who cannot sign

APPENDIX B: NATIONAL AND UWR MATERNAL HEALTH CARE SERVICE**COVERAGE COMPARED: 2003-2006**

Year / Percentage (%) Coverage of Services Delivered										
Service	Regional					National				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Antenatal	90	93.3	86.1	92.2	100	91.2	89.2	88.7	-	-
Skilled	34.7	32.3	31.1	27.5	34.5	52.4	-	54.2	44.5	34.9
Trained TBAs	66	38.3	41.0	69.4	-	-	-	-	-	-
Postnatal	75.9	95.7	71.0	64.9	-	66.7	53.3	55	-	-
F/P	48.1	48.2	59.6	59.9	-	22.6	24.3	22.6	-	-

Source: MOH/GHS Annual Reports 2003-2005

UWR Health Service/GHS Annual Reports 2003-2006

APENDIX C: QUESTIONNAIRES FOR WOMEN WHO DELIVERED BETWEEN THE PERIOD OF 2006 –2007

These questionnaires seek to investigate the effects of the mutual Health Insurance Scheme Implementation on skilled attendance at birth in the Upper West Region. Your responses to this questionnaire will provide the needed data for the investigation. It is solely for academic purposes and you are assured of anonymity and confidentiality. Your frank and candid opinions are welcome. However you are free to partake or decline.

Date..... Questionnaire No.....

Location (District +Village /Town).....

Interviewer.....

INSTRUCTIONS: Tick the appropriate response and fill in the gaps provided.

SECTION A: DEMOGRAPHIC AND SOCIO-ECONOMIC INFORMATION

1. Age.....

2. Marital status

a. Single b. Married c. Divorced/widowed

3. Number of children.....

4. A. Educational level

a. Primary /less b. JHS/ SHS c.Tertiary d. None

5. Occupation

a. Unemployed b. Formal jobs c. Brewer (pito brewing)
d. Trader e. Dressmaking/Hairdressing f. Farmers.....
g Others

6. Place of residence (village / town).....

7. Household size.....

8. How many wives does your husband have (You inclusive)?

9. Religion

a. Christianity b. Islamic c. Traditional .

10 What is your monthly income (GH¢)?

- a. Less than 10 b. 10 – 200 c. 200 – 400 d. 401+

B: THE PERCEPTIONS OF WOMEN ABOUT SKILLED DELIVERY.

- 11 Number of times ever pregnant.....
- 12 Number of miscarriages/abortions.....
- 13 Number of babies ever born.....
- 14 Number of babies ever born at health facility.....
- 15 Do you have a health facility with a trained midwife in your community?
- a. Yes b. No
- 16 Where will you personally like to give birth?
- a. Home b. Health facility
- 17 If home give reasons(choose as many as applicable)
- a. Fast Labour
- b. No means of transport
- c. No care taker at health facility and for the rest of children
- d. No funds for health facility delivery
- e. More convenient, natural and supportive
- f. My previous delivery/deliveries were normal
- g. I was not permitted health facility delivery
- h. I was not insured
- i. I could not get required items for health facility delivery
- j. To prove my fidelity
- k. Did not see the need for health facility delivery
- 18 If health facility give reasons(choose as many as applicable)
- a. I could not give birth normally at home
- b. I was cautioned during antenatal visit by the midwife/doctor
- c. I had a previous Caesarean section / still birth(s)
- d. Perceived quality of care / safe delivery
- e. I was insured
- f. close to a health facility
19. What do you dislike about health facility delivery?
- a. Restrictions
- b. Delivery position
- c. VE/Episiotomy/Caesarean Section
- d. Poor attitudes of staff
- e. Presence of male staff
- f. (Poor facilities (e.g, bathrooms
- g. Items for hospital delivery

SECTION C: THE PERCEPTIONS OF WOMEN ON THE MHIS

20. Do you know about the Mutual Health Insurance Scheme?

- a. Yes b. No

21. If yes, how did you get the message on the MHIS in your community?

- a. Campaigns and durbars by MHIS officials
b. The radio only
c. Television only
d. Friends/relatives
e. Health workers

22. What are the benefits of the MHIS in your community?

- a. Free health care services pregnancy, delivery and postnatal care
b. Free health care services for adults who are insured
c. Free health care services for children under 18years
d. Free health care services for the aged
e. Others.....

23. What do perceive to be the major benefit of MHIS to its members?

- a. Financial benefit for health care b. improved quality of health care

24. Have you personally registered with the MHIS?

- a. Yes b. No

D. THE INFLUENCE OF MHIS REGISTRATION ON SKILLED BIRTH ATTENDANCE

25. In which of the following years did you ever give birth to a child?

- a. 2006 b. 2007

26. Did you attend antenatal clinic during pregnancy?

- a. Yes b. No

27. Indicate number of antenatal visits.....

28. Did you experience any health problem during pregnancy?

- a. Yes b. No

29. If yes, specify the health problem.....

30. Where did the delivery take place?

- a. Home b. Health facility

31. If home delivery, give your reason.

- a. Availability of TBAs
- b. Labour was fast
- c. No means at the time of labour
- d. No care taker at health facility and for the rest of children
- e. Was not financially prepared for health facility delivery
- f. More convenient, natural and supportive

32. If health facility, state your reason.

- a. Unsuccessful home delivery
- b. Counseled on danger signs and birth preparedness antenatal visit
- c. Previous Caesarean section / still birth(s)/health problem
- d. Perceived quality of care / safe delivery
- e. I was insured
- f. Had discussed with partner on health facility delivery
- g. Proximity to residence

33. Who attended to you during delivery?

- a. Nurse/midwife c. Doctor
- b. TBA d. Relative/friend e. Self

34. How far is the nearest health facility in your community (km)?

- a. Less than a km
- b. 1-5km
- c. Above 5km

35. Were you an active registered member of the MHIS as at the time of delivery within the period indicated above?

- a. Yes b. No

36. Which of the following factors influenced your choice to deliver at health facility within the period 2006 – 2007? (Only those who delivered at health facility) Tick as many as apply.

- a. Good status with the MHIS
- b. Quality of skilled delivery services
- c. Short distance from skilled delivery service center
- d. Affordable cost of skilled delivery services due to MHIS
- e. Available means of transport to skilled delivery center
- f. Others (specify).....

37. Did you buy/pay in full/part for any drug / supply (gloves, antiseptics) during your pregnancy?

- a. Yes b. No

38. What was the reason?

- a. Not available in health facility b. Not covered by MHIS

39. How will you describe the availability of means of transport in this community?

- a. Always available b. Sometimes available c. Not available

40. By what means of transport did you get the point of delivery (Health facility deliveries only)

- a. Foot b. Bicycle c. Motorbike
d. Car/lorry e. Ambulance

41. What was the nature of the perceived differences observed?

- a. Yes b. No

42. Was your membership of the MHIS valid at your time of delivery? a. Yes b. No

SECTION E: CULTURAL BELIEFS AND PRACTICES THAT DISCOURAGE WOMEN FROM DELIVERING UNDER SKILLED CARE.

43. Who do you stay with?

- a. Children
b. parents
c. Husband and children
d. husband, children /other relatives

44. Who decided where you should have your baby?

- a. Self
b. husband
c. Self & husband
d. Parents in-law
e. My parents
f. Others

45. Which of the following socio-cultural beliefs, practices or factors encourage women to deliver at home?

- a. Prove of fidelity
b. Birth rites
c. Placental disposal
d. Presence of in-laws
e. Masculine decision
f. Prove of womanhood
g. High demand on women's time
h. Polygamy
i. Large family sizes
j. Low value on women's health
k. High illiteracy and unemployment rates

APPENDIX D: FOCUSED GROUP DISCUSSION GUIDE FOR MOTHERS AND FATHERS.

SECTION A: THE PERCEPTIONS OF WOMEN ABOUT SKILLED DELIVERY.

1. Where do you think women should deliver their babies (home/health facility)? Why?
2. What are the benefits and dangers of home delivery? (Knowledge and perceptions).
3. What are the benefits and dangers of health facility delivery? (Knowledge and perceptions).
4. (quality of care, attitude, practices, etc : positive and negative ones)
5. What are your experiences with health facility delivery? (quality of care, attitude, practices, etc : positive and negative ones)

SECTION B: THE PERCEPTIONS OF WOMEN ABOUT THE MHIS

6. What do you know about the MHIS? (Package and benefits).
7. What are your opinions and experiences about the workability of MHIS?
8. Who is the MHIS directly beneficial to women in your community?
9. What are reasons women register with the MHIS?
10. What are your experiences at registration centers?

SECTION C: THE INFLUENCE OF MHIS MEMBERSHIP ON SKILLED ATTENDANCE AT BIRTH

11. Benefits of MHIS to your community in terms of skilled delivery services (financial, drugs, supply, etc).
12. Experiences at health facilities during labour and delivery as insured members (positive and negative experiences)?
13. Concerns about MHIS and skilled care at birth.

SECTION D: CULTURAL BELIEFS AND PRACTICES THAT DISCOURAGE WOMEN FROM DELIVERING UNDER SKILLED CARE.

14. Socio-cultural beliefs and practices governing the process of childbirth in your community (pregnancy, place of delivery, decision making, rituals).
15. Influence of these beliefs and practices on seeking skilled care at birth.

APPENDIX E: IN-DEPTH INTERVIEW QUESTIONS FOR NHIS-OFFICERS

1. Why do you think the MHIS is a better choice, with particular reference to financing skilled delivery services?
2. How would you assess the performance of the MHIS *vis-à-vis* the free delivery policy, with particular reference to promoting skilled attendance at birth?
3. How would you assess the collaboration of partners (health workers, pharmacy shop owners, the district assemblies, opinion leaders, etc)?
4. From the start of the scheme how would you describe the trend in registration, male: female ratio, increase in numbers, age composition etc?
5. In your opinion, what could be the reasons for the trend?
6. What are some of your successes?
7. What are some of the challenges the scheme is facing, and how are you coping with these challenges, [clients (women, delivery charges, adverse selection, demand, premium charges) implementation, health workers (moral hazards) etc]?
8. Which areas will you be interested in extending your package for maternal health?
9. How much increment will cater for these extra services?
10. What is the way forward?

APPENDIX F: IN-DEPTH INTERVIEW QUESTIONS FOR HEALTH CARE PROVIDERS

1. How would you compare the demand for skilled attendance at birth now, and before the introduction of the MHIS?
2. What could be the reason for this observation?
3. Does the MHIS address issues relevant to the attainment of MDG5?
4. How would you describe the staffing (with midwifery skills including Obstetricians & Gynaecologists, anaesthetists), logistics, referral system, etc situation at your facility?
5. What are some of the challenges your facility is facing in promoting and providing skilled care at birth, and how are you coping with these challenges? (probe health system, cultural and scheme factors)
6. Have you any specific strategy in promoting skilled care at birth in your facility?
7. How would you assess the performance of the MHIS vis-à-vis the free delivery policy, with particular reference to promoting skilled attendance at birth?
8. In your opinion, what is the best option for financing maternal health services?
9. What, in your opinion, needs to be improved upon the Scheme to encourage women to register, so as to improve access to skilled attendance at birth?
10. What new treatments or procedures are you able to provide women during skilled delivery?
11. What is the way forward?