ENSIGN COLLEGE OF PUBLIC HEALTH, KPONG,
EASTERN REGION, GHANA

IMPACT OF THE NATIONAL HEALTH INSURANCE SCHEME ON HEALTH CARE QUALITY AND ACCESS IN ASITEY SUB-MUNICIPAL OF LOWER MANYA KROBO MUNICIPALITY

BY
SETH AMOQUANDOH
147100017

A Thesis submitted to the Department of Community Health in the Faculty of Public Health in partial fulfilment of the requirements for the degree

MASTER OF PUBLIC HEALTH

JUNE 2016

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SUPERVISOR: STEPHEN MANORTEY, PHD

JUNE 2016

DECLARATION

I, Seth Amoquandoh, declare that this submission is my own work towards the MPH and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

Signed

Date

Stephen Manortey, PhD (Supervisor)

Signed

Date

Dr. Christopher N. Tetteh (Dean, ECOPH)

Signed

Date

DEDICATION

This work is entirely dedicated to my parents (Samuel Amoquandoh and Justina Amoquandoh) and siblings (Emmanuel Amoquandoh, Rebecca Amoquandoh, Cecilia Amoquandoh, Benjamin Amoquandoh and Josephine Amoquandoh).

ACKNOWLEDGEMENT

The foremost acknowledgement is unto my Eternal Heavenly Father, Lord Jesus Christ and Comforter, The Holy Spirit. Their love and care have sufficiently sustained me all through these two years.

I acknowledge the immense support I have received from my parents, siblings, extended family and church.

I acknowledge the priceless support I have received from my supervisor, Dr. Stephen Manortey and his wife, Mrs. Christiana Manortey.

I specially acknowledge Mr. Francis Adjei and Mrs. Sarah Adjei for their love and generosity extended to me.

I acknowledge every support I have received in connection with this MPH degree, not forgetting the kind support from Lower Manya Krobo Municipal Health Directorate.

DEFINITION OF TERMS

1. NHIS SUBSCRIPTION- For the purpose of clarity and understanding, NHIS subscription in this study refers to both NHIS accredited health provider and individual subscription unto NHIS for health care coverage.
2. Quality healthcare in this study is measured as healthcare given by trained medical personnel consistent with nursing and medical standards.
3. Access is measured as affordability and time spent with medical personnel in receiving treatment.

ABBREVIATION/ACRONYMS

1. NHIS-National Health Insurance Scheme
2. IGF-Internally Generated Funds
3. CHPS-Community-based Health Planning and Services
4. GHC- Ghanaian Cedis
5. OPD-Out Patient Department
6. WHO- World Health Organisation

ABSTRACT

Health care financing in Ghana has seen several changes since independence in 1957. Initially, central government used tax resource to finance all public sector health care services making it free for patients at public health care facilities.

Due to economic stagnation during the early 1970s, the then government and subsequent ones could no longer maintain the tax-based health care financing system giving rise to substantial adverse impact on the health system and healthcare seeking behaviour of the citizenry. This development resulted in a situation which became known as "Cash and Carry"- a system where patients were made to pay for full cost of drugs and other medical consumables out of pocket whenever they visited any public health facility. Government was now responsible for other costs including consultations, salaries and emoluments for doctors, nurses and other healthcare workers in public health facilities.

The country's health care financing again saw another change in 2003, this time it was implementation of National Health Insurance Scheme (NHIS) to assist subscribed residents in paying for the cost of health care services and also protect them against high cost of basic health care. In so doing, the NHIS seeks to improve access to quality basic health care in health facilities in the country for all residents.

It has now been well over a decade since the commencement of NHIS' operations, and this study has been conducted to assess its impact on health care quality and access among residents in Asitey sub-municipal of Lower Manya Krobo Municipality.

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CHAPTER ONE

INTRODUCTION

1.1 Background Information

Seeking health care ties hand-in-hand with making commensurate payment for the care, this refers to health care financing. Healthcare financing is paying for healthcare services and there are several means for making payment for healthcare services. They include government interventions such as Medicaid and Medicare, out-of-pocket payment, insurance policies and donations. Health care financing goes far back in history, this is how the picture appears from varied perspectives.

In 1798, the US government established a marine service hospital and required owners of merchant ships to contribute 20 cents a month into a sickness fund for each seaman in their employ (Anon 2014). In fact, the basic principle of individuals pooling their resources in order to spread their economic risks can be traced far back as the so-called funeral societies of ancient Greece. Originally established to pay members' funeral costs, the societies ultimately came to have a variety of social and relief functions. Similarly, medieval craft guilds, forerunners of modern labor unions, often established welfare funds to assist sick and needy members. As the industrial revolution gathered momentum in the 19th century, a number of labor unions and individual employees required that workers join relief funds, many of which eventually came under government regulation.
In addition to the previous principle of pooling resources to spread economic risks, the idea that government should share some of the responsibility for health care can be traced as far back as Greece and its city states where citizens enjoyed the services of tax-

supported public physicians. Centuries later, the first broad-gauged compulsory health insurance law was enacted by the state of Prussia (*most part of today Germany except Bavaria, Bremen and Hamburg*)(Sudahl 2015) in 1854, 29 years before Germany was united under Chancellor Otto von Bismarck. The Chancellor was thus able to draw upon this precedent in 1883 when he persuaded the German Reichstag to extend compulsory health insurance to workers throughout the German nation. When Bismarck's program proved highly successful, it soon spread to other European countries, notably the UK, and eventually expanded into the sample chapter from health economics comprehensive system of worker protection that is known today as social insurance.

In 1911 David Lloyd George, UK Chancellor of the Exchequer convinced parliament to pass the National Health Insurance Act, which provided a cash payment in the event of maternity or disability and medical services if a worker became ill(Anon 2014). Other countries, including Austria, Hungary, Norway, Russia, and the Netherlands, also took the same steps through 1912. In addition, other European countries, including Sweden in 1891, Denmark in 1892, and France in 1910, and Switzerland in 1912, subsidized mutual benefit societies that workers had established among themselves. Meanwhile, during this same period of time the USA did not take any action to subsidize voluntary funds or make sickness insurance mandatory, because the federal government thought this responsibility belonged to the states. The states, in turn, thought this function was the responsibility of private and voluntary programs. Thus, the national debate in the USA as to how best to protect American citizens against the costs of ill health has not concluded.

While all of these have gone on, Ghana has had its unique picture too, of the same subject matter. Healthcare financing in Ghana has travelled a long winding road, right from the period when medical care was virtually free, through to the period we had the 'Cash and Carry' system, to the current health insurance system of healthcare financing. Following the attainment of independence, the government of Ghana switched to tax-based financing and made all public sector health services free (Allotey 2012). However, private sector health care was paid for by the individuals who accessed their services. Ghana's tax revenue dwindled due to economic stagnation during the early 1970s. As a result the then government and subsequent ones could not support the tax-based health financing system and this had adverse impacts on the health sector. In 1983, the PNDC government adopted an IMF (International Monetary Fund) and World Bank sponsored economic recovery program. Owing to the economic recovery program, the cost of health care services in most public health institutions were significantly raised, giving birth to a system that became known as the 'cash and carry'.

With the "Cash and Carry" system, patients were made to pay for the full cost of drugs and some medical consumables out of pocket whenever they visited any public health institution, while the state paid for other costs including consultations, salaries and emoluments for doctors, nurses and other healthcare workers in state hospitals. It was realized that people went to hospital only when they were very sick and that they had monetary challenges paying for cost of care. In fact this system of payment arguably constrained a lot of people from accessing healthcare except when they were in dire circumstances. This phenomenon left many health care seekers unprotected against

financial risk in accessing health care services in the various health facilities (Manortey S. 2013).

To improve access to healthcare particularly for the under privileged, the uncomfortable effect of 'Cash and Carry' system was mitigated by implementation of the National Health Insurance Scheme (NHIS). Health insurance is the type of insurance that covers an insured individual's medical and surgical expenses. Depending on the type of coverage, either the insured pays the full costs out-of-pocket for services and medications received at a health facility and later gets reimbursed, or the insurer makes payments directly to the provider. Health insurance policy, like many auto insurance policies, calls for a premium that subscribers must pay first before the insurance takes effect. There are also situations where patients must pay a flat fee or a fixed percentage of the reminder of the bill, called co-pay (UnitedHealthOne 2012).

The Ghanaian government in 2003 implemented the National Health Insurance Scheme (NHIS), with the goal to assist citizens and residents pay for cost of health care services. The foundation was laid between 1996 and 2000, with some pilot projects in the Dangme West District in the Greater Accra Region and Nkoranza District in the Brong Ahafo Region. It was implemented with a statutory enactment; The National Health Insurance Act, 2003 (Act 650) (NHIS 2016). With the NHIS, individuals aged 18 to 70 years pay a minimum annual premium and they receive medical care almost free of charge at point-of-service. This premium is renewable yearly. Indigents, elderly above 70 years, children under 18 years whose parents had enrolled, pregnant women and social security

pensioners fall within premium exemption group, they do not pay premiums to access medical care (NHIS 2016).

The scheme also has an aim of instilling a culture of early health care-seeking behavior among citizens and residents, and discourage the practice where some delay in seeking medical attention on grounds of affordability. In practice, Ghana's NHIS incorporates elements of universal coverage and social health insurance. It is a relatively affordable health insurance coverage for all citizens and residents. The scheme is funded through tax levied on goods and services, subscriber's premium, social security deductions, funds from central government and returns from investment (NHIS 2016).

Well over a decade of introduction, the National Health Insurance Authority (NHIA), the body that manages the insurance scheme reported of a subscriber base of 10.54million as at November 2015, representing 39% of the country's given population (Survey 2014), aside their mention of financial risk protection against high cost of basic health care for its subscribers.

This research work was designed to assess the impact of NHIS subscription on healthcare quality and access in Asitey sub-municipal of Lower Manya Krobo Municipality. The impact of NHIS subscription as mentioned in this study refers to the quality in healthcare services and access to quality healthcare services resulting from health facility's NHIS accreditation and resident's subscription unto NHIS.

1.2 Problem Statement

Ghana has practiced varied health care financing systems since independence and in 2003 the government implemented a National Health Insurance Scheme (NHIS) to assist subscribed residents in paying for cost of healthcare services, thereby giving improved access to quality basic health care and also protect them against high cost of basic health care.

It has been a decade and over since the commencement of NHIS' operations, and this study has been conducted to assess its impact on healthcare quality and access among residents in Asitey sub-municipal of Lower Manya Krobo Municipality.

1.3 Rationale of Study

There seems to be no known study done to assess the impact of the NHIS since its inception in the study area. Findings of this study will help inform the health leadership in the Lower Manya Krobo Municipal of the impact of the scheme on the residents in the Asitey sub-municipal. It will also contribute immensely to the knowledge of science.

1.4 Hypothesis

Subscription unto NHIS is improving quality of basic health care and access among residents of Asitey Sub-municipal in Lower Manya Krobo Municipal.

1.5 Research Questions

Is NHIS improving health care quality and access among residents of Asitey Sub-municipal in Lower Manya Krobo Municipal?

1.6 General Objective

The general objective of this study has been to assess the impact of the NHIS subscription on health care quality and access in Asitey sub-municipal.

1.7 Specific Objectives

The specific objectives are to;

- investigate whether patients are served by trained medical personnel consistent with progressive standards of nursing and medical practice.
- assess patients perception on the quality of care offered them.
- assess the coverage and satisfaction with timelines of health care services in Asitey sub-municipal.

1.8 Profile of Study Area

Asitey Sub-Municipal is one of six sub-municipal divisions within the Lower Manya Krobo Municipal Health Directorate. It has a population size of 5347, the least populated among the six sub-municipal divisions within the directorate. It consists of 23 communities in its catchment area. (Joyce Adjei 2015) Asitey sub-municipal has one health centre and one functional Community-Based Health Planning Services (CHPS) compound with six and two staff strength respectively.

The communities in the Asitey Sub-Municipal are largely farming communities (Joyce Adjei 2015). As a result most of them are literally deserted on Mondays to Thursdays during farming seasons when the farmers have left to work on their farms.

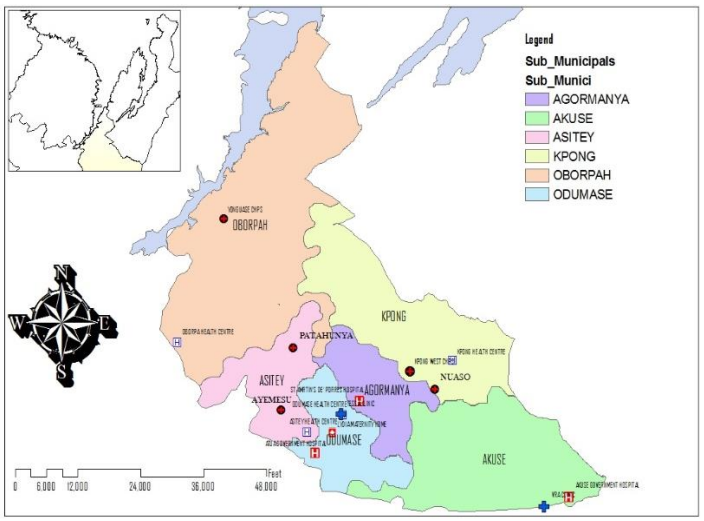

FIG. 1.1: Map of the Lower Manya Krobo Municipal showing Asitey sub-municipal(LMKMHD 2015)

1.9 Scope of Study

Precisely, this study has assessed the impact of Ghana's National Health Insurance Scheme on health care quality and access in the Asitey Sub-Municipal of Lower Manya Krobo Municipal.

1.10 Organisation of Report

The study has six chapters, Chapter One broadly has with it the introduction, background information, problem statement, rationale, hypothesis, research questions, objectives, profile of study area, scope, and organization of this thesis.

Chapter Two is a review of a range of related literature which are of relevance to this study. They largely are published research works relating to health insurance.

Chapter Three largely focuses on elements of methodology which includes research design, data collection and sampling techniques, study population, study variables, pre-

testing of research instruments, data analysis, ethical consideration, assumptions and limitations of study.

In Chapter Four, the study findings have been presented and thoroughly discussed in relation to the study objectives, research question and hypothesis in Chapter Five.

Finally in Chapter Six, the conclusions and recommendations have been presented.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter is a review of selected relevant literature on health care financing in the broad sense, health insurance in particular, the role of health insurance in the health care system and its influence on healthcare quality and access.

Healthcare Financing

Healthcare financing is the *"function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system… the purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care"*(WHO 2008).

Healthcare financing as explained above is central to a health system's capacity to sustain and advance the essential interest of healthcare seekers. For example, no medicines would be available and no health promotion activities can take place without adequate funds.

Healthcare financing comes from a broad spectrum of sources categorized as public, private and external(Beso 2012). The public sources of healthcare financing are taxes and revenues accrued by the central government and premiums paid into national health insurance schemes, private sources of healthcare financing are voluntary payments made into private interventions intended to cater for the health needs of contributors and external sources refer to financial aids which come through bilateral arrangements and

international nongovernmental organizations. In simple terms, the sources of healthcare financing are central government budget allocation from taxes, health insurance premiums and donor aids.

Another source of healthcare financing is literal out-of-pocket-payment(Neun 2003). This kind of healthcare financing is rather disadvantageous as it exposes healthcare seekers to high financial risk and limit their access to quality health even in times when it is needed most(Spaan et al. 2012a)

Health Insurance

Health insurance is one of several means for financing healthcare. In health insurance terminologies, *service provider* refers to health facilities such as clinic and hospital. The *Insured* is a person who receives the benefit of healthcare coverage after a premium has prior been paid. *Premium* is the cost of healthcare insurance coverage and *insurer* refers to the insurance company that pays for healthcare the insured person receives(Christian Nordqvist 2012).

Like other forms of insurance products, an arrangement is made between the insurer and insured. The insured then pays a premium such that in occurrence of an agreed upon event (Sickness/Injury) the insurer makes payment in interest of the insured per their contract.

Health insurance is an insurance product that pays for the cost of an insured person's medical and surgical expenses. It could be public or private(Christian Nordqvist 2012). Private health insurance simply refers to health insurance provided by a private insurer, in all private health insurance the insured is required to pay direct premium. This is not

the case in the kinds of public health insurance. Public health insurance is a kind of insurance coverage provided by the state and funded with taxes making it free for citizens such as the National Health Service practiced in the United Kingdom(NHS 2016). Other examples of public health insurance is Medicare, a national federal insurance program for people aged 65+ years as well as disabled people, and Medicaid which is funded jointly by the federal government and individual states, both are practiced in the USA(Christian Nordqvist 2012) . State Children's Health Insurance Program (SCHIP) is another public health insurance particularly for children and families who cannot afford private insurance, but to not qualify for Medicaid. There are also TRICARE and the Veterans Health Administration, all being public health insurance programs in the USA.

There is still another kind of public health insurance such as the one practiced in Ghana(NHIS 2016) which requires a relatively minimal premium from a category of its subscribers.

Depending on the type of health insurance coverage, particularly the private ones either the insured pays for cost of healthcare out-of-pocket and is reimbursed later by the insurer (*this kind is mostly practiced as incentives for employees in some organisations*), or the insurer makes payment directly to the provider on behalf of the insured. There is also another arrangement called co-pay. In this arrangement, the insured pays a fixed percentage of their health bill and the remainder is borne by the insurer (UnitedHealthOne 2012).

The advantage of health insurance is that, it takes away the direct responsibility of making payment for one's healthcare in the event of sickness or injury as this responsibility is shifted to the insurer who absorbs such responsibility. It also takes away the fear of accessing health care when the need arises, knowing that the insurer per earlier arrangement will fully or partly absorb cost incurred.

Health insurance models begun emerging in Sub-Sahara Africa in the 1980s (Nuhu 2012).These health insurance programs were small sized and community-based with voluntary membership. Some were initiated by health facilities with cover for few beneficiaries. The WHO points out that in some instances, some of these schemes cover a whole nation or many communities and include up to about one million and more beneficiaries. They were mostly established outside of the formal employment sector (WHO, 2003).

In the second half of the 1980s, health insurance schemes for the first time emerged in the Democratic Republic of Congo, formerly Zaire. Again, in the 1990s health insurance schemes sprouted in countries such as Benin, Mali and Kenya. In Ghana, it originated from the search for new sources of financing healthcare by mission hospitals (Nuhu 2012). The viability of health insurance has largely depended on several factors such as management of the schemes, full community participation, efficient regulation, and quality of healthcare service served by providers.

The Role of Health Insurance

Health insurance plays a very significant role in funding health care throughout the world (Witter & Garshong 2009) and is an important program in the healthcare delivery system that permits individuals to seek healthcare at a relatively moderate cost (Enthoven 1978). It has also influenced several factors in health systems such as mobilization of resource, financial protection for health care seekers and positive service utilization(Spaan et al. 2012b).

It is worthy of mention that access to quality health care is essential to healthy living and this is directly linked with efficient health insurance program which contributes to a vibrant health system(Witter & Garshong 2009).

In a quest to appropriately situate health insurance in the health system concept for its better appreciation, several scientific studies have been done around the world touching on varied elements including resource pooling to fund health care (Carrin et al. 2005), financial risk protection particularly for persons within the low income brackets(Ranson 2002), improved access to health care (Bailey et al. 2016) as well as the impact of health insurance on quality of health care(Delavallade 2016).

Quality health care among other constituents include care which is consistent with progressive nursing and medical practice standards (Institute 2016) and health insurance has contributed to same in some international territories(Petersen 2006). Also, access to quality health care refers to gaining entry into a health care facility where needed services are provided to prevent disease and disability, as well as detection and treatment of health conditions within reasonably time space (Phinational 2007). At the international

level, there is strong evidence of increased access to care for several persons because of health insurance(Sommers et al. 2013), particularly in reference to timely care(Taubman et al. 2014).

Within the African region, health insurance has substantially paid its due to the progress of several health systems in areas including resource mobilization, financial protection, and service utilization, with emphasis on protection against the detrimental effects of out of pocket user fees payment at the point of service, (Spaan et al. 2012b). There is however a weak evidence pointing to the effect of health insurance on quality of healthcare and this particularly is an area this very study has paid attention to, that is assessing the impact of Ghana's NHIS on health care quality and its access in the defined study site.

At the local level, Ghana, several studies have also been done in relation to health insurance. One such study assessed factors influencing the utilization of the NHIS in typical rural settings (Manortey S. 2013), while another study pointed out that Social capital (human relations) motivates individuals to enrol in health insurance (Fenenga et al. 2015a).

Health insurance coverage has also been a factor for inappropriate use of hospitals (Siu et al. 1986), at the same time others have not had access to needed care due to non-subscription status (Kataoka et al. 2002) and this study has been conducted in Asitey sub-municipal of Lower Manya Krobo Municipal Health Directorate and has assessed the impact of the country's NHIS on quality and access to health care services.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This research work was conducted using cross-sectional study to assess the impact of NHIS on quality health care and access to quality health care among residents of the Asitey Sub-Municipal of Lower Manya Krobo Municipal Health Directorate. The cross-sectional design is both ethically safe to administer and very cost effective in studying large population, it has allowed for successful comparison of the study variables at the same time.

Study questionnaires were administered to two hundred respondents who are residents of communities within Asitey sub-municipal, in addition to two key informant interviews with the medical officers in charge of the respective health facilities in Asitey sub-municipal (one health centre and one CHPS compound).

3.2 Data Collection Tools

This research work used two separate questionnaires to collect the needed information on the field. One set of questionnaire (resident questionnaire) was administered to residents in communities of Asitey sub-municipal and the second set (health worker questionnaire) was administered to two health officers. Both questionnaires were used to collect personal data and data on the study variables.

3.3 Study Population

The Asitey sub-municipal is one of six sub-municipal divisions within the Lower Manya Krobo Municipal Health Directorate. The sub-municipal has a population of 5,347, from a statistical calculation based on the 2010 National Population and Housing Census. Relatively, it is the least populated among the six sub-municipals and has 23 communities (Joyce Adjei 2015). The health facilities in the sub-municipal are those already stated (one Health Centre, one CHIPS compound) and drug stores.

The communities of Asitey Sub-Municipal are largely farming communities. And most communities are virtually empty in the farming season from Mondays to Thursdays when farmers go to work on their farms.

3.4 Study Variables

The study variables are NHIS subscription on one hand and healthcare quality together with its access on another hand. NHIS subscription is the independent variable been used as a factor to measure healthcare quality and access. Healthcare quality and access are dependent variables measured in association with NHIS subscription. Herein, the study has assessed the impact of the NHIS subscription on healthcare quality and access.

3.5 Sampling

The sample size used for this study at a 95% confidence level and with a 7% margin of error has been calculated to be 190. However, making room for a 5% attrition rate brings the total to about 200 respondents.

Six communities (three sub-urban and three rural) were conveniently sampled from the twenty-three communities. It was in these six communities that the resident questionnaires were administered and the health worker questionnaires were administered to the two health officers in charge of the respective health facilities in Asitey sub-municipal (one Health Centre, one CHIPS compound). The six communities are Salosi, Adome, Asitey, Ayemesu Dornu, Ayemesu Ako and Akosombo Korm.

3.6 Pre-testing

Pre-testing was done in Odumasi, a community in Odumasi Sub-Municipal which is adjacent to Asitey Sub-Municipal in the same Lower Manya Krobo Municipal Health Directorate and bears similar demographic characteristics as the selected communities.

The pre-testing allowed for the making of essential corrections in some wording of items in the questionnaire. The corrections made the questionnaire administration smooth and easy.

3.7 Data Handling

Upon completion of data collection, they were interred into Microsoft Access data screen, cleaned and then converted into a Stata dataset for statistical analysis.

3.8 Data Analysis

All quantitative data analyses were done using STATA statistical software package (StataCorp. 2007. *Stata Statistical Software: Release* 14. StataCorp LP, College Station,

TX, USA). Qualitative data analyses were done using the qualitative data analysis process namely; sorting, open coding, axial coding and selective coding with healthcare quality and access as major themes.

3.9 Ethical Consideration

Ethical clearance was given by the Ethics Board of Ensign College of Public Health, Kpong.

3.10 Limitations of Study

It was observed during the resident questionnaire administration that respondents had more to say regarding their experience in receiving health care at the health facilities, yet due to the close-ended nature of the research instrument all such responses could not be captured. A similar study may consider adopting an open-ended instrument or a mixed method.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter contains presentation of tables and descriptions on findings based on socio-demographic and key study variables in relation to the study objectives.

As earlier stated in the previous chapter, this study employed both quantitative (study questionnaires administered to two hundred respondents who are residents of six communities within Asitey sub-municipal) and qualitative (two respective key informant interviews with the medical officers in charge of the two health facilities in Asitey Sub-municipal) methods of data collection.

4.2 Qualitative Data Findings

This segment presents the findings of structured questionnaire interviews with the two female nurses, who respectively are in charge of the two health facilities in Asitey sub-municipal. This interview was also in relation to NHIS subscription and its impact on quality health care and access to quality healthcare. The health facilities are Asitey Health Centre and Ayemesu CHPS located in Asitey and Ayemesu Ako respectively. Both facilities are NHIS accredited.

4.2.1 NHIS and Quality Health Care

The indicator used to measure quality, as mentioned in the specific objective is healthcare given by trained medical personnel consistent with progressive standards of nursing and medical practice (Phinational 2007). It so happened that, the two health facilities in Asitey Sub-municipal are NHIS accredited providers on grounds that, they each have trained and competent medical personnel, working space, and basic essential working equipment.

The findings also shown that NHIS ensures treatment and drug prescription strictly match diagnosis (*meaning there is diagnosis before treatment*) before claims are paid to the providers. The scheme also ensures that claim forms are filled thoroughly, clearly and signed. This finding indicates that NHIS is positively impacting health care quality in Asitey sub-municipal.

NHIS has brought increase in internally generated funds for the facilities, helping them to procure and replenish essential working materials to keep the good work going, the findings revealed.

Although claim payment delays too much and the health officers deem it unsatisfactory, they continue to serve subscribers receiving them with smiles at no extra fee *(patients however pay minimal fee termed folder fee).*

4.2.2 NHIS and Access to quality health care

On access, NHIS has made health care more accessible to subscribers. This has helped improve the general health care seeking behaviors of the residents as they now report at the earliest possible time to the facilities for any change in their health conditions. It has also increase voluntary check-up attendance among subscribers. OPD attendance has particularly increased due to NHIS.

However, NHIS subscribers and non- subscribers are served on first-come first-serve basis. There is no time differentiation in whom is first served.

The services patronized are OPD services, maternity and family planning services at both facilities. The finding have been summarized in the figure below.

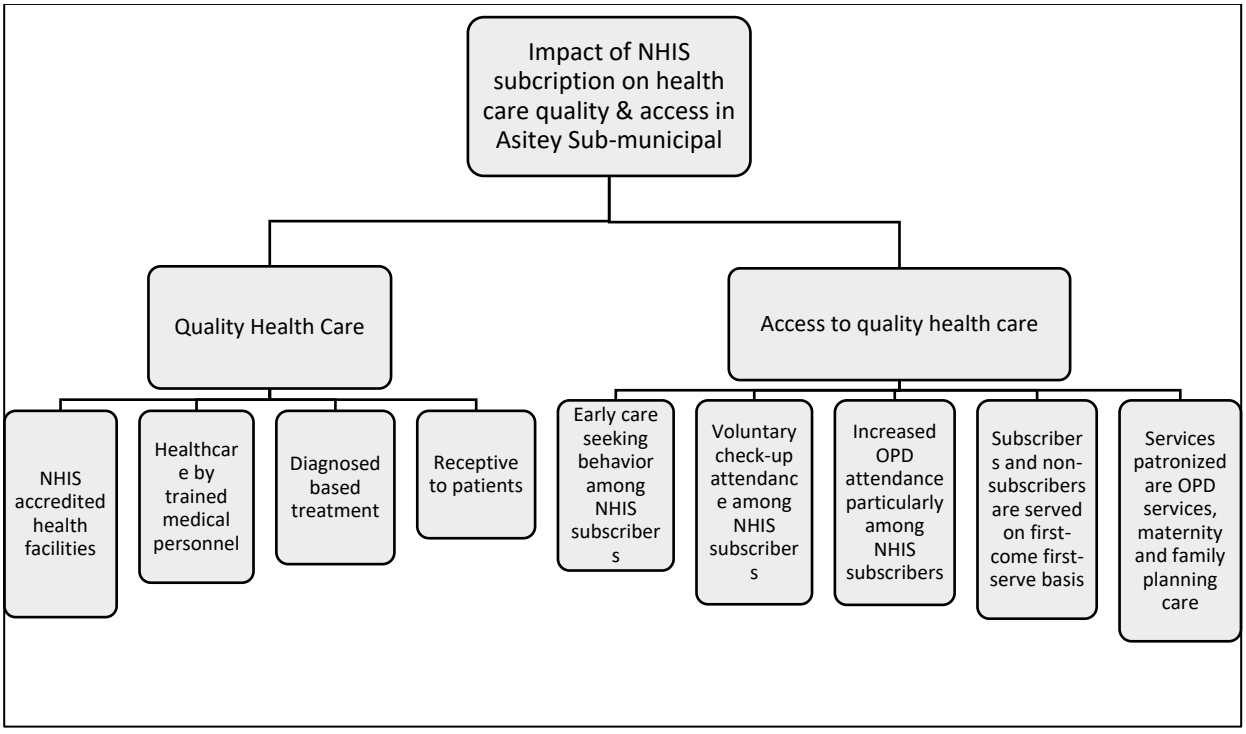

Figure 4.1. ***Qualitative finding of the impact of NHIS subscription on health care quality & access in Asitey Sub-municipal*****.**

4.3 Quantitative Data Findings

The quantitative data findings herein presented are as follows; univariate analysis, bivariate analysis on quality health care, bivariate analysis on access to quality health care.

4.3.1 Univariate Analysis

The table below is the presentation of univariate analysis on socio- demographic variables of respondents. The variables are sex, age group, communities, locality, NHIS subscription status and length of subscription.

TABLE 1. *Socio-demographic variables of respondents*

Variable	*n*	*%*
SEX		
Male	61	30.50
Female	139	69.50
AGE GROUP (yrs.)		
18-30	86	43.00
31-60	71	35.50
61+	43	21.50
COMMUNITIES		
Salosi	52	26.00
Adome	41	20.50
Asitey	42	21.00
Ayemesu Dornu	18	9.00
Ayemesu Ako	29	14.50
Akosombo Korm	18	9.00
LOCALITY		
Semi-Urban	135	67.50
Rural	65	32.50
NHIS SUBSCRIPTION STATUS		
Yes	170	85.00
No	30	15.00
DURATION OF SUBSCRIPTION		

< 1yr	36	18.00
1-5yrs	72	36.00
6-10yrs	41	20.50
11yrs+	21	10.50
None	30	15.00
SATIFACTION WITH NHIS		
Yes	183	91.50
No	17	8.50

There were sixty-one male respondents constituting 30.50% and one hundred, thirty-nine female respondents constituting 69.50%.

The age distribution of the respondents ranged from 18 years to well above 61 years. In fact one respondent was 101 years old. These individual ages have been grouped as displayed in the table.

It happened that 67.50% of this study's respondents lived in semi-urban communities and 32.50% lived in rural communities. Of these respondents, 85% were subscribed unto NHIS with time periods ranging from 6 months to 13 years. 54% of the subscribed-respondents have been subscribed for period ranging from 6 months to 5years, the remaining representing the none-subscribed and those subscribed 6 years and more.

4.3.2 Bivariate Analysis on Quality Health Care

The variables of this study have been NHIS subscription, quality health care and access to quality health care. And assessment of the impact of NHIS on quality health care and access to health quality care has been guided by study objectives.

The indicator for quality health care has earlier been explained as health care given by trained medical personnel consistent with progressive standards of nursing and medical practice (Institute 2016), which is predominantly treatment based on diagnosis.

The table below is the presentation of bivariate analysis on key study variables using chi squared to test association to NHIS subscription. The variables are diagnosed treatment, medical personnel-patient interaction and patient satisfaction with health care in relation to NHIS subscription.

Table 2. *Bivariate analysis on association between key study variables on quality health care and NHIS subscription*

No	Variable	NHIS subscription status		
		YES n (%)	NO n (%)	p-value
1	Diagnosed treatment			
	Yes	135(79.41)	24 (80)	0.94
	No	35(20.59)	6(20)	
2	Medical officer listens to patient			
	Yes	169(99.41)	30(100.00)	0.70
	No	1(0.59)	0(0.00)	
3	Medical officer allows patient to ask question on health condition			
	Yes	166(97.65)	30(100)	0.40
	No	4(2.35)	0(0.00)	
4	Patient satisfied with care given			
	Yes	154(90.59)	29(96.67)	0.27
	No	16(9.41)	1(3.33)	

The p-value for each of the four separate key variables measured against NHIS subscription status to find their association turns out statistically insignificant. This implies that there is no association between NHIS subscription status and receiving diagnosed treatment, having a medical officer listen to a patient or allowing patient to ask question on health condition, a patient's satisfaction with care given and having a medical Officer to be receptive.

This further means that, the medical personnel are providing care consistent with progressive standards of nursing and medical practice to all patients regardless of their NHIS subscription status. Quality care is given to both NHIS subscribed and non-subscribed patients in Asitey sub-municipal.

Table 3. *Bivariate analysis on association between key study variable on access to quality health care and NHIS subscription*

Variable	NHIS subscription status		
	Yes n (%)	No n (%)	P-value
Patient's response on being served in time			
Yes	74(43.53)	9(30.00)	0.20
No	96(56.47)	21(70.00)	

4.3.3 Bivariate Analysis on Access to Quality Health Care

The second arm of the study objective which has to do with access to quality health care has been explained as time spent in receiving health care service.

The table above is the presentation of bivariate analysis on a key study variable using chi squared to test association with the study objective. The variable is time spent in receiving care in relation to NHIS subscription.

Again the p-value for the key variable measured against NHIS subscription status to find its association turns out statistically insignificant. This implies that there is no association between NHIS subscription status and being served in time (an indicator of access). The medical personnel are providing care to both NHIS subscribed and non-subscribed patients in Asitey sub-municipal with no time differentiation.

The NHIS mentions that part of its mandate is offering financial risk protection against high cost of basic health care for its subscribers, this has been stated under the background

section of chapter one. The findings of the data collected on this has been displayed below;

Table 4. *Financial risk protection against high cost of basic health care*

Additional payment in Ghanaian Cedis	Payment in Ghanaian Cedis					
	1-10	11-30	31-50	51+	None	Total
No	0	0	0	0	116	116
Yes	61	7	4	12	0	84
Total						200

170 (85%) of this study's respondents were subscribed unto NHIS. Out of this number, 84 (49.4%) responded that additional money was taken from them when they visited the health facility to receive health care. Out of the 84 NHIS subscribed respondents, 61 (73%) responded that the monies taken from them at the health facility ranged between 1 and 10 GHC. This means that indeed subscription unto NHIS gives financial risk protection against high cost of basic health care to NHIS subscribers in Asitey sub-municipal.

4.4 Triangulation of qualitative data and quantitative data findings

Triangulation is a means in research by which credibility and harmony is achieved among the results of separate data collected on similar study variables (Fenenga et al. 2015a). This is usually done using one of two options (Taverner 2013). The first option is done by using separate data collection methods (interview, observation and questionnaire) on a given study. This is what has been done in this study, both quantitative (questionnaire for residents) and qualitative (structured interviews with health personnel) method have

been used to collect data in the study to measure *the impact of NHIS on health care quality and access in Asitey sub-municipal.*

The second option is using separate researchers to conduct a similar study. Triangulation is done with the understanding that, if multiple means arrive at the same or similar findings and conclusion, there is then greater likelihood of that conclusion being credible.

The table below is the triangulation of the findings from both qualitative and quantitative methods used in this study.

Table 5. *Triangulation of qualitative and quantitative data findings*

Qualitative data findings	Quantitative data findings	Triangulation (Harmony)
	Quality health care	
Qualitative data points out to quality health care indicators, ascribed to NHIS subscription; • *NHIS accredited health facilities* • *Healthcare by trained medical personnel* • *Diagnosed based treatment* • *Receptive to patients*	Key variables chi squared tested to NHIS subscription to find association turned out with statistically insignificant p-values. Inferring that a patient receiving quality health care bothers not on their NHIS subscription.	The key variables; diagnosed treatment, medical personnel-patient interaction and patient satisfaction with health care were chi squared tested to NHIS subscription to find association and the p-value for each of the five variables turned out statistically insignificant. While the qualitative data points to quality health care owing to NHIS subscription, the quantitative data points out that this quality health care applies to both NHIS subscribed and non-subscribed patients in Asitey sub-municipal. This is however the advantage of qualitative data over quantitative data, it's richer(Taverner 2013) and spells out details.

Access to quality health care		
Qualitative data points out access to quality health care indicators, ascribed to NHIS subscription; • *Early care seeking behavior among NHIS subscribers* • *Voluntary check-up attendance among NHIS subscribers* • *Increased OPD attendance particularly among NHIS subscribers* • *Subscribers and non-subscribers are served on first-come first-serve basis*	Key variable chi squared tested to NHIS subscription to find association turned out with statistically insignificant p-value (0.20). Inferring that there is no time differentiation in when a patient is served, whether or not they are NHIS subscribed. This is rightly pointed out in the qualitative column.	Both data findings clearly points access to quality health care particularly among the NHIS subscribed residents in Asitey sub-municipal.

CHAPTER FIVE

DISCUSSION

The goal of the NHIS has been to offer quality basic health care for all residents in Ghana and access to quality basic health care services to all persons covered by the scheme. (NHIS 2016) This goal has necessitated several other research studies into varied elements in connection with the NHIS. One of such studies researched into the role of social capital in people's motives and their decision to subscribe unto the NHIS (Fenenga et al. 2015b). The purpose of this study, as all similar others has been to assess the merits of the scheme and also explore areas the scheme needs correction and improvement.

To this end, this study has explored by means of survey and interview assessment, the impact of NHIS subscription on healthcare quality and access among residents of Asitey municipal in the Lower Manya Krobo Municipality. The study begun with the hypothesis that NHIS is improving health care quality and access among residents of Asitey.

The broad objective of assessing the impact of NHIS subscription on health care quality and access was then expressed in simple terms what quality health care meant and this has been explained earlier as health care served by trained medical personnel which is consistent with progressive standards of nursing and medical practice. The quality arm of the objective also sought to assess respondents' perception on the quality of care offered them. Access to quality health care has also been explained as affordability of basic health care services and time spent in receiving them.

As is the procedure with every research work, data was collected on essential variables to reach the stated objective. The data collection in this study was done using both quantitative and qualitative methods. In the case of collecting data on quality health care

under the quantitative method, the variables of interest were diagnosed treatment, medical personnel-patient interaction and patient satisfaction with health care in relation to NHIS subscription. The variable of interest for access to quality healthcare was time spent in receiving care in relation to NHIS subscription. These were the indicators (variables) used to measure the outcome of quality health care and access to quality health care in quantitative method.

In the qualitative method, a structured interview was conducted using an open ended questionnaire. This gave room for the nurses who were the respondents in this case to express themselves regarding how NHIS subscription has impacted quality in health care and its access among the residents of Asitey sub-municipal.

The findings from the data of both data collection methods as shown in the triangulation (see table 5) portrays uniformity and cogency. It is as follows;

a. In relation to quality health care, NHIS subscription has resulted in healthcare given by trained medical personnel using diagnosed based treatment. NHIS has achieved this by means of its accreditation process. The findings however show that this quality health care owing to NHIS subscription (the accredited provider status of the health facilities) is not reserved for only NHIS subscribed patients. A patient who goes to a health facility in Asitey sub-municipal does not necessarily have to be NHIS subscribed patient in order to receive quality health care. Again the medical personnel are receptive to all patients which also constitute quality health care (Health 2015) as defined in this study(See section 4.3.2 and Fig. 2) (Morris & Bailey 2014)

b. Regarding access to quality health care, the findings indicate that NHIS subscription has brought about early care seeking behavior and voluntary check-up attendance among subscribed patients. Also OPD attendance has increased particularly among subscribed patients, meaning that NHIS subscription makes basic health care affordable. However, subscribed and non-subscribed patients are served on first-come first-served basis, there is no time differentiation in whom is first served.

In the face of these findings therefore, the hypothesis that NHIS subscription is improving health care quality and access among the residents is upheld. The upholding of this study's hypotheses based on its findings further strengthens the scientific knowledge as portrayed by earlier studies (Delavallade 2016) (Bailey et al. 2016) that health insurance contributes to quality health care and access. It has earlier been pointed out that health insurance contributes to a vibrant health system(Witter & Garshong 2009) and this is one example of how it does.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

There is a high prevalence of NHIS subscription among residents of Asitey sub-municipal inferring from the findings, 85% of this study's respondents were subscribed unto NHIS with time periods ranging from 6 months to 13 years. This is a positive phenomenon as the qualitative findings have indicated that NHIS subscription leads to greater healthcare access. The only exception is that NHIS subscribed and non-subscribed patients are served on first-come first-serve basis with no time differentiation.

Respectively, 67.50% and 32.50% of the respondents lived in semi-urban and rural communities and to have 85% of them registered unto NHIS is a positive development. Implying that the NHIS healthcare financing program is receiving acceptance among the Ghanaian citizenry.

The findings summarized in figure 2 and table 5 indicate that NHIS subscription is improving health care quality and access among residents of Asitey Sub-municipal in Lower Manya Krobo Municipality.

Again table 4 indicates that indeed subscription unto NHIS gives financial risk protection against high cost of basic health care as stated by the scheme (NHIS 2016). 61 (73%) out of the 84 NHIS subscribed respondents who expressed making additional payment, responded that the extra monies taken from them at the health facility ranged between 1

and 10 GHC. This is partly related to the delayed claim payment by NHIS to service providers (see section 4.2.1).

6.2 Recommendations

Subsequent researchers on this or similar topic may consider adopting an open-ended data collection instrument or a mixed method. It was observed during the resident questionnaire administration that respondents had more to say regarding their experience in receiving health care at the health facilities, yet due to the close-ended nature of the research instrument all such responses could not be captured.

The findings herein contained points out that NHIS subscription is improving health care quality and access, authorities of NHIS should educate the Ghanaian citizenry and more particularly residents on the benefits of the scheme and encourage them to register. Also, just as it was pointed out by the nurses in the qualitative interview, the delayed claim payment is negatively affecting NHIS' attained scores. It has earlier been stated in this document (see section 4.2.1) that due to this phenomenon, the health facilities are now making minimal charges termed *folder fee* on all patients who report for medical care. The NHIS should make every effort to pay claims promptly, this will empower the service providers to intensify the good work they are already doing and also redeem the image of the NHIS.

The NHIS may also consider charging premiums based on health risk of subscribers to minimize and possibly eliminate abuse of the scheme (Allotey 2012).

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APPENDICES

Appendix 1: Resident questionnaire

THE IMPACT OF THE NATIONAL HEALTH INSURANCE SCHEME ON QUALITY HEALTH CARE AND ACCESS TO QUALITY HEALTH CARE IN ASITEY SUB-MUNICIPAL OF LOWER MANYA KROBO MUNICIPAL HEALTH DIRECTORATE

Questionnaire No: …….. Date: / / 2016

Respondent must be resident in Asitey Sub-municipal for at least six months.

PERSONAL DATA	
Name of Community	
How long have you lived in this community?	
Strata#	
House#	
Sex of Respondent	☐ Male ☐ Female
Age (YRS)	
Subscribed unto NHIS	☐ Yes ☐ No

Resident

l) Other; _____

1. How many years/months have you been subscribed to NHIS?

_____

2. Which of these services are you able to patronize at the health facility? *circle all that applies.*
   a) Medical practitioner visit/ consultation
   b) Laboratory test
   c) Blood transfusion
   d) Prescription drugs
   e) Mental-health care
   f) Dental care
   g) Maternity care
   h) Eye care
   i) Family planning services
   j) Emergency care
   k) Room and board

Q3 & Q4 for NHIS subscribers only

3. Do you make additional payment to receive any of these services?
   a) Yes
   b) No

4. If yes, how much extra payment do you make on average?

   GHC _____

5. How long does it take you to get served when you visit the health facility for care?

_____

1

6. How welcoming are the health workers when you visit for care at the health facility?
   a) Friendly, nice or polite
   b) Hostile, insensitive or careless

7. Are you satisfied with the overall care you receive at the health facility?
   a) Yes
   b) No

8. Will you recommend NHIS subscription to family members, friends or neighbors?
   a) Yes
   b) No

9. Where is your first point of call for health care need?

   _____

10. Why do you call at this place?

    _____

    _____

    _____

11. Do you receive treatment based on diagnosis when you visit for care at the health facility?
    a) Yes
    b) No

12. Does the doctor/health officer spend time to listen to your illnesses?
    a) Yes
    b) No

13. Does the doctor/health officer allow you to ask questions about your health conditions?
    a) Yes
    b) No

14. Does it take long for you to get treatment to your health condition?
    a) Yes
    b) No

15. How long has it been since you last visited the health facility?

    _____

Thanks for your time and participation in this study.

Appendix 2: Health Worker Questionnaire

THE IMPACT OF THE NATIONAL HEALTH INSURANCE SCHEME ON QUALITY HEALTH CARE AND ACCESS TO QUALITY HEALTH CARE IN ASITEY SUB-MUNICIPAL OF LOWER MANYA KROBO MUNICIPAL HEALTH DIRECTORATE

Questionnaire No: …….. Date: / / 2016

Respondent must be a health worker in Asitey Sub-municipal for at least six months.

PERSONAL DATA	
Name of Community	
Name of Facility	
Sex of Respondent	☐ Male ☐ Female
Number of Years Working in the Facility	
NHIS Accredited Provider	☐ Yes ☐ No

Health Worker

1. Has NHIS brought any improvements into the health care delivery system?

   a) Yes
   b) No
   c) Do not know

2. If yes, may you please state some examples of these improvements?

   1……
   ……
   ……

   2……
   ……
   ……

   3……
   ……
   ……

   4……
   ……
   ……

   5……
   ……
   ……

   6……
   ……
   ……

3. In your understanding, what provisions qualified your facility for NHIS accreditation?

   ……
   ……
   ……
   ……
   ……
   ……

4. What criteria does NHIS look out for in order for you to process your claim?

   ……
   ……
   ……
   ……

1

……
……..

5. How many weeks/months does it take to get your claim fully processed/paid?

_____

6. What is your level of satisfaction with the NHIS claim process?

……
……
……
……
……
……

7. Has this situation translate into better health care services for patients?
   a) Yes
   b) No

9. May you please state some examples of these better health care services for patients?

1……..

2……

3……

4……

5……

6……

10. In your understanding/observation, does NHIS subscription influence the health care seeking behavior of patients?
    a) Yes
    b) No

11. In what ways does NHIS subscription influence the health care seeking behavior of patient?

1……..

2……

3……

4……

5……

6……

12. What time differentiation exist between when NHIS subscribers are served compared to non- subscribers?

……
……
……
……
……
……

13. Which health care services are mostly patronized by NHIS subscribed patients?

1……..

2……

3……

4……

5……

6……

7……

Thanks for your time and participation in this study.