UNIVERSITY OF EDUCATION, WINNEBA

PROSPECTS AND CHALLENGES OF THE NATIONAL HEALTH INSURANCE SCHEME IN CENTRAL TONGU DISTRICT OF GHANA

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DECLARATION

Student's Declaration

I, Sampson Gawu, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: …….

Date: …….

Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis/dissertation/project as laid down by the University of Education, Winneba.

Name of Supervisor: Dr. G.Y. Dake

Signature: ……..…

Date: ……...

DEDICATION

This work is dedicated to my wife Mrs. Charity Gawu and my children Fiawomorm, Eyram and Eleagbe Gawu who supported me in prayers all along the study.

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GLOSSARY

BMI	Basic Medical Insurance
CBHIS	Community–based Insurance Scheme
CMS	Commune base cooperative Medical Scheme
CSMBS	Civil Service Medical Benefits Scheme
DMHI	District Mutual Health Insurance
DMHIS	District Health Insurance Schemes
EPF	Employees Providence Fund
GIS	Government Assurance Scheme
GPRS	Ghana Poverty Reduction Strategy
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immunodeficiency Syndrome
ICT	Information Communication Technology
ID	Identification Card
LIS	Laborer Insurance Scheme
MDGs	Millennium Development Goals
MHI	Micro Health Insurance
NCMS	New Cooperative Medical Scheme
NHIA	National Health Insurance Authority
NHIF	National Health Insurance Fund
NHIL	National Health Insurance Levy
NHIP	National Health Insurance Programme
NHIS	National Health Insurance Scheme
PCHIS	Private Commercial Health Insurance Scheme
PMHIS	Private Mutual Health Insurance Scheme

SAP	Structural Adjustment Programme
SOCSO	Social Security Organization
SSNIT	Social Security and National Insurance Trust
UC	Universal Coverage
UHC	Universal Health Coverage
WHO	World Health Organization

ABSTRACT

The health status of a nation goes a long way to determine its level of productivity and growth. The objective of the National Health Insurance Scheme (NHIS) is to ensure equitable universal access for all residents of Ghana to an acceptable quality package of health services. The objectives of the study was to analyze the challenges involved in accessing the National Health Insurance Scheme by subscribers in the Central Tongu District, evaluate the prospects of the National Health Insurance Scheme in the District and the factors that affect NHIS usage in accessing health care. To achieve these objectives, a combination of case study and survey research designs were used. The study employed descriptive statistics and probit regression analysis in presenting the results obtained on the factors that prevent people from accessing the National Health Insurance Scheme in the Central Tongu District and the challenges faced in accessing National Health Insurance Scheme. The findings of the study showed that, the introduction of NHIS in Central Tongu District has helped improve individuals‟ access to primary health care. That is, irrespective of one‟s education, employment status, distance and affordability, one can subscribe to NHIS in order to access basic health care within the district. The study found out that, NHIS subscription has the tendency of improving the health lives of people and it has also helped reduced the cash and carry system of obtaining basic health care in the country, precisely, in the Central Tongu District. Nevertheless, the above independent variables affect individuals within the Central Tongu District in accessing primary health care. However, NHIS subscription within the District has helped and brought some relief to individuals who obtain basic health care in the district at an affordable cost. It is recommended that, the government of Ghana through the ministry of health should collaborate with telecommunication companies to extend their services to remote areas to allow easy access for registration and renewal of the NHIS cards. In addition, the government of Ghana in collaboration with other health agencies should bring out policies in order to bring back on track some health workers who do not pay attention to individuals who comes to the health centers with the NHIS to access basic health care. This will help them keep the workers on their toes to enhance efficiency. Again, the ministry of health can collaborate with some private health centers who accept the NHIS card in accessing basic health care to build more health centers in the Central Tongu District in order to help individuals who find it difficult to access health care due to distance problem.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The National Health Insurance Scheme (NHIS) is a government-operated system of insurance that seeks to eliminate the financial constraints in acquiring basic healthcare across the country. The management of the scheme entails keeping information of beneficiaries and their contributions (Dalinjong and Laar, 2012).

Health Insurance Scheme is a tool to facilitate and to achieve United Nations (UN) Millennium Development Goals (MDGs). Out of Eight (8) MDGs that all the 191 UN member states had agreed to achieve by the end of the year 2015, four (4) of the MDGs are directly related to health, hence the need for NHIS. MDG 1 seeks to eradicate extreme poverty and hunger among member countries, which have a correlation with the health of some people. MDG 4, 5 and 6 seek to reduce child mortality, improve maternal health and combat HIV/AIDS, malaria and other diseases respectively. The United Nations Millennium Declaration signed in September 2000 commits world leaders to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women (WHO, 2019).

One of the major components of GPRS is to deliver quality, accessible and affordable healthcare to all residents in Ghana especially the poor and vulnerable. Some methods of financing healthcare determine its quality, accessibility and affordability. As part of the GPRS, the previously operated system of “Cash and Carry” was phased out to give way to the newly established system of Health Insurance. This policy framework allows the establishment of multiple health insurance schemes across the nation with a

focus on the social-type, which is called District Mutual Health Insurance (DMHI), and this is to address the needs of the poor in the districts (Arhin, 2013).

Government is aimed at achieving its set health goal within the Poverty Reduction Strategy by instituting the National Health Insurance Scheme. This insurance does not prevent ill health (sickness). The basic principle is to compensate the policyholder(s) by spreading out the risk of health cost on the shoulders of the entire community (district). The scheme thus, acts as a middleman of such a social co-operation. The more subscribers the scheme has, the more likelihood of available funds to support members when they require healthcare. The point to note here is that individuals still make payment for services consumed but in a more humane manner as they do not have to carry the burden of healthcare all alone. This underscores the policy of making it compulsory among others for every resident in Ghana to belong to a health insurance scheme of his or her choice (Kotoh *et al.,* 2018).

Access to healthcare is made easier for those who readily need it. Nonetheless, access is a function of location of providers of services, cost of care and the ability to pay, quality of care and socio-cultural aspects of service provision. Financial barrier to health care is dependent on the payment mechanism that is put in place at the time of use of service. Out of pocket, payment (cash and carry) at the time of use reinforces non-access to healthcare. Pre-payment schemes minimize or remove entirely the financial barrier to accessing healthcare. Thus, access to healthcare becomes independent of the individual‟s ability to pay out of pocket at the time of ill health. Direct out of pocket payment is regressive in that a higher proportion of income of the poor and lower income groups goes into healthcare.

In attempt to eradicate financial obstacles to healthcare, the Government of Ghana established the National Health Insurance Scheme in 2003, through an Act of Parliament, Act 650 (later reviewed with a new Act 852, 2012) to help in its effective implementation.

The ultimate goal of the NHIS was the provision of universal health insurance coverage for all Ghanaians, irrespective of their socio-economic background. The NHIS is based on District Mutual Health Insurance Schemes (DMHIS), which operate in all districts of the country. The NHIS covers both the formal and informal sectors of the economy (Adinkra, 2014).

As at June 2009, about 67 percent of the Ghanaian population had subscribed to the NHIS (Adinkra, 2014). The Act established National Health Insurance Authority (NHIA), with the responsibility of registration of subscribers, and paying for services rendered to these subscribers that remain active with the scheme. It seeks to reduce opportunities for corruption and any administrative bottlenecks and to introduce transparency, efficiency and effective governance of the scheme (NHIA, 2012). This initiative by the Government is to secure financial risk protection against the cost of healthcare services for all residents in Ghana.

The objective of the NHIA is to attain universal health insurance coverage in relation to persons resident in the country, persons not resident in the country but who are on a visit to the country, and to provide access to healthcare services to persons covered by the scheme. With regards to the functions, the NHIA seeks to ensure equity in healthcare coverage, access by the poor to healthcare services, protection of the poor and vulnerable against financial hardship, just to mention a few (NHI Act852, 2012).

The NHIA mandates a predefined benefits package that covers almost 95% of the disease burden in Ghana and includes in-patient hospital care, outpatient care at primary and secondary levels, and emergency and transfer services (Fenny *et al*. 2015).

The benefit package of the NHIS 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 percent of the diseases in Ghana are covered 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 (Dalinjong and Laar, 2012).

Revenue sources and allocation (Act 852) indicates that the NHIS is financed through combination of resource mobilization from taxes (2.5% value added tax) that is, National Health Insurance Levy (NHIL) and pay roll deductions (2.5% of the 17.5% of formal sector workers‟ Social Security and National Insurance Trust (SSNIT) contributions) which is channeled through Ministry of Finance and transferred to National Health Insurance Fund (NHIF) for allocation. Other sources of revenue are interest on fund (investment income), road accident fund, workmen‟s compensation, premium and registration fees and other incomes which go directly into NHIF account which is allocated to: payment to healthcare providers, administration and general expenses of NHIA and support to the Ministry of Health (capped at10%).

NHIS subscribers can access healthcare from "all public, quasi-government, faith-based and some private health facilities as well as chemist shops and pharmacies that have been accredited and operate under contract with the NHIA" (Kotoh *et al.,* 2018).

The National Health Insurance ACT 2003 is an ACT to secure the provision of basic healthcare services to persons resident in the country through mutual and private health schemes, to put in place a body to register, license and regulate health insurance schemes and accredit and monitor healthcare providers operating under health insurance schemes; to establish a National Health Insurance Fund that will provide subsidy to licensed district mutual health insurance schemes, to impose a health insurance levy and to provide for purposes connected with these.

There is an act established by a body corporate known as the National Health Insurance Council referred to in this ACT as the "Council". This Council is headed by a Chairperson who, together with the other members of the council, is appointed by the President of the Republic of Ghana in consultation with the Council of State. At the district level where the scheme is mainly operated, the following are the departments that play the role of seeing to the successful management of the scheme: the scheme markers department, accounting department, claim department, publicity/marketing department, data entry operations and reception/secretary section.

1.2 Problem Statement

The National Health Insurance Scheme (NHIS) was initiated by Government to secure financial risk protection against the cost of healthcare services for all residents in Ghana. Despite the good intents of the NHIS, there have been varying challenges confronting the scheme, the providers and the members of the scheme. The sustainability of the financial scheme continues to remain a big problem as the

demand for health insurance rises given its consequential increase in healthcare service utilization (NHIA, 2012). Higher demand for health care is considered most threatening problem affecting the progress of the National Health Insurance scheme on health care utilization in Ghana (NHIA, 2012) and Central Tongu District.

According to Mensah (2013), the challenges facing Ghana‟s NHIS are in two categories:

These are internal challenges which include financial sustainability of the scheme, identification of the poor in the informal sector, identification (ID) card management challenges, information and communication technology (ICT) challenges and external challenges consisting of moral hazard (both demand and supply side), pharmaceutical supply chain challenges (High cost of medicines), ability to pay premium/renewal Challenges, quality of care and waiting times.

With all the challenges stated above, the question is whether the scheme is sustainable enough to serve the needs of subscribers. It is against these conditions that, this study sought to examine the challenges and prospects that confront the scheme from the perspective of service providers and subscribers in the Central Tongu District of Ghana.

1.3 Objectives

1.3.1 Main Objective

The study seeks to determine or investigate the challenges, prospects and achievement of the National Health Insurance Scheme in the Central Tongu District.

1.3.2 Specific Objectives are to:

1. Analyze the challenges involved in accessing the National Health Insurance Scheme by subscribers in the Central Tongu District.
2. Evaluate the prospects of the National Health Insurance Scheme in the Central Tongu District of Ghana.
3. What are the factors that affect NHIS usage in accessing health care?

1.4 Research Questions

1. What are the challenges confronting clients in accessing the National Health Insurance scheme in the Central Tongu District?
2. What are the prospects of the National Health Insurance scheme in the Central Tongu District?
3. What are the roles and contributions of the service providers in ensuring the sustainability of NHIS in the district?

1.5 Significance of the Study

The provision of healthcare for the citizens of any country is very important.

1. The study will help to show the perception and satisfaction of NHIS subscribers on the implementation of the NHIS.
2. The study will also help to show the nature of challenges hindering the NHIS in Central Tongu District.
3. Hospitals and clinics in the District may use the findings of the research to improve and expand their health care activities.
4. The study may identify challenges hindering the operation of the scheme and chart appropriate mechanism to ensure a sustainable health care delivery in the Central Tongu District.

5. The findings of the study will contribute some information to the existing body of data on health care delivery and the National Health Insurance Scheme and provide a sense of direction for the improvement of the scheme in government‟s attempt to run the scheme satisfactorily.
6. Another area of significance of this study lies in the fact that the overall findings of this study will add to existing literature on health insurance system and also serve as a basis for further research on Ghana‟s NHIS. Data collected can also be a source of information for those who intend to pursue the issue of NHIS.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter critically examines both theoretical and empirical literatures, the historical development in Ghana, function of various departments and the health financing models.

2.1 Theoretical Literature

2.1.1 Theories in health insurance

Since independence, there have been several reforms in Ghana‟s health system. In 1957, free health care policy was implemented and in the 1970s, Ghana experienced economic shocks and began structural adjustment programs with the introduction of nominal payments for health services. In the 1980s, most developing countries were faced with health and socioeconomic inequalities. In this view, many of these countries including Ghana adopted the Structural Adjustment Programmes (SPA), which required introduction of user fees at the point of health service delivery to generate revenue. Specifically, in 1985, user fees (cash and carry) were introduced and this policy excluded majority of people from access to healthcare.

Under „Cash and Carry‟, patients were required to pay for drugs and some medical consumables, any time they visit hospital, while the state bore all other costs including consultation, salaries and emoluments for doctors, nurses and other healthcare workers in state hospitals. It also provided for free medical care for the aged above 70 years, children under five years and pregnant women for their ante-natal care, all under an exemption program implemented with that system of financing, thus, cash and carry. Under „Cash and Carry‟, people went to hospital only

when they were very sick and had money to pay for the stipulated health expenditures. The result of this is that, most often, people went to hospital when they were really very sick and often at the terminal end of their lives. It was pointed out that „cash and carry" constrained citizens from assessing healthcare except when they were in very dire situations (NHIA, 2009).

This user fees became important source of revenue for health providers but at the same time hinders and prevents the accessibility to health care, particularly among the poor, (Teye *et al.,* 2015).

In the 1990s, Community-based mutual health insurance schemes were introduced while in the year 2000, there was high out-of-pocket expenditure on health and very low utilization of health services. The Government through the Ghana Poverty Reduction Strategy (GPRS) has outlined its policy strategies for dealing with poverty in the country. One of the major components of this GPRS is the strategy to deliver quality, accessible and affordable healthcare to all residents in Ghana especially the poor and vulnerable. The method of financing healthcare determines its quality, accessibility and affordability (Awumbila, 2006).

Moreover, health insurance has proved to be an efficient tool in ensuring health care coverage by pooling risks across a large group of people in the developed world of today. According to Annang *et al.,* (2011), Insurance may be defined as "pooling of risk". It is a means of transferring risk from the insured or policyholder (the person who is protected against risk) to the insurer (the person or company who assumes or takes the risk). It is also a practice, which allows interested persons to contribute periodic funds (premium) towards a central "pool" which may be used to compensate people who suffer the actual loss for which the contributions were made. Healthcare is

insurable since it has a high probability of occurrence and can be predetermined or calculated according to rules of probability (Annang *et al.,* 2011).

According to Bennett (2004), the primary purpose of any insurance scheme, in principle, is to share risk between individuals and hence extend financial protection to members of the scheme. The developed countries have been proved to possess the capacity to pool resources across a wide range of individuals. The significant existence of formal sector together with the effective regulatory mechanism in health systems of developed world make it feasible to collect the revenues that are required to build a large enough resource pool. This ultimately results in efficient cross subsidization between the ill and the health, the rich and the poor (OXFAM, 2013). However, the developing world is yet to gain from the comparative advantage of health insurance. A concept that is widely becoming popular in the developing country context is micro health insurance (MHI). Despite its huge potential to ensure access to and provision of healthcare for the people, particularly the poor, there remains debate around feasibility and sustainability issues. A concern that is central to the MHI literature in developing countries is why its demand has remained relatively low over the years. Studying theories of demand for health insurance can help us understand the market for MHI. However, providing empirical evidence to come to a decision on which theory is correct in determining the demand for health insurance is very difficult. We will, in this section, consider two facets of health insurance markets: theories around decision-making and the demand for health insurance, and market failures that influence supply and demand of health insurance. The discussion will delve into the various theories that have contributed to the literature on health insurance and will study the relevance of each for MHI.

2.1.2 The Theories of Decision Making: Application for Health Insurance and Healthcare Markets

Healthcare, when considered as a commodity, has been identified to have some distinct economic features. According to Folland, Goodman, and Stano (2016) uncertainty, incomplete and asymmetric information, and the prominence of insurance are among the key economic features of healthcare markets.

Uncertainty in healthcare comes with respect to both the incidence of disease and the efficacy of treatment (Jonk, 2000).

This gives rise to financial uncertainty, which results from cost of treatment and loss of income ensuing from workdays lost due to illness. Arrow (1963) argues that the existence of uncertainty implies that risk bearing and information become commodities. Thus, uncertainty gives rise to a demand for health insurance. Through insurance people have the choice to level off their income between two states-illness and health. Although health insurance does not typically provide income protection directly, it can ensure access to treatment on time, which in turn reduces wage loss resulting from illness. This increases utility of the insured and provides some level of certainty making them better off than those who are not insured at that time. It therefore follows that theories of decision making under uncertainty are required to understand the demand for health insurance as that decision is based on an expectation about future health.

2.1.2.1 The Expected Utility Theory (EUT) has so far been the most widely used theory in explaining the demand for health insurance (Arrow, 1963; Neumann and Morgenstem, 1953; Friedman and Savage, 1948).

The expected utility hypothesis (due originally to Daniel Bernoulli 1738) states that individuals choose between alternatives to maximize expected utility. In general, it is the probability of the state of the world „i" occurring in the forthcoming time period (i = 1… n), and is the utility of income in state „i", then expected utility (EU) is given by the probability-weighted sum of utilities across all possible states:

$$EU = \sum_{i-1}^{n} p_i \, u(y_i)$$

The individual"s objective is assumed to be the maximization of expected utility. EUT states that a person"s demand for insurance is reflected in their degree of risk aversion and preference for income certainty. The demand for insurance arises out of a choice between an uncertain loss with a probability when uninsured, and a certain loss in the form a premium when insured. EUT assumes that individuals are normally risk-averse indicating that they have diminishing marginal utility of income. A person is said to be risk averse if he or she, starting from an initial income, prefers not to face a zero mean risk (a risk that has positive variance but expected value of zero) (Robson *et al.,* 2011). It follows from this assumption that if an individual is given a choice between a probability distribution of income, with a given mean income m, and the certainty of income m, then he/she would prefer the latter. Given this preference, if an insurance company offers insurance against the full value of a medical cost for an actuarially fair premium (i.e. if the full value of the medical cost is a random variable with a mean m, the company will charge a premium equal to m), the individual will prefer the certain outcome involving the payment of the premium and will therefore take out a policy, giving rise to a welfare gain (Arrow, 1963). This theory also states that, if the amount of the loss to be covered can be chosen by the individual, then the more risk averse a person is, the more coverage he or she will buy.

EUT is silent in explaining how the demand for insurance varies with varying socioeconomic status.

2.1.2.2 The Prospect Theory put forward by Tversky and Kahneman (1981) questions the assumption of expected utility theory that expected utility is linear in the probability of loss. This assumption implies that marginal expected utility is constant as the probability of loss varies. However, individuals may experience increasing marginal disutility as the probability of loss increases, placing a greater weight on changes in the probability of loss for higher probabilities of loss (Tversky and Kahneman refer to these weights as "decision weights"). In this case, EU becomes non-linear in the probability of loss as reflected in the following formulation of the EU function.

$$EU = \sum_{i-1}^{n} w\,(p_i)u(y_i)$$

The weighting function w reflects the allowance for differing (i.e. non-linear) effects of the probability of loss on expected utility. The resulting EU function (or value function in the parlance of prospect theory) can therefore be asymmetric and steeper for losses than gains, indicating displeasure for losses to be more than pleasure for gain (Jonk, 2000; Tversky, 1981)

People choose between prospects through weighted probabilities of loss or gain. In the health insurance market, this theory suggests that people insure if they overweight the probability of illness. To the extent that the poor underweight their probability of illness as they cannot afford to get ill and lose their wages, they will therefore remain uninsured. However, this theory is again silent on the relation between socioeconomic status and its influence on degree of risk aversion.

2.1.2.3 The Regret and Disappointment Theory introduced simultaneously by Loomes and Sugden (1982) and Bell (1982) is based on the notion that a person‟s objective is to minimize regret and disappointment (Sugden and Loomes, 1982; Bell, 1982). In the health insurance market, people may remain uninsured to avoid disappointment from failing to receive a pay-off and regretting the decision to insure, or they may insure to avoid regret if they fall ill while being uninsured. Again, this theory does not explain the difference in degree of regret and disappointment between rich and poor (Marquis and Holmer, 1996).

A few economic and social theories have contributed to the understanding of demand for health insurance by different socioeconomic strata, which would be more relevant in understanding the market for micro health insurance, as MHI is more popular in the developing world. Among these theories are: State dependent utility, endowment effect, status quo bias, regret and disappointment paradigms, prospect theory, and theories related to trust and social capital.

2.1.2.4 The State Dependent Theory says that consumers‟ utility or taste is influenced by their state, i.e. socioeconomic status, health status and at the same time by their degree of risk aversion. Demand for health insurance depends to some degree on the anticipation about need for medical care and the magnitude of insurance payoff (Phelps, 1973). Participants in the famous RAND study (Marquis and Holmer, 1996; Manning and Marquis, 1996) revealed that their demand for health insurance was influenced more by the payoff offered by the scheme than the premium level and their income.

2.1.2.5 The Cumulative Prospect Theory developed by Kahneman and Tversky is a combination of state dependent and prospect theory (Tversky and Kahneman, 1992). It states that people assign different weight to the probability that an event will occur.

2.1.2.6 The Endowment Effect Theory assumes that peoples‟ decision-making is influenced by their risk aversion about something new. They place a larger value on giving something up for gaining benefit from something new (Kahneman *et al.,* 1991). On this approach poor people will insure only if they perceive the benefit of being insured to be greater than the cost of giving up being uninsured. The implication of this theory in practice is that, for insurance to be attractive to the poor, it needs to ensure access to healthcare and to reduce unofficial payments. This is particularly important for MHI where the poor are asked to make out-of-pocket payments, which give mathematical discretion to the provider. In cases where people have mistrust of the provider, this scheme will not be attractive.

2.1.2.7 The Status-Quo Bias Theory argues that the „veil of experience‟ determines peoples‟ choices–people prefer to be in familiar status quo situation if there are increasing alternatives and the choices are complicated (Salkfeld *et al.,* 2000). This arises particularly when there is incomplete information in the market. Therefore, to attract poor people in the health insurance market, they need to be fully informed about the operation of the scheme and its benefits (Dror and Firth, 2014).

The poverty literature says poor may not insure, as out of necessity they value present consumption more over future anticipated consumption. The poor may choose to find alternatives to replace insurance, such as moneylenders, diversification of income, increasing earning members of household, etc. Even though these are important

coping mechanisms where premiums are unaffordable or insurance is not desired, there are limits to what these mechanisms can achieve.

A study on Vietnam showed that the demand for health insurance was influenced by the absence of an informal credit market and strong financial networks (Jowett, 2003).

Trust is one important factor in determining the demand for health insurance, particularly in a low income setting (Bloom, 1997; Liu, 2004). Medical care is a commodity where customers cannot test the product before consuming it and therefore there is an element of trust in this relationship. It is worth mentioning that trust, being an unobservable element, has been measured from different aspects throughout the literature. Patt *et al.,* (2009), has identified trust in three different dimensions: trust in the product itself, trust in the institution and the degree of interpersonal trust. Patt *et al.,* (2009) reported that trust in the health insurance market operates in 3 dimensions: patient‟s trust in provider, trust in insurer, and trust in control mechanisms for law enforcement (Bock and Gelade; Patt *et al.,* 2009). Insurers can build reputation by demonstrating expertise, responsiveness to consumers, and ensuring quality care in contracting health facilities and thereby attracting more clients. These trust issues are particularly important for MHI. Weak legal and political systems, mutual non-written contracts, managers‟ lack of technical expertise, and providers‟ inferior quality of care can negatively affect membership of MHI.

The practical implication of these theories helps identify factors that may influence demand for health insurance in general and MHI in particular. What follows from the above discussion is that, to make health insurance attractive in low income settings, the programme managers should concentrate on insurance design, information

context, and the socioeconomic status of their clientele. To attract the poor and win their trust in the MHI schemes, they will have to be provided with complete information about the insurance package and at the same time, the financial management of the scheme has to be accountable and transparent.

Further, the theories around attitude towards risk and people‟s decision-making under uncertainty bear important implication in terms of marketing the product that is offered under any insurance scheme. For marketing, a health insurance product that will attract sufficient clients it would require a strong value proposition. If the value proposition for the product focuses on people‟s preference towards risk (i.e. risk lover, risk averse or risk neutral) the product might succeed in increasing the demand for health insurance. A strong value proposition backed by knowledge of the clients‟ need and preference can potentially help people understand the real value of the product. Increasing the demand for MHI thus warrants further research in this area.

The Law of large numbers is the fundamental principle underlining insurance mechanism (Stigler, 1986). This law for insurance implies that as the number of mutually independent risk in a risk pool increases, the variance of mean losses tend to decrease. As a result actual claim runs much closer to projected claim making insurance policies more viable (Churchill, 2006; IRMI, 2014). In other words, if the insurance scheme has enough number of policies then according to the law of large numbers it becomes highly unlikely that the insurer will face an extremely large amount of loss relative to the premium they collected (Kunreuther and Pauly 2005).

2.2 Empirical Literature

A study by Sanusi and Awe (2009), on perceptions about NHIS revealed that the perception of people on NHIS differs from place to place and even within the same

place, it differs from one age group to another. In Oyo state it has been found out that majority of the registered members of NHIS have bad perception of the NHIS (Sanusi and Awe, 2009). Most of the NHIS subscribers indicated that the drugs under the NHIS are not good and sufficient and many people also complained that they are not promptly attended to by the NHIS service providers. According to Sanusi and Awe (2009), most people who were registered under NHIS recommended that the scheme should be discontinued because of poor services provided by scheme‟s service providers.

In South Africa, many people were not happy with the services provided by NHIS health centers. A large percentage of participants thought it more important to have improved health care coverage and services even if it meant raising taxes, while a small percentage said it is better to hold down taxes despite lack of access to health care for some South Africans. Almost a quarter of participants were unable to comment on questions posed to them, indicating the need for improved public education and communication (Shisana *et al.,* 2005).

2.2.1 The Bangladesh

According to Mahmood *et al.,* (2015) who worked on Micro Health Insurance In Bangladesh: Prospects And Challenges observed that, the health gains in Bangladesh achieved since its independence in 1971 have been applauded in the global development arena in recent times (Adams *et al.,* 2013; Das and Horton, 2013; Abed, 2013; Afsana and Wahid 2013; Sen, 2013; Chowdhury *et al.,* 2013). Even with a very low level of public expenditure, the general health indicators returned a relatively higher value for the resources invested over the years. The under-five (U5MR) and infant mortality rate (IMR) has declined impressively by 57% and 46% respectively

during 1990/1-2007 which has set the country on track to meet the Millennium Development Goal (MDG) of reducing U5MR and IMR to no more than 31 and 50 deaths per 1,000 by the year 2015.

The study compiles both primary and secondary level data. The primary level data is qualitative in nature and the secondary sources are quantitative data using 3 surveys carried out in 1999, 2004 and 2005. The qualitative data were collected with the aim to understand the factors influencing demand for micro health insurance (MHI), programmatic challenges in implementing MHI schemes and the policy environment around MHI in Bangladesh. Data were gathered from three different groups of respondents, namely the community members forming the client base for MHI in Chakaria, the programme personnel, and the policy makers. Information on programme related issues and on policy environment was collected through key informant interviews. Attempt was made to select key informants who are most knowledgeable on the concerned issues and are able to guide us in understanding the programmatic challenges and opportunities facing MHI industry in Bangladesh and the prospect of MHI from policy perspective. The programme personnel who ran the health card scheme in Chakaria were interviewed. The health card scheme was one of the activities of an ongoing project in Chakaria and that project was still in operation during our current study. Most of the programme people involved with the health card scheme were available at the project field office and we could get information from them. However, for respondents on policy issues interviews were limited to those who were available during the data collection period due to the busy schedule of the policy makers.

Semi structured interviews were conducted amongst the villagers to delve deeply into the factors that influenced the uptake of MHI scheme in Chakaria during 1998-2005. Using semi-structured interviews allowed to discuss particular topics, like people‟s understanding about MHI, preference between paying in advance for healthcare and paying as and when need arise etc., in detail. More on the use of semi structured interviews and key informant interviews as qualitative research tool can be found elsewhere (DiCicco-Bloom, 2006; Lavrakas, 2008). Complementing the interviews, a hypothetical scheme was presented to the community members using the Vignette method to understand factors that influence their decision to enroll in health insurance schemes (Finch, 1987; Hughes, 1998). Vignettes can be described as "stories about individuals, situations and structures, which can make reference to important points in the study of perceptions, beliefs and attitudes" (Hughes, 1998). The Vignette to describe the hypothetical micro health insurance scheme was developed taking into account the demand for specific healthcare services, the current market rate for these services, and people‟s average healthcare expenditure.

2.2.2 The Vietnam

According to Thanh *et al.,* (2015), who worked on The Impact Of A Health Insurance Program On The Near-Poor In Vietnam stated that , social health insurance is the most important pillar of health financing in Vietnam and plays a very important role in ensuring equity in health care. Vietnam, like Thailand, has a blended payment methodology for payment of providers incorporating both fee-for-services and capitation components.

The sampling size use for the study was 2000 near-poor individuals who could have potentially used health services in the past 6 months. The sample size was based on a

combination of an estimation of the power of the study to detect important differences and the practical limitations of the cost of recruitment. Power estimates prior research indicates that one of the most important factors in decisions about health insurance is knowledge of health insurance and its benefits. For the purposes of estimating sample size the study assumed that those with knowledge of health insurance were at least 2 times as likely to be involved in a health insurance program as those without knowledge of health insurance. This assumption was based on a study that found that the rate of the people with knowledge of health insurance but without an insurance card was 30% (Adebimpe and Olugbenga-Bello, 2010). The sample size required to detect a statistically significant (95% level) difference of at least two fold between the insured and uninsured was estimated using the following formula:

$$n = \frac{Z^2{}_{1-\propto/2}}{[\log_e(1-\varepsilon)]^2}\left[\frac{1}{P_1{}^*(1-P_1{}^*)} + \frac{1}{P_2{}^*(1-P_2{}^*)}\right]$$

In this case, P1: the „anticipated probability" of "having knowledge" given "coverage status" is not given; P2: "anticipated probability" of "having knowledge" given "no coverage status" is 30%, or 0.3;

„Anticipated odds ratio" is 2

Z: „Confidence level" is 95%

ε: „Relative precision" is 20%

This indicated that the minimum sample size for each group of the insured and uninsured should be 678.

In order to be able to identify the significant association between the outcome variables such as insurance coverage, healthcare service utilization, private out-of-pocket spending and the explanatory variables, the sample size of the insured was

increased to twice as many as that of the uninsured. The increase in sample size also allowed for multivariate modeling. As a result, the intended sample was 1300 insured and 700 uninsured households.

The questionnaires with collected data were frequently at every 2 weeks submitted to a study coordinator who was in charge of checking their completeness. Data was coded, cleaned and entered into the computer using Epi-data software and analyzed by SPSS 18.0. Descriptive statistics were used to describe the proportion and frequency of data. In addition, Chi-squared and odds-ratio were used to describe the association among the variables in bivariate analysis. In further analysis, multiple logistic regressions were used to identify the predictors of enrolling into the health insurance scheme and using health insurance. The most important assumption of applying this analysis was that there was no multicollinearity. In practice, this means that the correlation among the independent variables was less than 0.7 (Tabachnick and Fidell, 1996). In this study, ordinary least square analysis was also used to estimate the impact of near-poor health insurance on private out-of-pocket expenditures on health, controlling for observable factors in a linear regression model.

2.2.3 The Ghana

Aniah (2016) conducted a study on prospects and challenges of the national health insurance scheme in Tolon district of Ghana. The study employed a qualitative approach of data collection. Purposive Sampling was used to select respondents for the study. Qualitative data was analyzed through explanations, interpretations and direct speeches of respondents. Mutual health insurance scheme has become a major instrument in affordable and accessible quality health care for the people of Ghana. The scheme has made health care more accessible and affordable to both rich and the

poor in both urban and rural communities. In the Tolon District, people who previously could not access health facilities can now receive medical attention early enough to avoid complications. In practice, health insurance scheme covers outpatient and in-patient cases, including accidents and investigations.

In the Tolon District, women who are considered vulnerable enjoyed the scheme to the fullest with cases of maternity. In spite of all the challenges, the study established the optimism that the scheme has a future and would rise above its challenges to provide affordable and accessible, quality service delivery. It could be said that the health insurance policy is a good one and it is worth pursuing and needs the support and cooperation of all the stakeholders.

The findings of the study revealed that the people of Tolon District patronize the operation of NHIS as bedrock of health care delivery and making effort to chart out continued prospects for the scheme, though a few challenges were identified. The respondents, especially females within the ages of 20 to 49 representing 70 percent of the respondents are active NHIS subscribers as compared to any other age group.

The majority (78%) of the respondents who are insured under the NHIS are informal sector workers with 63 percent of them being farmers. They are dominated by women small holder farmers or subsistence farmers who by the laborious and fatigue nature of their practice regularly seek health care at the hospital. Notwithstanding the marital status of the respondents, up to 65 percent of them indicated that they and their entire family members access health care through NHIS at the Tolon District. In addition, the study revealed that majority of the people who access the health care have either attained education to the level of Junior high school only or having no formal education at all. Up to 50 percent of the respondents contacted indicated that they had

not been to school at all. Besides, over 80 percent of the respondents concurrently indicated some prospects for the scheme as they continuously access health care at the Tolon District for several years after they joined the NHIS.

In addition, they reported that, 53 percent of the respondents indicated that they would rate the operation of the NHIS as „good" with 17 percent rating it „very good" as it continues to solve their health care needs in the District. About 90 percent of the respondents attested that the scheme was affordable with yearly subscription of less than GH¢17. In addressing the challenges and charting out vibrant prospects for the NHIS in the Tolon District, there is the need for both service providers and clients to adhere strictly to the roles and responsibilities defined by the NHI Act 650.

In comparing the impact of health insurance across different health insurance schemes, several studies show that health insurance is by no means a homogeneous concept and that its impact depends on the specifics of the insurance scheme. A study by Ekman (2007), evaluating the impact of multiple health insurance schemes in Jordan, illustrates this point. Ekman first finds no impact of insurance coverage on outpatient care use, but when the type of insurance is disaggregated, it turns out that people with access to the Ministry of Health insurance program have a significantly higher probability of seeking outpatient care than do people covered under other insurance schemes. Escobar *et al.,* (2010) also reported a significant positive impact of health insurance for one new rural cooperative medical scheme in China on use but only a limited impact for another type of health insurance.

In response to the call to provide affordable health care for all, most low-and-middle income countries including some countries in Africa, e.g. Ghana, Kenya and Rwanda have instituted one form of social health protection program (Williams *et al.,* 2017).

All these countries came together with the aim of achieving Universal Health Coverage (UHC). According to O'Connell (2012), Ghana, China, Rwanda and Vietnam have approached near universal access to a formally defined set of essential healthcare interventions. This notwithstanding, Ghana and India were also identified as making small but progressive steps towards full population coverage. Ghana's National Health Insurance Scheme has been viewed as a model for other African countries because of the progress it has achieved in reaching a large section of the population in a short period of time since its implementation (Dixon *et al.,* 2013: Preker *et al.,* 2013).

However, these successes notwithstanding, Ghana still has a long way to go in achieving universal health coverage in its real sense. In this regard, there is a need for an equity analysis to identify population sub-groups who are at risk of being excluded as a necessary step towards achieving equity and universality. While there are several dimensions to equity, one critical but often overlooked dimension which is gender equity is necessary for achieving equity in UHC. Witter *et al.,* (2017), caution that the "movement towards UHC can fail to achieve gender balance or improve equity and may even exacerbate gender inequity" if not properly addressed. Thus in conducting research on equity in UHC, it is also important to investigate the component of gender equity but this has received limited attention in previous studies, especially for men, as the focus has mostly been on women and children (Dixon *et al.,* 2014).

Dake (2018) reported that a higher proportion of females (38.9%) compared to males (29.7%) were covered while the reverse is true in terms of no coverage (61.1 and 70.3% respectively). According to the article, females had a slightly larger household size on average compared to their male counterparts and the females reported having

had about two children on average. There were relatively higher proportions of respondents belonging to the richer and richest wealth quintiles compared to the middle, poorer and poorest quintiles.

Population growth in most of developing countries like Ghana increases the burden of cost to the Government however even the well developed nations like Germany experiences some difficulties due to population growth. According to Brin, *et al*., (2007), In 2007 Germany had a population of 82 million people, where the population density amounted to 230 person per square kilometer, compared to an European Union (EU) average of 116", however due to its powerful economy Germany has insured 87% of its population (Grosse-Tebbe, *et al.,* 2005). Unlike Ghana where only 18.1% of population is covered (Kuwawenaruwa and Borghi, 2012).

Tax-funded and social health insurance financing is another challenging issue in most of developing countries such as Ghana. This situation can be explained by different factors affecting the nation but the most mentioned reasons are political instability that is linked to economic insecurity (Carrin *et al,* 2005). However, Ghana has not experienced the so-called "political instability" rather than economic insecurity indicated by high level of dependence in health care financing (Haazen, 2012).

2.2.4 The History of Ghana's Health Insurance Scheme

The history of health in Ghana was heavily influenced by international actors such as Christian missionaries, European colonists, the World Bank, and the International Monetary Fund (Zwi and Mills, 1995). In addition, the democratic shift in Ghana spurred healthcare reforms in an attempt to address the presence of infectious and non-communicable diseases eventually resulting in the formation of the National Health insurance Scheme in place today (Wahab and Assensoh, 2008).

In 1874, Ghana was officially proclaimed a British colony. Ghana proved to be an extremely dangerous disease environment for European colonists driving the British Colonial administration to establish a Medical Department bringing about an introduction to a formal medical system, consisting of a Laboratory Branch for research, a Medical Branch of hospitals and clinics, and the Sanitary Branch for public health centered near British posts and towns (Curtin, 1985). In addition to hospitals and clinics staffed with British medical professionals, some selected towns were also provided anti-malaria medication to be distributed to colonists and to sell to local Ghanaians (Twumasi 1981).

In 1878, the Towns, Police, and Public Health Ordinance were enforced, initiating the construction and demolishing of infrastructure, draining of the streets, and issuing of fines to those that failed to comply with the heads of the colony. In 1893, a Public Works Department was introduced to implement a working sanitation system in urban colonial centers (Ferguson 1974). After the World War II, it became increasingly clear that, with improved transportation worldwide, international health policy needed to be strengthened. (Balabanova et *al.,* 2013)

Organizations such as the World Health Organization and the United Nations Children's Fund were active in providing money and support to provide additional western medical care in Ghana (Jamison *et al.,* 2006). These organizations provided financial and technical assistance for the elimination of diseases and the improvement of health standards (Jamison *et al.,* 2006).

Traditional health practices were not recognized by these initiatives or the British Medical Department in urban areas and were shunned by Christian missionaries in rural areas. However, traditional priests, clerics, and herbalists still remained

important health providers especially in rural areas where health centers were scarce (Ferguson 1974).

Ghana gained its independence in 1957 and during the nationalist period, we saw a shift in disease rates where the main causes of morbidity and mortality among wealthy communities were then chronic diseases due to their increased access to improving healthcare (Wahab and Assensoh, 2008). In addition, the focus was on curative healthcare and a public health approach that focused mainly on the control of outbreaks and epidemics.

These health programs were financed entirely through general taxation but with free public healthcare and large government spending, Ghana found itself struggling economically. Asenso-Okyere *et al.,* (1997) reported that, in the early 1990s, a democratic movement resurfaced and began to sweep through Africa. In response to democratic demands, the government focus and priorities included provisions to better social policies such as education and healthcare in the midst of the rising HIV/AIDS epidemic.

In 1996, a Medium Term Health Strategy was adopted that signified a shift from time-restricted, rigid projects to a more holistic approach that would better help develop the public health sector Cassels *et al.,* (1996). The idea for the National Health Insurance Scheme (NHIS) in Ghana was conceived to abolish the cash and carry system of health delivery (Ibrahim *et al.,* 2016).

Under the cash and carry system, the health need of an individual was only attended to after initial payment for the service was made (Ibrahim *et al.,* 2016). Even in cases when patients had been brought into the hospital on emergencies, it was required that money was paid at every point of service delivery.

In 2003, the scheme was passed into law. Under the law, there was the establishment of Ghana National Health Insurance Authority, which licenses, monitors and regulates the operation of health insurance schemes in Ghana. Like many countries in the world, Ghana's health insurance was fashioned out to meet specific needs of persons resident in Ghana (Singleton, 2006).

According to (NHIS Ghana), the National Health Insurance Scheme is a form of social intervention established by the Government of Ghana in the year 2003. The scheme provides equitable access and financial coverage for basic health care services to residents in Ghana. The objective of the NHIS is to secure the implementation of the national health insurance policy that ensures access to basic healthcare services to all residents of Ghana.

2.2.5 The Forms or Types of Health Insurance in Ghana

There are three main categories of health insurance in Ghana:

The first and most popular category is the District Mutual Health Insurance Scheme (DMHIS), which is operational in every district in Ghana. This is the public/non-commercial scheme and anyone resident in Ghana can register under this scheme. If you register in „District A" and move to „District B", you can transfer your insurance policy and still be covered in the new district. The district mutual health insurance scheme also covers people considered to be indigent (that is too poor, without a job and lacking the basic necessities of life to be able to afford insurance premiums).

Apart from the premium paid by members, the district mutual health insurance schemes receive regular funding from central government. This central government funding is drawn from the national health insurance fund. Every Ghanaian worker pays two-and-a-half percent of their social security contributions into this fund and

the VAT rate in Ghana also has a two-and-a-half percentage component that goes into the fund.

The second category of health insurance comprises the Private Commercial Health Insurance Schemes (PCHIS), operated by approved companies. You can just walk into any of such companies and buy the insurance for yourself and dependents. Commercial health insurance companies do not receive subsidy from the National Health Insurance Fund and they are required to pay a security deposit before they start operations.

The third category of health insurance is known as the Private Mutual Health Insurance Scheme (PMHIS). Under this, any group of people (say members of a church or social group) can come together and start contributing to cater for their health needs, providing for services approved by the governing council of the scheme. Private mutual health insurance schemes are not entitled to subsidy from the National Health Insurance Fund.

2.2.6 The Services Enjoyed by Subscribers under NHIS

Whatever forms of health insurance the subscriber signs up to entitles him/her to some minimum services accordingly. And these are:

i. **Out-patient services** – general and specialist consultation reviews, general and specialist diagnostic testing including; laboratory investigation, X-rays, ultrasound scanning, medicines on the NHIS Medicines list, surgical operations such as hernia repair and physiotherapy are all among out-patient services.

ii. **In-patient services** – General and specialist in patient care, diagnostic tests, medication-prescribed medicines on the NHIS medicines list, blood and blood

products, surgical operations, in patient physiotherapy, accommodation in the general ward and feeding (where available).

iii. **Oral health –** pain relief (tooth extraction, temporary incision and drainage), dental restoration (simple amalgam filling, temporary dressing).

iv. **Maternity care** – antenatal care, deliveries (normal and assisted), Caesarean section, post-natal care.

v. **Emergencies** – these refer to crises in health situations that demand urgent attention such as medical emergencies, surgical emergencies, pediatric emergencies, obstetric and gynecological emergencies and road traffic accidents.

2.2.7 The Services not under NHIS

i. Appliance and prostheses including optical aids, heart aids, orthopedic aids, dentures etc.

ii. Cosmetic surgeries and aesthetic treatment

iii. Anti-retroviral drugs for HIV

iv. Assisted Reproduction (e.g. artificial insemination) and gynecological hormone replacement therapy.

v. Echocardiography

vi. Photography

vii. Angiography

viii. Dialysis for chronic renal (kidney) failure

ix. Organ transplants

x. All drugs that are not listed on the NHIS list

xi. Heart and Brain Surgery other than those resulting from accidents

xii. Cancer treatment other than breast and cervical

xiii. Mortuary Services

xiv. Diagnosis and treatment abroad

xv. Medical examinations for purposes other than treatment in accredited health facilities (e.g. Visa application, Education, Institutional, Driving license etc.)

xvi. VIP ward (accommodation)

2.2.8 The Functions of the Various Departments

The Scheme Managers Department: This department is made up of the Managers of the local office of the scheme. Its functions are to supervise the daily activities of the scheme. It also serves as a mediatory body between the local office and other secretariats, health service providers and the Council. Decisions and actions concerning the local office are addressed by this department. The Scheme Manager who also acts as the Member-Secretary to the Board of Director is the head of the management at the local office.

The Accounting Department: This is where the accountant of the scheme is. All financial related issues (In-and-Out financial flows) of the local office are handled by this department financial decisions of the local office are taken with the mail consent of this unit.

The Claims Department: This is an investigative body that seeks to verify various claims by beneficiaries of scheme within the scheme‟s catchment area. Since the scheme entails different levels of contributions, subscribers with various claims would

have to go through some form of vetting or scrutiny and this is done by the claims department.

Publicity / Marketing Department: It takes care of information and the human relation component of the secretariat (interactions with visitors are done here). Information on history and progress of the scheme can be obtained from this department.

Data Entry Operations: This department takes and enters subscriber‟s records. Scanning of pictures and issuing of ID cards to subscribers are done here.

Reception / Secretary Section: This section is situated close to the main entrance of the secretariat and receives people before introduction to various departments within the local office**.**

2.2.9 The Health Financing Models

2.2.9.1 The Universal Health Coverage and Health Insurance Models in Some Asian Countries

The following is a review of models of health care financing implemented in Asian countries, selected on the basic potential comparability and therefore relevant, to Ghana.

The World Health Assembly called on governments to “develop their health systems, so that all people have access to services and do not suffer financial hardship paying for them.” The United Nations General Assembly also called on governments to “urgently and significantly scale-up efforts to accelerate the transition toward universal access to affordable and quality healthcare services” (Somanathan *et al.,* 2014). Universal Health Coverage (UHC) is defined as “a system in which everyone

in a society can get the healthcare services they need without incurring financial hardship" (Savedoff *et al.,* 2012). Countries have reached UHC using different approaches and varying health systems. However, there are three common characteristics for making progress towards UHC. First, there must be a political commitment to create regulations for expanding access to care, improving equity and pooling financial risks. Second, health expenditures need to be increased in order to purchase more health services for more people. Third, the share of health spending must be raised and pooled to avoid reliance on households" out-of-pocket payments (Savedoff *et al.,* 2012). The WHO Health Financing Strategy for the Asia Pacific Region (2010-2015) further developed the framework for countries to evaluate universal health coverage with four target indicators:

a. Total health expenditure should be at least 4-5% of the gross domestic product;
b. Out-of-pocket expenditures should not exceed 30-40% of total health spending;
c. Over 90% of the population is covered by prepayment and risk pooling schemes; and,
d. Close to 100% coverage of vulnerable populations with social assistance and safety-net programmes (Chua and Cheah, 2012). Based on the momentum in support of the objectives of universal health coverage (UHC), countries have adopted UHC as their national strategy worldwide and have made progress toward its goal of affordable access to needed and quality healthcare services. The finance model for health systems has important implications for the equity and efficiency of health care. Broadly, finance models should:

(i) Mobilize adequate financial resources for health care;

(ii) Manage and allocate the resources equitably and efficiently;

(iii) Promote the quality of health service delivery; and,

(iv) Protect people from financial risks due to health care costs.

To achieve these objectives, the health-financing model needs to include functions such as a sustainable funding mechanism (possibly through tax collection and/or health insurance premiums), effective collection systems for these, and have processes in place to ensure effective and efficient management of the financial fund. Managing the funds includes managing the costs of different risk groups (pooling), implementing processes for service purchasing, efficient allocation of funds to achieve cost-effectiveness in health outcomes, keeping costs of the health system at affordable levels for any given part of the population, and promoting quality and efficiency of service delivery (Ministry of Health, 2008; Ministry of Health, 2012). Health insurance systems require groups, either government, employers, businesses or households, to make contributions in advance of the costs caused by illness or service utilization. These pre-payments must enable the accumulation of a pool of funds from which all or part of the health care expenses can then be paid or reimbursed. Pooling is an essential component of any health insurance scheme to achieve the objectives of financial risk sharing and protecting households from catastrophic health care costs (Ministry of Health, 2008).

2.2.9.2 The Singapore

In Singapore, the healthcare financing system has been developed as a mixed financing system, which ensures all individuals access to elementary healthcare without financial hardship. This system consists involved to compulsorily contribute

from 7% to 9.5% of their monthly salary according to age. These compulsory savings earn interest and are tax exempt. The savings can only be withdrawn upon retirement. The medical saving fund can be used to pay for inpatient services, and certain outpatient services (Chia and Tsui, 2005; Ministry of Health, 2013). To support Medisave in terms of risk pooling and adequate funding, Medishield was established in 1990. Medishield is also managed by the CPF scheme to minimize administrative costs. The guidelines for Medishield aim to prevent the abuse of medical services and insurance in terms of over servicing and excessive demand. Those who want to participate in Medishield contribute their premiums to a medical savings account. The annual premium increases with age, those aged 1 to 20 years old contribute $50 and those aged between 86 and 90 contribute $1,190. Those aged over 90 are excluded from this scheme (Gill and Low, 2013). To supplement Medisave and Medishield, Medifund was established to help meet the medical services needs of the poor. Medifund is a last resort for a patient who cannot pay his/her medical expenses even after using subsidized care, Medisave and Medishield (Gill and Low, 2013). Given the advantages of the those layers of protection, Singapore has reached universal health coverage, defined as a system in which everyone in society can access health care services without paying high out-of-pocket expenditures (Savedoff *et al.,* 2012). Household out-of-pocket expenditures have been just 4.3% to 4.5% (Tan *et al.,* 2014).

2.2.9.3 The Malaysia

Yu *et al.,* (2011), reported that in confronting the increases in health care costs, Malaysia decided to introduce a new national health-financing scheme aimed at strengthening health financing to cope with current and future challenges. The new health insurance scheme (NHI) consists of a compulsory Employees Provident Fund (EPF) enrolling private business workers, self-employed and government employees.

The Social Security Organization (SOCSO) covers all working Malaysian citizens and their dependents. In 2004, the National Health Insurance Scheme was established in accordance with a community-rating model. The National Health Financing Authority, a part of the Ministry of Health, is charged with the administration of this scheme. The National Health Insurance Scheme is now called the National Health Financing Mechanism. Beneficiaries like public servants, the disabled, the elderly, pensioners, the unemployed and the poor will not have to make compulsory contributions to the scheme. Other household beneficiaries will have to pay compulsory community-rated premiums and co-payments when they use healthcare services (Sidorenko and Butler, 2007).

The NHI system pools contributions from five finance sources of direct taxes, indirect taxes, contributions to EPF and SOCSO, private insurance premiums and out-of-pocket payments. It is based on the philosophy that health problems are a shared responsibility and as such, the financial burden should be shared by the population based on the individuals‟ ability to pay. The underserved and vulnerable will be subsidized by the government‟s fund. Government employees and pensioners are also subsidized from government revenue. Insurance coverage is reported at 100%, but due to high out-of-pocket payments, the effective rate is suggested to be lower than this level (Tangcharoensathien *et al*., 2011). The NHI is intended to reduce pressure on the government to subsidize the increasing healthcare costs and citizens‟ out-of-pocket payments (Yu *et al.,* 2011). Based on the World Health Organization strategy for the Asia Pacific Region (2010-2015), Malaysia has achieved the outlined indicator of reducing out-of-pocket health payments, below 40% of the total national health expenditure (30.7%) (Chua and Cheah, 2012).

2.2.9.4 The China

In China, the health insurance system was developed during two different periods, before and after economic reform. Before the reform of the planned economy, most individuals were involved in some forms of health insurance. The old commune based cooperative medical scheme (CMS) was developed to cover agricultural workers with a coverage rate of 90% of the rural population, whilst the Laborer Insurance Scheme (LIS) covered state owned enterprise workers and the Government Insurance Scheme (GIS) covered civil servants and other government workers (Weiner *et al.,* 2009). After the move to a more market based economy from 1980 onwards, there were sharp reductions in health insurance coverage. In 2003, the proportion of the rural population covered by health insurance decreased to 20% due to agricultural de-collectivization leading to the collapse of CMS. The situation was similar in urban areas where there was a decline of health insurance coverage by LIS and GIS as the state owned enterprise (the backbone of LIS) came into financial difficulty.

During market-oriented reforms, health insurance coverage fell to 10% of the population and roughly, 900 million rural individuals could not access basic medical care (Wagstaff and Lindelow, 2008). To a certain extent, these inequities in health care access created political instability, which led China‟s government to respond by returning to prepayment-based health care financing mechanisms through large-scale reforms. In 1998, a social insurance scheme - the Urban Employee Basic Medical Insurance (BMI) - was launched. In 2006, it was estimated that 160 million workers and retirees were covered by BMI. It was expected that there would be 100% coverage for all working and non-working urban individuals by the end of 2010. For the rural population, the voluntary New Cooperative Medical Scheme (NCMS) was launched in 2006 and covered about 400 million informal-sector workers and

households with the expectation that coverage of all of the rural population would occur by 2008. By 2008, the proportion of the total Chinese population covered by various social health insurance schemes was 87%, including coverage under NCMS of 68% and under BMI of 19% (Qingyue and Shenglan, 2010). Public and private health care providers under NCMS and BMI are paid through a fee-for-service mechanism. Private health insurance regained ground during the period of economic reforms and is controlled by the Insurance Regulatory Commission. Most services provided by this kind of insurance scheme are supplemental to BMI and the NCMS. The proportion of the Chinese urban and rural populations involved in some form of private health insurance was 6% and 8% respectively. Beneficiaries began to rely on the private health insurance as a supplement to cover health services not covered by BMI and NCMS (Bhattacharjya and Sapra, 2008).

In 2010, the health insurance coverage rate, including public and private, was 87%. Health insurance schemes helped to gradually create an equitable financing model to provide people with financial protection for when they suffered from sickness. However, because of low premiums and high copayments, the financial protection was still limited. In 2010, China‟s per capita annual premium for NCMS was about 22 AUD, around ten times lower than the BMI scheme, and, the reimbursement rate for BMI and NCMS were 70% and 40% respectively. These differences in insurance premiums and reimbursements between urban and rural health insurance schemes lead to a difference in risk protection. Payment to providers for health care services is largely by fee-for-service mechanisms. Thus, there is an incentive for providers to over-service and over-prescribe and providers tend to supply the health services with high technology to increase revenue for health facilities. This leads to higher out-of-pocket health spending. As a result, it is expected that the implementation of broader

health insurance schemes needs to be paralleled with improvements in the quality of health service delivery and human resources. Li *et al.,* (2011), observed that, China has substantially improved health insurance coverage with the aim of increasing the community‟s access to health care services. However, in order to reach the universal coverage of health care, China‟s government needs to seriously take into account the positive implications of transformative policies such as the reduction of benefit packages among different health insurance schemes, transformation of the fee-for-service mechanism, changing the risk pooling level and integration of fragmented health insurance schemes and quality of health care delivery. Several issues have resulted in slow progress to universal health coverage in China. In principle, every person should be covered by current health insurance schemes; however, urban informal sector workers are often poor target groups who cannot afford the insurance premiums for the BMI scheme. In addition, adverse selection is another inevitable issue happening to voluntary enrolment under BMI and NCMS schemes. Apart from the issues of health insurance enrolment, the limited effect of financial risk protection is also a determinant influencing the progress towards universal health coverage (Li *et al.,* 2011).

2.2.9.5 The Thailand

Thailand has been an exemplar of universal health insurance in Asia, with almost all Thai citizens being covered through different insurance schemes. There are two public health insurance schemes; the Civil Service Medical Benefits Scheme (CSMBS) introduced in 1963 and the Social Security Scheme (SSS) introduced in 1990. The CSMBS, which was financed by taxes, covered about 6 million government‟s employees and their dependents. The SSS enrolled private workers (but not their dependents) or about 8 million people based on the equal premium contribution from

employees, employers and the government. The universal coverage (UC) scheme was introduced in 2001. This scheme is the largest insurance program, enrolling 47 million people. The Thai government established the 30 Baht health care scheme, which is fully funded by general taxes and covers the majority of the uninsured. The co-payment 30 Baht was cancelled in 2006 (Yiengprugsawan *et al.,* 2010; Li *et al.,* 2011). Apart from the public schemes, Thai citizens can participate in private insurance schemes to supplement the benefits from the public schemes. These schemes currently cover about 1.5 million people and the enrollees pay premiums directly to the insurance companies. Outpatient, inpatient and preventive health services were provided using a comprehensive benefit package standardized across UC, CSMBS and SSS. The payment methods differed between the types of services. A capitation was used to pay for outpatient services, while diagnostic-related groups (DRGs) were used to pay for inpatient services (Li *et al.,* 2011). Thailand achieved universal health coverage in 2002. The population coverage, which was protected by health insurance schemes, reached 98% (Tangcharoensathien *et al.,* 2011). The out-of-pocket expenditures decreased to less than 15% in 2010. Outpatient and inpatient visits increased about 50% and 78% respectively in 2011 as compared to 2003 (Tangcharoensathien *et al.,* 2014).

2.3 The Problems/ Challenges of Health Insurance

Even though NHIS is benefiting most Ghanaians, there are still challenges that face both subscribers and service providers.

The technical arrangements made by the scheme management may influence people"s perception of personal benefits. A number of schemes in the World Health Organization (WHO) study had addressed the issue of affordability. For instance in

the Nkoranza Scheme, the estimated cost of contributions varied from 5 percent to 10 percent of annual household budgets (Atim, 1998). It was recognized that such contributions could be a financial obstacle to membership. A variety of factors influence people‟s decision to join the schemes given the voluntary character of Community Health Insurance (CHI). Affordability of premiums or contributions is often mentioned as one of the main determinants of membership.

Although the NHIS is widely embraced by Ghanaians, the scheme is still bedeviled with some bottle necks that have to be removed to improve on the performance of the scheme (Boni, 2010). Another major challenge facing the NHIS is the management and payment of claims to health service providers, which is usually done through the District Mutual Health Insurance Schemes (Auditor General, 2012 and NHIA, 2013).

The Auditor-General reported some key challenges confronting the scheme in claims management and payments in 2012 such as:

i. Irregularities in the processing and payments of claims at the District Mutual Health Insurance Schemes (DMHIS).
ii. Delay in the payment of claims to health service providers under scheme by the DMHIS.

The irregularities in the processing of claims create the environment for fraudulent activities to occur in the payments of claims to service providers. In addition, the manual way of processing claims is a major contributing factor in the delay in payment of claims to service providers (Auditor General, 2012).

Dalinjong and Laar (2012) also reported that the delay in the payment of claims to the service providers hinders the smooth operations of these health facilities in the area of drug and non-drug procurements. According to Dalinjong and Laar (2010), the

delay in claims payments has a trickling effect on subscribers to the scheme in two ways:

i. Service providers are compelled to turn their attention to non-subscribers who are ready to pay cash for services. This causes non-subscribers to the scheme to spend less time in seeking health care as compared to scheme subscribers.
ii. Service providers compelled to issue prescription forms to subscribers to the scheme to buy drugs providers are also out of the facilities.

Adogla, 2013 revealed the following as some of the challenges subscribers to the scheme face at the premises of some of these service providers:

i. Charging of illegal fees and exploiting of patients.
ii. Unprofessional behaviours such as verbal abuse and undue delays.
iii. Referral of clients to some private medical health facilities that are not contracted to the scheme.
iv. Sale of drugs to clients with the excuse that these drugs are not covered by the scheme.
v. Use of unqualified staff by some private health facilities.

These unethical practices have made some Ghanaian lose confidence in the scheme. Hence, if not curbed, will go a long way to defeat the purpose of the scheme (Adogla, 2013). Reimbursement of funds to service providers constitutes about 80 percent of the operational funds of these service providers hence the delay in payment of claims is key a challenge which the NHIA is putting measures in place to overcome (NHIA, 2013). Adogla (2013) reported that the success of the NHIS does not depend solely on the NHIA but also the health service providers contracted to the scheme.

Darlinjong and Laar (2012) also reported that service providers claim the introduction of the NHIS has given some subscribers the leverage to frequent health facilities at the slightest ailment, which increases the workload of the health workers. The author revealed that some subscribers go as far as attempting to collect drugs for their friends and relatives who are not subscribers to the scheme. Some subscribers were also accused of not completing the treatment course given to them by one service provider before jumping to another service provider to begin another treatment course (NHIA, 2012).

2.3.1 The Achievements of Health Insurance in Ghana

In 1983, the government of many countries adopted a traditional International Monetary Fund (IMF) and World Bank economic recovery programme. Since a key component of the economic recovery programme was to reduce government expenditure to the barest minimum, the full burden of paying for health care was borne by patients. The public sector user fees for health care were raised significantly as part of structural adjustment policies and became known as „cash and carry". The aim of the user fees was to recover at least 15 percent of recurrent expenditure for quality improvements. The financial aims were achieved (Ministry of Health, 2001).

In the later part of the 1980"s, shortages of essential medicines and some supplies improved across many countries. However, these achievements were accompanied by inequities in financial access to basic and essential clinical services (Waddington and Enyimayew, 1990). Assensoh-Okyere and Dzator (1997) observed that costs of medicine alone accounted for over 60 percent of treatment of malaria, one of the commonest illnesses in Africa. As many people could not afford to pay the requisite fees at point of delivery to seek medical attention, they avoided going to hospitals and

health centers; instead, they engaged in self-medication or other cost-saving behaviours or practices. As a result, by 2003 some countries introduced and passed into law a National Health Insurance Scheme (NHIS) bill, designed to cover all their citizens who join the program (Wahab, 2008).

The aim of the health insurance scheme in Ghana is to enable the government achieve its set goal within the context of the Ghana Poverty Reduction Strategy (GPRS) and the Health sector Five Year Programme of Work, starting from 2002 to 2006. Specifically, it is to provide a more humane and a sustainable health financial mechanism that focuses on the poor. To this end, a policy document was developed with the objective of providing accessible, affordable and good quality service to all people living in Ghana and especially the poor and the most vulnerable in society (Appiah-Denkyira and Preker, 2007).

The policy makes it compulsory for residents in Ghana to belong to a scheme and hopes to achieve 10 percent in the first year rising to 30 percent within five years and 50 percent within 10 years. Government has elected to support the DMHIS to serve as a strategy to deliver its pro poor policy to the underprivileged segment of the society. The DHMIS is therefore a fusion of two concepts - the traditional Social Insurance Scheme for the formal sector workers and the traditional mutual health organization for the informal sector of the society. The mixed membership from both sides as well as the universality of its coverage is meant to provide a spirit of belongingness, solidarity and social responsibility (Appiah-Denkyira and Preker, 2005).

The unique design of the DHMIS is based on the principles of equity, risk equalization, cross subsidization, solidarity, quality care, efficiency in premium collection, community or subscriber ownership, partnership, reinsurance, and

sustainability. It is meant to be district- wide, managed locally by management teams and supported by a governing board to bring about best managerial practices, good governance and democracy. The schemes will be regulated by a National Health Insurance Council, a body formed under Act 650 to register, license and regulate health insurance schemes, and to accredit and monitor health care providers (public and private) operating under the scheme. This body is also responsible for the management of the National Health Insurance Funds into which the levy is deposited (Appiah-Denkyira and Preker, 2005).

Djan (2010) found out that, NHIS coverage in Ghana has shot up from 1.3 million people in 2005 to about 16 million in 2010 due to peoples" confidence in the scheme

According to NHIA chief executive officer (Mensah, 2013), the stake holders and service providers have been able to improve the NHIS in the following various ways;

- Innovative funding:
  - Earmarked fund – NHIL (2.5% VAT)
  - 2.5 % Social Security Contributions
  - Informal sector contributions
- Promotion of acceptability through community ownership using district based sub-schemes
- Non-partisan support
- Comprehensive credentialing system and post credentialing inspection
- Involvement of both public and private health care providers
- Clinical audit based on sampling for promotion of quality and cost containment
- Claims verification based on detailed and comprehensive review

- Instant issuance of ID Cards based on Bio-Data
- Revised NHIS Act 2012 (Act 852)

2.3.2 The roles and contributions of service providers in ensuring sustainability of NHIS in the district

The service providers encourage the people, particularly, pregnant women and children, through sensitization and public education to access the scheme. Moreover, the service providers assist any subscriber who happens to visit any public health center despite the inadequacy of available resources when attending to them on few occasions. Furthermore, the service providers have patience for people who attend hospital especially the aged.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter outlined the research procedures and methodology used for the study. Specific areas of discussion include the study design, study area map, research approach, methods and tools of the research. The research methodology was guided by the theoretical framework underlying the nature of the research problem; the study goal and objectives; the type of data needed; how data would be analyzed; interpreted and presented; the scope of the study; and the purpose of the study.

3.1 Study Area

The Central Tongu District was established by Legislative Instrument (LI, 20077) in February 2012 with Adidome as its capital. The district was part of the southern Volta districts that were first colonized by the Danes and later on transferred to the British and was administered as part of the Gold Coast, now Ghana. Central Tongu District (formerly North Tongu District) was, at the time of its establishment in 1989, known as Adidome District. The North Tongu district was again divided into the current Central Tongu and the new North Tongu districts. The Central Tongu shares boundaries with South Tongu, North Tongu, Akatsi South, Akatsi North, Ho West and Adaklu districts of the Volta Region, and Ada East District of the Greater Accra Region. The strategic location and its nearness to the Volta Regional capital, Ho and the National Capital Accra enhance marketing of agricultural produce and other economic product produced from the district. (Ghana statistical service, 2014).

Figure 3.1: Central Tongu District Map

Source: Ghana Statistical Service GSS

3.2 Population Size, Structure and Composition

The population of Central Tongu District according to the 2010 Population and Housing Census is 59,411 representing 2.8% of the region‟s total population. Females constitute 53.2 percent and males represent 46.8%. About 88% of the population resides in rural localities. The District has a sex ratio (number of males per 100

females) of 87.9. The District has a youthful population, with 38.7% of the population below 15 years. The total age dependency ratio for the District is 89.8. (Ghana statistical service, 2014).

3.3 Education

There are 68 public and 8 private primary schools, which are spread in the eight educational circuit areas of the district. The average teacher / pupil ratio in the public schools is 1:45. One key challenge is how to attract qualified teachers to communities, as many parts of the district are remote. Junior High Schools in the district number 47 public and five (5) private across the district. The teacher/pupil ratio at this level is not too different from the picture painted at the primary level i.e. 1:43. In these ratios, the advantage is skewed towards schools in urban and peri-urban communities. There are two (2) Senior High Schools in the district that serve the interest of the many qualified applicants from the Junior High Schools. (Ghana statistical service, 2014).

3.4 Health Care

The district has one hospital located in Adidome and other health facilities such as Mafi Kumase Health Post, Mafi Sasekpe Health Centre, Kpoviadzi Health Centre, Avedo CHPS Zone, Gidikpoe CHPS Zone, Agoe CHPS Zone, and Tove CHPS Zone. There is also a private clinic at Adidome by name Biodum Maternity which supplements health services at the district capital.

The Total Fertility Rate (TFR) for the District is 3.3. The General Fertility Rate (GFR) is 94.9 births per 1000 women aged 15-49 years, which is the fourth highest for the region. The Crude Birth Rate (CBR) is 23.2 per 1000 population. The Crude Death Rate (CDR) for the district is 9.9 per 1000. Majority of migrants (68.0%) living in the District were born elsewhere in the region in Ghana. For migrants born in

another region, those born in Eastern (20.5% form the majority followed by Greater Accra (17.6%) and Northern (14.7%) Regions (Ghana Statistical Service, 2014).

3.5 Study Design

Based on the objectives of the research, appropriate methodology was developed to collect data to satisfy the objectives of the research. The research plan is a cross sectional survey that adopt the mixed method approach. This method involves triangulating both quantitative and qualitative methods to collect and analyze data at the same time.

The quantitative part involves the use of structured questionnaires on heads of institutions. Most of the questionnaires were self-administered. The qualitative methods included the use of in-depth interviews with field workers and workers of health insurance and focus group discussions with caregivers. The face-to-face interviewing method is used to collect data from respondents who could not complete the questionnaire themselves. This is to ensure that respondents understand the questions and thus provide the type of information needed for the study. Appointment was booked with the heads of department, Scheme Manager and other staff members of the scheme.

Creswell (2003) supports the use of mixed method approach in social sciences, because the technique has become increasingly popular as a legitimate research technique. According to Neuman (2003), mixed method technique is the best method that should be used in a study. The rational for adopting the mixed method technique is based on the distinctive advantage it offers. It helps one gain better understanding of the phenomenon under study and helps complement the strength of qualitative and quantitative methods.

3.6 Study Population

The study population for the study includes the following group of people:

i. Beneficiaries (registered members of NHIS)
ii. Service Providers (assigned hospital and a clinic)
iii. Head of NHIS in Central Tongu District

Beneficiaries were involved in the study because they were the people benefiting from the services of NHIS. Their inclusion helped us know the challenges that were making it difficult for them to access NHIS easily. Service providers on the other hand play vital role in NHIS. Some of the roles played by service providers include providing health services in hospitals for patients and provision of drugs to NHIS beneficiaries. The involvement of NHIS service providers enriches the study. It helps the study know some of the challenges facing NHIS service providers in the district. Furthermore, the overall operation of NHIS in Central Tongu district is headed by a district manager. The engagement of the district Manager also helped unearth the challenges facing the smooth running of NHIS in the district.

3.7 Sample Size

According to GSS (2014), the Central Tongu District has a population of 59,411 and a sample size of 500 respondents were purposively selected for the study, 100 from each of five electoral areas: Bakpa Gafatsikofe electoral area (Atiglinyi-kofe, Bekpevie, Wegodo, Tsawodzi-kofe, Gafatsi-kofe, and Agortakpo), Dove electoral area (Old Bakpa, Mafi-Dugame, Bekpo and Aborme, Mafi-Zortikpo, Mafi-Kebegodo and Bakpa-Kebenu), Devime electoral area (Devime-Gbolofor, Devime-Wugodzi, Devime-Akorkorlife and Mafi-Dokpo). Also, Adidome electoral area (Adidome township and Kpogede including Avakpedome and Dekpoe which falls under

Avakpedome electoral area), Tsati electoral area (Adzorkoe, Aziegbor-kofe, Yawli-kofe, Dzogolo-kofe, Kpeglo-kofe and Kpoku-kofe and Mafi-Kumase electoral area (Kumase township, Mafi-Dzogadze electoral area: Dzogadze township and Mafi-Sasekpe electoral area: Sasekpe township) in the district. One hospital, private clinic, health facility and CHPS zone for each were also sampled (service providers). The head of NHIS in the Central Tongu District was interviewed. In addition, the data collection tool used demands that a sizeable sample size must be chosen to ensure quality response from the respondents. This is supported by a study by Farooq (2013) which indicates that interview schedule is best suited for small sample sizes.

3.8 Sampling Techniques

This study employed purposive sampling method to select respondents and simple random sampling technique in which each community in the district has equal and independent chance of being included in the sampling. This randomization was done using blind folded method in selecting the five towns.

3.9 Instruments and Methods of Data Collection

Questionnaires were administered to both the NHIS subscribers in the randomly selected towns and service providers in the Central Tongu District. Already existing published source of data in books, journals, magazines or newspapers was used as secondary data together with primary data where questionnaires administered to the respondents alongside with face-to-face interviews, which were also conducted to seek the opinions from respondents.

3.10 Methods of Data Analysis

Statistical Package for Social Sciences now modified to read Statistical Product and Service Solutions (SPSS) and probit regression model were used to analyze the data

that were collected. The National Health Insurance Scheme (NHIS) usage was the dependent variable while the independent variables are as age, gender, level of education, income level, distance and cost of service. The study adopted probit econometric model to analyze the factors influencing the use of health insurance. The choice of the probit model was due the dichotomous nature of the dependent variable as in „yes" or „no"nature of the dependent variable.

3.11 Ethical Considerations

Respondents were assured that they remain anonymous and that their identities would not be made known due to how information about their background"s values were required. Moreover, the study is to be as confidential as possible so, necessary precautionary measures were put in place. The research participants were duly informed about the main purpose of the study and were educated about all the aspects of the research. No respondent was made to answer the questionnaire forcibly.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter highlights the analysis and discussion of the results of the study. The chapter employed descriptive statistics and probit regression analysis in presenting the results obtained. The chapter is made up of various sections namely; descriptive analysis, probit regression on the factors that prevent people from accessing the National Health Insurance Scheme in the Central Tongu District and the challenges faced in accessing National Health Insurance Scheme.

4.1 Descriptive Analysis

This section deals with the demographic analysis of characteristics of respondents thus, individuals in the Central Tongu District who have subscribed to National Health Insurance Scheme. The demographic characteristics results are analyzed and presented in table 4.1 and table 4.2 discusses the economic characteristic such as employment status, occupation as well as income levels of respondents.

Table 4.1: Personal Information of Respondents

	Category	Frequency	Percentage
	Male	183	36.6
Gender	Female	317	63.4
	Total	**500**	**100**
	10-20years	90	18.0
	21-30 years	140	28.0
Age of respondents	31-40 years	107	21.40
	41-50 years	68	13.60
	51-60 years	30	6.0
	61 years and above	65	13.0
	Total	**500**	**100.0**
	No education	88	17.6
Education Level	Basic	210	42
	Secondary	112	22.4
	Tertiary	90	18
	Total	**500**	**100.0**
	Married	227	45.5
Marital Status	Single/divorced/widowed	273	54.6
	Total	500	100.0

Source: Authors field Survey 2020

The results from table above show that, respondents who fall between the ages of 21-30 years lead the age groups constituting 140 respondents out of 500. This represents 28.0% of the total population who answered the questionnaire. This is followed by age 31-40 years who were 107 representing 21.40%. Respondents whose ages are from 10-20 years were 90 representing 18%. Out of 500 respondents, individuals whose ages are from 41-50 years were 68 constituting 13.60% whiles individuals whose age is 61years and above were 65 representing 13%. Individuals whose age is from 51-60years were least represented with 30 constituting 6.0%. It can be deduce from the table that respondent whose age are from 21-30 years have more subscribers to the National Health Insurance Scheme in Central Tongu District.

Gender is another important demographic characteristics; the female category dominates the respondents, as they constitute 63.4% as compared to males of 36.6%.

Moreover, the educational level of the respondents is dominated by the basic school leavers representing 210 out of 500 respondents. This constitutes 42% and they are defined as the class that has access and obtain junior secondary school education. This is followed by individuals who have accessed and attained senior secondary education within the study area was 112 constituting 22.4%. Respondents who had obtain tertiary education and those with no education were least represented with 18% and 17.6% respectively.

Out of the 500 respondents who answered the questionnaire, individuals who are single/widowed/divorced were 273 representing 54.6% whiles individual who are married were 227 representing 45.5%.

4.2 Economic Characteristics of Respondents

This section discusses the economic characteristics of respondents. This includes employment status and income level of the respondents. This is illustrated in the table below:

Table 4.2: Economic Characteristics of Respondents

	Category	Frequency	Percentage
Employment status	Unemployed	151	**30.2**
	Employed	349	**69.8**
	Total	**500**	**100.0**
Income level	Below 100	241	**48.2**
	100-1000	185	**37**
	1100-2000	26	**5.2**
	2100-3000	17	**3.4**
	3100-4000	20	**4**
	4100-5000	11	**2.2**
	Total	**500**	**100.0**

Source: Authors field Survey 2020

From the table above, the employment status is made up of individuals who are employed and unemployed. Those who are employed were 349 out of 500 respondents constituting 69.8% whiles the unemployed were 151 representing 30.2%.

With regards to the income level of the respondents from Central Tongu District, respondents whose income level is below GHc 100 are dominant of about 241 out of 500 representing 48.2%. Individuals whose income level is between GHc 100-1000 were 185 representing 37% whiles respondent with GHc 1100-2000 income level were 26 representing 5.2%. Again, respondents whose income level is between GHc 2100-3000 were 17 out of 500 representing 3.4% whiles individuals with income level between GHc 3100-4000 were 20 representing 3.4%. The least represented income group were respondents with income level between GHc 4100-5000. They were 11 representing 2.2%.

4.3 National Health Insurance Scheme Usage

In this section, the study looks at whether or not the respondents own and access health centers with the national health insurance card within Central Tongu District.

Table 3 National Health Insurance card usage

	Category	Frequency	Percentage
NHIS subscription	No	39	7.8
	Yes	461	92.2
	Total	**500**	**100.0**

Authors field Survey 2020

The table above illustrates the number of respondents who have subscribed to national health insurance scheme and uses the card in accessing health care in the Central Tongu District. The results from the table show that out of 500 respondents who answered the questionnaire, 461 people representing 92.2% have subscribed and use

the NHIS card in accessing health in the central Tongu District whiles the remaining 39 respondents constituting 7.8% do not have the NHIS card. This means majority of the respondents in the district patronize NHIS in accessing the health care.

4.4 Challenges Involved in Accessing the National Health Insurance Scheme in the Central Tongu District

This section discusses the challenges individuals face in subscribing and accessing the national health insurance scheme with the central Tongu district.

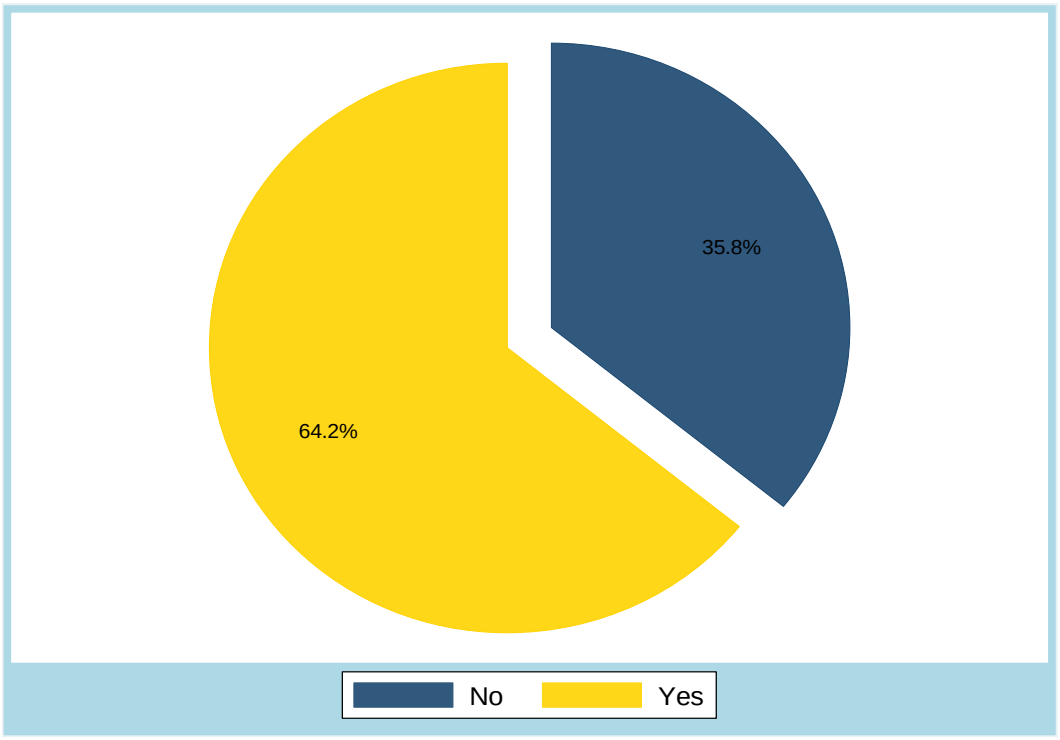

Figure 4.1: Challenges in accessing NHIS

The pie chart above illustrates the challenges respondents in central Tongu district face in accessing the national health insurance scheme. Out of 500 respondents who answered the questionnaire, it was found that, 321 individuals representing 64% indicated that they face problems in accessing national health insurance scheme whiles the remaining 179 respondents representing 35.8% indicated that, there are no problems in accessing the national health insurance scheme with the district. Some

respondents brought up some peculiar problems they face in using and accessing health centers with the national health insurance scheme.

One category of respondents indicated during the interview that „the health care officials do not pay much attention to you when you attend the clinic or hospital with the health insurance card.

Respondents in this group also made it clear that:

> *'the health insurance card does not cover a lot of medicines, it only cover paracetamol, motivite and other basic medicines which can be afforded by we the clients. It is very pathetic that the NHIS card does not cover some expensive medicine and services'*

Moreover, a group of respondents also opined that:

> *„though NHIS card helps a lot of pregnant women in terms of their consulting fee, folder taking and others, yet it does not cover major antibiotic drugs in addition to surgical operation and blood purchase. These sometimes make us lose precious lives of our dear ones'*

Last but not least, a group of the respondents also stated that

> *„I find it difficult in renewing my card when it expires since I cannot read and understand the digitization of the system via the mobile phone. This has made me abandoned the system to use the cash and carry system'*

4.5 Analysis of the Factors that Affect Individuals Using National Health Insurance Scheme in Central Tongu District

This section looks at the factors that affect individuals who use NHIS in central Tongu district. Employing probit model, the analysis was done using Stata (version 14.0) and the result is presented in the table below.

Table 4: Probit regression results for factors that affect individuals using National Health Insurance Scheme in Central Tongu District.

Health insurance Usage	Coefficients	Robust Std. Err.	Probability P>|Z|	Marginal Effect (dy/dx)
Ref (female)				
Male	-.0315829	.2110515	0.881	-.0028009
Ref (single/divorced/widowed)				
Married	-.0061732	.2124378	0.977	-.0005434
Ref (distance)				
Distance 1	-.0608251	.2268991	0.789	-.0054741
Distance 2	-.9380745	.2486773	0.000	-.1516151
Ref (not affordable)				
Affordable	.6592433	.2084761	0.002	.0694162
Ref (unemployed)				
Government worker	-.5430833	.2866968	0.058	-.0684626
Self employed	.2077892	.2349878	0.377	.0174781
Casual	.6782489	.3279525	0.039	.0441444
Ref (no education)				
Secondary education	-.7602755	.2274718	0.001	-.1014293
Tertiary education	.4352491	.3058938	0.155	.0297978
Cons	1.358913	.2174043	0.000	

Probit regression — Number of obs = 500; Wald chi2(10) = 37.02; Prob > chi2 = 0.0001

Log pseudo likelihood = -101.67308 — Pseudo R2 = 0.1623

Source: Computed by the author using Stata (14.0) corp.

The Probit model is significant at 1% since Prob>chi2 is 0.001 and there is about 16% variation of the dependent variable (health insurance card usage) is explained by the independent variables such as employment categories including government worker and casual, distance, affordability and secondary education.

From the table above, the results from the model shows that, employment status was categorized in government worker, casual worker and self-employed with unemployed as reference category is significant. This means that government workers and casual workers in the central Tongu district are significant at 10% and 5% respectively. The result further shows that, government workers have a negative relationship between health insurance usage and accessing health care whiles there exists a positive relationship between casual workers and health insurance usage in accessing health care. It is apparent that individuals who are employed in the government sector are less likely to use the NHIS to access health care whiles individuals in the casual work have a higher probability of using the NHIS in accessing health care. It is obvious that, if a person who is a government worker subscribes to NHIS, the probability of using the NHIS card to access health care fall about 6.9% (Marginal effect= -.0684626) and that of casual worker rises of about 4.4% (Marginal effect= .0441444) respectively.

Distance to nearest health center is another variable that was significant at 1% and has a negative coefficient. Using the lowest distance to the health center to be the base outcome, the result shows that, there is an indirect relationship between distance to the nearest health center and using health insurance in accessing health care in Central Tongu District. This means that, the far away the health center, the less likely people uses NHIS card to access health care in the District and the shorter the distance to the health center the more people use the NHIS card to access health care. This also means that distance between 6-10 km is significant and with this, the respondents reduce access to health care when the distance is as short as this 6-10 km; that is the probability of accessing health care when the distance is between 6-10km falls about 1.5% (marginal effect= -.151615).

Prospects of the scheme-cared was a dummy variable which indicates that either a person sees the NHIS subscription affordable or not. Using not affordable as a base outcome, the results show that affordability is significant at 1% and positive. This means that individuals who can afford the NHIS card access health care more than those who cannot afford it.

Education was also categorized into no education, basic education, secondary and tertiary education. Using no education as a base category, the study found secondary education to be statistically significant at 1% and negative. This means that individuals who have obtained secondary education are less likely to use NHIS in accessing health care as compared to those who have no education. The results show that, the probability of using the NHIS falls about 10% (marginal effects=-.1014293) for respondent who obtain secondary education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the results of the study as well as discusses the conclusions drawn based on the findings. It further gives the recommendations based on the findings discussed.

5.1 Summary

The summary of results is done based on the research questions of the study, which were stated as what are the challenges confronting clients in accessing the National Health Insurance scheme in the Central Tongu District? What are the prospects of the National Health Insurance scheme in the Central Tongu District and what factors affect individuals in using the NHIS for accessing health care. The Summary of findings is given below:

The results of the study show that, the introduction of NHIS in Central Tongu District has helped improve individuals‟ access to primary health care; that is, irrespective of one‟s education, employment status, distance and affordability, one can subscribe to NHIS in order to access basic health care within the district. The results further indicated that, education categories such as secondary level, employment status such as government worker and casual worker in addition to distance and affordability of NHIS card improve individuals access to primary health care within the Central Tongu District . NHIS subscription within the central Tongu district has helped and brought some sort relief to individuals in the district who obtain basic health care at an affordable cost.

- The data obtained from the respondents indicated that, about 92.2% of the respondents within the district have NHIS hence, used for accessing primary health care. The remaining 7.8% who did not have NHIS card have to use the cash and carry system when accessing primary health care within the district. This shows the central role of NHIS services in ensuring access to primary health care. The NHIS services have been a blessing to many households within the district to obtain basic health care at a reasonable rate in the partnered clinics and hospital with the district.

Despite the essential role played by the NHIS service in providing a platform for individuals to embark on basic health care, there are some challenges the customers face when using the service. Among the challenges are:

1. Inadequate attention paid to the NHIS subscribers when they attend health centers especially in the private health centers.
2. Inadequacy of the NHIS to cover expensive antibiotic drugs, surgical operation and blood purchase.
3. Difficulties in renewing the card when it expires. These challenges therefore were ranked based on the responds given by the respondents.

5.2 Conclusions

The study focused on the prospects and challenges of NHIS in accessing health care in the Central Tongu district of the Volta Region of Ghana. Using a sample size of 500 respondents, the study employed a probit regression estimation technique to analyze the results.

Accessing basic health care has been a primary target for every developing country, specifically in Ghana, where various governments have developed policy in attaining such goal. NHIS policy over the years is capable of growing the economy; improving lives in addition to strengthen global competition as far as the labor market is concern. The study found out that, NHIS subscription has the tendency of improving the health lives of people and it has also helped reduced the cash and carry system of obtaining basic health care in the country. The NHIS has made individuals either rich or poor, employed or unemployed, educated or not educated to access basic health care at an affordable cost. With the challenges obtained from the data, many suggestions were made by the respondents to help improve the usage of NHIS services in order to enhance efficiency. These include: educating the general public especially those in the Central Tongu district on the need to go by digitalization and how to renew the NHIS when it expires, the NHIS service to cover expensive antibiotic drugs, surgical operation and blood purchase and there should be an extension of the NHIS services to some private health centers that will help individuals in terms of emergencies.

5.3 Recommendations

With reference to the findings obtained from the study, the following recommendations are made:

1. The government of Ghana through the ministry of health should collaborate with telecommunication companies to extend their services to remote areas to allow easy access for registration and renewal of the NHIS cards.
2. In addition, the government of Ghana in collaboration with other health agencies should bring out policies in order to bring back on track some health workers who do not pay attention to individuals who comes to the health

centers with the NHIS to access basic primary health care. This will help them keep the workers on their toes to enhance efficiency.

- Again, the ministry of health can collaborate with some private health centers who accept the NHIS card in accessing basic health care to build more health centers in the Central Tongu District in order to help individuals who find it difficult to access health care due to distance problem.

5.4 Limitations of the Study

1. The study is limited in terms of time and financial constraints because, for a study of this nature, a considerable amount of time and money is needed to achieve such a target.
2. Some of the respondents were not willing to answer the questions and were left out.
3. Due to illiteracy, most of the respondents demanded money before attending to the questionnaire, as they did not know the importance of a research work.

5.5 Recommendations for Further Studies

The study mainly investigated the prospects and challenges of NHIS in Central Tongu district. It is recommended that future research should:

1. Expand the scope to other district within the Volta Region in order to find out the prospects and challenges of the NHIS services.
2. The subsequent research should focus on challenges faced by service providers vis-à-vis the use of health insurance scheme.
3. Another study should attend to challenges faced by subscribers with services providers.

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APPENDICES

APPENDIX 1

Probit regression result

```
. probit Health_insurance_card_usage male married distanc distan afford  government self casual SHS tert, vce(robust)

Iteration 0:   log pseudolikelihood = -121.37806
Iteration 1:   log pseudolikelihood = -102.96836
Iteration 2:   log pseudolikelihood = -101.67995
Iteration 3:   log pseudolikelihood = -101.67308
Iteration 4:   log pseudolikelihood = -101.67308

Probit regression                               Number of obs     =        497
                                                Wald chi2(10)     =      37.02
                                                Prob > chi2       =     0.0001
Log pseudolikelihood = -101.67308               Pseudo R2         =     0.1623
```

Health_insurance_card_usage	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
male	-.0315829	.2110515	-0.15	0.881	-.4452363	.3820704
married	-.0061732	.2124378	-0.03	0.977	-.4225435	.4101972
distanc	-.0608251	.2268991	-0.27	0.789	-.5055391	.3838889
distan	-.9380745	.2486773	-3.77	0.000	-1.425473	-.450676
afford	.6592433	.2084761	3.16	0.002	.2506376	1.067849
government	-.5430833	.2866968	-1.89	0.058	-1.104999	.018832
self	.2077892	.2349878	0.88	0.377	-.2527785	.6683568
casual	.6782489	.3279525	2.07	0.039	.0354737	1.321024
SHS	-.7602755	.2274718	-3.34	0.001	-1.206112	-.3144389
tert	.4352491	.3058938	1.42	0.155	-.1642917	1.03479
_cons	1.358913	.2174043	6.25	0.000	.9328087	1.785018

```
. mfx

Marginal effects after probit
      y  = Pr(Health_insurance_card_usage) (predict)
         =  .95896483
```

variable	dy/dx	Std. Err.	z	P>|z|	[	95% C.I.	]	X
male*	-.0028009	.01887	-0.15	0.882	-.039784	.034182		.356137
married*	-.0005434	.01871	-0.03	0.977	-.037214	.036127		.452716
distanc*	-.0054741	.02094	-0.26	0.794	-.046522	.035574		.287726
distan*	-.1516151	.05774	-2.63	0.009	-.264784	-.038446		.102616
afford*	.0694162	.024	2.89	0.004	.02238	.116452		.633803
govern~t*	-.0684626	.05005	-1.37	0.171	-.166567	.029642		.112676
self*	.0174781	.01834	0.95	0.341	-.018477	.053433		.366197
casual*	.0441444	.01482	2.98	0.003	.015094	.073195		.217304
SHS*	-.1014293	.04107	-2.47	0.014	-.181926	-.020932		.185111
tert*	.0297978	.01727	1.73	0.084	-.004046	.063642		.156942

(*) dy/dx is for discrete change of dummy variable from 0 to 1

.

Appendix 2

Questionnaire

UNIVERSITY OF EDUCATION, WINNEBA

INTRODUCTION

I am a student of UEW, undertaking a study on "Prospects and Challenges of NHIS in Central Tongu". I would therefore be very grateful if you could take a few minutes to answer some questions for me. This information will help us to know the problems, achievements and what we must do henceforth to make the scheme better off. All answers given will be kept confidential. Thanks for your cooperation.

APPENDIX A

QUESTIONNAIRE FOR SUBSCRIBERS OF NATIONAL HEALTH INSURANCE SCHEME

SECTION A

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Respondent number…….

Name of Town/Village of respondent…….

1. Age of Respondent

1= ☐ 10-20 years

2= ☐ 21-30 years

3= ☐ 31-40 years

4= ☐ 41-50years

5= ☐ 51-60 years

6= ☐ 61 years and above

2. Status of respondent

1= ☐ Head 2= ☐ Spouse 3= ☐ Child 99= ☐ Others

3. Sex of respondent 0 = ☐ Male 1 = ☐ Female

4. Marital status of respondent

1= ☐ Married 2= ☐ Single 3= ☐ Divorced 4= ☐ Separated 5= ☐ Widowed

5. What is your highest educational level?

1= ☐ Primary

2= ☐ Middle school/JSS/JHS/"A"level

3= ☐ Secondary/ SSS/SHS/GCE/O"Level/A"Level

4 = ☐ Technical/Vocational/Secretarial

5= ☐ Tertiary

6= ☐ No Education

6. For how many years now have you completed your last education?

1= ☐ 1-5 2= ☐ 6-10 3= ☐ 11-15 4= ☐ 16-20 5= ☐ 21-25 6= ☐ 26-30 99= ☐ Others

7. Employment status of respondent.

1= ☐ Government worker

2= ☐ Self employed

3= ☐ Unemployed

99= ☐ Others

8. How much do you earn monthly in Ghana Cedi (GHc)?

1= ☐ 100.00 - 1,000.00

2= ☐ 1,100.00 - 2,000.00

3= ☐ 2,100.00- 3,000.00

4= ☐ 3,100.00 - 4,000.00

5= ☐ 4,100.00 - 5,000.00

99= ☐ Others

SECTION B

PROSPECTS OF NATIONAL HEALTH INSURANCE SCHEME

9. How often do you access health care?

1=☐ Weekly 2= ☐ Monthly 3=☐ Quarterly 4=☐ Yearly 99=☐ Others

10. Did you pay any fees for which you demanded for a receipt and you were not given?

0 = ☐ No 1 =☐ Yes 99=☐ N/A

11. How long (years) have you been accessing health insurance?

1=☐1-5 2= ☐6-10 3= ☐11-15 4= ☐16-20 5= ☐21-25

12. Does your registration with the scheme cover all family members under your care?

0= ☐ No 1= ☐ Yes

13. Do you find the scheme relevant in terms of health care provision?

0=☐ No 1= ☐ Yes

14. If yes to question 13, please indicate or list how you deem the scheme relevant?

a.....

b.....

c.....

15. Do you find the scheme affordable/ are you able to renew your membership with the scheme regularly?

0 = ☐ No 1 =☐ Yes

16. Do you think the scheme should continue to exist as health insurance policy?

0 = ☐ No 1 =☐ Yes

17. If yes to question 16, how will you rate the scheme?

1= ☐ Excellent 2=☐ Very good 3=☐ Good 4=☐ Poor

SECTION C

CHALLENGES OF NATIONAL HEALTH INSURANCE SCHEME

20. Do you usually encounter any problems in the course of renewing /accessing your card?

0= ☐ No 1 = ☐ Yes

21. If yes to question 20, please indicate the nature of the problems? Tick those that are applied to you.

a. Long queues during card renewal.
b. Inability to renew NHIS card early due to financial constraint.
c. Inadequate drugs given
d. Poor attitude of health service providers.
e. ……. (Others, indicate)

22. At the OPD, how will you rate the treatment you receive from the service providers?

1= ☐ Excellent 2 = ☐ Very good 3 = ☐ Good 4 = ☐ Poor

23. If you answer poor to question 22, please list the reasons for your claim

a.....

b.....

c.....

d.....

24. At the pharmacy/drug collection joint, how will you rate the treatment you receive from the service providers?

1= ☐ Excellent 2 = ☐ Very good 3 = ☐ Good 4 = ☐ Poor

25. If you answer poor to question 24, please indicate your reasons for the claim.

a.....

b.....

c.....

d.....

26. Have you ever been asked to pay for a medical service or drug that is not covered by the scheme?

0= ☐ No 1= ☐ Yes

27. If you answer yes to question 26, please what will you suggest to accommodate this problem?

a.....

.....

c.....

28. What is your perception or observation about the NHIS in the Central Tongu district?

a.....

b.....

c.....

d.....

29. What is the distance from your house to the nearest health center (in kilometers) ?

1= ☐ 1-5 2=☐ 6-10 3=☐ 11-15 4= ☐ 16-20 5= ☐ 21-25 99= ☐ Others

30. By what means do you access the health care?

1= ☐ Vehicle 2=☐ Motor bike 3= ☐ Bicycle 4=☐ Foot 99=☐ Others

Any comment?

……
……
……

INTERVIEW GUIDE FOR SERVICE PROVIDERS OF NATIONAL HEALTH INSURANCE SCHEME

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1. Sex: ☐ Male ☐ Female

2. Age:.....

3. Occupation: ☐ Civil/Public servant ☐ Paramedic

4. Marital Status: 1=☐ Single ☐ Married ☐= Divorced ☐ 4= Separated

5. Educational Background:

1= Junior High School/Middle School

2= Senior High School/ Secondary School/ A Level

3= Diploma (Polytechnic/Teacher/Nursing Training)

4= University/ Professional Equivalent

5= Postgraduate Degree

PROSPECTS/CHALLENGES

6. How has the NHIS contributed in the health care delivery in the district?

a……

b……

7. Do the clients you serve appreciate /enjoy accessing the scheme? 0=☐ No 1=☐ Yes

8. If you indicate yes to question 7, please show how they express their appreciation

a……

b……

c……

d……

9. Do you think the Government can do more to improve on the scheme for effective health care delivery?

0=☐ No 1 ☐ Yes

10. What do you think the Government can do to improve on the scheme?

a……

b……

c……

d……

11. What challenges do you face with clients in providing services to them? Please list them

a……

b……

c……

d……

12. How do you think the Government can intervene to improve on service provided for clients? Please list them

a……

b……

c……

13. What measures do you think stakeholders should be put in place to make the NHIS sustainable?

a……

b……

Any comment

.....
.....
.....

INTERVIEW GUIDE FOR NATIONAL HEALTH INSURANCE SCHEME MANAGEMENT IN THE CENTRAL TONGU DISTRICT

1. How would you rate community awareness of the existence of the scheme?
a……

b……

2. What are some of the strategies that have been adopted to create more awareness of the existence of the scheme?

a.....

b.....

c.....

3. What are the significant achievements of the scheme in the district?

a.....

b.....

c.....

4. What measures have been put in place to ensure sustainability of the scheme?

a.....

b.....

5. What has been the District Assembly's contribution to the implementation of the NHIS?

a.....

b……

6. What challenges do you face with clients in providing services to them?
a……

b……

7. What challenges do you face with service providers?

a……

b……

Any other comment

……