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**The impact of the National Health Insurance  
Scheme on the interactions between providers and  
clients in the Bolgatanga and Builsa districts of  
Ghana**

**Name: Dalinjong Ayizem Philip**

**Student number: DLNAYI001**

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**Supervisor: Dr Ayako Honda**

**Health Sciences Faculty, School of Public Health and Family Medicine,  
Health Economics Unit**

## DECLARATION

I, Dalinjong Ayizem Philip, hereby declare that the work on which this dissertation is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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Except the Journal Article, where the Vancouver referencing style has been used (in order to meet the requirements for the BMC Health Services Research Journal), other parts of the dissertation (Study Protocol, Literature Review and Policy Brief) have been referenced using the Harvard referencing style.

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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## ABSTRACT

**Background:** Prepayments and risk pooling through social health insurance has been advocated by international development organizations. Social health insurance is seen as a mechanism that helps mobilize resources for health, pool risk, and provide more access to health care services for the poor. Hence Ghana implemented the National Health Insurance Scheme (NHIS) to help promote access to health care services for Ghanaians. Objective: The study examined the influence of the NHIS on the behaviour of health care providers in their treatment of insured and uninsured clients.

**Methods:** The study took place in Bolgatanga (urban) and Builsa (rural) districts in Ghana. Data was collected through exit survey with 200 insured and uninsured clients, 15 in-depth interviews with health care providers and health insurance managers, and 8 focus group discussions with insured and uninsured community members.

**Results:** The NHIS promoted access for insured and mobilized revenue for health care providers. Both insured and uninsured were satisfied with care, according to the survey. However, increased utilization of health care services by the insured leading to increased workloads for providers influenced their behaviour towards the insured. Most of the insured perceived and experienced long waiting times, verbal abuse, not being physically examined and discrimination in favour of the affluent and uninsured. The insured attributed their experience to the fact that they were not making immediate payments for health care services. A core challenge of the NHIS was a delay in reimbursement which affected the operations of health facilities and hence influenced providers' behaviour as well. Providers preferred clients who would make instant payments for health care services. Few of the uninsured were utilizing health facilities and visit only in critical conditions. This is a consequence of the increased cost of health care services under the NHIS.

**Conclusion:** The NHIS is beneficial for promoting access to health care services, but there is the urgent need to streamline the reimbursement process in order to sustain the NHIS. Improving the capacity of health facilities and personnel for the provision of quality care also requires immediate action.

## LIST OF ABBREVIATIONS

BMHIS	Builsa District Mutual Health Insurance Scheme
BMMHIS	Bolgatanga Municipal Mutual Health Insurance Scheme
CBHIS	Community-based Health Insurance Schemes
CHPS	Community based Health Planning and Services
DMHIS	District Mutual Health Insurance Schemes
FGDs	Focus Group Discussions
DRGs	Diagnostic Related Groupings
GDRGs	Ghana Diagnostic Related Groupings
GTZ	Germany Agency for Technical Cooperation
IGF	Internal Generated Funds
ILO	International Labour Organization
IMF	International Monetary Fund
MHI	Mutual Health Insurance
MHOs	Mutual Health Organizations
MOH	Ministry of Health
NHI	National Health Insurance
NHIA	National Health Insurance Authority
NHIC	National Health Insurance Council
NIHF	National Health Insurance Fund
NHIS	National Health Insurance Scheme
OOP	Out-of-pocket
SHI	Social Health Insurance
SSA	Sub-Saharan Africa
SSNIT	Social Security and National Insurance Trust
UER	Upper East Region

UNICEF	United Nations International Children Educational Fund
USAID	United States Agency for International Development
WHO	World Health Organization

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**PART A: STUDY PROTOCOL**

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## SUMMARY OF STUDY PROTOCOL

**Background:** Ghana provided free health services to her citizens after independence in 1957. This became impossible in the 1970s and 1980s as a result of the economic crisis at the time. The situation led to the introduction of user fees (cost recovery) in public health facilities. However, the introduction of the user fees prevented the utilization of health care services by Ghanaians. In order to promote access, the Government of Ghana enacted the National Health Insurance (NHI) Act (650) in 2003, which brought about the implementation of the National Health Insurance Scheme (NHIS) in 2005.

**Aim:** The study will investigate the influence of the NHIS on the behaviour of health care providers. Specifically, the study will explore the perceptions of providers about the NHIS, especially the reimbursement process. The perceptions and experience of insured and uninsured clients, and health insurance managers will also be assessed.

**Methods:** Both quantitative and qualitative methods will be used for the data collection. The quantitative method will involve the use of patient exit interviews. The qualitative methods will make use of in-depth interviews with providers and health insurance managers, and focus group discussions with community members.

The study will help give a better insight and understanding on issues driving the behaviour of health care providers in their treatment of insured and uninsured clients upon the implementation of the NHIS. This information will be important for Ghana and other countries that are planning to introduce the concept of social health insurance/mandatory health insurance.

## **1.0. Introduction**

Ghana is among the few African countries that promulgated a National Health Insurance (NHI) Act (650). Hitherto, the country had been providing free health care services for her citizens after independence in 1957. This was possible due to the small population size (about 8 million) at the time and a flourishing economy (Assensoh & Wahab, 2008). However, the free health care services could not be sustained because of the economic crisis in the 1970s and early 1980s which adversely affected all sectors of the economy leading to budget cuts on social spending including health and education. Thus, little money was available for the health sector, leading to widespread shortages of essential medicines, supplies and equipment which adversely affected the quality of care (Agyepong & Adjei, 2008).

To forestall these problems, cost recovery or user fees (popularly called “cash and carry”) was introduced in the late 1980s in all government facilities. Patients were made to pay for the full cost of medication and care. The argument for the user fees was to generate revenue and to discourage frivolous use of health care services. However, the user fees policy affected the utilization of health services by Ghanaians. The poor especially, were undertaking self-medication and also reporting late to health facilities for treatment (Arhin-Tenkorang, 2001, Arhinful, 2003). This prompted the need to look for other alternatives of health care financing, thus the introduction of some Community-based Health Insurance Schemes (CBHIS) in the early 1990s. As at 2003, such CBHIS covered only about 1% of the country’s population (19 million), leaving many Ghanaians uncovered against high health care service costs (Sulzbach et al., 2005).

### **1.1. Background**

The Government of Ghana passed the National Health Insurance (NHI) Act (650) in August 2003, which saw the implementation of the National Health Insurance Scheme (NHIS) in 2005. The mission statement of the NHIS is to promote equitable and universal access for all residents of Ghana to an acceptable quality package of essential health care services without making out-of-pocket payments (OOP) at the point of consumption (Government of Ghana, 2003). The NHIS is seen as a health financing mechanism that will help provide universal health coverage to Ghanaians.

## **1.2. Design of the NHIS**

The design of the NHIS is based on the District Mutual Health Insurance Schemes (DMHIS), which operates in all 145 districts of the country. The NHIS covers both the formal and informal sectors of the economy. Apart from the District Mutual Health Insurance Schemes (DMHIS), there are other health insurance schemes permitted to operate under the NHI Act. They included; Private Mutual Health Insurance Schemes and Private Commercial Health Insurance Schemes. Ghanaians have the option to either join a District Mutual Health Insurance Scheme operating in each of the districts or join any private insurance scheme. The government of Ghana is however, committed to support the District Mutual Health Insurance Scheme. The National Health Insurance Council (NHIC) has been set up for the purpose of running the NHIS. Under the National Health Insurance Council, there is the National Health Insurance Authority (NHIA) which is responsible for the accreditation and payment of health care providers.

## **1.3. Financing of the NHIS**

The sources of funding for the NHIS include 2.5% sales tax, 2.5% monthly payroll deduction for formal sector workers as part of their contribution to the Social Security and National Insurance Trust (SSNIT) fund, government budgetary allocation and donor funding support. Ghanaians in the informal sector are required to make a contribution to the District Mutual Health Insurance Scheme based on how they were classified (as agreed by the National Health Insurance Council). The following classification existed; the very rich, the rich, the middle rich, the poor, the very poor and finally the core poor. The District Mutual Health Insurance Schemes are to apply this classification in the collection of the premium. The minimum and maximum premium to be paid is GH□7.20 (\$8) and □47.70 (\$53) respectively.

## **1.4. Benefit package under the NHIS**

There is a minimum benefit package developed for clients under the NHIS. The benefit package consists of basic health care services, including outpatient consultations, essential drugs, inpatient care and shared accommodation, maternity care (normal and caesarean delivery), eye care, dental care, and emergency care. Ninety-five percent (95%) of diseases afflicting Ghanaians have been covered by the NHIS. Family planning and immunizations

which were previously provided for free have also been captured under the NHIS. However, some services classified to be unnecessary or very expensive are on the exclusion list. Among these are; cosmetic surgery, drugs not listed on the NHIS drugs list (including antiretroviral drugs), assisted reproduction, organ transplantation, and private inpatient accommodation.

### **1.5. Provider payment under the NHIS**

At the start of the NHIS, a fee for service type of provider payment mechanism was used for paying health care providers. But this was replaced with the Ghana Diagnostic Related Groupings (GDRGs) in April, 2008. The reason for the replacement was that the fee for each service was found to be low and hence unattractive, especially for private providers to participate, since the public providers were automatically accredited (Ankomah, 2009). Providers are encouraged to participate in the NHIS, in order to reduce congestions and delays for clients. With the fee for service, providers were also required to submit detailed information on all services and charges for claims submissions. It involved a lot of paperwork which providers were not happy with (Ankomah, 2009).

Therefore the GDRGs were introduced to help remedy some of these issues. The tariff covers the full cost of the estimated direct consumables for direct patient care, anaesthesia and other investigations. The GDRGs also captures about 80% of the estimated overhead cost for public health facilities, comprising of building and equipment maintenance, housekeeping and utilities (Ankomah, 2009). It is expected that the new tariff will generate adequate revenue from the NHIS for providers to cover a significant portion of their cost of operation.

### **1.6.Reimbursement process under the NHIS**

Regarding the process of reimbursement, providers were required to compile and submit their claims to a District Mutual Health Insurance Scheme (DMHIS) to which they have been accredited to. The claims are then vetted by the DMHIS. When satisfied, the DMHIS makes a submission to the National Health Insurance Authority (NHIA) for funds to pay the providers. The NHIA pays providers by channelling the funds through the DMHIS.

## **2.0. Problem statement**

In the era of the NHIS, the main financing mechanisms are; annual budgetary allocations from central government (that is, for public sector health care providers), reimbursements

from the NHIA and OOP payments from uninsured clients. Central government makes an annual budget allocation to the public sector health care providers for meeting some of their recurrent expenditure, for instance, water and electricity bills. But government will gradually reduce or stop this budgetary allocation to providers when the NHIS is successfully carried through.

The other mechanism of financing for providers is the reimbursement from the NHIA. The NHIA which derives its funds from a 2.5% sales tax (VAT), 2.5% monthly payroll deduction from formal sector workers, contributions from the informal sector, government budgetary allocation and donor funding are used for the payment of providers to cover insured clients. But user fees are charged by providers for the provision of health care services to the uninsured. That is, the uninsured clients at the point of consumption of all health care services are required to make OOP payments.

There is anecdotal evidence that providers are giving differential treatment to insured and uninsured clients in terms of waiting times, physical examination, quality of treatment and drugs. The uninsured are thought to be treated better by providers than the insured clients. This is seen as a threat to the achievement of the goal of the NHIS which is to make health care services accessible to all Ghanaians (Government of Ghana, 2003).

The research question is whether there are any differences in the behaviour of health care providers towards the insured and uninsured and what reasons account for the differences under the NHIS.

### **2.1. Rationale and justification for research**

Health care providers are the bedrock for the delivery of health care services. Their behaviour in relation to how clients are treated plays a significant role in determining whether the goals of a health system can be achieved or not, particularly with the implementation of the NHIS in Ghana.

Provider payment types and reimbursement process are key determinants of providers' behaviour in the provision of health care services (Kutzin & Barnum, 1992). Since the inception of the NHIS in Ghana, few studies have been conducted, focussing on health care providers' behaviour with regards to their treatment of insured and uninsured clients. It is

therefore important that a study is conducted to investigate whether the implementation of the NHIS, especially the reimbursement process has affected the behaviour of health care providers in the provision of health care services. The study will help improve current understanding on the behaviour of providers under social health insurance. This information will be important for Ghana and other countries that are planning to introduce the concept.

### **3.0. Literature Review**

#### **3.1. Introduction**

Health insurance is seen as an alternative financing mechanism for health care which has the ability to increase utilization and protect people against high health expenses (WHO, 2000). Health insurance serves three main functions: the pooling of health risk, the mobilization of health care resources, and the payment of health care providers (Liu, 2002). Through health insurance, individuals are able to share the risk of any large costs due to illness and to access health care services when in need and in good time (McIntyre, 2007). Hence insured persons are protected from paying high treatment costs in times of sickness.

#### **3.2. Types of health insurance**

The financing of health care through health insurance could either be voluntary or mandatory (McIntyre, 2007).

##### **3.2.1. Voluntary health insurance**

Voluntary health insurance is one that an individual or group can subscribe without a legal requirement to do so (McIntyre, 2007). It could be for profit or not for profit. The commercial health schemes are examples of voluntary health programmes that are run for profit. The Community-based health insurance schemes are also examples of voluntary health schemes that are not for profit. Poor individuals and households are not able to join the “for profit” type of voluntary health insurance. The “for profit” voluntary health insurance is mostly patronized by high socio-economic groups. The premium payment is based on individual risk assessment (Asenso-Okyere et al., 1997).

##### **3.2.2. Mandatory health insurance**

Mandatory health insurance may also be called national health insurance or social health insurance (McIntyre, 2007). The mandatory health insurance is generally supported by the government and membership tends to be compulsory for the intended group (Asenso-Okyere

et al., 1997). The mandatory or social health insurance is based on the principle of social solidarity.

### **3.3. Health insurance and utilization of health care services**

Studies have shown that the introduction of health insurance is associated with increased health care service utilization. For instance, in Senegal a study showed that members of a Mutual Health Organization had a higher probability of using hospitalization services than individuals who were not insured (Jütting, 2003). A randomized trial in Ghana also indicated that insured children had higher utilization rates for insured services than their uninsured counterparts. The above findings might be explained by the fact that the introduction of health insurance makes possible for individuals to have access to health care services which they would not have had, if the health insurance programme was unavailable.

In spite of the evidence of the association of health insurance with increased utilization of health care services, a study in Ghana showed that the introduction of the National Health Insurance Scheme did not increase the likelihood of the insured using maternal health care services. Prenatal care, skilled attendance at delivery, and caesarean-sections were unaffected by the implementation of the scheme (Hatt et al., 2009). The findings were explained by the fact that other direct cost of seeking health care services, for instance, costs of transportation, meals, costs for accompanying relatives, may have prevented the utilization of the maternal health care services. This signifies that health insurance coverage does not necessarily increase utilization in all settings. The findings for the higher utilization rates as reported in the other studies may be as a result of adverse selection and moral hazard on the part of the insured, which most studies do not report on.

### **3.4. Health insurance and equity**

According to Lagarde & Palmer, the equity effects of a health insurance programme depend on its design and implementation process (Lagarde & Palmer, 2006). Some Community-based Health Insurance Schemes and social/mandatory health insurance schemes have their core objective of promoting equity. That is, providing coverage to populations regardless of their socio-economic status, gender, age, race, and geographical location. For example, Ranson et al found in India that the Vimo Self-employed Women's Association (SEWA) scheme was able to provide coverage for the poorest of the poor, with 32% located in rural areas and 40% found in urban areas, and from households below the 30th percentile (Ranson

et al., 2006). Also, the Community-based Health Insurance Schemes in Ethiopia had helped to mitigate the effects of health shock on poor rural households (Asfaw & Braun, 2004). The poor were able to access health care services as and when they needed them with the introduction of the Community-based Health Insurance Schemes.

On the other hand, evidence has shown that some Community-based Health Schemes and social/mandatory health insurance schemes have proven to be relatively inequitable (Lagarde & Palmer, 2006). The introduction of some social health insurance schemes might help to deepen inequalities especially (Pannarunothai & Mills, 1997). In Indonesia, a study by Hidayat et al revealed that both the mandatory health insurance programme for civil servants (Askes) and the one for private employees (Jamsostek) had all failed to promote equity by not providing insurance coverage for the whole population (Hidayat et al., 2004). Another study in Senegal showed that the core poor were not covered due to their inability to afford premium payment, though the objective of the Community-based Health Insurance Scheme was to attract the poor and vulnerable (Jutting, 2003). In Ghana, findings indicated that the poorest of the poor were excluded from the Community-based Health Insurance Schemes introduced to cater for their health care needs (Osei-Akoto, 2003).

### **3.5. Health insurance and health care expenditures (out-of-pocket payments)**

The introduction of health insurance is meant to reduce health care expenditures (out-of-pocket payments) for consumers of health care services and to reduce health related impoverishment. Results from studies on the relationship between being enrolled in a health insurance programme and incurring further health expenditures are not clear (Levine, 2008). Some studies revealed that being insured helps to reduce health expenditure or out-of-pocket payments. In Senegal for instance, it was discovered that members of a Community-based Health Insurance Scheme pay far less when they seek health care services than those who were not insured (Jütting, 2003).

Contrarily, some studies have found that out-of-pocket payments were unaffected by the introduction of health insurance or rather increased for the insured. In China, for example, a government subsidized voluntary health insurance scheme (the New Cooperative Medical Scheme) was found not to have had any impact on the average out-of-pocket payments for the insured population (Wagstaff et al., 2007). The investigators attributed their findings to the institutional set up of health care in China which promoted increased utilization and

substitution toward more expensive health care services and treatments (Levine, 2008). The fact also remains that it is not only the direct cost of health care services that constitute the total cost for health care seeking. There are other indirect costs like transportation, meals, and even unofficial fees for which all add up to the total cost of health seeking (out-of-pocket payments). This therefore may help to explain the findings of the study.

In West Africa, a three country study evaluating the impact of Mutual Health Organizations have proven that membership to these organizations does have a less significant effect on out-of-pocket payments for outpatient care (Chankova et al., 2008). The Mutual Health Organizations provided insurance coverage for only cases of hospitalization and hence insured outpatients would have to make out-of-pocket payments for the services.

### **3.6. Provider payment mechanisms**

Provider payment mechanisms are important in the delivery of health care services. Provider payment mechanism is the process of managing, setting the benefit package and paying for health care services (Reaven & Rosenbloom, 2009). It may also refer to the allocation of health care resources to health care providers for the provision of health care services (Kutzin, 2000). Provider payment mechanisms are meant to cater for some aspects of the information asymmetry between health care providers and clients. This is done by defining rules in terms of the cost per patient or group of patients, the reimbursement costs, and the procedure for patient transfers or rejection (Maceira, 1998).

Provider payment mechanisms may either be prospective or retrospective. When the payment for a package of health care service is negotiated and agreed upon before the treatment takes place, it is referred to as prospective payment. When the payment is selected during or after the service has been rendered, it is referred to as retrospective payment (Maceira, 1998, Jegers et al., 2002). There are six main provider payment methods (Maceira, 1998). They include budgets, capitation, diagnostic related groupings (case-based payment), per diem/day, fee for service and salary (Lave & Frank, 1990).

### **3.7. Implementation issues relating to the NHIS in Ghana**

As shown earlier, Ghana adopted the NHI Act in 2003, which led to the implementation of the NHIS in 2005. Since the introduction of the NHIS, studies have shown an increasing level

of registration and membership, a rise in the number of those who consult formal health care for general health conditions, an increased likelihood of women to receive prenatal care and deliver at a hospital, etc, (Sulzbach, 2008, Mensah et al., 2009, Witter & Garshong, 2009). But there are challenges which include an overburdened public health infrastructure, increasing workloads, short supply of health care providers, and unmotivated staff (Health Systems 20/20 Project and Research and Development Division of the Ghana Health Service, 2009). In addition, there are problems in relation to the reimbursement process for health care providers. It showed that the introduction of the Ghana Diagnostic Related Groupings (a new tariff) in April, 2008 has resulted in the submission of huge amounts of claims by health care providers for payment. The National Health Insurance Authority therefore has to find extra funds to pay its health care providers (Sodzi-Tettey, 2010).

### **3.8. Conclusion and knowledge gaps**

The behaviour of health care providers is considered as one of the key determinants in the provision of health care services to insured and uninsured clients. Several factors including providers' payment type and the process of payment or reimbursement can influence the behaviour of health care providers. In Ghana, there is limited research on the behaviour of health care providers under the NHIS. Hence there is the need to conduct a study to fill this gap. The study will help give a better insight and understanding on issues driving the behaviour of health care providers in their treatment of insured and uninsured clients upon the implementation of the NHIS.

### **4.0. Aim**

The aim of the study is to investigate the influence of the NHIS on the behaviour of providers in their treatment of insured and uninsured clients.

### **4.1. Specific objectives**

The study focuses on:

- (1) Examining providers' perceptions about the reimbursement process under the NHIS.
- (2) Assessing providers' perceptions of the insured and uninsured clients.
- (3) Assessing the perceptions and experience of insured and uninsured clients.
- (4) Making policy recommendations to strengthen the implementation of the NHIS.

## **5.0. Methodology**

This section gives a description of the study area in which the study will be conducted. It also describes the methodology to be used for the study.

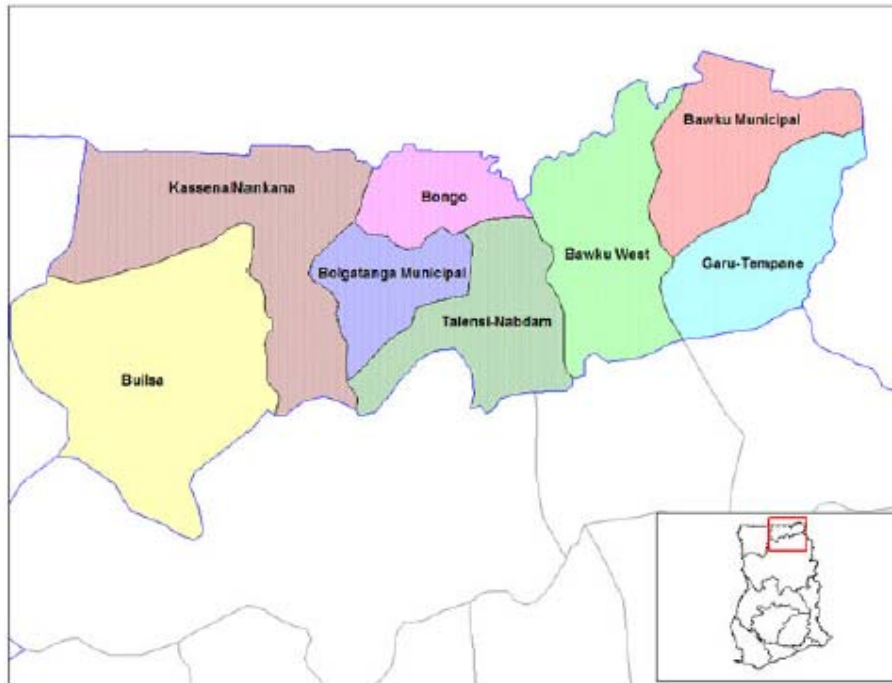
### **5.1. Study Area**

The study will be carried out in the Upper East Region, which is one of the 10 regions of Ghana. The region has been selected because it is one of the three poorest regions in the country, where health care providers are reluctant to accept postings to. It has a surface area of 8,842 sq.km (about 3.7% of the country) and an estimated population of 961,246 (2004) and is largely rural (87%) (Upper East Regional Administration, 2009). The doctor patient ratio stands at 1:29,000 and nurse-patient ratio is 1 to 1,243 (Upper East Regional Administration, 2009). The region has one hundred and forty-seven (147) health facilities (public and private) comprising of hospitals, clinics, maternity homes and health centres. The hospitals are located in Bolgatanga, Navrongo, Bawku, Sandema and Bongo, which are the major towns in the region. Out of the one thousand one hundred and thirty-four (1,134) accredited health care providers by the National Health Insurance Scheme in the country, fourteen (14) are located in the region. The study is seen as an opportunity to investigate the behaviour of health care providers in resource poor settings.

### **5.2. Study Site**

The Upper East Region is divided into nine (9) administrative districts and forty-two (42) health sub-districts. The map below shows the districts in the upper east region.

**Figure 1: Map of the Upper East Region showing the districts**



Source: (Upper East Regional Administration, 2009)

However, the Kassena-Nankana district was recently divided into two districts, namely Kassena-Nankana East and Kassena-Nankana West. This has not been reflected in the map above. The districts selected as the study site are the Bolgatanga municipality and the Builsa district. The two districts have been purposively selected to reflect urban and rural settings. The Bolgatanga municipality is considered as urban and Builsa district as rural.

### **5.2.1. Bolgatanga municipality**

The Bolgatanga municipal district is one of the nine districts in the Upper East Region. Bolgatanga serves as the capital of both the region and the Bolgatanga municipality. The municipality is located on latitudes 10°30' and 1°55' North and Longitudes 0°33' and 1°00' West. It has a land area of 1,620 km<sup>2</sup>. The municipality is bordered to the North by the Bongo district, South and East by Talensi-Nabdam district and Kassena-Nankana district to the West (Bolgatanga Municipal Assembly, 2009).

#### **5.2.1.1. Population characteristics**

The Bolgatanga municipality has a population of about 119,975 (2009 estimate) with a growth rate of 1.7%, compared with the national rate of 2.7%. The population density is 141.2 persons per sq. km. The distribution of the population is as follows: 0-15 years – 47.7%; 15-65 years – 50.8%; 65 years and above - 1.5%. In terms of sex distribution, males are 49% and females are 51% (Bolgatanga Municipal Assembly, 2009).

#### **5.2.1.2. Ethnic composition**

The major language spoken in the municipality is Gruune which is the main language of the people in the municipality. But due to the cosmopolitan nature of the municipality, other languages such as Dagaare, Ga, Ewe, Adanbge, Akans and Kassem are also spoken.

#### **5.2.1.3. Occupational distribution**

Agriculture accounts for about 57% of the labour force, trade and commerce takes 19%, manufacturing (mainly handicrafts) 11.92%, community/social services 7.4% and other miscellaneous activities take about 4.68% in the municipality (Bolgatanga Municipal Assembly, 2009).

#### **5.2.1.4. Health**

Life expectancy in the municipality is about 50 years; compared to the national figure of 58 years (Bolgatanga Municipality Assembly, 2009). The commonest diseases in the municipality are malaria, respiratory tract infections (ARI), diarrhoeal diseases and skin diseases.

#### **5.2.1.5. Health facilities and personnel**

The major health institutions in the municipality are the Regional hospital (a referral facility) and a private clinic. There are other smaller clinics and health centres run by some non-governmental organisations. The Community Health Integrated Planning Services (CHIPS) centres are also in operations in the municipality. All these institutions offer both curative and preventive services. The municipality has a total population of 5 medical doctors and 205 nurses. The doctor/patient and nurse/patient ratios are 1:30,932 and 1:755 respectively, compared to the national doctor/patient ratio of 1:400 (Bolgatanga Municipal Assembly, 2009).

### **5.2.2. Builsa district**

Builsa district is also one of the nine districts in the Upper East Region of Ghana. The capital of the district is Sandema. The district lies between longitudes 10 05' West and 10 35' West and latitudes 10 20' North and 10 50' North. The district covers an area of 2,220 km<sup>2</sup> and constitutes 25.1% of the total land area of the Upper East Region. It is bounded to the north and east by the Kassena-Nankana district, to the east by the Sissala district and to the south by the West Mamprusi district (Builsa District Assembly, 2009).

#### **5.2.2.1. Population characteristics**

The Builsa district has a population of about 84,069 (2009 estimate) with an annual growth rate of about 1%. The total population consists of 51.8% females and 48.2% males. The population density based on the land surface is presently about 33.94 or 34 persons per square kilometre (Builsa District Assembly, 2009).

#### **5.2.2.2. Ethnic composition**

The district is largely inhabited by the Builsa tribe constituting about 83%. However there are a few of other smaller groupings comprising of the Kantosi, Mamprusi, Sissala, Nankani and Mossi.

#### **5.2.2.3. Occupational distribution**

As it pertains in other districts in the region, the main occupation in the district is agriculture (comprising of farming, animal husbandry, forestry and related activities) accounting for about 67.4%. Other activities include production and transport equipment work (13.5%), sales work (8.6%), services work (4.5%), professional, technical and related work (3.8%), and other unclassified activities (2.2%) (Builsa District Assembly, 2009).

#### **5.2.2.4. Health**

Life expectancy in the district is about 50 years. The commonest diseases in the district are malaria, upper respiratory tract infections, diarrhoeal diseases, pneumonia, rheumatism, and anaemia. The district has a maternal mortality rate of 942 per 100,000 compared to the national average of 214 per 100,000 (Builsa District Assembly, 2009).

#### **5.2.2.5. Health facilities**

The main health institution in the district is the District hospital, with a doctor patient ratio of 1:84,069. There are smaller health centres and clinics located in some communities in the district. The district also has the Community Health Integrated Planning Services (CHIPS) centres (Builsa District Assembly, 2009).

#### **5.2.3.**

#### **Study**

##### **design**

The study will be a cross-sectional survey due to time and resource constraints. It will be carried out over a period of six (6) months. Both quantitative and qualitative methods of data collection will be used in order to enhance the validity of results through triangulation. Patient exit interviews, in-depth interviews and focus group discussions will be the techniques of data collection. Policy documents review will also be done for the study.

##### **5.2.3.1. Patient exit interviews**

The patient exit interviews will be held with outpatients exiting two public hospitals in the two selected districts after seeking health care. The aim is to assess patients' perceptions and experience of providers' behaviour in terms of, patients' satisfaction with health care provision, health staff attitude towards patients, and any preferential treatment by providers. Other indicators to help determine providers' behaviour are; time spent by patients at the health facility seeking health care, physical examination of patients, unofficial payments and drugs prescribed. The indicator "time spent by patients at the health facility seeking health care" is to record the entire time that the patient will spend at the health facility seeking health care. When patients arrive at the health facility, their time of arrival will be written on a slip and the slip given out to them (only sampled patients of insurance status, but all uninsured patients will be included in the study if they consented). When the patients are finally leaving the health facility, the time of exit will be recorded on the slip and transcribed to the questionnaire form.

Structured questionnaire developed in English will be used to collect the data. The questionnaire will be translated by experts into the local dialects spoken in the two districts. There will be a back translation for all questions to ensure that their meanings are not lost out as a result of the translation.

### 5.2.3.2. Sample size calculation for patient exit interviews

A sample size will be calculated for the patient exit interviews in the two public hospitals in the two districts (Bolgatanga municipality and the Builsa district). Insurance coverage for the two districts varied, 67% for Bolgatanga (BMMHIS, 2009) and 80% for Builsa (BMHIS, 2009). But the study will use a 50% insurance coverage levels to calculate the sample size for each of the two districts. This will be done in order to obtain an equal sample size for the two districts to enable comparison between the two districts. A standard error of 10% at 95% confidence level will also be used. The sample size required for the study in the Bolgatanga district will be determined as follows;

$$\text{Sample size (n), for Bolgatanga district} = \frac{Z^2 pq}{d^2} = \frac{(1.96 \times 1.96) \times (0.5 \times 0.5)}{(0.1 \times 0.1)} = 96$$

Where:

n = the sample size

Z = normal deviate (confidence limit) taken as 1.96 at 95% confidence level

p = proportion of population coverage for health insurance in the district

q = proportion of population not insured.

d = the acceptable degree of accuracy desired.

The sample size for the Bolgatanga municipality will be 96 participants. But calculating a 5% non-response rate to be added, the total sample size for the district will be 100 participants.

$$\text{Likewise, sample size (n), for the Builsa district} = \frac{Z^2 pq}{d^2} = \frac{(1.96 \times 1.96) \times (0.5 \times 0.5)}{(0.1 \times 0.1)} = 96$$

The sample size for the Builsa district will also be 96 participants. However, a non-response rate of 5% will also be calculated and added, giving a total sample size of 100. Overall, the sample size for the study will be 200 participants for the exit interviews.

### 5.2.3.3. Sampling distribution for the patient exit interviews

The sample will be distributed evenly among the insured and uninsured groups. This will be done in order to allow for comparison between the insured and uninsured groups. For the Bolgatanga district with a sample size of 100, 50 patient exit interviews will be conducted with insured clients and 50 will be conducted with uninsured clients. For the Builsa district with a sample size of 100, 50 patient exit interviews will be conducted with insured clients

and 50 will also be held with uninsured clients. Table 1 illustrates the distribution of participants for the two districts.

**Table 1: Distribution of participants**

District	Insurance status		Total
	Insured	Uninsured	
Bolgatanga	50	50	100
Builsa	50	50	100
<b>Total</b>	<b>100</b>	<b>100</b>	<b>200</b>

Systematic random sampling will be adopted to identify insured clients at the health facilities for the exit interviews. On average, 120 patients visit the public hospital a day. The study seeks to recruit approximately 15 participants a day. This will generate a recruitment interval of 8 patients. The starting point will be the first patient/client to arrive at the health facility. For the uninsured, all clients will be interviewed because of their limited use of the health facilities due to the fact that they make out-of-pocket payments for health care services. The exit interviews will be conducted by the research assistants and supervised by the investigator, observing on average two or more per day.

#### 5.2.4. In-depth Interviews

The in-depth interviews will be held with health care providers and the national health insurance scheme managers in the two districts. The health care providers to be interviewed include hospital administrators, accountants, pharmacists, medical doctors, and nurses. The health insurance managers and their claims officers will also be interviewed. Table 2 shows how the in-depth interviews will be distributed in the two districts.

**Table 2: Distribution of in-depth interviews**

Interviewee	In-depth interviews	
	Bolgatanga municipality	Builsa district
Regional health insurance manager	1	-
District health insurance	1	1
District health insurance claims manager	1	1
Hospital pharmacist	1	1
Hospital administrator	1	1
Medical doctor	1	1
Hospital accountant	1	1
Senior nurse	1	1
<b>Subtotal</b>	<b>8</b>	<b>7</b>

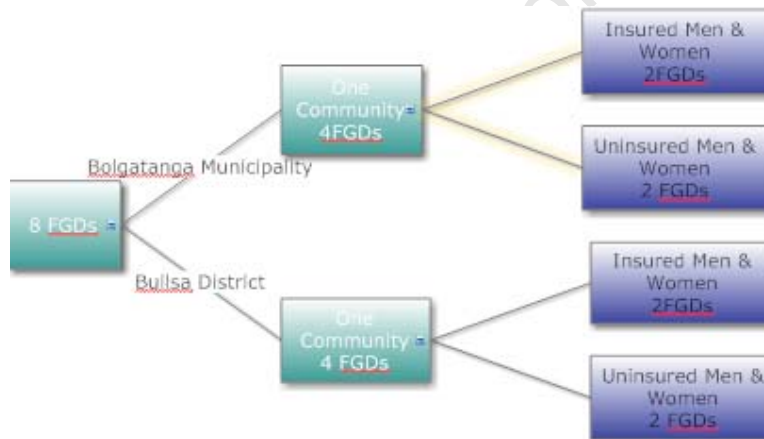
Total	15
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Semi-structured interview guide will be used for conducting the interviews, which will be in English. The essence of the in-depth interviews is to get an insight into providers' perceptions of the NHIS, especially the reimbursement process, clients' behaviours and challenges of the NHIS. The interviews will also seek to collect views of the health insurance managers about the behaviour of health care providers. All interviews will be recorded and later written out for data analysis. Field notes will also be written alongside as a complement. The in-depth interviews will be conducted by the investigator.

### 5.2.5. Focus Group Discussions (FGDs)

Eight (8) FGDs will be held with community members in the two districts. The discussions will be conducted with both insured and uninsured men and women, with an age range of between 18 and 60 years (both productive and reproductive ages). Figure 1 is a diagrammatic representation of the design for the discussions.

**Figure 2: Design for FGDs**



From figure 1, one community each from the two districts will be selected for the FGDs. The selection will be done according to the community's location from the health facility. As the location of a community to a health facility is an important determinant to health seeking. A community that extends out from the health facility up to about 8 kilometres (kms) will be the criteria for its inclusion in the study. A community that extends about 8 kilometres from a facility includes households that are nearer to the facility (about 4kms within) and also

households that are far from the facility (about 4kms further). Four FGDs will be conducted in each community with two each to be held with insured and uninsured men and women. The selection of the participants for the FGDs will also be done taking account of their residential location to the health facilities in the two districts. The study will bring together participants who live nearer (about 4kms within) and those who live further (about 4kms further) from the health facilities for each of the discussions. The participants will be recruited with the assistance of the communities' leaders or their representatives. Each focus group will comprise of a membership of between 8 to 12 members.

An interview guide will be developed in English and translated into the local dialects for the discussions. The interview guide will contain issues on the perceptions and experience of community members about the NHIS and that of providers' behaviour. The discussions will also be recorded and transcribed into English. The translation and transcription of the interview guide and the discussions will be carried out by people who are experts in the dialects spoken. All transcriptions will be done verbatim to reduce errors. Field notes as well as bodily expressions will also be taken, to complement the transcribed notes. The FGDs will be conducted by trained field assistants and supervised by the investigator to assure quality.

#### **5.2.6. Data analysis**

The data from the exit interviews will be entered into EpiData software (3.1) and transferred to STATA, (version 10.0) for analysis. The data will be entered twice as a form of validation check, to help detect errors and inconsistencies. The identification of outliers and other inconsistencies among the variables will be done through the running of frequencies and cross tabulations. Chi-square test will be used to test for differences in groups and t-test for differences in means. The in-depth interviews and FGDs will be recorded and transcribed. This data will be analysed manually using themes. The investigator will read through all the transcripts exhaustively and code them. The codes will be matched and generated into common themes and sub-themes for the write-up. All analysis will be carried out by the principal investigator, but assistance will be sought if the need arises. The analysis will take place in both Ghana and South Africa.

### **5.2.7. Training**

Two experienced undergraduate research assistants with a background in the social sciences will be recruited for the study (to be recruited from the Navrongo Health Research Centre). The research assistants must be fluent in the local dialects spoken in the respective districts. A three-day training session will be organized for them by the investigator on the purpose and objectives of the study, data collection techniques and tools to be used, translated questionnaire and interview guides, and ethical issues.

### **5.2.8. Pre-testing**

The data collection tools will be pre-tested in other health facilities and communities other than those selected for the study to help validate them. Modification to the tools will be made if there is the need, before they are used in the actual data collection.

### **5.2.9. Community entry**

Meetings will be held with community members in the selected communities in the two districts for the FGDs. The purpose of the meetings, among other things, will be to provide information on the objectives of the study and the operations of the NHIS. These meetings will be held in collaboration with the leaders of the communities.

### **5.2.10. Dissemination of findings**

Findings will be shared with the appropriate bodies including the District Health Management Teams in the two districts, the NHIS and the communities in which the study took place. Other presentations will be made if the need arises.

### **5.2.11. Ethical considerations**

The study will conform to the required ethical guidelines regarding the conduct of research. Ethical clearance will be sought from the Health Sciences Faculty Research Ethics Committee, University of Cape Town. Permission will also be sought from the Ghana Health Service Ethical Review Committee and the District Health Management Teams in the two districts that the study will be carried out.

### **5.2.12. Potential risks/discomforts**

This study will not involve any physical risks to participants. However, if at any point they become uncomfortable with any question, they can choose not to answer that or discontinue outright participation. The data collected will not be given out to any other person, except for the purpose of which the study covers.

#### **5.2.13. Benefits**

Participation in the study will allow participants to share their knowledge and perceptions on the operations of the NHIS, especially the reimbursement process, challenges facing the NHIS and ways of improving them. The results of the study will be used to inform policy, for the success of health care delivery in the country. Whatever information that is given, remains private and will not be linked to anyone.

#### **5.2.14. Confidentiality**

The interview will be conducted in a private place. It will be tape recorded and some notes also written out. Names will not be written in the notes nor recorded on the tapes. Nobody will be identified in any report or publication made on the study. All the information given for the interviews will be held private. This information will be accessible only to research personnel, who will listen to the tapes, make written notes, and use the notes for the purpose of which the study is intended. After the notes are written from the tapes, they will be destroyed. Personal information obtained from participants will be kept in the strictest confidentiality.

#### **5.2.15. Voluntariness and right to withdraw**

Participation is completely voluntary. Questions can be asked on anything that is not understood. Participants have the right to terminate the interviews at anytime, or decline to answer questions without any penalty.

Informed consent will be taken from all participants at the beginning of each interview or discussion, which will be in a language understood by each participant. Interviews and discussions will also be carried out in languages of choice by participants.

## Timeline

	Months													
	December		January		February		March		April		May		June	
Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Instrument translation	█	█												
Training of research assistants		█												
Piloting		█	█											
Data collection			█	█	█									
Data coding and transcription					█	█								
Data entry						█	█							
Data cleaning							█	█						
Analysis and presentation of results								█	█	█				
Thesis writing up	█	█	█	█	█	█	█	█	█	█	█	█	█	█

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**PART B: LITERATURE REVIEW**

University of Cape Town

## **1.0. Introduction**

After independence many African countries introduced free or heavily subsidized health care services to their people (Arhinful, 2003). Consumers of health care services could access services for free or pay a minimal fee in public health facilities. This was funded through general tax. However, this became a problem in the 1970s and 1980s due to the economic and financial crisis around that era which led to reduced spending by governments on health and other social services like education (Arhinful, 2003). This trend adversely affected the quality of health care services in terms of equipment, supplies and tools and the morale of health care staff (Criel, 1998, Huber et al., 2002). Apart from these crisis, most countries in the sub-Saharan region lacked robust tax base, low institutional capacity to collect taxes and weak tax laws compliance to have maintained the general tax funding of health care services (Carrin, 2002, Huber et al., 2002). The inadequacy of donor funding could not also maintain the free health care programmes run by some of these countries (Criel, 1998).

User fees were therefore prescribed by some international organizations as a remedy to the health crisis (Criel, 1998). Users of health care services were required to pay in part or in full, the cost at the point of service consumption (Ellis, 1987). The essence of the user fees was to help improve the quality and efficiency of health care services, contain cost (mitigate moral hazard) and to generate additional revenue for health care facilities (Gilson, 1988). The introduction of the user fees led to the availability of some essential drugs in health care

facilities (Waddington & Enyimayew, 1990, Nyongator & Kutzin, 1999, Litvack & Bodart, 1993), but the overwhelming evidence showed that they constituted a strong barrier to health care seeking for many individuals and households trapped in poverty (McPake, 1993, Palmer et al., 2004, Ndiaye et al., 2007).

This generated the debate to identify alternative mechanisms for health care financing (Huber et al., 2002, Mbengue, 2009). Hence, Community-based Health Insurance Schemes (CBHIS) were introduced as an alternative financing mechanism. Community-based Health Insurance Schemes were seen to be a promising attempt to improve access to health care, health outcomes and social protection against the cost of ill health, especially for the informal sector employees (Wiesmann & Jutting, 2000). The Community-based Health Insurance Schemes developed on the principles of social solidarity which are widely practiced in most parts of sub-Saharan Africa (Ndiaye et al., 2007). Some countries in sub-Saharan Africa are therefore utilizing the concept of Community-based Health Insurance to help achieve universal coverage for their populations (Chankova et al., 2008, Mbengue, 2009, Atim et al., 2009). For example, Ghana and Rwanda are using this strategy to achieve universal coverage for their citizens. Therefore, Ghana enacted the National health insurance Act (Act 650) in 2003, leading to the implementation of the National health Insurance Scheme in 2005.

### **1.1. Structure of the review**

The review explores the background to the concept of health insurance, definitions and types of health insurance, how the mechanism of health insurance works, and the theory of demand and supply of health insurance. Furthermore, the review examines the empirical evidence available for the introduction of health insurance and the utilization of health care services, equity, and health care expenditures (out-of-pocket payments). Provider payment mechanisms and evidence of their impact on the behaviour of health care providers have been discussed as well. The design and implementation of the National Health Insurance Scheme in Ghana, and conclusion and knowledge gaps concludes the review.

The objective for the analytical review is to identify the available empirical evidence on the effect of health insurance on health care providers and insured members. Specifically, the review focuses on the behaviour of health care providers under health insurance, especially on provider payment mechanisms and their influence on providers' behaviour.

## **1.2. Search strategy**

An electronic search was conducted in databases like PubMed, MedLine, Inter-Science (Wiley), Science Direct (Elsevier), EBSCO (Academic search premier) to identify relevant studies in published peer-reviewed journals and unpublished papers and reports (grey literature). A combination of key words was made for the search. These key words were; national health insurance, mandatory health insurance, social health insurance, universal coverage, community-based health insurance schemes, health insurance in sub-Saharan Africa (SSA), provider payment mechanisms, health care provider's behaviour under health insurance, and patients' health seeking behaviour under health insurance. Additional articles were retrieved from Bibliographies of selected articles. Besides these databases, searches were also made on the web pages of international organizations and donors, including the World Bank, the World Health Organization (WHO), International Labour Organization (ILO), United Nations International Children Educational Fund (UNICEF), German Agency for Technical Cooperation (GTZ) and the United States Agency for International Development (USAID). In addition to these sources, reports and publications were also taken from health insurance managers from the study districts.

## **1.3. Background to the concept of health insurance**

The concept of health insurance was first proposed in 1694 by Hugh the Elder Chamberlen from the Peter Chamberlen family (Kalyanasundaram, 2008). Germany was the first country to implement a policy of health insurance in 1883 (Ron et al., 1990). Health insurance is a risk pooling mechanism which permits access to health care services in times of illness. Several definitions have been given to the concept.

## **1.4. Definitions of health insurance**

According to Schneider, health insurance is a risk sharing mechanism which makes possible for the sharing of health care costs among insured members (Schneider, 2004). Health insurance helps to reduce the out-of-pocket (OOP) payments for health care services at the time of consumption by insured members. It promotes access to health care services for the poor and vulnerable. In a similar manner, Arhin-Tenkorang defines the concept as the act of spreading the risk of incurring high health care costs over a group of individuals or households (Arhin-Tenkorang, 2001). Besides, health insurance is also a mechanism that

helps to raise additional funds for essential public health care services through risk sharing (Jowett et al., 2004).

Hence health insurance is considered an alternative financing mechanism for health care which has the ability to increase utilization and protect people against high health expenses (WHO, 2000). Indeed from the definitions, health insurance serves three main functions: the pooling of health risk, the mobilization of health care resources, and the payment of health care providers (Liu, 2002). Through health insurance, individuals are able to share the risk of any large costs due to illness and to access health care services when in need and in good time (McIntyre, 2007). Insured persons are protected from paying high treatment costs in times of sickness. The concept is different from user fee or direct payment schemes in which the user has the sole responsibility of paying for the costs of his or her medical care (Carrin, 2002). Health care resources are also mobilized through health insurance through the payment of premium by insured individuals and households. These funds or health resources are then used for the payment of health care providers in their provision of health care services for insured individuals or households.

### **1.5. Types of health insurance**

The financing of health care through health insurance could either be voluntary or mandatory (McIntyre, 2007). The classification depended on whether individuals and households were required by law to be registered with the health insurance programme against the financial risk of falling ill. It is also based on the reason for initiating the health insurance programme. Mandatory health insurance is generally initiated to help promote universal coverage for a population or a section of a population.

#### **1.5.1. Voluntary health insurance**

The voluntary type of health insurance could be for profit or not for profit. Commercial health insurance schemes are examples of voluntary health insurance programmes that are run for profit. The Community-based Health Insurance Schemes are also examples of voluntary health schemes that are not for profit.

McIntyre states that voluntary health insurance is one that an individual or group can subscribe without a legal requirement to do so (McIntyre, 2007). Poor individuals and households are not able to join the “for profit” type of voluntary health insurance. The “for

profit” voluntary health insurance is mostly patronized by high socio-economic groups. The premium payment is based on individual risk assessment (Asenso-Okyere et al., 1997). Individuals with higher risk of illness may pay higher premiums than individuals with lower risk of illness. For instance, people with chronic conditions or the elderly would pay a higher premium than people likely to require less costly health care services. Cross income and risk subsidization are therefore minimal or non-existent with the “for profit” voluntary health insurance (McIntyre, 2007).

Community-based Health Insurance Schemes are a form of voluntary health insurance with very distinct features emphasizing on community ownership and empowerment (Mills, 2007). They are independent non-profit making institutions drawing on the solidarity of their members and are also directly responsible to them (Atim, 2000). Community-based Health Insurance Schemes have different names. They are referred to as Mutual Health Organizations (MHOs) in Anglophone countries and Mutuelles de Sante in Francophone countries (NCBA, 2007). The International Labour Organization (ILO) also calls them micro-insurance schemes (Huber et al., 2002).

Majority of the populations in sub-Saharan Africa are found in the informal sector (Atim, 2009, Bennett et al., 1998). Thus Community-based Health Insurance Schemes are considered as tools which offer financial protection for this class of people, as well as helping to mobilize health care resources for health care delivery (Arhin-Tenkorang, 2001). So the difference between Community-based Health Insurance Schemes and other health insurance programmes is that, while they (Community-based Health Insurance Schemes) offer insurance coverage to rural and informal sector populations, the others especially the commercial health insurance schemes mostly provide coverage for the urban and formal sectors of the economy (Tabor, 2005).

### **1.5.2. Mandatory health insurance**

Mandatory health insurance may also be called national health insurance or social health insurance, and are often used interchangeably (McIntyre, 2007). The mandatory health insurance is generally supported by the government and membership tends to be compulsory for the intended group (Asenso-Okyere et al., 1997). The mandatory or social health insurance is based on the principle of social solidarity and contributions are derived from the average expected cost of health care service use by the entire insured group (McIntyre, 2007).

Again with mandatory or social health insurance, the contributions could be from employees and their employers, civil servants and government (as their employer), and the self-employed from the formal and informal sectors of the economy (Carrin et al., 2008).

Social health insurance is seen as a promising method for granting the population access to health care services in an equitable way (Carrin, 2002), by lowering the out-of-pocket payments that the consumer must pay for the benefit package. Furthermore, social health insurance facilitates the flow of revenue to health care providers (Carrin, 2002). Through social health insurance, health care resources are mobilized through premium payments and government subsidies which are paid in bulk to health care providers for the provision of health care services. The concept is therefore a benefit to both the insured client and the health care provider.

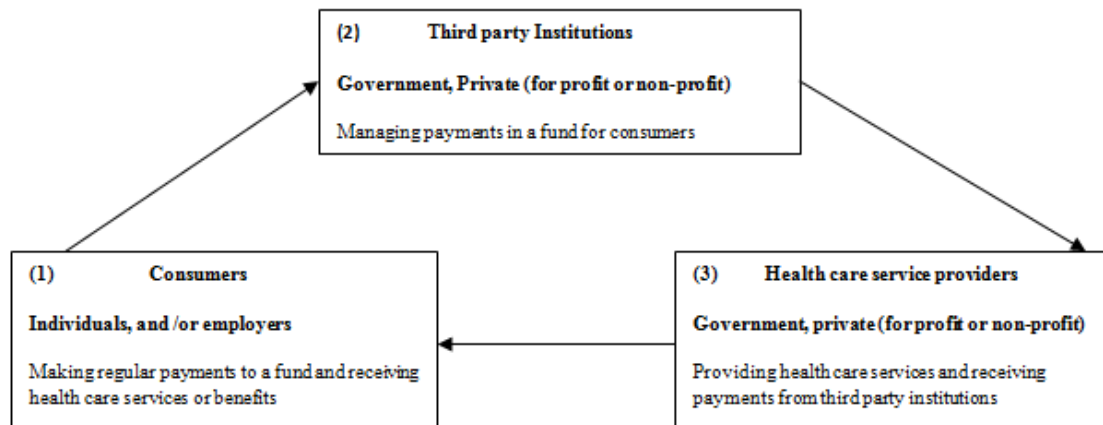
In terms of the provision of health care services for registered members, social health insurance may have their own health care provider networks, work with accredited public and private health care providers (for example, Ghana) or a combination of both (Carrin & James, 2005).

A number of factors are necessary for the success of a social health insurance system. They include the employment rate in the formal and informal sectors, the costs of health care services, health care service infrastructure, and the level of contribution of the health insurance premium (Bayarsaikhan et al., 2005). A firm political will and effective administrative capacity is also required to be able to run a social health insurance programme (Kwon, 2002). These factors determine the success or otherwise of a social health insurance policy. For instance, Ghana had a strong political will that permitted the successful implementation of its National Health Insurance Scheme in 2005 (Assensoh & Wahab, 2008).

#### **1.6. How the mechanism of health insurance works**

The mechanism of health insurance whether it is voluntary or mandatory, involves three key stakeholders and processes (Conn & Walford, 1998). The stakeholders include individuals or employers, health care providers and health insurance institutions (or third parties which could be either government or private institutions). Figure 1 below depicts how the mechanism of health insurance operates.

**Figure 1: How the mechanism of health insurance operates**



Source: Conn & Walford (1998)

From figure 1, a consumer being either an individual or household (or even employer), make regular payments in the form of premium to third party institutions, that is government or private organizations (for profit or not for profit) that manages the funds for the consumer. The fund is then used to pay for the cost of the health care services that the contributor or beneficiary would receive from health care providers. The health care provider, being either government or a private organization is required to provide health care services to the contributor/consumer (individual/employer), in return for payment by the third party institutions. Health insurance therefore serves as an intermediary between health care providers and the consumers of health care services (Liu, 2002).

### **1.7. The theory of demand and supply of health Insurance**

In theory, the introduction of a health insurance programme may affect the utilization of health care services in a variety of ways. According to Zweifel & Manning, the introduction of a health insurance programme may lead to the reduction of the price of health care services (or health costs subsidization) at the time of purchase. This may lead to an increase in the utilization of health care services (when price goes down, consumption goes up), referred to as ex post moral hazard (Zweifel & Manning, 2000). The situation might not have occurred if consumers were required to pay for the full costs of health care services.

Secondly, the introduction of health insurance may lead to the reduction in the consumption of preventive care and other changes in lifestyle by those insured. The scenario may result in an increase in the probability of the individual falling ill, and experiencing a more severe

illness, often referred to as *ex ante* moral hazard. The consequence is an increase in the consumption of health care services, possibly the use of more expensive services (Zweifel & Manning, 2000).

However, Arrow preferred to use a less judgemental and more informative term, hidden action, in place of moral hazard (Arrow, 1985). It is argued that in situations where there is a huge unmet health care need, especially in low income countries, then the increased consumption of health care services under health insurance is not considered to be a problem. Hence Arrow's labelling is very appropriate. Again, Zweifel & Manning argued that the optimal amount of moral hazard is positive, and that health insurance can bring about efficiency gains in situations where, for instance, it leads to an increase in the consumption of cost effective services (Zweifel & Manning, 2000).

An opponent of the use of moral hazard, referring to it as the abusive use of health care service, is Nyman. The purchase of an insurance cover is normally meant to help gain access to a necessary but otherwise unaffordable treatment. Therefore the use of health care services by the insured cannot be considered to be an abuse (Nyman, 1999). However, Cutler & Zeckhauser, suggested that in order to avert excessive utilization of health care services, insured persons should be made to pay a part of the costs of health care services at the point of consumption, which is called co-payments (Cutler & Zeckhauser, 2000).

From the perspective of supply, the introduction of a health insurance programme might encourage health care providers to provide health care services which are unnecessary or not needed, to insured members and hence leading to over utilization (Cutler & Zeckhauser, 1999, Liu & Mills, 1999). This is due to the fact health care providers are aware that the insurance programme will be responsible for paying for the cost of the health care services and hence will encourage the consumption of services which may not be needed or necessary. The use of the fee for service method of payment, for instance, encourages this kind of behaviour from health care providers.

### **1.8. Health insurance and utilization of health care services**

Studies have shown that the introduction of health insurance is associated with increased health care service utilization. For example, a study in the United States of America revealed that elderly women who had coverage for some health care services (outpatients, inpatient

and medication prescription) were significantly more likely to use the particular covered service compared to women without coverage, with odds ratios ranging from 2.0 to 6.7 (Xu et al., 2006). In Taiwan, it was revealed that persons with different health insurance plans had a higher probability of visiting a medical doctor than their uninsured counterparts, with odds ratios ranging from 1.8 to 2.0 (Cheng & Chiang, 1998). Similarly, insured patients in Vietnam were more likely to use outpatient facilities as compared to uninsured patients (Jowett et al., 2004).

In the settings of sub-Saharan Africa, a study in Senegal showed that members of a Mutual Health Organization had a higher probability of using hospitalization services than individuals who were not insured (Jütting, 2003). The utilization of outpatient health care services by registered members of the Community-based Health Insurance in Burkina Faso were also found to be higher (about 40% higher) than for the uninsured members (Gnawali et al., 2009). Still, a randomized trial in Ghana indicated that insured children had higher utilization rates for insured services than their uninsured counterparts (Ansah et al., 2009). The study however, found that insurance coverage did not impact on health outcomes. The above findings on increased utilization of health care services may be explained by the fact that the introduction of health insurance makes possible for individuals to have access to health care services which they would not have had, if the health insurance programme was unavailable. This is particularly true in developing countries with a huge unmet health care needs.

In spite of the overwhelming evidence of the association of health insurance with increased utilization of health care services, a study in Ghana showed that the introduction of the National Health Insurance Scheme did not increase the likelihood of the insured using maternal health care services. Prenatal care, skilled attendance at delivery, caesarean-sections, etc, were unaffected by the implementation of the National Health Insurance Scheme (Hatt et al., 2009). The findings were explained by the fact that other direct cost of seeking health care services, for instance, costs of transportation, meals, costs for accompanying relatives, may have prevented the utilization of the maternal health care services. This means that health insurance coverage does not necessarily increase utilization in all settings. A lot of other countless factors influence health care utilization including indirect cost, socio-cultural beliefs, attitude of health care staff, and so on. Again, the findings for the higher utilization rates as reported in the other studies may be as a result of adverse

selection, moral hazard on the part of the insured, etc, which most studies do not report on. The issue of adverse selection and moral hazard threatens the sustainability of insurance schemes in terms of cost escalation.

Besides, it cannot be concluded that the higher utilization rates reported in the above studies have positive effects on health outcomes for the insured persons. Most of the studies on utilization did not measure health outcomes for insured and uninsured clients, which is the ultimate reason for health care delivery (but often very difficult to measure).

Furthermore, individuals differ systematically in behaviours which have consequences on their health, for instance, lack of exercise, poor diet, and excessive alcohol consumption. Persons with these habits which may negatively impact on their health status will require more health care services than other individuals. This will lead to a higher utilization of health care services for those individuals and not as a result of the introduction of a health insurance programme.

### **1.9. Health insurance and equity**

According to Lagarde & Palmer, the equity effects of a health insurance programme depend to a large extent, on its design and implementation process (Lagarde & Palmer, 2006). Health insurance programmes that are for profit, do not mostly consider issues of equity in their design and implementation. However, it is the “not for profit” ones that endeavour to promote equity. Community-based Health Insurance Schemes and social/mandatory health insurance schemes have their core objective of promoting equity, by providing insurance coverage to populations that would otherwise not have had coverage against the cost of ill health. In particular, social/mandatory health insurance seeks to achieve universal coverage for populations, by giving insurance coverage to all regardless of socio-economic status, gender, age, race, geographical location, and so on. It was found in India for example, that the Vimo Self-employed Women's Association (SEWA) scheme was able to provide coverage for the poorest of the poor, with 32% located in rural areas and 40% found in urban areas, and from households below the 30th percentile (Ranson et al., 2006)

Similarly, the Askeskin programme in Indonesia was able to ensure coverage for the poor who were vulnerable to catastrophic health costs and those in the informal sector as well (Sparrow et al., 2010). In the settings of Africa, the Community-based Health Insurance

Schemes in Ethiopia had helped to mitigate the effects of health shock on poor rural households (Asfaw & Braun, 2004). The poor were able to access health care services as and when they needed them with the introduction of the Community-based Health Insurance Schemes.

Studies have also shown that some Community-based Health Insurance Schemes and social/mandatory health insurance schemes have proven to be relatively inequitable (Lagarde & Palmer, 2006). The introduction of social health insurance schemes may help to deepen inequalities especially (Pannarunothai & Mills, 1997). Some social health insurance schemes start by providing coverage for a particular group or section of the population, for example, the formal sector. In Indonesia, a study by Hidayat et al revealed that both the mandatory health insurance programme for civil servants (Askes) and the one for private employees (Jamsostek) had all failed to promote equity by not providing insurance coverage for the whole population (Hidayat et al., 2004).

A recent study on the Community-based Health Insurance Schemes in Armenia also showed that the schemes achieved a high level of equity in terms of social classification, gender and age, but the levels of registration was relatively low due to problems of premium affordability. The benefit package for the schemes was also found to be limited and does not include chronic diseases (Polonsky et al., 2008). The findings suggest that majority of Armenians were not registered into the schemes and hence were not protected against the financial risk of ill health. Again, it means that Armenians who were chronically ill will continue to incur very high health costs which could lead to their impoverishment.

Another study in Senegal showed that the core poor were not covered under the Community-based Health Insurance Scheme due to their inability to pay the premium, though the objective of the scheme was to attract the poor and vulnerable (Jutting, 2003). In the context of Ghana, findings indicated that the poorest of the poor were excluded from the Community-based Health Insurance Schemes introduced to cater for their health care needs (Osei-Akoto, 2003). This was also as a result of the inability of the poor to pay for the premium. There is therefore the need to put interventions in place to cater for the needs of the poor, to allow them participate in social health insurance schemes. Wagstaff argued that in the absence of exemptions or reduced contributions for the poorest, contributions to social insurance schemes can be regressive (Wagstaff, 2007). High levels of co-payments may also negatively

impact on poorer households and thus widen the inequities in social health insurance programmes (Yang, 1991).

Still inequity may arise in an insurance programme when there is an unequal geographical coverage of health care services, especially between urban and rural locations (Lagarde & Palmer, 2006). For example, Kutzin & Barnum demonstrated that as a result of geographical locations, inequalities arose in Brazil and in South Korea where members of the health insurance schemes in rural areas tend to have poorer access to health care services than their counterparts in urban locations (Kutzin & Barnum, 1992). This emphasizes the need for planners and policy makers of health insurance programmes to make special provisions to cater for the health care needs of geographically disadvantaged populations. This is particularly necessary in developing countries where health care facilities and staff are unevenly distributed between rural and urban areas.

#### **1.10. Health insurance and health care expenditures (out-of-pocket payments)**

Health insurance is meant to reduce health care expenditures for consumers of health care services and to help mitigate health related impoverishment. Findings from studies on the relationship between being enrolled in a health insurance programme and incurring further health care expenditures are not clear (Levine, 2008). Some studies revealed that being insured helps to reduce health expenditure or out-of-pocket payments. For instance, Yip & Berman in Egypt found that insured children under the School Health Insurance Programme incur less health costs compared to their colleagues who were not enrolled with the health insurance programme (Yip & Berman, 2001).

In Senegal, it was discovered that members of a Community-based Health Insurance Scheme pay far less when they seek health care services than those who were not insured (Jütting, 2003). A baseline evaluation report on the National Health Insurance Scheme in Ghana showed that the overall out-of-pocket payments among outpatients in formal health care facilities reduced greatly from 21,293 cedis in 2004 to 13,748 cedis in 2007. The findings for the endline also indicated that the total out-of-pocket payments for insured patients were about 20 percent of the amount paid by the uninsured (Health Systems 20/20 Project and Research and Development Division of the Ghana Health Service, 2009).

Contrarily, some studies have found that out-of-pocket payments were unaffected by the introduction of health insurance or rather increased for the insured. In China, for example, a government subsidized voluntary health insurance scheme (the New Cooperative Medical Scheme) was found not to have had any impact on the average out-of-pocket payments for the insured population (Wagstaff et al., 2007). The investigators attributed their findings to the institutional set up of health care in China which promoted increased utilization and substitution toward more expensive health care services and treatments (Levine, 2008). The fact also remains that it is not only the direct cost of health care services that constitute the total cost for health care seeking. There are other indirect costs like transportation, meals, and even unofficial fees for which all add up to the total cost of health seeking (out-of-pocket payments). This therefore may also help to explain their findings from the study.

A three country study in West Africa which evaluated the impact of Mutual Health Organizations proved that membership to these organizations does have a less significant effect on out-of-pocket payments for outpatient care (Chankova et al., 2008). The Mutual Health Organizations provide insurance coverage for only cases of hospitalization and hence insured outpatients would have to make out-of-pocket payments for the services.

In conclusion, despite the above findings, the introduction of health insurance programmes help to reduce people's expenditure for health care services in general.

### **1.11. Provider payment mechanisms**

Provider payment mechanisms are important in the delivery of health care services. Provider payment mechanism is the process of managing, setting the benefit package and paying for health care services (Reaven & Rosenbloom, 2009). It may also refer to the allocation of health care resources to health care providers for the provision of health care services (Kutzin, 2000). Provider payment mechanisms are meant to cater for some aspects of the information asymmetry between health care providers and clients. This is done by defining rules in terms of the cost per patient or group of patients, the reimbursement costs, the procedure for patient transfers or rejection, etc, (Maceira, 1998). Provider payment mechanisms may either be prospective or retrospective. When the payment for a package of health care service is negotiated and agreed upon before the treatment takes place, it is referred to as prospective payment. When the payment is selected during or after the service

has been rendered, it is referred to as retrospective payment (Maceira, 1998, Jegers et al., 2002).

It is essential to state that provider payment mechanism to a large extent, determines how health care services are produced by health care providers (Barnum et al., 1995). The study of provider payments is necessary, particularly for developing countries, where the available resources for health care services are very limited (Maceira, 1998).

### 1.12. Types of provider payment under health insurance

As seen earlier, health care providers to a greater extent determine the consumption of health care services by clients. However, this is dependent on the type of provider payment mechanism adopted for paying them. It is therefore important to study and understand the various types of provider payment mechanisms used for paying health care providers.

There are six main provider payment methods (Maceira, 1998). They include budgets, capitation, diagnostic related groupings (case-based payment), per diem/day, fee for service and salary (Lave & Frank, 1990). Table 1 is a detailed description of the various types of provider payments, their advantages and disadvantages

**Table 1: Methods for paying providers**

Type of payment	Description	Per unit service	Advantages	Disadvantages
Diagnosis related Groupings (DRG)/Case or episode	Case payment system that uses a schedule of diagnostic groups. Used mainly for hospital payments. The patient diagnosis will have to fall into a DRG. This is assigned after the discharge of the patient, which determines the fee (prospective system).	Per diagnosis Grouping.	<ul style="list-style-type: none"> <li>-Risk shared: Provider bears risk that some diagnosis may cost more than predetermined fee; the scheme also has to ensure that cases are assigned to the right diagnostic groups by the facilities.</li> <li>-Patients are not unnecessarily transferred and the desired level of quality is achieved.</li> </ul>	<ul style="list-style-type: none"> <li>-Providers will seek to reduce cost per diagnosis, and hence compromising quality.</li> <li>-Providers may also choose only illnesses having high costs and refer others.</li> <li>- Providers can also code patients into groups with higher costs in order to obtain high payments.</li> <li>-Complex setting up DRGs and operating them.</li> <li>-It is also not cheaper to administer like others e.g.</li> </ul>

				<p>fee for service.</p> <ul style="list-style-type: none"> <li>-Require schemes to have good validation and claims management system.</li> <li>-Also require providers to collect large amount of information on patient characteristics, diagnosis and procedures.</li> </ul>
Budgets	<p>Payments made in advance to providers for total costs of service to members for a specific time period, e.g a year. (prospective systems)</p>	<p>All services are paid for members for a defined period and prescription.</p>	<ul style="list-style-type: none"> <li>-It is good for controlling costs.</li> <li>-It is easy to set up and operate. No claims processing involved but requires utilization management to ensure quality.</li> </ul>	<ul style="list-style-type: none"> <li>-Difficult ensuring that quality is not compromised in trying to contain cost by providers.</li> <li>-Providers have the incentive to spend all remaining funds by the end of budget period.</li> </ul>
Capitation	<p>Providers are paid a fixed agreed amount per member for all members. This covers a month, a quarter or year (prospective system).</p> <p>Provider required to provide all the defined care for members in need without extra cost</p>	<p>Payments made per member per year or other agreed period of time.</p>	<ul style="list-style-type: none"> <li>- Effective in controlling cost.</li> <li>-Ensures that providers do not stand to gain by providing unnecessary services so helping to keep costs down.</li> <li>-May also promote efficiency by encouraging providers to engage in prevention and promotion activities to maximize revenue.</li> <li>-Administrative costs could be low.</li> <li>-Providers assume all financial risks; schemes/payers face little risk.</li> <li>-Improves/ensures continuity of care for members for the period under consideration.</li> </ul>	<ul style="list-style-type: none"> <li>-Management can be complex where quality control mechanisms are to be enforced, if skills of providers and schemes are not high.</li> <li>-Administrative cost increases when members change providers.</li> <li>-There is a big task of ensuring that quality is up to standard.</li> <li>-Where no competition exists, it will require adequate quality control mechanisms.</li> <li>-Also constant monitoring is required to prevent under servicing of members.</li> <li>-Providers may also undertake crème skimming of members.</li> </ul>
Salary	<p>Providers are paid a fixed amount for a fixed number of hours work. The salary is fixed for</p>	<p>Payment per month or annum.</p>	<ul style="list-style-type: none"> <li>-Providers have no incentive to refuse treatment to members, since compensation</li> </ul>	<ul style="list-style-type: none"> <li>-Providers have the incentive to serve few patients as possible.</li> </ul>

	either a month or year. The amount is fixed according to qualification, experience and in relation to other jobs (prospective system).		is fixed.  -Providers have no benefit to provide excessive treatment.  - Financial planning for health care services becomes easier.  -Administrative costs also become low compared to other modes of payment.	-Providers also may leave work early or practice absenteeism.  -Providers have no urge to build any relationship with clients, since payment is fixed.  -Providers may not also provide adequate attention to clients; hence quality and quantity may be affected.  - May lower the morale of providers who work hard.  - Providers not encouraged to work in the public sector.
Per diem/day	It is used within hospital setting. The fee charged covers all services and cost per patient in a day including the treatment, drugs, tests, accommodation and feeding (prospective system).	Per patient day	-Can help save cost, since fee is fixed.  -This is very easy to administer. No technicalities involved in terms of fee schedules or detailed lists of prices. The average per diem rate is easy and quick to calculate and implement.  -Risk is shared between providers and schemes/payers.	-Providers have the incentive to reduce care or services per day.  -Providers might also prolong hospital stay, increase bed occupancy and capacity and shifting outpatient and other services to the hospital setting in order to maximize income.
Fee for service	A fee charged for each service or treatment rendered (retrospective payment system).	Each unit of service or treatment.	- It can easily be developed and implemented, with little capacity required.  - Providers are encouraged to work longer hours and/or provide more services.  - Helps to improve access and utilization for underserved areas.  -The effect on quality is relatively good. Payment is related to nature/type of case or service rendered.	-Providers are tempted to provide many unnecessary services.  -Provide expensive services which might not be needed.  -No risk sharing between providers and the schemes. The schemes bear all the risk involved.

Source: (Lave & Frank, 1990, Maceira, 1998, Atim, 2000)

From the table, it will be realized that the precise method by which a health insurance scheme pays its health care providers is important because the payment method has an impact on the:

quality of health care services provided, costs and efficiency, equity, complexity of administrative and management information systems, and risk management (Camilo et al., 2008, Ellis & Miller, 2008). The impact prevails mostly in developing countries where there are weak or no regulation and control mechanisms, no professional self-regulation or where the public health sector is under resourced (Yip & Eggleston, 2004).

### **1.13. Provider payments and the behaviour of health care providers**

Provider payment mechanisms determine the behaviour of health care providers in terms of cost containment, efficiency and quality of health care services (Qingyue, 2005). The different provider payment mechanisms generate different incentives/disincentives which affect the behaviour of health care providers (Dor & Farley, 1996). For example, with the introduction of the diagnosis-related grouping (case-based hospital payment system) in the U.S. Medicare system that provided health care services to elderly people, health care providers saw no incentive to prolong hospital admissions any more. Hence it led to a reduction in the average length of hospital stay by 15 percent within a period of three years (Lave & Frank, 1990). This emphasizes the need to consider the incentive that comes with the introduction of each payment method for health care providers.

Similarly, health care providers under the Korean Social Health Insurance Scheme who were paid through the fee for service mechanism had the incentive to overprescribe drugs for insured clients. This resulted in the escalation of costs and depleted funds from the National Insurance Fund (Kwon, 2009). Thus demonstrating the vulnerability of social/national health insurance systems to the type of provider payment adopted for paying health care providers.

A recent study by Quimbo et al also discovered that not only national level accreditation with the Philippines National Health Insurance system influences the behaviour of public and private providers, but health insurance payments affected their provision of paediatric health care service as well. The health insurance payments in the form of monthly salary for public care providers and fee for service for private providers motivated providers to provide higher quality of clinical care than the non-accredited providers (Quimbo et al., 2008). This was explained by the fact, in order to be paid by the health insurance scheme, providers must provide health care services to a certain required standard.

Therefore when making a choice for a provider payment system, policy makers/purchasers must decide on the policy objective that is desired. Whether it is increased revenues, efficiency of health care service delivery, cost-containment, access, quality, administrative simplicity, or a combination of these that they seek to achieve (Langenbrunner et al., 2009).

In addition, it is suggested that in order to achieve an optimum level of behaviour from health care providers, policy makers/health insurance schemes should operate a mix of provider payment methods (Camilo et al., 2008). Mix provider payment methods involve the use of more than one payment mechanism for paying health care providers. For instance, China introduced a mix of payment methods for paying health care providers in its health insurance programme which led to the reduction of cost (Qingyue, 2005).

## **2.0. The National Health Insurance Scheme (NHIS) in Ghana**

### **2.1. Background**

Ghana is among the few African countries that promulgated a National Health Insurance (NHI) Act (650). Hitherto, the country provided free health care services for her citizens after independence in 1957. This was possible due to the small population size (about 8 million) at the time and a flourishing economy (Assensoh & Wahab, 2008). The free health care service could not be sustained because of the economic crisis in the 1970s and early 1980s which adversely affected all sectors of the economy leading to budget cuts on social spending including health and education. Little money was available for the health sector and this led to widespread shortages of essential medicines, supplies and equipment. Therefore the quality of health care services was greatly affected (Agyepong & Adjei, 2008).

To forestall these problems, cost recovery or user fees (popularly called “cash and carry”) were introduced in the late 1980s in all government health care facilities. Patients were made to pay for the full cost of medication and care. The argument for the user fees was to generate revenue and to discourage frivolous use of health care services. The introduction of the user fee saw an improvement in the availability of drugs in the health care facilities (Arhin-Tenkorang, 2001). However, the policy affected the utilization of health care services by

Ghanaians. The poor especially, were undertaking self-medication and also reporting late to health care facilities for treatment (Arhin-Tenkorang, 2001, Arhinful, 2003). Hence it prompted the need to look for other alternatives of health care financing, which led to the introduction of some Community-based Health Insurance Schemes in the early 1990s. As at 2003, such Community-based Health Insurance Schemes covered only about 1% of the country's population (19 million), leaving many Ghanaians uncovered against high health care costs (Sulzbach et al., 2005). In order to promote universal coverage and equity, the government of Ghana then adopted the National Health Insurance Scheme (NHIS) in 2003, which was fully implemented in 2005.

## **2.2. Design of the National Health Insurance Scheme**

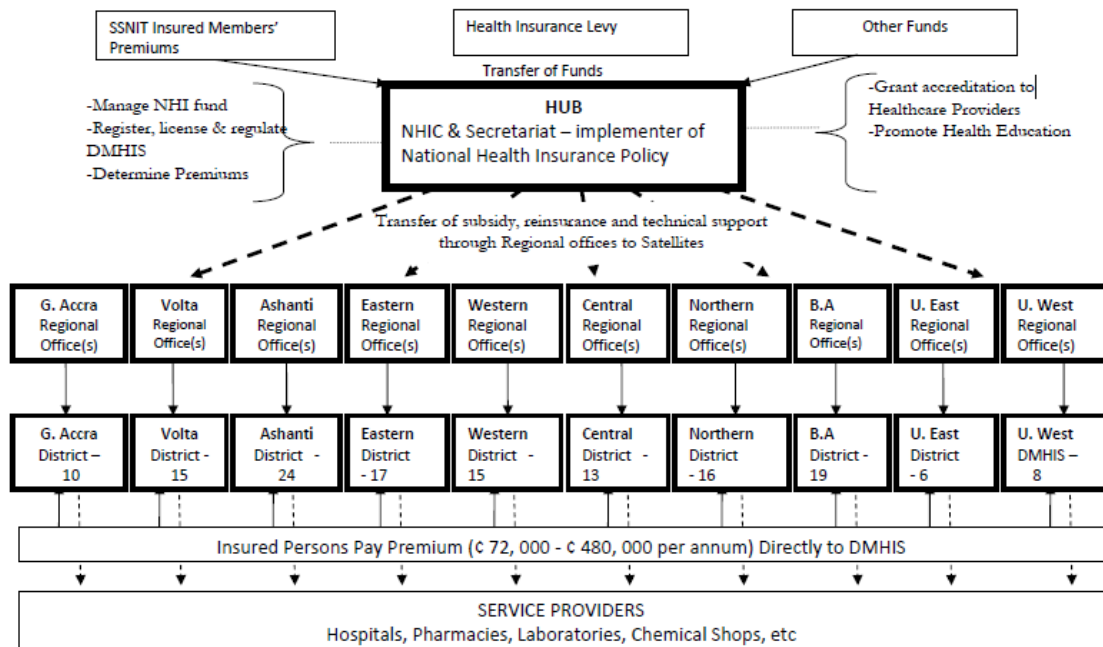
The implementation of the scheme drew experience from several years of the successful operations of the Community-based Health Insurance Schemes (McIntyre et al., 2005). The National Health Insurance Scheme combines both the voluntary and mandatory health insurance systems. Members are required, but free to join an insurance scheme of their choice. The National Health Insurance Scheme is also designed to incorporate those in the informal and formal employment sectors into a single insurance system in an attempt to promote universal coverage. This is in contrast to the status quo, where most countries start with the coverage for the formal sectors first (Carrin et al., 2005).

The National Health Insurance Act of 2003 permits the following types of health insurance schemes: First, the District Mutual Health Insurance schemes (Community-based) to be set up in all the 145 districts in the country. The design of the schemes at the district level is the same but the operations and coverage at the various district levels and between urban and rural areas may differ for each geographic location. Residents are required to be members of the scheme in their district of residence. Second, private mutual health insurance schemes are also allowed to operate. Any group of people are allowed to form a mutual health insurance scheme, but most of these schemes were already in existence and were mostly mission-based and hence not for profit. The third type of insurance schemes was the private commercial health insurance schemes. They are "for profit" companies and are not restricted to a particular location in the country. Membership here is also opened to all Ghanaians.

The National Health Insurance Council (NHIC) was established by the NHI Act to serve as a regulatory body for the National Health Insurance Scheme. In fact, the National Health

Insurance Council is to ensure the successful implementation of the National Health Insurance Scheme. The Council is supported by a secretariat. Figure 2 illustrates the design and set-up of the National Health Insurance Scheme including the functions and responsibilities of the National Health Insurance Council.

**Figure 2: The design and set-up of the National Health Insurance Scheme in Ghana**



Source: (Boateng, 2008)

From figure 2, The National Health Insurance Council is the hub of the National Health Insurance scheme. Some of its responsibilities include the registration, licensing, and

regulation of the health insurance schemes; the accreditation and monitoring of health care providers providing health care under the various schemes; education of the public in relation to health insurance issues; and resolution of complaints arising from the health insurance schemes, among several other functions. The Council also has the sole responsibility for managing the National Health Insurance Fund (NIHF) and for determining premiums. But a body called the National Health Insurance Authority (NHIA) set up under the National Health Insurance Council is solely responsible for managing and disbursing the National Health Insurance Fund.

As stated earlier, Ghanaians are permitted by the NHI Act to make a choice and join any type of health insurance scheme. The Act stipulates that it is compulsory for anyone living in Ghana to belong to a health insurance scheme (Government of Ghana, 2003). However, the government of Ghana will only support the District Mutual Health Insurance Schemes (DMHIS) through the provision of subsidies. This is to help create a strong motivation for people to join the District Mutual Health Insurance Scheme instead of the other schemes, especially the private ones.

The policy objective of the National Health Insurance Scheme is that, every citizen of Ghana shall belong to a health insurance scheme that adequately covers him/her against the need to make out-of-pocket payments at the point of service consumption (Government of Ghana, 2003). Targets set for the National Health Insurance Scheme include achieving coverage of 30-40% of the population by 2010 and 50-60 % by 2015-20 (Government of Ghana, 2003).

### **2.3. Composition of staff for the District Mutual Health Schemes**

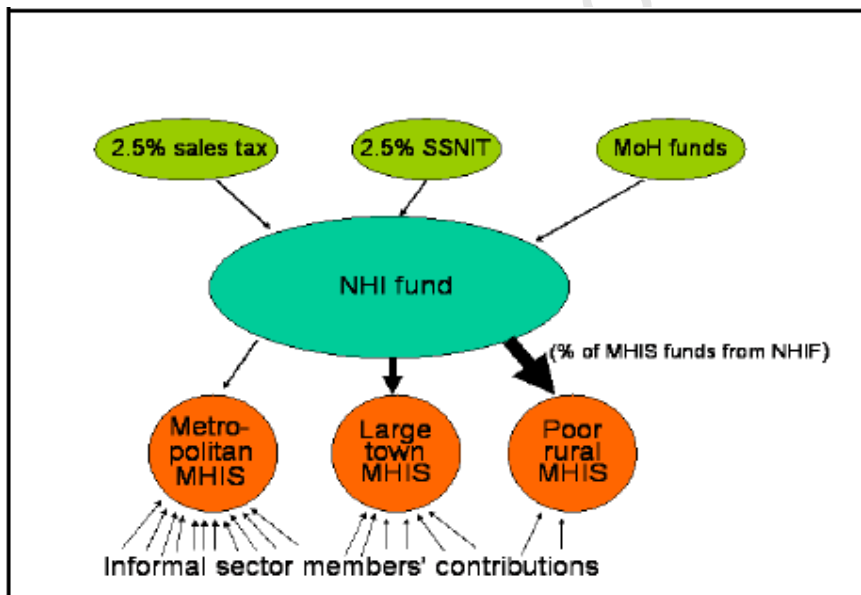
Each District Mutual Health Insurance Scheme has a core staff consisting of the Scheme Manager, the Claims Officer, the Accountant, Public Relations Officer, Management Information Systems Officer and some Data Entry Clerks.

### **2.4. Financing of the National Health Insurance Scheme**

The National Health Insurance Fund is being financed by the national insurance levy of 2.5% on specific goods and services. There is also a 2.5 % payroll deduction from the contributions of formal sector employees to the Social Security and National Insurance Trust (SSNIT) fund, government budgetary allocations to the health sector (from general tax and other

sources) and donor support. Figure 3 shows the sources of funds for the financing of the National Health Insurance Scheme in Ghana.

**Figure 3: Source of funding for the National Health Insurance Scheme**



Source: (McIntyre et al, 2005)

Another source of funding is the contributions of individuals in the informal sector who are not classified as core poor. They are required to pay an annual membership premium to a scheme of their choice in a district. In fact, an entire household is required to register for the scheme so as to avoid the risk of adverse selection.

## 2.5. Classification of individuals in the informal sector

Table 2 consist of the various classifications of Ghanaians in the informal sector and the amount of premium to be contributed to the National Health Insurance Scheme.

**Table 2: Type of social group and the minimum contribution required**

SOCIAL GROUP	WHO THEY ARE	MINIMUM CONTRIBUTION
<b>Core poor (A)</b>	Adults who are unemployed and do not receive any identifiable and constant support from elsewhere for survival.	Free
<b>Very poor (B)</b>	Adults who are unemployed, but receive identifiable and consistent financial support from sources of low income.	GH¢7.20
<b>Poor (C)</b>	Adults who are employed, but receive low returns for their efforts and are unable to meet their basic needs.	GH¢7.20
<b>Middle income (D)</b>	Adults, who are employed and able to meet their basic needs.	GH¢18.00
<b>Rich (E)</b>	Adults, who are able to meet their basic needs and some of their wants.	GH¢48.00
<b>Very rich(F)</b>	Adults, who are able to meet their needs and most of their wants.	GH¢48.00

Source: NHIA, 2009

From table 2, Ghanaians have been classified into six different groups based on their socio-economic background, ranging from the core poor to the very rich. The core poor (indigent and in category A) are exempted from the payment of premium. The exemption process is carried out in conjunction with the community health insurance committees located in the various communities. These committees help to identify poor individuals and households to be exempted from paying the premium. But it is a big challenge identifying people who are poor for exemption, since the policy was not clear on the exemption procedure/criteria and hence if the core poor will be represented in the NHIS (Aikins & Ahinful, 2006).

The very poor and poor (category B and C) pay a minimum of GH¢7.20 for registration into the NHIS. On the other hand, the very rich are required to make a minimum contribution of GH¢48.00. But most people in Ghana do not agree to be classified as being rich or very rich and to contribute a higher amount than what other people are contributing. This resulted in the payment of a flat amount of GH¢7.20 by almost all contributors to the scheme, since the inception of the National Health Insurance Scheme. This attitude works against income subsidization for the successful operation of the scheme. Again, it questions the issue of social solidarity among Ghanaians. It is therefore not surprising that the health sector review report in 2007 found the contributions from the informal sector to the National Health Insurance Scheme to be just 0.01%, for the period 2006 (Atim et al., 2009). Table 3 depicts the percentage contributions of the various sources of funding to the scheme in 2006.

**Table 3: Contribution of the various funding sources of the NHIS in 2006**

Sources of NHIF income	% of NHIF income in 2006
National Health Insurance levy (VAT)	76%
Social security contributions of formal sector workers	24%
Premium paid by informal sector members	0.01% (estimate)

Source: Government of Ghana, 2007

From table 3, the highest proportion of the funding in 2006 came from the national health insurance levy (76%). This raises concerns about the sustainability of the scheme, since taxes in sub-Saharan Africa countries are less reliable and administratively expensive to collect (Carrin, 2002).

The National Health Insurance Authority uses the pooled funds in the National Health Insurance Fund for the following purposes; allocation to each District Mutual Health Insurance Scheme to cover the contributions of formal sector workers (drawn from the Social Security and National Insurance Trust payroll deductions), partially subsidize the contributions of low-income households, and subsidize in full the contributions for the indigent. These funds are also used for risk equalization and reinsurance for the various District Mutual Health Insurance Schemes.

## 2.6. Exemptions under the National Health Insurance Scheme

Apart from the exemption of the indigent from the payment of the insurance premium, there are other categories of persons who enjoy some exemptions too. But these categories of persons will have to pay registration fees before they can be enrolled into the District Mutual Health Insurance Schemes, whereas with the indigent, they are not required to pay any registration fee. The persons exempted from paying premium are; children less than 18 years of age whose parents or guardians are contributors, children less than 18 years of age whose parents or guardians are proven by the NHIS to be single parents, and pensioners under the Social Security and National Insurance Trust. Individuals who are over 70 years of age and pregnant women are also exempted from the premium payment.

## 2.7. Benefit Package of the National Health Insurance Scheme

The National Health Insurance Scheme provides a minimum benefit package for which all members are entitled to, irrespective of their socio-economic background. Most diseases (95%) afflicting Ghanaians have been covered by the National Health Insurance Scheme. Table 4 shows the benefit package for registered members of the National Health Insurance Scheme.

**Table 4: Benefit package of the National Health Insurance Scheme**

Outpatient Benefits	Inpatient Benefits
1.Consultations, including reviews	9.General and specialized inpatient care
2.Requested investigations	10.Requested investigations
3.Medications	11.Medication
4.Outpatients/Day surgical operations	12.Surgical operations
5.Outpatients physiotherapy	13.Inpatient physiotherapy
6.Oral health services	14.Accommodation
7.Eye care	15.Feeding where available
8.Maternity care	16.Emergencies

Source: NHIA, 2009

From the table above, it will be seen that the benefit package covers the necessary basic drugs and services required. Diseases and services considered to be of public health interest including; in-patient and out-patient treatment of mental illness, treatment of tuberculosis, onchocerciasis, buruli ulcer, and trachoma are also captured under the National Health Insurance Scheme's benefit package. Other benefits provided for free under the National Health Insurance Scheme are; confirmatory HIV test on AIDS patients, family planning

services, ante-natal and post-natal services and immunizations. The policy is also flexible allowing districts to upgrade the minimum health care benefit package if they have the financial capacity. However, this move must be approved by the National Health Insurance Council. From the above, it has been argued that the benefit package is too comprehensive to be sustainable in the long term (Atim et al., 2009).

## **2.8. Exclusion list for services and drugs**

Drugs and other services which are considered to be very expensive have been excluded from the benefit package for members. Table 5 shows these drugs and services.

**Table 5: Exclusion list for services and drugs**

1.Rehabilitation other physiotherapy
2.Appliances and prostheses
3.Cosmetic surgeries
4.Replacement therapy
5.Echocardiography
6.Angiographies
7.Orthoptics
8.Dialysis for chronic renal failure
9.All drugs not listed on the NHIS drug list
10.Heart and brain surgery
11.Mortuary services

Source: NHIA, 2009

## **2.9. Accessing Services under the National Health Insurance Scheme**

The first point of call, except in cases of emergency, will be a primary health care facility, which includes Community-based Health Planning and Services (CHIPS), Health Centres, District Hospitals, Polyclinics or Sub-metro Hospitals, Quasi Public Hospitals, Private Hospitals, Clinics and Maternity Homes. In localities where the only health facility is a Regional Hospital, the General Outpatient Department will be considered a primary health care facility. Active, registered members of the schemes are allowed to access health care services outside their district schemes if the need arises and a transfer letter is required.

However, when the national ID card for the National Health Insurance Scheme is fully implemented, there will not be the need for a transfer letter from one district or scheme to another.

### 2.10. Membership coverage of the National Health Insurance Scheme

There is a rapid increase in membership (67% of Ghana's total population as at June, 2009 were registered with the National Health Insurance Scheme (Asenso-Boadi, 2009). This phenomenon is due mainly to the subsidized groups. For instance, about 48.89% of the members of the scheme as at June, 2009, were children less than 18 years of age. This is depicted in table 6.

**Table 6: Membership under the National Health Insurance Scheme as at June, 2009**

<b>Schemes in operation</b>	<b>145</b>	
Total Registered	13,840,198	67%
<b>Category of members</b>		
Informal Adult	4,065,483	29.38%
Aged (Over 70 years)	942,320	6.81%
Under 18 years	6,896,633	48.89%
SSNIT Contributors	857,842	6.20%
SSNIT Pensioners	73,407	0.53%
Indigents	331,426	2.40%
Pregnant Women	669,163	4.84%

Source: Asenso-Boadi, 2009

The composition of the membership again raises questions of sustainability, as most of those covered are not making health insurance contributions because they are considered the exempt group.

### 2.11. Provider payment under the National Health Insurance Scheme

At the start of the National Health Insurance Scheme, a fee for service type of provider payment was adopted for paying health care providers. But this was replaced with the Ghana Diagnostic Related Groupings (GDRGs) in April, 2008. The reason for the replacement was

that the fee for each service was found to be low and hence unattractive, especially for the private providers to participate, since the public providers were automatically accredited (Ankomah, 2009). Providers are encouraged to participate in the NHIS, in order to reduce congestions and delays for clients. With the fee for service, providers were also required to submit detailed information on all services and charges for claims submissions. This involves a lot of paperwork which providers were not happy with (Ankomah, 2009).

Therefore the Ghana Diagnostic Related Groupings were introduced to help remedy some of these issues. The tariff covers the full cost of the estimated direct consumables for direct patient care, anaesthesia and other investigations. The Ghana Diagnostic Related Groupings also captures about 80% of the estimated overhead cost for public health facilities, comprising of building and equipment maintenance, housekeeping and utilities (Ankomah, 2009). It is expected that the new tariff will generate adequate revenue from the National Health Insurance Scheme for health care providers to cover a significant portion of their cost of operation.

#### **2.12. Reimbursement process under the National Health Insurance Scheme**

Regarding the process of reimbursement, providers are required to compile and submit their claims to a District Mutual Health Insurance Scheme (DMHIS) to which they have been accredited to. The claims are then vetted by the District Mutual Health Insurance Scheme. When satisfied, the District Mutual Health Insurance Scheme makes a submission to the National Health Insurance Authority (NHIA) for funds to pay the providers. The National Health Insurance Authority pays providers by channelling the funds through the District Mutual Health Insurance Scheme.

#### **2.13. Implementation issues relating to the National Health Insurance Scheme**

Since the introduction of the National Health Insurance Scheme, studies have shown an increasing level of registration and membership, a rise in the number of those who consult formal health care for general health conditions, an increased likelihood of women to receive prenatal care, deliver at a hospital, have their deliveries attended by trained health professionals, and experience less birth complications (Sulzbach, 2008, Mensah et al., 2009, Witter & Garshong, 2009).

But these benefits come with some challenges. These include an overburdened public health infrastructure, increased workloads for health care providers, short supply of providers, and unmotivated staff (Health Systems 20/20 Project and Research and Development Division of the Ghana Health Service, 2009). There are also problems in relation to the reimbursement of health care providers. It is argued that the introduction of the Ghana Diagnostic Related Groupings (a new tariff) in April, 2008 has resulted in the submission of huge amounts of claims by health care providers for payment. The new tariff has a higher remuneration rate for health care providers than the previously fee for service. The National Health Insurance Authority therefore has to find extra funds to pay its health care providers (Sodzi-Tettey, 2010).

### **3.0. Conclusion and knowledge gaps**

The behaviour of health care providers is considered as one of the key determinants in the provision of health care services to insured and uninsured clients. Several factors including providers' payment types and the process of payment or reimbursement can influence the behaviour of health care providers. In Ghana, there is limited research on the behaviour of health care providers under the National Health Insurance Scheme. Hence there is the need to conduct a study to fill this gap. The study will help give a better insight and understanding on issues driving the behaviour of health care providers in their treatment of insured and uninsured clients upon the implementation of the National Health Insurance Scheme. These findings will be important for Ghana and other countries that are planning to introduce social/mandatory health insurance.

**{Word count: 9560 words}**

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**PART C: ARTICLE**

University of Cape Town

University of Cape Town

**The impact of the National Health Insurance Scheme on the interactions between providers and clients in the Bolgatanga and Builsa districts of Ghana**

Dalinjong Ayizem Philip<sup>1</sup>, Ayako Honda<sup>2</sup>

<sup>1</sup>School of Public Health and Family Medicine, University of Cape Town, South Africa.

<sup>2</sup>Health Economics Unit, School of Public Health and Family Medicine, University of Cape Town, South Africa.

Email address:

DAP: padalinjong@yahoo.com

AH: Ayako.Honda@uct.ac.za

University of Cape Town

## **Abstract**

**Background:** Prepayments and risk pooling through social health insurance has been advocated by international development organizations. Social health insurance is seen as a mechanism that helps mobilize resources for health, pool risk, and provide more access to health care services for the poor. Hence Ghana implemented the National Health Insurance Scheme (NHIS) to help promote access to health care services for Ghanaians. Objective: The study examined the influence of the NHIS on the behaviour of health care providers in their treatment of insured and uninsured clients.

**Methods:** The study took place in Bolgatanga (urban) and Builsa (rural) districts in Ghana. Data was collected through exit survey with 200 insured and uninsured clients, 15 in-depth interviews with health care providers and health insurance managers, and 8 focus group discussions with insured and uninsured community members.

**Results:** The NHIS promoted access for insured and mobilized revenue for health care providers. Both insured and uninsured were satisfied with care, according to the survey. However, increased utilization of health care services by the insured leading to increased workloads for providers influenced their behaviour towards the insured. Most of the insured perceived and experienced long waiting times, verbal abuse, not being physically examined and discrimination in favour of the affluent and uninsured. The insured attributed their experience to the fact that they were not making immediate payments for services. A core challenge of the NHIS was a delay in reimbursement which affected the operations of health facilities and hence influenced providers' behaviour as well. Providers preferred clients who would make instant payments for health care services. Few of the uninsured were utilizing health facilities and visit only in critical conditions. This is a consequence of the increased cost of health care services under the NHIS.

**Conclusion:** The NHIS is beneficial for promoting access to health care services, but there is the urgent need to streamline the reimbursement process in order to sustain the NHIS. Improving the capacity of health facilities and personnel for the provision of quality care also requires immediate action.

**(Word count: 337 words)**

## **1.0. BACKGROUND**

Health care financing continues to stir debates around the world. Many low and middle income countries especially, keep on exploring different ways of financing their health systems. This is due to the fact that their health systems are chronically under-funded [1]. User fees were initially introduced at the point of service delivery in some of these countries in order to generate revenue for the running of their health systems. In some contexts, the introduction of user fees led to improvement in the quality of health services [2]. However, the overwhelming evidence suggests that user fees constitute a strong barrier to the utilization of health services, as well as preventing adherence to long term treatment among poor and vulnerable groups [1,3]. These problems led to yet another debate to look for other alternatives of health care financing.

But prepayment and risk pooling through social health insurance (SHI) and taxation are found to provide protection against some of the undesirable effects of user fees [4]. The international community is therefore paying more attention to SHI as one of the promising financing mechanisms for providing coverage to populations against high health service costs [5]. SHI is seen as helping to pool health risks, prevent health related impoverishment and improvement in efficiency and quality of health services [4,6,7]. It also provides access to health services for the poor and helps mobilize revenue for providers [4]. Nonetheless, the implementation of SHI programmes are challenged in terms of high administrative cost, lack of managerial skills, problems of cost containment and ensuring national coverage [2]. Due to these, there are still few examples of SHI schemes operating at large scale in developing countries [7].

Ghana is among the few African countries that promulgated a National Health Insurance (NHI) Act (650). Hitherto, the country had been providing free health services for her citizens

after independence in 1957. This was possible due to the small population size (about 8 million) at the time and a flourishing economy [8]. However, the free health services could not be sustained because of the economic crisis in the 1970s and early 1980s which adversely affected all sectors of the economy leading to budget cuts on social spending including health and education. Thus, little money was available for the health sector and this led to widespread shortages of essential medicines, supplies and equipment which adversely affected the quality of care [9].

To forestall these problems, cost recovery or user fees (popularly called “cash and carry”) was introduced in the late 1980s in all government facilities. Patients were made to pay for the full cost of medication and care. The argument for the user fees was to generate revenue and to discourage frivolous use of health services. However, the user fees policy affected the utilization of health services by Ghanaians. The poor especially, were undertaking self-medication and also reporting late to health facilities for treatment [10,11]. This prompted the need to look for other alternatives of health care financing, which led to the introduction of some Community-based Health Insurance Schemes (CBHIS) in the early 1990s. As at 2003, such CBHIS covered only about 1% of the country’s population (19 million), leaving many Ghanaians uncovered against high health service costs [12].

### **1.1. Design and set up of the NHIS**

In order to promote universal coverage and equity, the government of Ghana adopted the National Health Insurance Scheme (NHIS) in 2003, which was fully implemented in 2005. The NHIS aims to assure equitable and universal access for all residents of Ghana to an acceptable quality package of essential health services without OOP payment being required at the point of use [13]. The NHIS is based on District Mutual Health Insurance Schemes

(DMHIS), which operates in all 145 districts of the country. The NHIS covers both the formal and informal sectors of the economy. According to McIntyre et al, the implementation of the NHIS draws experience from the operations of the CBHIS [14]. The NHIS had a membership of about 67% as at June, 2009 [15].

### **1.2. Sources of funding for the NHIS**

The sources of funding for the NHIS include 2.5% sales tax, 2.5% monthly payroll deduction for formal sector workers as part of their contribution to the Social Security and National Insurance Trust (SSNIT) fund and government budgetary allocation. In addition, there is a minimum and maximum premium payment of GH¢7.20 (\$8) and ¢47.70 (\$53) per adult respectively, from the informal sector [13]. Children under 18, adults over 70 years, pregnant women and the indigent are exempted from paying the premium.

### **1.3. Benefit package under the NHIS**

The benefit package consists of basic health services, including outpatient consultations, essential drugs, inpatient care and shared accommodation, maternity care (normal and caesarean delivery), eye care, dental care, and emergency care. About 95% of the diseases in Ghana are covered under the NHIS. All public facilities are accredited to participate in the NHIS, while private facilities have to apply for accreditation and participation.

### **1.4. Provider payment mechanism under the NHIS**

At the start of the NHIS, a fee for service type of provider payment mechanism was used for paying health care providers. But this was replaced with the Ghana Diagnostic Related Groupings (GDRGs) in April, 2008. The reason for the replacement was that the fee for each

service was found to be low and hence unattractive, especially for the private providers to participate. Providers are encouraged to participate in the NHIS, in order to reduce congestions and delays for clients when seeking health services. With the fee for service, providers were also required to submit detailed information on all services and charges for claims submissions. This involves a lot of paperwork which providers were not happy with [16].

Therefore the GDRGs were introduced to help remedy some of these issues. The tariff covers the full cost of the estimated direct consumables for direct patient care, anaesthesia and other investigations. The GDRGs also captures about 80% of the estimated overhead cost for public health facilities, comprising of building and equipment maintenance, housekeeping and utilities [16]. It is expected that the new tariff will generate adequate revenue from the NHIS for providers to cover a significant portion of their cost of operation.

### **1.5. Reimbursement process under the NHIS**

Regarding the process of reimbursement, providers were required to compile and submit their claims to a DMHIS to which they have been accredited to. The claims are then vetted by the DMHIS. When satisfied, the DMHIS makes a submission to the National Health Insurance Authority (NHIA) for funds to pay the providers. The NHIA pays providers by channelling the funds through the DMHIS.

### **1.6. Implementation issues relating to the NHIS**

Since the introduction of the NHIS, studies have shown an increasing level of registration and membership, a rise in the number of those who consult formal health care for general health

conditions, an increased likelihood of women to receive prenatal care, deliver at a hospital, have their deliveries attended by trained health professionals, and experience less birth complications [17,18,19]. But these benefits come with some challenges. They include an overburdened public health infrastructure, increased workloads for providers, short supply of providers, and unmotivated staff [20]. There are also problems in relation to the reimbursement of providers. It is argued that the introduction of the Ghana Diagnostic Related Groupings in April, 2008 has resulted in the submission of huge amounts of claims by providers. The new tariff has higher remuneration rates than the previous payment type. The NHIA therefore has to find extra funds to pay its providers [21].

There is limited knowledge on the influence of the NHIS on the behaviour of providers, who are at the core of service provision. Providers form an important segment of health care delivery. Their behaviour plays a significant role in determining whether the goals of a health system can be achieved. The aim of the study was to examine the effect of the NHIS on the behaviour of providers. Specifically, the study examined the perceptions of providers about the reimbursement process and about insured and uninsured clients. The perceptions and experience of insured and uninsured clients, and insurance managers was also studied and presented here.

## **2.0. METHODS**

### **2.1. Study area and site**

The study was carried out in the Upper East Region of Ghana, considered as one of the three poorest regions in the country, with the least number of health workers. Two districts were purposively selected (out of nine districts in the region) for the study, to reflect urban and

rural settings. The selected districts were the Bolgatanga municipality and capital town of the region (urban setting) and the Builsa district (rural setting where not much studies have been carried out). Table 1 is a summary of some characteristics of the two districts.

**Table 1: Some characteristics of the districts**

	<b>Bolgatanga</b>	<b>Builsa</b>
Total land area	1,620 km <sup>2</sup> .	2,220sq km
Total Population	119,975 (2009 estimate)	84,069 (2009 estimate)
Number of hospitals	1 (Regional hospital)	1 (District hospital)
Total doctor population	5	1
Total nurse population	205	Not available
Doctor/patient ratio	1:30,932	1: 84,069
Nurse/patient ratio	1:755	Not available

Source: Bolgatanga Municipal Assembly [22]  
Builsa District Assembly [23]

## **2.2. Study design**

The study was cross-sectional and data collection was carried out between December, 2009 and February, 2010. Both qualitative and quantitative methods were used in order to enhance the validity of results through triangulation. Patient exit interviews were used in the quantitative methods and the qualitative approach used in-depth interviews and Focus Group Discussions (FGDs). The patient exit interviews were conducted with patients who were exiting the two main public hospitals in the two districts after seeking health care. Time and financial constraints did not allow for private health facilities to be included in the study. The in-depth interviews were held with health care providers, health insurance managers at the district level and their claims officers, and the FGDs with community members. Some policy documents were reviewed as well for the study.

### 2.3. Sampling for the patient exit interviews

A sample size was calculated for the patient exit interviews in the two public hospitals in the two districts (Bolgatanga municipality and the Builsa district). Health insurance coverage for the two districts varied, 67% for Bolgatanga [24] and 80% for Builsa [25]. But the study used a 50% insurance coverage levels to calculate the sample size for each of the two districts.

This was done in order to obtain an equal sample size for the two districts to enable comparison between the two districts. A standard error of 10% with a 95% confidence level was also used. Table 2 shows the calculated sample size and distribution. The calculated sample size for each district was distributed equally between the insured and the uninsured population. This was done to allow for comparison between the insured and uninsured groups.

**Table 2: Sample distribution for the patient exit interviews**

District	Insurance status		Total
	Insured	Uninsured	
Bolgatanga	50	50	100
Builsa	50	50	100
Total	100	100	200

Systematic random sampling was used to recruit insured clients at the health facilities for the exit interviews. On average 15 participants were recruited a day, using a recruitment interval of 8 patients, starting with the arrival of the first patient. All uninsured clients who presented at the health facilities during recruitment and consented were interviewed. This was done due to their (uninsured) limited use of health care as a result of the OOP payments. It must be noted here that the original intent of the study was to recruit only outpatients; however, it became difficult getting the uninsured clients, especially in the Bolgatanga municipality when the study commenced. It was realized that most of the uninsured visit the facilities as inpatients. Therefore the recruitment was extended to include inpatients in that municipality, to allow for the required sample size to be obtained.

Structured questionnaire were used to collect the required data. The questionnaire were developed in English and translated into the local dialects spoken in the two districts by language experts. There was a back translation for all questions to ensure that their meanings were not lost out as a result of the translation. The main aim of the exit interviews was to gather data on patients’ perceptions and experience in the facilities. Questions were based on perceptions of differential treatment of the insured and uninsured, physical examination at the consultation rooms, waiting times, satisfaction with health care provision, ranking of providers’ behaviour and OOP payments made at the facilities. Two well trained field assistants fluent in the dialects spoken in the chosen districts were responsible for conducting the interviews. Quality was monitored by the investigator who observed on average two interviews a day.

#### 2.4. In-depth Interviews

Fifteen (15) In-depth interviews were conducted with providers and insurance managers in the two districts. Table 3 demonstrates the distribution of the in-depth interviews in the two districts.

**Table 3: Distribution of in-depth interviews**

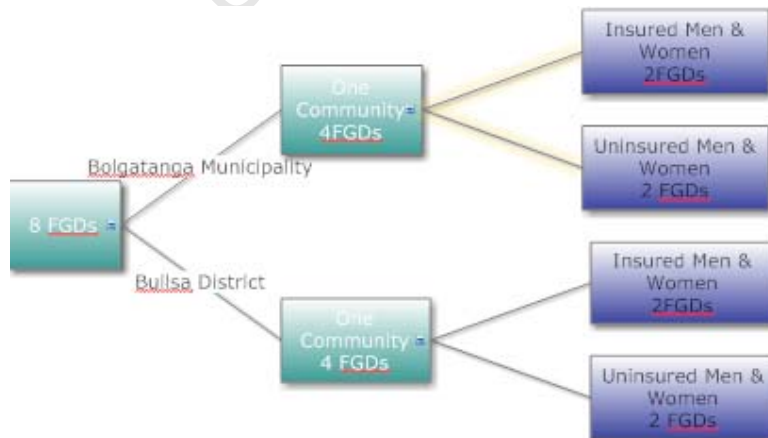
Interviewee	In-depth interviews	
	Bolgatanga municipality	Builsa district
Regional health insurance manager	1	-
District health insurance	1	1
District health insurance claims manager	1	1
Hospital pharmacist	1	1
Hospital administrator	1	1
Medical doctor	1	1
Hospital accountant	1	1
Senior nurse	1	1
<b>Subtotal</b>	<b>8</b>	<b>7</b>
<b>Total</b>	<b>15</b>	

The essence of the in-depth interviews was to get an insightful data on providers' perceptions of the NHIS and that of clients. The interviews were also meant to collect insurance managers' views about the NHIS, providers and clients. Semi-structured interview guide was used for conducting the interviews, which was in English because all the participants could speak English fluently. The interviews covered the reimbursement process, the response of providers to the reimbursement process, providers' treatment of insured clients and challenges facing the NHIS. These interviews were recorded with an Olympus Digital Voice Recorder. The recordings were listened to and transcribed for the data analysis. Field notes were also taken alongside as a complement. All the in-depth interviews were carried out by the investigator.

### 2.5. Focus Group discussions (FGDs)

Eight (8) FGDs were held with community members in the two districts. The discussions were conducted with both insured and uninsured men and women between ages 18 and 60 years (both productive and reproductive ages). Figure 1 is a diagrammatic representation of the design for the discussions.

**Figure 1: Design for the FGDs**



From figure 1, one community each from the two districts was selected for the FGDs. This selection was done according to the community's location from the facility because the location of a community to a facility can determine the health seeking behaviour of its residents. A community that extended out from the facility up to about 8 kilometres (kms) was the criteria for its inclusion in the study. A community that extends about 8kms from a facility includes households that are nearer to the facility (about 4kms within) and also households that are far from the facility (about 4kms further). Zaare in Bolgatanga and Tankonsa in Builsa were the communities selected and used for the discussions. Four (4) FGDs was conducted in each community with two each held with insured and uninsured men and women. The selection of the participants for the FGDs was also done taking into account their residential location to the facilities in the two districts. The study brought together participants who live nearer (about 4kms within) and those who live further (about 4kms further) from the facilities for the discussions. The participants were recruited with the assistance of the communities' leaders or their representatives. Each group had a membership of 8 to 12 members.

An interview guide was developed and used for the discussions, which was carried out in the local dialects. The interview guide contained issues on the perceptions and experience of community members about the NHIS and that of providers' behaviour. The discussions were recorded in the local dialects and transcribed into English. The translation and transcription of the interview guide and the discussions was carried out by people who were experts in the dialects spoken. All transcriptions were done verbatim to reduce errors. Field notes as well as bodily expressions were also taken, to complement the transcribed notes. The FGDs were also conducted by the trained field assistants and supervised by the investigator to assure quality.

## **2.6. Data analysis**

The data from the exit interviews were entered into EpiData software (3.1) and later transferred to STATA, (version 10.0) for analysis. The data was entered twice as a form of validation check, to help detect errors and inconsistencies. The identification of outliers and other inconsistencies among the variables was done through the running of frequencies and cross tabulations. Chi-square test was used to test for differences in groups and t-test for differences in means. The in-depth interviews and FGDs were recorded and transcribed. This data was analysed manually using themes. The investigator read through all the transcripts exhaustively and coded them. The codes were matched and generated into common themes and sub-themes for the write-up.

## **2.7. Ethical considerations**

Ethical approval was granted for the study by the Faculty of Health Sciences' Ethics Committee, University of Cape Town, South Africa, and by the Ghana Health Service Ethical Review Committee, Ghana. Permission for the research was also obtained from hospital management and all participants gave informed written consent to be interviewed or surveyed.

### 3.0. RESULTS

#### 3.1. Results from the exit survey

A total of 200 respondents were recruited for the survey comprising of 100 participants each in two public facilities in the Bolgatanga and Builsa districts. The 100 respondents in each district were stratified equally into insured and uninsured positions.

##### 3.1.1. Characteristics of respondents

Table 4 is a composition of the characteristics of the respondents. About 51% of the respondents were in the age range of 21-60 years who were uninsured while 49% were in the 0-20 age range and were insured.

**Table 4: Characteristics of respondents**

Characteristics	Bolgatanga municipality				Builsa district				Total			
	Insured		Uninsured		Insured		Uninsured		Insured		Uninsured	
	Freq (50)	%	Freq (50)	%	Freq (50)	%	Freq (50)	%	Freq (100)	%	Freq (100)	%
Age(years)												
0-20	20	40	21	42	29	58	24	48	49	49	45	45
21-60	29	58	28	56	16	32	23	46	45	45	51	51
61+	1	2	1	2	5	10	3	6	6	6	4	4
Sex												
Male	23	46	24	48	20	40	21	42	43	43	45	45
Female	27	54	26	52	30	60	29	58	57	57	55	55
Type of patient												
Inpatient	15	30	31	62	-	-	-	-	15	15	31	31
Outpatient	35	70	19	38	50	100	50	100	85	85	69	69

Females were more than the male respondents, with 57% being insured and 55% being uninsured. Outpatients who were insured were 85% while the uninsured were 69%. Insured and uninsured inpatient respondents were 15% and 31% respectively (Note: the inpatients came from the Bolgatanga municipality only).

### 3.1.2. Diagnosis

Causes of outpatient attendance and hospitalizations are presented in table 5. Malaria tops the list and accounts for 55% of the insured and 60% of the uninsured attendance. In the Bolgatanga municipality, malaria was responsible for 33.3% insured and 67.8% uninsured inpatient hospitalization. It also caused 60% and 58% insured and uninsured outpatients attendance in the Builsa district.

**Table 5: Diagnosis**

Diagnosis	Bolgatanga municipality								Builsa district				Total			
	Insured				Uninsured				Insured		Uninsured		Insured		Uninsured	
	Inpatients		Outpatients		Inpatients		Outpatients		Outpatients		Outpatients					
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Malaria	5	33.3	20	57.1	21	67.8	10	52.6	30	60	29	58	55	55	60	60
URI	1	6.7	4	11.4	1	3.2	3	15.8	5	10	6	12	10	10	10	10
Anaemia	2	13.3	3	8.6	-	-	2	10.5	4	8	5	10	9	9	7	7
Others	7	46.7	8	22.9	9	29	4	21.1	11	22	10	20	26	26	23	23
<b>Total</b>	<b>15</b>	<b>100</b>	<b>35</b>	<b>100</b>	<b>31</b>	<b>100</b>	<b>19</b>	<b>100</b>	<b>50</b>	<b>100</b>	<b>50</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

### 3.1.3. Patients' perception about health care providers

Respondents' satisfaction with health service provision, perception of waiting times and differential treatment of the insured and uninsured clients by providers were collected.

### 3.1.3.1. Satisfaction with health care provided

Table 6 shows the level of satisfaction of respondents with health service provision in the two districts and facilities. Overall, there was no difference (p-value = 0.177) in response with regards to satisfaction with health service provision between the insured and the uninsured. About 76% of the insured and 82% of the uninsured were satisfied with the health care provided them. The same pattern had been observed between inpatients of insured and uninsured positions (p-value = 0.734) as well as outpatients who are insured and uninsured (p-value = 0.240) in the Bolgatanga municipality. Equally, the Builsa district saw no difference in response for the insured and uninsured outpatients (p-value of 0.292).

**Table 6: Satisfaction with health care provided**

Satisfaction with health care?	Bolgatanga municipality										Builsa district					Total				
	Inpatients					Outpatients					Outpatients									
	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*
	Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%	
Satisfied	10	31.25	23	67.65	0.734	22	68.75	11	32.35	0.240	44	88	48	96	0.292	76	76	82	82	0.177
A little satisfied	4	25	8	50		12	75	8	50		5	10	2	4		21	21	18	18	
Dissatisfied	1	50	-	-		1	50	-	-		1	2	0	0		3	3	0	0	
Total	15	30	31	62		35	70	19	38		50	100	50	100		100	100	100	100	

\*Chi-square test to compare proportions for insured and uninsured respondents

### 3.1.3.2. Perception of waiting times at the health facility

Respondents' perception of waiting times in the facilities is captured in table 7. While no difference was observed for inpatients of insured and uninsured status in the Bolgatanga municipality (p-value = 0.345), there was a difference between outpatients who are insured and those who are uninsured (p-value = 0.003). About 76% of outpatients who are insured

compared to about 63.16% uninsured perceived the waiting times to be too long. In the Builsa district, the insured (68%) regarded waiting times to be too long in the district (p-value = 0.000). A further difference (p-value = 0.001) had been found for the combined result from the two districts between the insured and uninsured. About 59% of insured respondents viewed the waiting times to be too long compared to only 35% of the uninsured.

**Table 7: Perception of waiting times at the health facility**

Waiting time s?	Bolgatanga municipality										Builsa district					Total				
	Inpatients					Outpatients					Outpatients									
	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*
	Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%	
Too long	6	24	7	36.84	0.345	19	76	12	63.16	0.003	34	68	16	32	0.000	59	59	35	35	0.001
Ok	9	36	24	77.42		16	64	7	16.22		16	32	34	68		41	41	65	65	
Total	15	30	31	62		35	62	19	38		50	100	50	100		100	100	100	100	

\* Chi-square test to compare proportions for insured and uninsured respondents

### 3.1.3.3. Perceived differences in treatment of insured and uninsured clients

The insured and uninsured did not perceive that insured clients were treated better than uninsured. This is shown in table 8, where the total responses of the insured (88%) and uninsured (85%) were not different (p-value = 0.535). This trend reflected in the Bolgatanga municipality too, between insured and uninsured inpatients and for the insured and uninsured outpatients as well with p-values of 0.321 and 0.151 respectively. But a difference however, was recorded for the responses in Builsa between insured and uninsured outpatients (p-value = 0.041), where all the uninsured (100%) and 92% of the insured responded that the insured was not treated better than the uninsured clients.

**Table 8: Perception of insured being treated better than uninsured clients by health providers**

Is insured treated better?	Bolgatanga municipality										Bulsia district					Total				
	Inpatients					Outpatients					Outpatients									
	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*
	Fr	%	Fr	%		Fr	%	Fr	%		Fr	%	Fr	%		Fr	%	Fr	%	
Yes	1	12.50	7	46.67	0.321	7	87.50	8	53.33	0.151	4	8	0	0	0.041	12	12	15	15	0.535
No	14	33.33	24	68.51		28	66.67	11	31.43		46	92	50	100		88	88	85	85	
<b>Total</b>	<b>15</b>	<b>30</b>	<b>31</b>	<b>62</b>		<b>35</b>	<b>70</b>	<b>19</b>	<b>38</b>		<b>50</b>	<b>100</b>	<b>50</b>	<b>100</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	

\*Chi-square test to compare proportions for insured and uninsured respondents

Likewise, respondents in the two districts did not perceive the uninsured to be treated better than the insured. From table 9, about 85% of the insured and 86% of the uninsured perceived that the uninsured was not treated better compared to the insured (p-value = 0.841). In the districts, the same observation was made for insured and uninsured outpatients in Bulsias (0.461) and between insured and uninsured inpatients (p-value = 0.352) in Bolgatanga. But a significant difference was seen between insured and uninsured outpatients in Bolgatanga, given a p-value of 0.051. Approximately 83.33% of insured outpatients compared to about 66.67% of the uninsured outpatients view the uninsured to be treated better than the insured.

**Table 9: Perception of uninsured being treated better than insured clients by health care providers**

Is uninsured treated better?	Bolgatanga municipality										Bulsia district					Total				
	Inpatients					Outpatients					Outpatients									
	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*
	Fr	%	Fr	%		Fr	%	Fr	%		Fr	%	Fr	%		Fr	%	Fr	%	
Yes	2	16.67	3	33.33	0.352	10	83.33	6	66.67	0.051	3	6	5	10	0.461	15	15	14	14	0.841
No	13	34.12	28	68.29		25	65.79	13	31.71		47	94	45	90		85	85	86	86	
<b>Total</b>	<b>15</b>	<b>30</b>	<b>31</b>	<b>62</b>		<b>35</b>	<b>70</b>	<b>19</b>	<b>38</b>		<b>50</b>	<b>100</b>	<b>50</b>	<b>100</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	

\*Chi-square test to compare proportions for insured and uninsured respondents

### 3.1.4. Actual experience of respondents at the health facilities

The study also examined the actual experience of respondents at the facilities through the use of physical examination by providers, amount of time spent at the facilities seeking health service and direct OOP payments.

#### 3.1.4.1. Physical examination of insured and uninsured clients

Table 10 consist of the responses on whether respondents had been physically examined in the consultation room by providers. Except for the insured and uninsured outpatients in the Bolgatanga municipality (p-value = 0.263), the rest of the results indicated a significant difference between the responses for the two groups. More of the uninsured reported having been physically examined than the insured. About 94% of the uninsured outpatients in the Bulsia district responded “yes” to being physically examined by providers compared to 78% of the insured outpatients (p-value = 0.021). This pattern was also observed for the total responses between the two groups, where 81% of the uninsured reported having been physically examined compared to 68% of the insured respondents (p-value = 0.035).

**Table 10: Physical examination by health care provider**

Physical examination?	Bolgatanga municipality										Builsa district					Total				
	Inpatients					Outpatients					Outpatients									
	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*	Insured		Uninsured		P-value*
	Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%		Fr eq	%	Fr eq	%	
Yes	12	41.38	23	67.65	<b>0.040</b>	17	58.62	11	32.35	<b>0.263</b>	39	78	47	94	<b>0.021</b>	68	68	81	81	<b>0.035</b>
No	3	14.29	8	50		18	85.71	8	50		11	22	3	6		32	32	19	19	
<b>Total</b>	<b>15</b>	<b>30</b>	<b>31</b>	<b>62</b>		<b>35</b>	<b>70</b>	<b>19</b>	<b>38</b>		<b>50</b>	<b>100</b>	<b>50</b>	<b>100</b>		<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	

\*Chi-square test for comparing proportions for insured and uninsured respondents

### 3.1.4.2. Time spent at the health facility

Time spent at the facilities by respondents is captured in table 11. The overall result from the two districts showed a difference (p-value = 0.0274) in time spent by the insured and uninsured outpatient respondents. The insured outpatients spent a mean time of 236.8 minutes while the uninsured outpatient respondents spent a mean time of 203.0 minutes seeking health services. A similar observation was made in the Builsa district, where the insured outpatient respondents spent a significant mean time of 238.1 minutes seeking health care likened to a mean time of 199.6 minutes spent by the uninsured (p-value = 0.0096). No mean time difference was observed for insured and uninsured inpatients (p-value = 0.0890) and outpatients (p-value = 0.5238) in the Bolgatanga municipality.

**Table 11: Time spent at the health facility**

Bolgatanga municipality	Inpatient (days)				Outpatient (minutes)				
		Obs	Mean	Std dev	P-value	Obs	Mean	Std dev	P-value
Bolgatanga municipality	Insured	15	2.533333	1.302013	0.0890	35	234.8857	122.8059	0.5238
	Uninsured	31	3.677419	2.371878		19	212.1053	127.7684	
Builsa district	Insured	-	-	-	-	50	238.1	47.92607	0.0096
	Uninsured	-	-	-		50	199.56	91.35894	
Total	Insured	15	2.533333	1.302013	0.0890	85	236.7765	86.2944	0.0274
	Uninsured	31	3.677419	2.371878		69	203.0145	101.8208	

\*t-test to compare mean time spent by insured and uninsured respondents

### 3.1.4.3. Direct payments for health services

The uninsured and some insured patients made direct OOP payments at the facilities for drugs and services. Table 12 is a compilation of these payments. The mean OOP payments for insured (8) and uninsured respondents (50) in Bolgatanga was GH¢ 7.625 (USD □ 5.37) and GH¢ 23.74 (USD □ 16.63) respectively (regardless of patient type). Also, the mean OOP payments for inpatients (35) and outpatients (23) in the municipality was GH¢ 24.91429 (USD\* 17.545) and GH¢21.24685 (USD\* 14.962) in the given order (irrespective of insurance status). Uninsured outpatient respondents in Builsa district made a mean OOP payments of GH¢23.5 (USD □ 17.96) for health services. But insured outpatient respondents made no OOP payments in the district. The overall result from the two districts showed a mean OOP payment of GH¢23.62 (USD\*16.63) for the uninsured (100) and GH¢7.625 (USD\*5.37) for the insured (8).

**Table 12: Payments for drugs and services by respondents**

Bolgatanga municipality		Obs	Mean (GH¢)	Std dev (GH¢)	Insurance status not considered		Obs	Mean (GH¢)	Std dev (GH¢)
		Insured	8	7.625			9.164177	Inpatient	35
	Uninsured	50	23.74	11.34579	Outpatient	23	16.34783	9.398301	
Builsa district	Insured	-	-	-	Inpatient	-	-	-	
	Uninsured	50	23.5	14.16124	Outpatient	50	23.5	14.16124	
Total	Insured	8	7.625	9.164177	Inpatient	35	24.91429	12.97593	
	Uninsured	100	23.62	12.76658	Outpatient	73	21.24658	13.21592	

\*Exchange rate: GH¢1 .42 = USD 1

### 3.1.5. Conclusion

The results of the exit survey suggest no difference in perception on respondents' satisfaction with health care provision and differential treatment among the two groups. The insured and uninsured indicated that they were satisfied with the health care given and that no group was treated better than the other by providers. But a difference in perception of waiting times for the two groups was observed in Builsa and for the overall result. The insured perceived waiting times to be long while the uninsured think waiting times were ok.

The findings on respondents' actual experience in the facilities showed a significant difference for the two groups for the combined results and in Builsa as well. More of the uninsured reported having been physically examined than the insured. The insured also spent more time at the facilities than the uninsured. The overall mean for direct OOP payments for the uninsured was GH¢23.62 (USD\*16.63). Some insured (8) in the Bolgatanga municipality also made direct OOP payments for health services (mean of GH¢7.625 (USD\*5.37)).

### **3.2. Results from the FGDs and in-depth interviews**

#### **3.2.1. Health care providers' views about the NHIS**

Health care providers in the two districts indicated that the NHIS made health services accessible to the insured without any payment at the point of consumption. This was reflected in the high attendance by the insured. They attested to a phenomenal increase in attendance compared to the period when the NHIS was not in operation.

*The NHIS assisted in health care delivery. The insured are able to access health services all the time (In-depth interview, hospital accountant-Bolgatanga).*

The NHIS also enabled providers to get funds in bulk to carry out their operations and undertake minor infrastructural developments in their facilities. However, there was the problem of delay in reimbursement. Providers were not paid for over six (6) months in both districts.

*For almost six (6) months, the insurance has not paid the hospital (In-depth interview, hospital administrator-Builsa).*

The main reason for the delay in payment was the inability of the National Health Insurance Authority (NHIA) to provide funds for payment.

*The insurance office is telling us that they are still waiting for money from Accra (the nation's capital) in order to pay us (In-depth interview, hospital administrator-Bolgatanga).*

Providers reported that inadequate and incompetent staff in the facilities responsible for the submission of claims to the DMHIS could also cause delays in the payment. For instance, some staff lacked knowledge of the computer software used for submitting claims to the DMHIS. Contentious claims between the facilities and the DMHIS could result in delays as well.

*On several occasions, we providers and the DMHIS have disagreed on submitted claims (In-depth interview, hospital accountant-Bolgatnga).*

Due to the delay in reimbursement, providers were unable to procure drug and non-drug supplies.

*The delay affects our work, because if you don't have the logistics to work with.....tell me, assuming that you have run out of drugs, they have not paid you, where will you get the money to buy the drugs? (In-depth interview, hospital administrator-Builsa).*

Providers were compelled to issue prescriptions for clients to buy drugs out of the facilities. The facilities were not also able to pay casual employees, for example, cleaners, whose names were not on government's payroll. These type of employees are usually paid from Internally Generated Funds (IGFs) mobilized by the facilities.

### **3.2.2. Health care providers' views about insured clients**

Providers in both districts thought that there was an increased attendance by insured clients, which some visits were unnecessary. Providers claimed that some insured clients could visit

the facilities for over 5 or 6 times within a week/month or visit different facilities on different days conservatively for the same condition without taking the drugs prescribed.

*Some people can come to the hospital ten times in a week. There is an abuse (In-depth interview, hospital accountant-Bolgatanga).*

Besides, some insured clients could fake themselves as being ill to collect drugs from facilities for their uninsured relatives and friends. This could only be revealed if they (“supposed patients”) were required to take an instant treatment, like an injection.

*Some of the insured come here pretending to be ill so that they can collect drugs for their sick relatives (In-depth interview, medical doctor-Bolgatanga).*

Furthermore, some insured clients also hire out their insurance IDs for a fee to some uninsured patients to come to the hospital for treatment.

*Some insured clients do give their insurance cards to some uninsured patients to come to the hospital. There are some cases where a fee is charged in order that an insurance card can be used by an uninsured person (In-depth interview, medical doctor-Builsa).*

As a result of the high attendance, a lot of workload pressure was generated for providers.

The staff experience long working hours with little or no break times.

*....in some days when the attendance is so high, we could work here from morning to very late in the evening without any break (In-depth interview, senior nurse-Builsa).*

Their salaries and allowances have not been upgraded to commensurate with these loads of work. Providers then suggested for a form of compensation either by increasing their salaries or allowances.

*Government has to find a way of motivating us to work (In-depth interview, hospital administrator-Bolgatanga).*

### **3.2.3. Health care providers' views about uninsured clients**

The interviews with providers further revealed that few of the uninsured were visiting the facilities and that it was mostly the core poor who could not afford registration with the NHIS.

*We have realized that with the uninsured, unless they are seriously ill they don't report early to the facilities. Some of them just come to die (In-depth interview, medical doctor-Builsa).*

Secondly, the insurance had made the cost of services to rise and hence a challenge for the uninsured to access services. The uninsured pay the same service charges as agreed by the NHIS for paying its providers.

*Persons who are not registered with the insurance will have to pay the same cost for a service as agreed by the NHIS which is quite high for them (In-depth interview, surgical nurse-Bolgatanga).*

On preferential treatment for uninsured, providers stated that they did not prefer the uninsured to the insured. However, providers reported that it was possible for some of them to prefer payment that would be instant to enable them run the facilities, since they were not paid for a very long time by the NHIS. So if there was any preference for the uninsured, it was because they would make cash payment to the facilities.

*Some facilities in the South of the country have turned away people who are insured. It is true that some facilities and pharmacies would prefer people who will pay in cash to those with insurance, due to the delay in reimbursement (In-depth interview, hospital accountant-Bolgatanga).*

#### **3.2.4. Insurance managers' views about the NHIS**

Insurance managers think that the NHIS is one of the best social interventions that enabled clients to have access to health services as and when needed.

*As at now, insured members are accessing health service without the problem of having to pay at the point of use (In-depth interview, insurance manager-Builsa).*

#### **3.2.5. Insurance managers' views about health care providers**

Insurance managers reported that providers were happy with the operations of the NHIS, if they were paid early. However, the delay in reimbursement does not make them happy.

*If we pay our providers early, they are happy (In-depth interview, insurance manager-Bolgatanga).*

Managers said they had completed the necessary procedure for reimbursement and were only waiting for funds from the NHIA. The NHIA was yet to make funds available for payments.

*We here have finalized everything; we are now waiting for funds from Accra (the NHIA) (In-depth interview, insurance claims manager-Builsa).*

Inadequate number of staff on the part of the DMHIS for the vetting of claims was sometimes responsible for the delay in payment of providers.

*We have only one claims officer for the whole municipality. It is difficult vetting all the claims that come in good time (In-depth interview, insurance manager-Bolgatanga).*

Some providers were perceived by the managers to put up bad attitude towards clients of the NHIS. For instance, providers could make some insured clients to spend a whole day seeking health service through delays at the facilities. Some providers could also shout at insured clients without any provocation.

*Some attitudes of our providers are not good. Some could shout at our clients for no apparent reason. Indeed, they (providers) could tell them (insured) that they frequent the facility too much with minor complaints (In-depth interview, insurance manager-Bolgatanga).*

Managers added that these complaints were usually discussed during their quarterly meetings with providers or when emergency meetings were held.

### **3.2.6. Insurance managers' views about insured members**

Managers saw insured clients to be happy with the operations of the NHIS. Insured clients, for instance, were able to access “free” health services with their valid insurance ID cards at any time.

*Generally, people are happy with the insurance because they don't have to wait till their sicknesses get worse before they attend the facilities (In-depth interview, insurance manager-Builsa).*

But some insured clients tend to abuse the services offered under the NHIS. Managers stated that they do come across instances of insured clients attending different facilities for the same illness within a given period. The multiple attendance increases the indebtedness of the NHIS to providers.

*During the vetting, it is very common to see our clients utilizing different facilities with the same condition within a given short period (In-depth interview, insurance manager-Bolgatanga).*

Under the NHIS, insured clients were allowed to attend any accredited facility of their choice within the district. They (insured) could even attend facilities in other districts with a transfer letter from the DMHIS where they were registered.

On what to do to help curb these problems, the managers declared that they were finding ways of educating their clients.

*I think that with the right education, these issues (abuse of services) can be brought to a minimal (In-depth interview, insurance manager-Bolgatanga).*

### **3.2.7. Insured clients' views about the NHIS**

The insured discussants all agreed that the NHIS was very useful. It made access to health service very easy. This was due to the fact that one was not required to pay for services at the point of consumption.

*It is good because we in this community are farmers and poor, when you are sick, at once you cannot sell a fowl to be able to go to the hospital. But with the insurance, we are safe now (FGD, insured men-Builsa).*

But the insured clients were not happy with high premium payment for registration, the delay in processing the insurance ID cards after registration, and the yearly renewal of the ID cards.

*..... you have to register (with the DMHIS) which is very high, but there are no jobs for us to get money (FGD, insured men-Bolgatanga).*

### **3.2.8. Insured clients' views about health care providers**

Most insured clients in both districts perceived that providers were discriminatory against them in terms of verbal attacks for no reason, long waiting times for obtaining their hospital folders and that of drugs, and the issuance of prescription forms to buy drugs outside the facilities.

*Some of the staff are too discriminatory. When you come without insurance, very quickly they will attend to you (FGD, insured men-Builsa).*

Furthermore, some insured discussants thought that providers did not take their time to physically examine them (insured) before prescribing drugs for them.

*....after my complaints, the doctor just wrote some drugs for me, he did not touch any part of my body (FGD, insured women-Builsa).*

It was also reported by the insured that providers tend to give preferential treatment to the rich, who were well dressed and attended the facilities in cars. They (insured) contended that the rich were attended to quickly than the poor, but discussants did not indicate whether these rich people were insured or uninsured clients.

*They have their own people who are well dressed and good looking, but not poor people like me (FGD, insured women-Builsa).*

The insured therefore concluded that it was because they were not making instant payment for health services, they were being discriminated against by the providers.

### **3.2.9. Uninsured clients' views about the NHIS**

The uninsured clients also recognized the usefulness of the NHIS. They reported that they had seen insured clients accessing health services without any payment, even with free feeding for those hospitalized.

*The insurance helps in the sense that when you are admitted in the hospital it is free, you get everything for free, even the food and the bed free (FGD, uninsured men-Bolgatanga).*

But the uninsured clients thought that the premium payment was high for them and hence they were unable to register with the NHIS.

*Most of us in this community are farmers, with our income being unreliable. It is very difficult getting that amount of money to join the insurance (FGD, uninsured women-Bolgatanga).*

They (uninsured) advanced other problems of the NHIS which included; the delay in getting the insurance ID cards after registration and their yearly renewal.

*The bad aspect of the insurance is the period it takes for one to receive his card after registration and the renewal as well. It takes several months (FGD, uninsured men-Builisa).*

Perceived limited benefit package and unreliable insurance agents contracted by the NHIS to help register members were other issues that the uninsured were not happy with in both districts. The insurance agents were accused of causing delays in the processing of the ID cards. The above issues therefore did not motivate them (uninsured) to subscribe to the NHIS.

The uninsured clients viewed the NHIS as being responsible for the increased cost associated with health services. Health services were not so expensive when the NHIS was not in operation. The new increased charges implemented by the NHIS for payment to providers for

their diagnosis and treatment were the same charges that the uninsured would have to pay when they visit the facilities.

*These days when you are admitted in the hospital for only 2 to 3 days, they may charge you an amount of GH¢ 300 to GH¢ 400 (US \$ 263.15 to US \$ 350.88). It wasn't like that (FGD, uninsured women-Builsa).*

### **3.2.10. Uninsured clients' views about health care providers**

The uninsured reported that they could not utilize the facilities like the insured. The main reason was the high charges for health services under the NHIS. So they have resorted to the use of local herbs and to buying drugs from drug stores for treatment at home.

*It doesn't mean we don't want to attend the hospital. It is because we don't have the money. But if you see that you can get to the drugs store and get yourself some drugs, it will help (FGD, uninsured women-Bolgatanga).*

Again the uninsured thought that providers discriminated against the insured. This was done by making them experience delays when they (insured) come for their hospital folders (records) and prescribing drugs that cannot be obtained at the pharmacy shops, as well as providing low quality drugs for them

*Sometime, people even complain to my hearing that if you don't have insurance, it is better. If you go to the hospital with your own money, they (providers) give you special attention than when you have the insurance card (FGD, uninsured men-Builsa).*

### **3.2. Conclusion**

Providers perceived the NHIS to have promoted access and enabled them to obtain funds in bulk for their operations. But there was a delay in reimbursement. The NHIA had not yet made funds available for their payment. Other reasons which providers thought could cause delays in reimbursement was the inadequate and incompetent staff responsible for vetting and submission of claims for both the facilities and the DMHIS, and disagreements over submitted claims between the two parties (facilities and the DMHIS). The delay in payment made providers not to be able to procure drugs and non-drug supplies. They (providers) resorted to issuing prescription forms for clients to buy drugs outside the facilities. Casual workers in the facilities could not also be paid as a result of the delay in payment. Providers saw an increased in attendance by insured clients, but some visits were unnecessary. The increased attendance by the insured generated lots of workload for providers, but their salaries and allowances were not upgraded to compensate them. Providers observed that the uninsured were not utilizing the facilities due to the increased cost of health services under the NHIS. Providers also reported that they do not prefer the uninsured to the insured, but the delay in payment could make some of them to do that.

The NHIS managers at the district level considered the NHIS to be one of the best social interventions for health services. Managers said providers were pleased with the NHIS, except the delay in reimbursement. In addition, managers reported that the insured were also pleased with the NHIS, but some of them were abusing the services under the NHIS.

The views of the insured showed that they were equally happy with the NHIS, given the fact that they were able to access health services without immediate payment. However, high premiums, delays in the processing of insurance ID cards, their yearly renewal were some of

the issues they were not happy with. The insured viewed providers to be discriminatory against them by verbally abusing them, causing delays for them, issuing prescription forms for them to obtain drugs outside the facilities, and not physically examining them.

Furthermore, the insured perceived providers were giving preferential treatment to the uninsured and the affluent. The insured think they experience these behaviours by providers because they were not making instant payments for services.

The uninsured too perceived the NHIS to be beneficial for registered clients. They had seen the insured accessing health services without payment for them. But the uninsured saw premiums payments for the NHIS to be high. Other problems of the NHIS enumerated by the uninsured were the delays in getting insurance ID cards when registering, the annual renewal of the cards, and a limited benefit package. The uninsured also think that the cost of health services had risen in the era of the NHIS and hence could not utilize the facilities. Some of them reported that they resorted to treating at home. Furthermore, providers were perceived by the uninsured to discriminate against the insured by causing long waiting times for them, prescribing low quality drugs and drugs that cannot be obtained in the facilities.

The results therefore showed providers and managers perceiving the insured to be abusing the services under the NHIS. The insured and uninsured on the other hand thought that the insured was verbally abused, experienced long waiting times and discrimination as a result of the fact that they were not making instant payments for services.

#### **4.0. DISCUSSION**

The study found that the NHIS was working, promoting access for the insured and mobilizing revenue for providers. Both the insured and uninsured were satisfied with care provided.

However, most insured clients had reported long waiting times, verbal abuse, not being physically examined and discrimination. Providers perceived that the insured were abusing their services and generating lots of workloads for them. The uninsured were found not to be utilizing the facilities.

The study answered the study question by uncovering the fact that the delay in reimbursement and the perceived opportunistic behaviour of the insured by providers was responsible for the differences in the behaviour of providers towards the insured and uninsured. The remaining unanswered question arising from the study was why the general dissatisfaction with health services delivery under the NHIS. Further investigation is required in this direction.

#### **4.1. Views about utilization of health services under the NHIS**

Managers and providers said utilization rates for health services for insured clients had increased more than twofold. The finding was confirmed by baseline and endline studies on the NHIS. The studies found an increase in utilization of health services from 37% in 2004 to 70% in 2008 under the NHIS [20]. Similarly, the Ministry of Health reported that the use of outpatient and inpatient services under the NHIS almost doubled between 2005 and September 2007 [26]. The finding on increased utilization could be explained by some unmet health care needs prior to the introduction of the NHIS, especially when the “cash and carry” was in operation. It could also be explained by an abuse on the part of insured clients.

However, managers and providers indicated that there was a delay in reimbursement by the NHIS. Providers had not been paid for almost six (6) months and this was affecting the delivery of services to clients of the NHIS. Various news items had been put up by

Ghanaweb.com in Ghana showing some providers refusing to offer services to some insured clients unless they were ready to make instant payments. For instance, it was reported by the Ghana News Agency that the Ho Municipal Hospital had turned away insured clients unless they were ready to pay for the services [27].

This finding of the delay in reimbursement by the NHIA is one of the underlying reasons for the differences in the behaviour of providers towards the insured and uninsured. It requires action by policy makers to address the issue in order to promote the sustainability of the NHIS and to attain universal coverage as well.

#### **4.2. Satisfaction with health care provided**

The results from the exit interviews showed that the insured and uninsured in both districts were satisfied with health care provision under the NHIS. However, the FGDs with community members revealed that the insured were less satisfied with the provision of health care. This finding underscores the fact that some consumers of health services, especially the insured are not happy with the services rendered them in the era of the NHIS. This requires further investigation as to why there is dissatisfaction with service delivery which this study failed to address. The NHIA should also endeavour to provide monitoring and evaluation of the services provided by providers to ensure confidence and satisfaction.

#### **4.3. Perception of waiting times and actual time spent at the health facility**

Findings for the exit survey for the two districts and that of Builsa alone revealed that the insured perceived waiting times to be long. The same trend was observed when the actual time spent at the facilities was determined for both insured and uninsured. Insured outpatients

spent more time in the facilities than the uninsured. This was further confirmed by the in-depth interviews and FGDs held with providers and community members respectively. The reason for the difference in waiting times between the two districts could be attributed to the availability of more medical staff in Bolgatanga than in Builsa. For instance, the Bolgatanga Regional hospital had 5 medical doctors, while Builsa had just one. But the core reason for the long waiting times for insured clients in both districts had been revealed by the study. Providers stated that it was due to the processes that the insured goes through in terms of documentation, and given their high attendance rates, waiting times were quite high for them. The finding of long waiting times for the insured is in consonance with what De Allegri et al discovered, that insured respondents with a Mutual Health Insurance Scheme in Burkina Faso complained of long waiting times when accessing health services [28].

It would therefore be appropriate if the NHIS or policy makers are able to put measures in place to reduce the documentation process for the insured and help bring down their waiting times.

#### **4.4. Perceived differences in treatment of insured and uninsured clients**

The exit survey results revealed no difference in perception of differential treatment for either the insured or uninsured. However, the FGDs showed differences in perception of differential treatment which was in favour of the uninsured and affluent. The finding is in line with what De Allegri et al had in Burkina Faso. The insured and uninsured were not happy with differences in treatment based on patients' socio-economic status [28]. Similarly, Arhinful found respondents doubting whether with the introduction of a Community-based Health Insurance, providers would sincerely give equal treatment to clients. It was perceived that the uninsured and affluent may pay bribes and get preferential treatment from nurses [10].

The study however, could not substantiate this finding due to the fact that it had not collected data on the socio-economic status of respondents to make a comparison with their perceptions. This therefore requires further enquiry.

#### **4.5. Physical examination of insured and uninsured clients**

Overall, the findings from the exit survey proved that more of the uninsured than the insured reported having been physically examined by providers. The FGDs also confirmed the exit survey. This could be explained by the high attendance of the insured, creating more pressure on providers, thus making physical examination a time-consuming exercise. With this finding, it is required that a continuous monitoring of the provision of health services is undertaken to ensure that services rendered to insured clients are of the required standard. This is due to the fact that the finding runs contrarily to what Bassili et al found in Egypt, a similar setting. Insured children had a significantly higher frequency of physical examination, investigations and diabetes education compared to their uninsured counterparts [29].

#### **4.6. Direct payments for health services**

The overall mean for direct OOP payments for drugs and services for the uninsured was GH¢23.62 (USD16.63). Proportionally, the payment would be 1.2% to the average annual household expenditure of GH¢ 1,918.00 (USD 1,350) in Ghana [30]. Indirect costs was not included, but are known to be quite significant when seeking health services in Ghana [31]. A direct cost of GH¢23.62 (USD16.63) for one episode of illness could therefore be considered high. Besides, the FGDs showed that most of the uninsured were the poorest and hence that payment would have a significant negative impact on them. In fact, the literature on health

insurance in Africa have shown that the poorest were not represented among the insured [28,32,33], and could adversely be affected by direct OOP payments. Special efforts were required to include this class of people. It must be stated here that the insured who made OOP payments were for services or drugs not covered by the benefit package of the NHIS.

#### **4.7. Limitations of the study**

The study was conducted in only two of Ghana's 145 districts, which may limit the generalizability of the results. In addition, the study was carried out in two public facilities, despite the visible existence of the private sector. About 1,277 private health facilities have been accredited, providing about 10% of health services [34]. This therefore affects the representativeness of the facilities surveyed. A study in only two public facilities would not be enough to represent both the public and private facilities.

Also, the inclusion of inpatients in the Bolgatanga municipality to make up for the required number of respondent introduces a weakness in the sampling strategy for the quantitative aspect of the study. This limits the consistency of the analysis (as planned initially to compare insured and uninsured outpatients). Besides, it does not permit comparison to be made between the two districts, as it is inappropriate to compare the results of outpatients and inpatients as they receive different types of health services. Lastly, it restricts the conclusions that can be made about the results from the two districts. Hence the interpretation of the results should be made with caution.

In addition, non-medical costs such as cost of meals, transportation, etc, were not considered by the study and hence the cost captured here would be an under-estimation of the total OOP payments.

#### **4.8. Further research**

There is the need for further research to cover a lot more of the districts and in more public and private facilities to help determine the influence of the NHIS on the behaviour of providers. It would particularly be interesting to study the behaviour of providers in the private sector since they are profit-oriented. Further research should also be carried out to determine if non-medical costs in terms of transportation, meals, etc, affect health seeking among the population, apart from removing payments at the point of service use.

#### **4.9. Policy recommendations**

The immediate policy required would be on the issue of the delay in reimbursement by the NHIS. There is an urgent need for action to streamline the reimbursement procedure in order to maintain providers' confidence in the NHIS. Central government and the management of the NHIA should search for an effective and permanent way of addressing the issue, if not the success and sustainability of the NHIS would be affected.

Another issue is the high cost of health services in the era of the NHIS. The introduction of the new tariff in April 2008 (Ghana Diagnostic Related Groupings) has led to an increase in the cost of health services [16]. This has affected the utilization of health services by the uninsured. Other issues included high premium payment leading to the exclusion of the poorest, long waiting periods for the issuance of insurance ID cards, required annual renewal of the ID cards, limited benefit package, and issuance of prescription forms for clients to buy drugs out of the facilities. The unacceptable behaviour of some insurance agents contracted by the NHIS to register members was another challenge. The above problems require action

to ensure the success of the NHIS in providing health services to the population, particularly mapping out strategies to include the very poor, in order to attain universal coverage. On the part of the facilities, more professional staff are required. The staff should also be motivated to carry out their duties efficiently due to the heavy workloads.

## **5.0. CONCLUSION**

The study set out to examine the behaviour of providers under the NHIS. This was achieved by assessing the views of providers, insurance managers, and insured and uninsured clients. The findings demonstrated that the NHIS was seen by all participants of the study to be beneficial. It led to an increase in the utilization of health services for the insured and mobilized health resources for facilities. The insured and uninsured were satisfied with the care given them, according to the exit survey. However, most insured clients reported verbal abuse, long waiting times, not being physically examined and discrimination in favour of the uninsured and the rich. Providers also think that the insured were abusing their services by frequenting the facilities, and sometimes faking illness to collect drugs for their uninsured relatives. This has affected significantly the behaviour of providers towards the insured.

One of the biggest challenges was the delay in reimbursement. Managers and providers agreed that the NHIA had not reimbursed providers for almost six (6) months. As a result, providers were not able to purchase drugs and non-drug supplies and hence were prescribing drugs for the insured especially, to purchase outside the facilities. The delay also affected providers' ability to pay their casual employees who were not on government's payroll. This again, influenced the behaviour of providers where some of them preferred clients who would make instant payments for care.

The study showed that both insured and uninsured perceive differences in the behaviour of providers towards insured and uninsured clients. Providers' perception of the opportunistic behaviour of the insured and the delay in reimbursement was responsible for the differences in their behaviour towards the insured and uninsured.

**{Word count: 9113 words}**

University of Cape Town

## List of abbreviations

BMHIS	Builsa District Mutual Health Insurance Scheme
BMMHIS	Bolgatanga Municipal Mutual Health Insurance Scheme
CBHIS	Community-based Health Insurance Schemes
CHPS	Community based Health Planning and Services
DMHIS	District Mutual Health Insurance Schemes
FGDs	Focus Group Discussions
DRGs	Diagnostic Related Groupings
GDRGs	Ghana Diagnostic Related Groupings
GTZ	Germany Agency for Technical Cooperation
IGF	Internal Generated Funds
ILO	International Labour Organization
IMF	International Monetary Fund
MHI	Mutual Health Insurance
MHOs	Mutual Health Organizations
MOH	Ministry of Health
NHI	National Health Insurance
NHIA	National Health Insurance Authority
NHIC	National Health Insurance Council
NIHF	National Health Insurance Fund
NHIS	National Health Insurance Scheme
OOP	Out-of-pocket
SHI	Social Health Insurance
SSA	Sub-Saharan Africa
SSNIT	Social Security and National Insurance Trust
UER	Upper East Region
UNICEF	United Nations International Children Educational Fund

USAID                    United States Agency for International Development  
WHO                     World Health Organization

### **Competing interests**

None of the authors listed have any competing interests.

### **Authors' contribution**

DAP contributed to the conception of the study, study design, developed the questionnaire, coordinated the data collection, performed the statistical analysis, and wrote the paper. AH directed and supervised all stages of the study. All authors read and approved the final article.

### **Authors' information**

DAP is a post-graduate student at the University of Cape Town. The article is part of the requirements for the partial attainment of the MPH degree. AH is a lecturer at the Health Economics Unit, School of Public Health and Family Medicine, University of Cape Town.

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University of Cape Town

**PART D: APPENDICES**

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**Appendix 1**

**Ethical approval letters**

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## Appendix 2: Article Template

### Title page

Charles A Darwin<sup>1\*</sup>, Jane E Doe<sup>1,2\*</sup>, John RS Smith<sup>3§</sup>

<sup>1</sup>Life Sciences Department, King's College London, Cornwall House, Waterloo Road, London, UK

<sup>2</sup>Department of Zoology, Cambridge, Cornwall House, Waterloo Road, London, UK

<sup>3</sup>Marine Ecology Department, Institute of Marine Sciences Kiel, Düsternbrooker Weg 20, 24105 Kiel, Germany

\*These authors contributed equally to this work

<sup>§</sup>Corresponding author

Email addresses:

CAD: [charles@darwin.co.uk](mailto:charles@darwin.co.uk)

JED: [jane@darwin.co.uk](mailto:jane@darwin.co.uk)

JRSS: [johnsmith@darwin.co.uk](mailto:johnsmith@darwin.co.uk)

#### Abstract

#### Background

Text for this section of the abstract...

#### Methods

Text for this section of the abstract...

#### Results

Text for this section of the abstract...

#### Conclusions

Text for this section of the abstract...

## **Main body**

### **Background**

Text for this section.

### **Methods**

Text for this section.

### **Results**

Sub- heading for this section

Text for this sub-section.

Sub- heading for this section

Text for this sub-section.

Sub- heading for this section

Text for this sub-section.

### **Discussion**

Text for this section.

### **Conclusions**

Text for this section.

### **Competing interests**

Text for this section.

### **Authors' contributions**

### **Acknowledgements**

Text for this section.

## **References**

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### **Figures**

Figure 1 - Sample figure title

Figure legend text

Figure 2 - Another sample figure title

Figure legend text.

### **Tables**

Table 1 - Sample table title

Table legend text.

Table 2 - Another sample table title

Table legend text.

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Preparing main manuscript text

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Please read the descriptions of each of the article types, choose which is appropriate for your article and structure it accordingly. If in doubt, your manuscript should be classified as a Research article, the structure for which is described below.

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- Methods
- Results
- Discussion
- Conclusions
- List of abbreviations used (if any)
- Competing interests
- Authors' contributions
- Authors' information (if any)
- Acknowledgements
- References
- Figure legends (if any)
- Tables and captions (if any)
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The **Accession Numbers** of any nucleic acid sequences, protein sequences or atomic coordinates cited in the manuscript should be provided, in square brackets and include the corresponding database name; for example, [EMBL:AB026295, EMBL:AC137000, DDBJ:AE000812, GenBank:U49845, PDB:1BFM, Swiss-Prot:Q96KQ7, PIR:S66116].

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**X is a risk factor for Y: a case control study**

The full names, institutional addresses, and e-mail addresses for all authors must be included on the title page. The corresponding author should also be indicated.

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## **Results and Discussion**

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## **Conclusions**

This should state clearly the main conclusions of the research and give a clear explanation of their importance and relevance. Summary illustrations may be included.

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### *Article within a journal supplement*

2. Orengo CA, Bray JE, Hubbard T, LoConte L, Sillitoe I: **Analysis and assessment of ab initio three-dimensional prediction, secondary structure, and contacts prediction.** *Proteins* 1999, **43**(Suppl 3):149-170.

### *In press article*

3. Kharitonov SA, Barnes PJ: **Clinical aspects of exhaled nitric oxide.** *Eur Respir J*, in press.

### *Published abstract*

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### *Article within conference proceedings*

5. Jones X: **Zeolites and synthetic mechanisms.** In *Proceedings of the First National Conference on Porous Sieves: 27-30 June 1996; Baltimore*. Edited by Smith Y. Stoneham: Butterworth-Heinemann; 1996:16-27.

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6. Schnepf E: **From prey via endosymbiont to plastids: comparative studies in dinoflagellates.** In *Origins of Plastids. Volume 2.* 2nd edition. Edited by Lewin RA. New York: Chapman and Hall; 1993:53-76.

*Whole issue of journal*

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*Whole conference proceedings*

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*Book with institutional author*

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13. **The Mouse Tumor Biology Database** [<http://tumor.informatics.jax.org/mtbwi/index.do>]

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Greek and other special characters may be included. If you are unable to reproduce a particular special character, please type out the name of the symbol in full.

#### Appendix 4: Summary of data collection activities

<b>Objective 1 : To examine the perception of the providers about the reimbursement process</b>			
<b>Data/Information to be collected</b>	<b>Data Collection method</b>	<b>Data Issues</b>	<b>Study Population</b>
Reimbursement process.	(1)Policy documents review  (2)In-Depth Interviews (Semi-structured interviews)	Help understand the reimbursement process.	-Health care Providers in public health facilities from two districts.  <b><u>Urban district (Bolgatanga)</u></b> <b>Regional hospital:</b> 5 interviews; with Administrator, Doctor, Pharmacist, Accountant, and a Nurse.  <b><u>Rural district (Bulsu)</u></b> <b>District hospital:</b> 5 interviews; with Administrator, Doctor, Pharmacist, Accountant and a Nurse.  1 Interview will be held with the Regional health insurance manager of the region. 2 Interviews; with the district health insurance manager in the <b>urban district</b> and the claims manager. 2 Interviews; with the district health insurance manager in the <b>rural district</b> and the claims manager as well.
<b>Objective 2: Assess health care providers' perceptions about insured and uninsured clients.</b>			
<b>Data/Information to be collected</b>	<b>Data Collection method</b>	<b>Data Issues</b>	<b>Study Population</b>
Perceptions of health care providers about insured and uninsured clients.	In-Depth Interviews (Semi-structured interviews)	Help to explore participants perceptions about insured and uninsured clients.	-Health care Providers in public health facilities from two districts.  <b><u>Urban district (Bolgatanga)</u></b> <b>Regional hospital:</b> 5 interviews; with

			Administrator, Doctor, Pharmacist, Accountant, and a Nurse. <b><u>Rural district (Builsa)</u></b> <b>District hospital:</b> 5 interviews; with Administrator, Doctor, Pharmacist, Accountant and a Nurse.
<b>Objective 3: Assess perceptions and experience of insured and uninsured clients.</b>			
<b>Data/Information to be collected</b>	<b>Data Collection method</b>	<b>Data Issues</b>	<b>Study Population</b>
Perceptions of insured and non-insured clients about the behaviour of providers and quality of care (satisfaction with attitude of health staff, satisfaction with health care provided, and preferential treatment). Using other indicators like waiting times, physical examination of patients, drugs prescribed, unofficial payments etc to measure providers' behaviour.  Perceptions of community members about the operations of the national health insurance scheme and providers' behaviour.	(1)Patient Exit Interviews (Structured questionnaire)  (2)Focus Group Discussions with community members.	Responses from participants.	(1)Patients who have visited public health facilities to seek health care. <b><u>Urban district (Bolgatanga):</u></b> Public health facility: 50 insured patients 50 non-insured patients  <b><u>Rural district (Builsa)</u></b> <b>Public health facility:</b> 50 insured patients 50 non-insured patients  Community members(FGDs) <b><u>Urban district (Bolgatanga):</u></b> 2 FGDs with <b>insured members</b> (men and women of productive age 18yrs-60yrs). 2 FGDs with <b>non-insured members</b> (men and women of productive age 18yrs-60yrs)  <b><u>Rural district (Builsa)</u></b> 2 FGDs with <b>insured members</b> (men and women of productive age 18yrs-60yrs). 2 FGDs with <b>non-insured members</b> (men and women of productive age 18yrs-60yrs)
<b>Objective 4: Make policy recommendations for the successful operation of the national health insurance.</b>			
<b>Data/Information to be collected</b>	<b>Data Collection method</b>	<b>Data Issues</b>	<b>Study Population</b>
Suggestions from health care providers, health insurance managers and	Based on responses from participants of the study that recommendations will	Responses from participants.	

community members.	be made.		
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**Total: 15 Interviews, 200 patient exit interviews and 8 FGDs.**

## Appendix 5

### **INFORMED CONSENT FORM FOR HEALTH CARE PROVIDERS**

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#### **THE IMPACT OF THE NATIONAL HEALTH INSURANCE ON THE INTERACTIONS BETWEEN HEALTH CARE PROVIDERS AND CLIENTS**

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##### **PURPOSE OF THE STUDY**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain knowledge on the behaviour of health care providers in the era of the operations of the national health insurance. Health care providers play a crucial role in the successful implementation of the health insurance scheme. It will therefore be proper to study and understand those factors influencing their behaviour. The information obtained from this study will be used to make appropriate policy recommendations for the goals of the scheme to be achieved.

The overall aim of the study is to contribute to the success of health care delivery in the country. You have been asked to take part because you are a health care provider who provides health care services under the national health insurance. The duration for the study is six (6) months.

##### **PROCEDURE**

If you agree to take part, we will ask you about how you feel on issues on cost sharing mechanisms, utilization rates, the reimbursement procedures, your perceptions about the reimbursement system and the challenges of your work under the national health insurance. We will ask you several questions about these issues and record your responses on paper and with a tape recorder as well.

Your participation in this study will last for approximately 45 minutes. There is no right or wrong answers to any of these questions. You can choose not to answer any question you do not want to.

##### **POTENTIAL RISKS/DISCOMFORTS.**

This study will not involve any physical risks to you for participating. However, if at any point you become uncomfortable with any question, you can choose not to answer that question or discontinue participation in the interview. The information you may give out here will not be given out to any other person, except for the purpose of which this study covers. We assure you that we will keep the information as secured as possible under lock.

##### **BENEFITS**

Participation in this study will allow you to share your knowledge and perceptions on the operations of the national health insurance, especially the reimbursement process, challenges and ways of improving them. The results of the study will be used to inform policy, for the success of the health care delivery in this country. Whatever information that you will give remains private and will not be

linked to you.

**CONFIDENTIALITY**

The interview will be conducted in a private place. We will tape record the interview and also write some notes to help us remember all that was discussed. Your name will not be written in the notes nor recorded on the tapes. You will not be identified in any report or publication made on this study. All the information you give us from this interview will be held private. This information will be accessible only to research personnel, who will listen to the tapes, make written notes, and use the notes for research purposes only. After the notes are taken from the tapes, the tapes will be destroyed. You are assured that personal information we obtain from you will be kept in the strictest confidence.

**VOLUNTARINESS AND RIGHT TO WITHDRAW**

Your participation is completely voluntary. You can ask questions on anything that you don't understand. You have the right to terminate the interview at anytime, or to decline to answer any question without penalty.

This research has been approved by the Human Research Ethics Committee in the Health Sciences Faculty, University of Cape Town, South Africa. Issues concerning your rights and welfare can be channelled to Professor Marc Blockman through this email address: Marc.Blockman@uct.ac.za.

You can also contact Mr Paul Andoh on 0244275103 or e-mail to furnstyle2@yahoo.com for any clarification on this study.

---

**Consent form to be signed by interviewee**

**Participant's Agreement**

I have read the information provided above, or it has been read and explained to me by the interviewer in the language that I fully understand. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time.

**Name of participant:**

**Name of investigator:**

Signature/Thumb print:

Signature:

Date:

Date:

**Name of witness (in case of an illiterate participant):**

Signature:

Date:

## Appendix 6

### **INFORMED CONSENT FORM FOR PATIENT EXIT INTERVIEW**

#### **THE IMPACT OF THE NATIONAL HEALTH INSURANCE ON THE INTERACTIONS BETWEEN HEALTH CARE PROVIDERS AND CLIENTS**

##### **PURPOSE OF THE STUDY**

We are inviting you to take part in a study, which is being conducted by a student of the school of Public Health and Family Medicine, of the University of Cape Town.

The purpose of this research is to help understand the behaviour of health care providers with the implementation of the national health insurance in the country. Health care providers play a big role in providing health care services to patients. It is appropriate to study and understand how you perceive the behaviour of health care provider under the national health insurance.

The information obtained from this study will be used to make appropriate policy recommendations for the goals of the national health scheme to be achieved.

The overall aim of the study is to contribute to the success of health care delivery in the country. You have been asked to take part because you are a patient who has just accessed health care services in this facility. The duration for the study is six (6) months.

##### **PROCEDURE**

If you agree to take part, we will ask you questions about how on your insurance status, treatment given out to you, payments for the health care services, attitude of staff, satisfaction with quality of care, etc. We will ask you several questions about these issues and record your responses on the questionnaire form.

Your participation in this study will last for approximately 30 minutes. There is no right or wrong answers to any of these questions. You can choose not to answer any question you do not want to.

##### **POTENTIAL RISKS/DISCOMFORTS.**

This study will not involve any physical risks to you for participating. However, if at any point you become uncomfortable with any question, you can choose not to answer that question or discontinue participation in the interview. The information you may give out here will not be given out to any other person, except for the purpose of which this study covers. We assure you that we will keep the information as secured as possible under lock.

##### **BENEFITS**

Participation in this study will allow you to share your knowledge and perceptions on the behaviour of health care providers towards you, in the course of delivery of health care

services. The results of the study will be used to inform policy, for the success of the national health insurance in the country. Whatever information that you will give remains private and will not be linked to you.

### **CONFIDENTIALITY**

The interview will be conducted in a private place. We will record your responses on the questionnaire form. You will not be identified in any report or publication made on this study. All the information you give us from this interview will be held private. This information will be accessible only to the research team, who will make data entry your responses. You are assured that personal information we obtain from you will be kept in the strictest confidence.

### **VOLUNTARINESS AND RIGHT TO WITHDRAW**

Your participation is completely voluntary. You can ask questions on anything that you don't understand. You have the right to terminate the interview at anytime, or to decline to answer any question without penalty. If you decide not to take part in this study, your refusal to participate will not affect or influence the subsequent care that you will receive from any facility.

This research has been approved by the Human Research Ethics Committee in the Health Sciences Faculty, University of Cape Town, South Africa. Issues concerning your rights and welfare can be channelled to Professor Marc Blockman through this email address: Marc.Blockman@uct.ac.za.

You can also contact Mr Paul Andoh on 0244275103 or e-mail to furnstyle2@yahoo.com for any clarification on this study.

### **Consent form to be signed by interviewee**

#### **Participant's Agreement**

I have read the information provided above, or it has been read and explained to me by the interviewer in the language that I fully understand. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time.

**Name of participant:**

**Name of investigator:**

Signature/Thumb print:

Signature:

Date:

Date:

**Name of witness (in case of an illiterate participant):**

Signature:

Date:

## Appendix 7

### **INFORMED CONSENT FORM FOR FOCUS GROUP DISCUSSION WITH COMMUNITY MEMBERS**

#### **THE IMPACT OF THE NATIONAL HEALTH INSURANCE ON THE INTERACTIONS BETWEEN HEALTH CARE PROVIDERS AND CLIENTS**

##### **PURPOSE OF THE STUDY**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain knowledge on the behaviour of health care providers in the era of the operations of the national health insurance. Health care providers play a crucial role in the successful implementation of the national health insurance scheme. It will therefore be proper to study and understand those factors influencing their behaviour. The information obtained from this study will be used to make appropriate policy recommendations for the goals of the national health insurance scheme to be achieved.

The overall aim of the study is to help contribute to the success of health care delivery in the country. You have been asked to take part because you are a member of this selected community. The duration for the study is six (6) months.

##### **PROCEDURE**

If you agree to take part, we will ask you about your health insurance status, whether you have utilized health care services under the national health insurance, staff attitude towards you etc. We will ask you several questions about these issues and record your responses on paper and with a tape recorder as well.

Your participation in this study will last for approximately 30 minutes. There is no right or wrong answers to any of these questions. You can choose not to answer any question you do not want to.

##### **POTENTIAL RISKS/DISCOMFORTS.**

This study will not involve any physical risks to you for participating. However, if at any point you become uncomfortable with any question, you can choose not to answer that question or discontinue participation in the interview. The information you may give out here will not be given out to any other person, except for the purpose of which this study covers. We assure you that we will keep the information as secured as possible under lock.

##### **BENEFITS**

Participation in this study will help you share your knowledge on the behaviour of health care providers towards you in the era of the national health insurance. The results of the study will be used to inform policy, for the success of the health care delivery in this country. Whatever information that you will give remains private and will not be linked to you.

### **CONFIDENTIALITY**

The interview will be conducted in a private quiet place. We will tape record the interview and also write some notes to help us remember all that was discussed. Your name will not be written in the notes nor recorded on the tapes. You will not be identified in any report or publication made on this study. All the information you give us from this interview will be held private. This information will be accessible only to the research team, who will listen to the tapes, make written notes, and use the notes for the purpose of the research. After the notes are written from the tapes, the tapes will be destroyed. You are assured that personal information we obtain from you will be kept in the strictest confidence. We will also like members of this group discussion to respect each other's confidentiality and not to discuss outside issues that were raised during this meeting.

### **VOLUNTARINESS AND RIGHT TO WITHDRAW**

Your participation is completely voluntary. You can ask questions on anything that you don't understand. You have the right to terminate the interview at anytime, or to decline to answer any question without penalty. If you decide not to take part in this study, your refusal to participate will not affect or influence the subsequent care that you will receive from any health facility.

This research has been approved by the Human Research Ethics Committee in the Health Sciences Faculty, University of Cape Town, South Africa. Issues concerning your rights and welfare can be channelled to Professor Marc Blockman through this email address: Marc.Blockman@uct.ac.za.

You can also contact Mr Paul Andoh on 0244275103 or e-mail to furnstyle2@yahoo.com for any clarification on this study.

---

### **Consent form to be signed by interviewee**

#### **Participant's Agreement**

I have read the information provided above, or it has been read and explained to me by the interviewer in the language that I fully understand. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time.

**Name of participant:**

**Name of investigator:**

Signature/Thumb print:

Signature:

Date:

Date:

**Name of witness (in case of an illiterate participant):**

Signature:

Date:

## **Appendix 8**

### **INFORMED CONSENT FORM FOR HEALTH INSURANCE MANAGERS**

<p><b>THE IMPACT OF THE NATIONAL HEALTH INSURANCE ON THE INTERACTIONS BETWEEN HEALTH CARE PROVIDERS AND CLIENTS</b></p>
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#### **PURPOSE OF THE STUDY**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain knowledge on the behaviour of health care providers in the era of the operations of the national health insurance. Health care providers play a crucial role in the successful implementation of the insurance scheme. It will therefore be proper to study and understand those factors influencing their behaviour. The information obtained from this study will be used to make appropriate policy recommendations for the goals of the scheme to be achieved.

The overall aim of the study is to contribute to the success of health care delivery in the country. You have been asked to take part because you are a stakeholder in the national health insurance scheme. The duration for the study is six (6) months.

#### **PROCEDURE**

If you agree to take part, we will ask you about how you feel on issues on cost sharing mechanisms, utilization rates, the reimbursement process, your perceptions about the reimbursement process and the challenges of your work under the national health insurance. We will ask you several questions about these issues and record your responses on paper and with a tape recorder as well.

Your participation in this study will last for approximately 30 minutes. There is no right or wrong answers to any of these questions. You can choose not to answer any question you do not want to.

#### **POTENTIAL RISKS/DISCOMFORTS.**

This study will not involve any physical risks to you for participating. However, if at any point you become uncomfortable with any question, you can choose not to answer that question or discontinue participation in the interview. The information you may give out here

will not be given out to any other person, except for the purpose of which this study covers. We assure you that we will keep the information as secured as possible under lock.

### **BENEFITS**

Participation in this study will allow you to share your knowledge and perceptions on the operations of the national health insurance especially, the reimbursement procedures, ways of improving the system if any, and other challenges. The results of the study will be used to inform policy, for the success of the health care delivery in this country. Whatever information that you will give remains private and will not be linked to you.

### **CONFIDENTIALITY**

The interview will be conducted in a private place. We will tape record the interview and also write some notes to help us remember all that was discussed. Your name will not be written in the notes nor recorded on the tapes. You will not be identified in any report or publication made on this study. All the information you give us from this interview will be held private. This information will be accessible only to research personnel, who will listen to the tapes, make written notes, and use the notes for research purposes only. After the notes are taken from the tapes, the tapes will be destroyed. You are assured that personal information we obtain from you will be kept in the strictest confidence.

### **VOLUNTARINESS AND RIGHT TO WITHDRAW**

Your participation is completely voluntary. You can ask questions on anything that you don't understand. You have the right to terminate the interview at anytime, or to decline to answer any question without penalty.

This research has been approved by the Human Research Ethics Committee in the Health Sciences Faculty, University of Cape Town, South Africa. Issues concerning your rights and welfare can be channelled to Professor Marc Blockman through this email address: Marc.Blockman@uct.ac.za.

You can also contact Mr Paul Andoh on 0244275103 or e-mail to furnstyle2@yahoo.com for any clarification on this study.

---

### **Consent form to be signed by interviewee**

#### **Participant's Agreement**

I have read the information provided above, or it has been read and explained to me by the interviewer in the language that I fully understand. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time.

**Name of participant:**

**Name of investigator:**

Signature/Thumb print:

Signature:

Date:

Date:

**Name of witness (in case of an illiterate participant):**

Signature:

Date:

## **Appendix 9**

### **IN-DEPTH INTERVIEW GUIDE FOR PROVIDERS**

#### **Introduction**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain an insight into the operations of the national health insurance scheme and also to get your opinion about the scheme.

**Date of interview:**

**District:**

**Name of facility:**

**Position of respondent:**

Q1. When did this facility join the district health insurance scheme?

Q2. What do you have to say about the district health insurance scheme?

Q3. What ways of payments for health care are used in this facility?

Q4. Which people make payments out of pocket for health services in this facility?

Q5. Do patients under the district health insurance still make out-of-pocket payment?

Q6. How do you see facility attendance in the era of district health insurance for?

a) Insured patients

b) Uninsured patients

Q7. How are you reimbursed for services rendered to clients of the district health insurance?

Q8. How often does the reimbursement take place?

Q9. Do you have problems with reimbursement?

Q10. What was the last time you got reimbursed for insured clients?

Q11. Does any delay in receiving reimbursement have any impact on your ability as a facility to continue providing service to clients?

Q12. If yes, how does the delay affect your ability as a facility to continue to provide service to clients in terms of drugs, equipment and other accessories?

Q13. Generally, what do you think about this reimbursement mechanism?

Q14. Generally, what do you think about insured patients behaviour in the era of district health insurance?

Q15. Have you ever been involved in the care of a patient who received preferential treatment in terms of shortened waiting time, laboratory testing, drugs, and X-Rays, apart from emergencies?

Q16. Was the patient insured or not insured?

Q17. What made you to give the preferential treatment?

Q18. What constraints do you face in your operations in this era of district health insurance?

Q19. What suggestions do you have for solving some of the challenges/problems that you face?

**THANK YOU**

## Appendix 10

### **INDEPTH INTERVIEW GUIDE FOR MANAGERS OF HEALTH INSURANCE SCHEMES**

#### **Introduction**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain an insight into the operations of the national health insurance scheme and also to get your opinion about the scheme.

**Date of interview:**

**Name of district:**

**Position of respondent:**

- Q1. When did you start operating as a health insurance scheme?
- Q2. What do you have to say about the district health insurance scheme?
- Q3. What are your tasks in relation to the district health insurance implementation?
- Q4. How often do you meet with providers?
- Q5. What is it like to be an intermediary between government and providers?
- Q6. How many people have been covered by your scheme?
- Q7. What ways are used for reimbursing providers?
- Q8. How long does it take to reimburse providers?
- Q9. What was the last time you reimbursed providers?
- Q10. Do you think providers are happy with the current arrangement of reimbursement?
- Q11. Why are they happy or why are they not happy?
- Q12. What do you think can be done if providers are not happy?

- Q13. Do you think patients are happy with the operations of the district health insurance?
- Q14. Why are they happy or why are they not happy?
- Q15. What do you think can be done about the situation?
- Q16. How do you see the quality of health care provided under the district health insurance?
- Q17. Is there any difference in the treatment of insured and non-insured by health care providers?
- Q18. What is the scheme's role in ensuring the provision of good health services?
- Q19. How do you ensure that this role is fulfilled?
- Q20. How often do you get grants from the NHIS headquarters for reimbursement?
- Q21. What key challenges are you facing in your operations as a health insurance scheme?
- Q22. What suggestions do you have for improving your operations?

**THANK YOU**

University of Cape Town

## Appendix 11

### FOCUS GROUP DISCUSSION GUIDE

#### **Introduction**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to gain an insight into the operations of the national health insurance scheme and also to get your opinion about the scheme.

**Date of Interview:**

**District:**

**Community:**

- Q1. Have you heard of the district health insurance scheme?
- Q2. Why did you register or not with the district health insurance scheme?
- Q3. How do you see quality of care provided under the district health insurance scheme?
- Q4. In making a choice for seeking health care, what type of health facility will you prefer to utilize (public versus private)?
- Q5. What has led you to make that choice?
- Q6. How do you see the behaviour of the staff at the health facility?
- Q7. What is good about the district health insurance?
- Q8. What is bad about the district health insurance?
- Q9. What do you think can be done to improve the operations of the district health insurance?

**THANK YOU**

## Appendix 12

### EXIT INTERVIEW QUESTIONNAIRE FOR PATIENTS

#### **Introduction**

This is a study being conducted by a student of the University of Cape Town, South Africa under the School of Public Health and Family Medicine.

The purpose of this research is to assist gain an insight into the operations of the national health insurance scheme and also to get your opinion about the scheme.

**Name of Interviewer:**

**Date of Interview:**

**District:**

**Name of facility:**

#### **Background information**

Patient Identification: 1) Child 2) Care giver 3) Adult 4) Other (Specify).....

Age (in years): 1) 0-10 2) 11-20 3) 21-30 4) 31-40 5)41-50 6)51-60  
7)61+

Gender: 1) Male 2) Female

Marital status: 1) Married 2) Not married 3) Divorced

Educational level: 1) None 2) Primary/JHS 3) SHS/Technical 4) Tertiary

5) Other (Specify).....

Occupation: 1) Farmer/Fisherman 2) Student 3) Government worker 4) Trader 5) Artisan

7) Unemployed 8) Other (Specify).....

Q1. Are you a registered member of the the district health insurance scheme with a valid ID card?

- 1) Yes      2) No

Q2. If yes, for how long?

- 1) Since its inception 2) Three years 3) Two years 4) One year 5) Six months

Q3. If no, why are you not a member?

1) Cannot afford premium payment 2) Perceived not to be good 3) Waiting to see what will happen

4) Don't usually fall sick 5) Don't know 6) Other (Specify).....

Q4. If former member, why have you not renewed your membership?

1) Not satisfied with healthcare provided 2) Long waiting time at health facilities 3) High premium 4) Other (Specify) .....

Q5. What complaint /illness brought you to this facility?

1) Malaria 2) ARI 3) Diarrhoea 4) Skin disease 5) Don't know

6) Other (Specify) .....

Q6. In the consultation room, were you physically examined by the doctor/nurse?.

- 1) Yes 2) No

Q7. Did you pay for the consultation?

- 1) Yes 2) No

Q8. If yes, how much did you pay?

**(Please record amount here)** GH¢ .....

Q9. If no, why did you not have to pay for the service?

1) Exempted 2) Could not afford 3) Covered by health insurance 4) Don't Know

5) Other (Specify).....

Q10. Did you pay for the cost of drugs given to you at this health facility?

- 1) Yes 2) No

Q11. If yes, how much did you pay?

**(Please record amount here)** GH¢ .....

Q12. If no, why did you not have to pay for the drugs?

1) Exempted 2) Could not afford 3) Covered by health insurance 4) Don't Know

5) Other (Specify).....

Q13. Did you get all the drugs prescribed for you from the health facility for this sickness?

1) Yes      2) No

**(Skip question 14 and 15, if response to question 13 is “Yes”)**

Q14. If no, did you have to **BUY** drugs outside the health facility for this sickness?

1) Yes      2) No

Q15. If you **BOUGHT** drugs, how much did it cost you to buy the drugs?

**(Please record amount here)** GH¢ .....

Q16. If you did not buy the drugs that you could not get from the health facility, what did you do?

1) Did nothing   2) Used traditional medicine   3) Other (Specify).....

Q17. If yes, how much did you pay?

**(Please record amount here)** GH¢ .....

Q18. Do you think insured patients are treated better than non-insured patients?

1) Yes   2) No

**(Skip question 19, if response to question 18 is “No”).**

Q19. If yes, what makes you think so?

.....

Q20. Do you think non-insured patients are treated better than insured patients?

1) Yes   2) No

**(Skip question 21, if response to question 20 is “No”).**

Q21. If yes, what makes you think so?

.....

Q22. Did you make any unofficial payments at this facility, with the exception of the official fees for consultation, drugs, laboratory tests, and X- ray?

1) Yes      2) No

**(Skip question 23 and 24, if response to Q22 is “No”)**

Q23. If yes, how much did you pay?

**(Please record amount here)** GH¢ .....

Q24. What level did you make the payment?

- 1) Records unit   2) Consultation room   3) Laboratory   4) Dispensary   5) X-ray unit
- 6) Other (Specify).....

Q25. Have you been asked to come back for a review for your illness?

- 1) Yes   2) No

Q26. How would you rank the attitude of health care providers in this facility?

- 1) Very good   2) Good   3) Satisfactory   3) Fair   4) Poor
- 5) Other (specify).....

Q27. Why do you think so?

.....

Q28. How do you see the waiting period?

- 1) Is too long   2) Is OK

Q29. Why do you think so?

.....

Q30. Would you visit this health facility again in case of an illness like the one that brought you here today?

- 1) Yes   2) No

Q31. Why did you choose that response?

.....

Q32. How satisfied are you with your care in this facility for this sickness?

- 1) Satisfied   2) A little satisfied   3) A little dissatisfied   4) Very dissatisfied
- 5) Other (specify) .....

Q33. What things would you like to be done about the district health insurance?

- 1) Allow Installment payment of premium
- 2) More education
- 3) Reduction of waiting period
- 4) Other (Specify) .....

Q34. What are your suggestions for improving health care in this facility under the district health insurance?

.....

**(Please record time for patient below)**

Patient time of arrival at health facility: .....

Patient time of leaving health facility: .....

**(Please complete the table below)**

<b>Disease diagnosed</b>	<b>Drugs prescribed</b>

**THANK YOU**

University of Cape Town

**PART E: POLICY BRIEF**

University of Cape Town

## **THE NATIONAL HEALTH INSURANCE SCHEME IN GHANA: CHALLENGES AND THE WAY FORWARD**

*This brief is based on the findings of a study conducted in two districts of Bolgatanga and Builsa in the Upper East Region of Ghana, between the period of December, 2009 and February, 2010. It is directed to actors involved in the implementation of the NHIS; especially central government and management of the National Health Insurance Authority (NHIA) who are responsible for the accreditation and reimbursement of health care providers.*

### **1.0. Introduction**

Prepayment and risk pooling through social health insurance and taxation are found to provide protection against the financial risks of ill health (Xu et al., 2005). Due to this, the international community is paying more attention to social/mandatory health insurance as one of the promising health financing mechanisms which will help provide coverage to populations against catastrophic health care costs (Hsiao & Shaw, 2007). Social health insurance is seen as a way of pooling health risks, assisting in the prevention of health related impoverishment, and the improvement in efficiency and quality of health care services (WHO, 2005). The programme also offers the opportunity for providing access to health care for the poor and further helps to mobilize revenue for health care providers (Carrin, 2002).

### **1.1. Background**

Ghana enacted the National Health Insurance (NHI) Act (650) in 2003, leading to the implementation of the National Health Insurance Scheme (NHIS). This was after user fees which were instituted in the late 1980s had proven to have affected the utilization of health care services. The imposition of the user fees resulted in individuals undertaking self-medication and also reporting late to health facilities for treatment (Arhin-Tenkorang, 2001,

Arhinful, 2003). Hence the NHIS was introduced to help assure equitable and universal access for all Ghanaians to an acceptable quality package of essential health care services (Government of Ghana, 2003). Registered Ghanaians are required not to make any out-of-pocket (OOP) payments for the use of health care services under the NHIS. The NHIS is based on District Mutual Health Insurance schemes (DMHIS), which operates in all 145 districts of the country, covering both formal and informal sectors of the economy.

The sources of funding for the NHIS include 2.5% sales tax, 2.5% monthly payroll deduction from formal sector workers as part of their contribution to the Social Security and National Insurance Trust (SSNIT) fund and government budgetary allocation. In addition, there is a minimum and maximum premium payment of GH¢7.20 (\$8) and GH¢47.70 (\$53) per adult respectively, from the informal sector. The benefit package consists of basic health care services, including outpatient consultations, essential drugs, inpatient care and shared accommodation, maternity care (normal and caesarean delivery), eye care, dental care, and emergency care. About 95% of the diseases in Ghana are covered under the NHIS. Registered members of the schemes receive health care services from accredited health care providers including government health facilities, quasi-government, mission and private health facilities.

As of June 2009, membership of the NHIS stood at about 67% of the total population of Ghana after four years of inception (Asenso-Boadi, 2009). Similarly, the Ministry of Health reported that the use of outpatient and inpatient department services by the insured had almost doubled between 2005 and September 2007, under the NHIS (Ministry of Health, 2008).

### **1.2. Implementation issues relating to the reimbursement process by the NHIS**

At the start of the NHIS, a fee for service type of provider payment mechanism was used for paying health care providers. But this was replaced with the Ghana Diagnostic Related Groupings (GDRGs) in April, 2008. The reason for the replacement was that the fee for each service was found to be low and hence unattractive, especially for the private providers to participate. Providers are encouraged to participate in the NHIS, in order to reduce congestions and delays for clients. With the fee for service, providers were also required to

submit detailed information on all services and charges for claims submissions. This involves a lot of paperwork which providers were not happy with (Ankomah, 2009).

Therefore the GDRGs were introduced to help remedy some of these issues. The tariff covers the full cost of the estimated direct consumables for direct patient care, anaesthesia and other investigations. The GDRGs also captures about 80% of the estimated overhead cost for public health facilities, comprising of building and equipment maintenance, housekeeping and utilities (Ankomah, 2009). It is expected that the new tariff will generate adequate revenue from the NHIS for health care providers to cover a significant portion of their cost of operation. However, the introduction of the new tariff has resulted in the submission of huge amounts of claims for payment by health care providers. The National Health Insurance Authority therefore has to find extra funds to pay its providers (Sodzi-Tettey, 2010).

Additionally, the process for reimbursement was considered to be too bureaucratic by providers, especially for schemes that suffer financial distress (Sodzi-Tettey, 2010). It takes some time for the NHIA to investigate the circumstances and to make funds available to such distressed schemes for the payment of their providers.

## **2.0. Research objective**

The study explored the influence of the implementation of the NHIS on the behaviour of health care providers. Specifically, the study examined the views of health care providers on the NHIS, especially the reimbursement process. The perceptions and experience of insured and uninsured clients, and health insurance managers were also assessed to determine the behaviour of health care providers.

## **3.0. Methods**

The study took place in the Bolgatanga municipality and Builsa district between the period of December, 2009 and February, 2010 in the Upper East Region of Ghana. Bolgatanga municipality is an urban district and Builsa is a rural district. Table 1 is a composition of some characteristics for the two districts.

**Table 1: Some characteristics of the districts**

	<b>Bolgatanga</b>	<b>Builsa</b>
Total land area	1,620 km <sup>2</sup> .	2,220sq km
Total Population	119,975 (2009 estimate)	84,069 (2009 estimate)

Number of hospitals	1 (Regional hospital)	1 (District hospital)
Total doctor population	5	1
Total nurse population	205	Not available
Doctor/patient ratio	1:30,932	1: 84,069
Nurse/patient ratio	1:755	Not available

Source: Bolgatanga Municipal Assembly, 2009  
Builsa District Assembly, 2009

Data was collected through patient exit interviews with the insured and uninsured, in-depth interviews with health care providers and health insurance managers, and focus group discussions with insured and uninsured community members.

#### 4.0. Findings

Health care providers and health insurance managers perceived that the introduction of the NHIS has led to an increase in attendance and the utilization of health care services by more than twofold for the insured. Providers also think that the NHIS helps to mobilize health care resources for the running of the facilities when reimbursement is done in good time by the NHIS.

Both the insured and uninsured were satisfied with the care provided, according to the exit survey. However, most insured clients had reported long waiting times, verbal abuse, not being physically examined and discrimination in favour of the uninsured and affluent by providers. This was what an insured said: *“After the consulting room, the doctor gives your folder with the prescription to take your drugs from the dispensary, when you place your folder there, you can sit and wait without them mentioning your name for a very long time”* (FGD, insured women-Builsa). The perceived reason for that treatment was that, the insured were not making instant payment for health care services. It was also revealed by providers that only a few uninsured clients were utilizing health facilities. A provider stated *“We’ve realized that with the uninsured, unless they are seriously ill they don’t report early to the facilities. Some of them just come to die”* (In-depth interview, medical doctor-Builsa). The uninsured indicated it was because of the increased cost of health care services under the NHIS that they were not utilizing the facilities. An uninsured said: *“I have noticed that before the insurance started, things were very cheap, in terms of hospital bills and consultation fees, but now because of the introduction of the insurance, everything has gone very high in the hospital. Initially a folder was sold for GH ₵0.70 (US \$ 0.61) but now it is GH ₵7.00 (US \$ 4.92)”* (FGD, uninsured men-Bolgatanga).

However, there is a core challenge that may prevent the achievement of the objective of the NHIS, which is the delay in reimbursement. The objective of the NHIS is make health care services accessible to all citizens without the need to make OOP payments at the point of service consumption (Government of Ghana, 2003). The health insurance managers and health care providers showed that the NHIA had not been able to reimburse its providers for almost six (6) months. A health care provider reported: *“For almost six (6) months the health insurance has not paid the hospital”* (In-depth interview, hospital administrator-Builsa). But the NHI Act (650) stipulates that health care providers should be reimbursed four weeks following the month for which claims were submitted. This was not the case and hence contravening the NHI Act (650).

The inability of the NHIA to provide funds to the District Mutual Health Insurance Schemes (DMHIS) for the payment of health care providers was one of the reasons for the delay in reimbursement. The health insurance managers indicated they were waiting for the NHIA to provide funds for the payment of their providers. Both managers and providers agreed that inadequate and incompetence on the part of some staff responsible for the submission and processing of claims could also result in delays. For instance, some staff in charge of the submission and processing of claims lacked competencies in the use of computer software for their work. This was not only a problem for the facilities, but the District Mutual Health Insurance Schemes (DMHIS) as well. Again, some claims could sometimes be submitted with errors to the DMHIS which would have to be sent back to the facilities for correction and hence causes delay in payment.

It was also the view of managers and providers that disagreements over submitted claims between the DMHIS and facilities could generate delays in payment. It is common to find the DMHIS rejecting claims submitted by providers due to some unacceptable charges/fees.

The consequences of the delay in reimbursement were that;

- Health care providers were unable to procure drug and non-drug consumables due to their (providers) continued indebtedness to suppliers. They were hamstrung in their operations as a result of the delay in reimbursement. A quotation from a provider: *“.....we are not able to buy drugs and other things to use for our work. We owe suppliers a lot. We are not able to pay them for most of the things that they supply to*

*us. You realized that there are no drugs and you cannot go out there and buy” (In-depth interview, medical doctor-Bolgatanga).*

- Due to the inability of health care providers to procure drugs for dispensation, clients were continuously being issued with prescription forms in order to buy drugs outside the facilities. This creates inconvenience and extra costs in terms of transportation for clients. The insured will also have to make OOP payments for these drugs if they were to obtain them from unaccredited pharmacies out of the facility. Thus the insured enumerated this as one of the things they were unhappy with in the era of the NHIS.
- Yet another consequence of the delay in reimbursement was that it affected the ability of facilities to pay their casual employees who were not paid from government payroll. These employees are paid from Internally Generated Funds (IGF) mobilized by the facilities. The result of non-payment of wages to employees is obvious; demonstrations which can significantly distract the delivery of health care services.
- Besides, the delay in reimbursement had also affected the behaviour of health care providers. It had generated the situation where some providers preferred clients who would make instant payment for their services. A provider said; *“It is true that some facilities and pharmacies would prefer people who will pay in cash to those with health insurance, due to the delay in reimbursement. It is business and we don’t do business like that (In-depth interview, hospital accountant-Bolgatanga).* Also, the insured had this to say concerning the behaviour of providers. *“But when you come without insurance, very quickly they will attend to you” (FGD, insured men-Builsa).*

#### **5.0. Policy recommendations**

The policy recommendations here would be typified into short and long term. The immediate short term recommendation is the training and provision of adequate staff to man the positions responsible for the submission and processing of claims for both the facilities and the DMHIS. The provision of adequate and skilled personnel especially in the use of computer software for the submission and processing of claims will help speed up the process of claims payment. Again, staff of the schemes and facilities should be well motivated to

enable them to carry out their duties efficiently in terms of claims submission and processing. Furthermore, the DMHIS should endeavour to meet immediately with providers and settle disagreements over claims to curb delays in payment.

For the long term policy options, they take account of the mode of payment for providers and the manner claims are processed. The recommendations include the following;

➤ **Mix provider payment mechanism**

One of the reasons for the delay in reimbursement was the inability of the NHIA to generate extra funds for the payment of providers. This was as a result of the introduction of the GDRGs (new tariff) which had a higher remuneration and thus higher claims submissions by providers for payment.

It is recommended that a mix of provider payment systems should be introduced. The mix provider mechanism will help reduce the amount that will be paid out to providers as claims. This can be achieved by the introduction of capitation payments for outpatient attendance, especially for primary health care alongside the GDRGs. With the capitation, the providers will be paid a fixed agreed amount per member for all registered members for a given period of time, being a month, a quarter or a year. Providers will then be required to provide all the defined services for members in need of them. The introduction of the mix provider payment mechanism will help beat down costs and make funds available for timely payment. The mix payment system had been tried in other countries like china, Korea, etc, and had been successful in beating down costs. However, it will involve the use of competent staff on the part of the schemes to constantly monitor the facilities to ensure the provision of quality services. This group of persons are currently lacking.

➤ **Centralised Claims Payment System**

Another policy option available for adoption is the setting up of a Centralised Claims Payment System by the NHIA. All accredited providers and DMHIS will be linked to this centralised unit or department where claims by providers can be submitted for vetting and processing. The vetting and processing of claims will no longer be done by individual DMHIS who may not have competent staff for the task, which usually causes delays in payment. The option will help speed up the vetting and processing of claims and thus the timely payment of providers. But again, this will also require the employment of competent personnel who might not be available in the short run.

## **6.0. Summary and Conclusion**

The study revealed that the NHIS has led to a significant increase in utilization of health care services by registered members. One of the major problems with the operations of the NHIS is the delay in reimbursement for providers. Providers and insurance managers said the delay in reimbursement was due to the inability of the NHIA to timely provide funds, inadequate and incompetency on the part of some staff of the health facilities and the DMHIS in the submission and processing of claims. Disagreements between the DMHIS and the facilities over submitted claims could also cause delay in payments. The consequence of the delay included; the inability of providers to procure drug and non-drug supplies leading to the issuance of prescription forms for clients to buy drugs outside the health facilities, inability of facilities to pay their casual employees, and finally providers' preference for clients who make instant payments for health care services. Insured clients also perceived and experienced long waiting times, verbal abuse, not being physically examined and discrimination in favour of the uninsured and affluent by providers.

Both short and long term measures have been discussed. This brief particularly recommends the mix provider payment mechanism as a long term measure to help alleviate the problem. The mix payment mechanism will involve the use of capitation alongside the GDRGs for paying outpatients attendance. The mechanism will help reduce costs and make funds available for prompt payment. The policy will make the NHIS sustainable at the long run for the promotion of universal coverage for all Ghanaians.

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University of Cape Town