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DEPARTMENT OF HEALTH POLICY, MANAGEMENT AND ECONOMICS

EXPLORING ALTERNATIVE SOURCES OF HEALTH CARE FINANCING IN GHANA: A CASE STUDY IN THE ASANTE AKIM NORTH DISTRICT

BY:

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JUNE, 2019

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUTE STUDIES, KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER IN PUBLIC HEALTH SERVICES PLANNING AND MANAGEMENT.

JUNE, 2019

DECLARATION

I hereby declare that except for references to other people's work which have been duly acknowledged, this thesis is the result of my own composition and that no part of it has been presented for the award of degree in this university or elsewhere.

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(HEAD OF DEPARTMENT) Signature Date

DEDICATION

This research is dedicated to my Mum Madam Lilian Amaniwaa Mamphey, who passed away during the period of my education for the acquisition of my master‟s programme.

ACKNOWLEGDEMENT

I first acknowledge my supervisor Dr. Peter Agyei-Baffour for not only supervising and guiding me, but also providing me with the necessary information throughout my work.

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Above all, my profound gratitude goes to the Almighty God for giving me wisdom, knowledge and abundant grace throughout my years of schooling.

DEFINITION OF TERMS

Alternative: A course of action that may be used or taken instead of or one or more others.

Health: Is a state of complete physical and mental wellbeing and not merely the absence of disease or infirmity (WHO, 1948)

Health care: The prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health professions.

Health care Financing: Is the process of mobilization of funds for payments of health care and allocation of funds to the regions and population groups and for specific types of health care.

ABBREVIATIONS

F.F.S.	-	Fee- For-Service
G-D.R.G.	-	Ghana – Diagnostic Related Groupings
PSGH.	-	Pharmaceutical Society of Ghana
NHIS.	-	National Health Insurance Scheme
NHIA.	-	National Health Insurance Authority
WHO.	-	World Health Organization
VAT.	-	Value Added Tax
NHIL.	-	National Health Insurance Levy
EFDL.	-	External Finance Donor and Lenders
CHAG.	-	Christian Health Association of Ghana
GSS.	-	Ghana Statistical Service

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ABSTRACT

The study sought to establish the significant alternative sources of health care financing in the Asante Akim North District. A case study research design was employed to gather data from primary and secondary sources. The principal objective was to explore alternative means of generating funds to finance healthcare in the Asante Akim North District. The Primary data was gathered through structured questionnaire and interview guide from fifteen respondents. Non-probability method of sampling with combination of quota and purposive techniques was used to select the respondents for the study. Qualitative and quantitative analysis was used to establish the finding of the study.

Firstly, it was established that the current state of health care financing apart from the funds from the MOH mainly includes internally generated funds and donations from benevolent societies and individuals. Secondly, revenue generated was generally inadequate for most of the years understudy. Thirdly, the challenges the health care financing included unavailability of funds to purchase equipment, delayed reimbursement from the NHIA and high dependency on the NHIS. Lastly, majority of the participants acknowledged that exploring alternative sources of health care financing to include practice of cash and carry, operation of psychotherapy center, extension of accommodation, recreational and health facilities, provision of means of transport to patients and clients, support from NGOs and extension of pharmaceutical and laboratory facilities. It is recommended that, the MOH for that matter should encourage the private sector and other Non-Governmental Organizations to take keen interest in funding both mission and public healthcare institutions to reduce the burden on them. Also, policies governing the NHIS concerning reimbursement should be enforced by the government and ensured by NHIS.

CHAPTER ONE

INTRODUCTION

1.1 Background

Financial barrier remains an important impediment in the realization of the Universal Health Coverage in many low and developing countries. In the 1950s health care in Ghana was financed by the central government through tax but this was waned as public expenditure increased. This situation in the 1980s compelled the World Bank to order developing countries to prudently manage their public expenditure leading to various reforms such as the Structural Adjustment Programme and Economic Recovery Programme (ERP). Consequently, health care in Ghana was financed by Fee-For-Service or "cash and carry" which according to Sodzi – Tettey *et al*, (2012) created an access barrier for quality health care delivery. To remove this barrier of high cost associated with quality health care, National Health Insurance Scheme (NHIS) was started and implemented in 2003. Payments were made to providers by use of a combination of Ghana – Diagnostic Related Groupings (G-DRGs) for services and Fee- For-Service (FFS) for drugs through the claim process. Sodzi – Tettey *et al*, (2012) in agreement to this stated that claim processes have also faced a lot of challenges such as administrative capacity, technical, human resource and working environment over the years ; which has resulted in delayed submission of claims by providers and, vetting and payments by schemes.

A study at Kassena Nankana and Builsa Districts indicated that both schemes rejected between 10% -14% total cost of claims (less than 1% of all claims submitted). Also, although claims are submitted on time, there were significant differences between the reimbursement rates and timely reimbursement rates in both schemes (Sodzi – Tettey *et al*, 2012).

The delay in reimbursement was found to have affected the quality of healthcare delivery especially in the pharmaceutical Sector. The president of the Pharmaceutical Society of Ghana (PSGH) Ohemeng Kyei (2015) in a press conference in Accra, stated that the pharmaceutical businesses are going through difficult times suffering from harassment from bankers, suppliers and professionals debt collectors and are at the point of collapse because the NHIA has failed to pay providers their claims for the past eight (8) to ten (10) months (Mensah, 2015).

In June 2017, Kale-Dery reiterated this after interviewing heads of some renowned CHAG institutions in Ghana. The heads said, "they were unable to buy hospital consumables and essentials which are critical for the daily operations of the facilities, including securing oxygen, which is an essential item for sustaining life was becoming a challenge to the institutions because of indebtedness of the NHIS to these health institutions", (Kale-Dery, 2017).

In order to prevent such circumstances, the NHIS needs to reform its provider payment and claims submission and processing systems to ensure simpler and faster processes of reimbursement.

In addition, Owusu-Sekyere *et al*, (2014) in collaboration with Sodzi – Tettey *et al*, (2012) stated that the individual health service providers need to find other alternatives in soliciting for funds to financing health care and pharmaceutical services in their institutions.

It is in view of this that this research was carried out; to explore other means of generating funds to finance healthcare in the study district.

1.2 Problem Statement

Health is a state of complete physical and mental well-being and not merely the absence of disease or infirmity (WHO, 1948). Healthcare is the prevention, treatment, and management of illness and the preservation of mental not clear (Agyei-Baffour, 2016).

The approaches to mobilize funds for health care" is healthcare financing thus, it is a means to an end; an instrument chosen to achieve specific societal goals" (Hsiao, 2000 as cited in Agyei-Baffour, 2016).

In the year 2016, Agyei-Baffour with Hsiao, indicated four major mechanisms of healthcare financing: Government revenue (all the funds obtained from the government), Private and Social Insurance, User fees and Community financing.

Of the above four, Gobah and Liang (2011) indicated in their work on National Health Insurance Scheme in Ghana that; User fees also known as out-of-pocket health payments mechanism is what many low-and middle-income countries rely heavily on to finance their health care systems. The World Health Organization (WHO), has empirical evidence indicating that out-of-pocket health payment is the least efficient and most inequitable means of financing health care and prevents people from seeking medical care and may exacerbate poverty. As such there is a growing movement, globally and in the Africa region, to reduce financial barriers to quality health care generally, but with particular emphasis on high priority services and vulnerable groups. In 2003, WHO recognized Health Insurance Schemes as a tool to finance health care provision in developing countries like Ghana, Rwanda, Tanzania, Kenya and Nigeria? In the following year (2004), Ghana started implementing a National Health Insurance Scheme (NHIS) to remove cost as a barrier to quality healthcare(Sodzi-Tettey *et al*,2012).Providers were initially paid by Fee – For – Service (FFS). But in May 2008, this payment mechanism changed to a combination of Fee – For – Service (FFS) for medicines and Ghana - Diagnostic Related

Groupings (G-DRGs) for services through the claims process. As a result, the scheme helped to increase utilization and protect people against health expenses and address issues of equity (Sodzi-Tettey *et al*, 2012).

Apart from the above successes the scheme encountered numerous challenges including; financial sustainability of the scheme, identification of indigents, ID card management challenges, ICT challenges**,** pharmaceutical supply chain challenges (High cost of medicines), ability to pay premium/renewal challenges, quality of care and waiting time as indicated by Agyei-Baffour, 2016.

Amidst these challenges Sodzi-Tettey *et al*, 2012, classified the challenges they identified as technical, human resource, financial challenges and working environment challenges. These reflected in stress of work from delayed reimbursement resulting in delays in paying of hospital suppliers and poor information flow between the scheme and providers sometimes leading to conflicts.

This delay could also result in collapse of the institution. In line with this, Kale-Dery recently in June this year (2017) stated that; "some hospital managers operating in deprived communities in the country have expressed fears that their facilities are grinding to a halt as a result of the indebtedness of the National Health Insurance Scheme (NHIS) to their facilities". He continued that; the managers also emphasized that the situation was as a result of the fact that majority of their patients are NHIS card bearers and rely heavily on it to access health care (Kale-Dery,2017).

Kale-Dery spoke to managers in charge of the Agogo Presbyterian Hospital in the Ashanti Region, Bawku Presbyterian Hospital in the Upper East Region, SDA Hospital in Obuasi, St Joseph Hospital in the Nkwanta South District in the Volta Region,

Techiman Holy Family Hospital in Techiman in the Brong Ahafo Region and the Jirapa Hospital in the Upper West Region respectively. The interviews showed that currently, these CHAG institutions are unable to buy hospital consumables and essentials which are critical for the daily operations of the facilities, including securing oxygen, which is an essential item for sustaining life was becoming a challenge to the institutions (Kale-Dery, 2017)

Resultantly, delay in reimbursement of the health insurance funds of these institutions could lead to poor quality of healthcare and virtually collapse of the health institutions. This is not different from the situation in Ashanti Akim North District health facilities as already shown above. It is in view of this that this research was carried out to seek and determine other sources of generating income, other than the existing IGF and funds from the government of Ghana, for the healthcare institutions in Ghana.

1.3 Conceptual framework

A conceptual framework as defined by Regoniel in 2015; is a framework that represents the researcher‟s synthesis of literature on how to explain a phenomenon. Thus; it maps out the actions required in the course of the study given previous knowledge of other researchers‟ point of view and their observations on the subject of research.

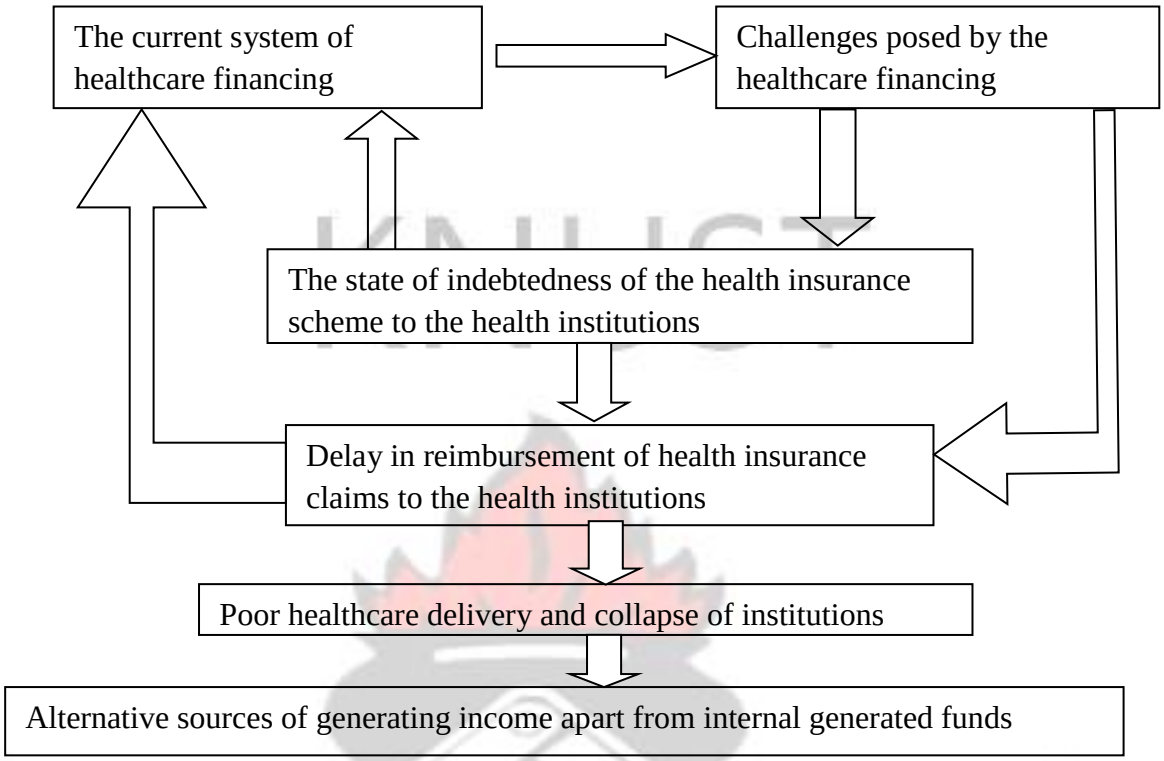


Figure 1.0 Conceptual framework of alternative sources of healthcare financing in Ghana.

SOURCE: Author‟s construct, 2017

According to Agyei-Baffour (2016), Healthcare financing is defined as „mechanisms for paying healthcare‟. He also states that, it is the allocation of funds to the regions and the population groups and for specific types of healthcare (Sodzi-Tettey *et al*, 2012).

The term "health care financing" to Hsiao, 2000 as cited in Agyei-Baffour, 2013 mean the approaches to mobilize funds for health care. According to him, health care financing is a means to an end; an instrument chosen to achieve specific societal goals. In Ghana cost of health care according to the Ministry of Health (MOH), 2004 was initially paid by fee-for-service to providers and this cost of care created a barrier for quality health care. To remove this barrier of cost for quality health care, National Health

Insurance Scheme (NHIS) was started and implemented in 2004.Owusu-Sekyere and Bagah (2014) indicated that, payments were made to providers by use of a combination of Ghana – Diagnostic Related Groupings (G-DRGs) for services and fee- for-service for drugs through the claim process.

This claim processes they said, also faced a lot of challenges such as administrative capacity, technical, human resource and working environment over the years ; which has resulted in delayed submission of claims by providers, vetting and delay in the payment of the funds by schemes (Owusu-Sekyere and Bagah,2014).

The indebtedness of the NHIS to the healthcare facilities and delay in the reimbursement of the funds could lead to poor healthcare delivery and may also result in collapse of the institutions. Therefore generating alternative sources of income for the healthcare facility could result in improved healthcare delivery.

1.4 Research/ Study Questions

These are specific questions that would be asked to serve as the basis for the study. They are formulated from the purpose /objectives of the research work.

- What is the current state of health financing?
- Is it adequate to cover the cost of financing?
- What challenges does the current health financing system poss.?
- What are the alternative sources of generating income in your institution?

1.5 General Objectives

The general objective of the study was to determine alternative means of generating funds to finance healthcare in the Asante Akim North District.

1.6 Specific Objective

- To evaluate the current system of healthcare financing.
- To assess the adequacy of the revenue generated.
- To investigate challenges posed by the current health care financing.
- To identifying alternate sources of generating income in the health institution.

1.7 Organization of Report

This research work consists of six chapters. The first chapter provides a general introduction to the research and a rationale for the study. It indicates the objectives of the study as well as addresses the significance of the research work in Asante Akim North District.

Chapter two examines exiting literature on the state of healthcare financing, National Health Insurance Scheme (NHIS), Challenges and Sustainability of the scheme and alternative sources to finance health care in Ghana.

Chapter three describes the methodology employed in gathering data from the field. It includes research design, sampling, data collection and data collection tools.

Chapter four analyses the data that were collected from the field.

Chapter five also discusses of findings of the study.

Chapter Six lastly discusses recommendations and conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.0 OVERVIEW

In Ghana health care according to the Ministry of Health (MOH), 2004 was initially paid by fee-for-service to providers and this cost of care created a barrier for quality health care. In order to remove this barrier of cost for quality health care, National Health Insurance Scheme (NHIS) was started and implemented in 2004. The payments from this scheme were made to providers by use of a combination of Ghana – Diagnostic Related Groupings (G-DRGs) for services and Fee- For-Service (FFS) for drugs through the claim process. However, the claim processes also faced a lot of challenges such as administrative capacity, technical, human resource and working environment over the years and resulted in delayed submission of claims by providers, vetting and delay in the payment of the funds by schemes.

This delay in the reimbursement of the funds and the indebtedness of the NHIS to the healthcare facilities has led to poor healthcare delivery, striking health care workers because of their delayed remittances and also resulted in collapse of certain healthcare institutions. Apparently generating alternative sources of income could improve these uncertainties and result in improved healthcare delivery in these healthcare facilities.

This chapter therefore reviews literature on the state of healthcare financing, National Health Insurance Scheme (NHIS), Challenges and Sustainability of the scheme and alternative sources to finance health care.

2.1 HEALTH CARE FINANCING

The World Health Organization (WHO) defined human health in its broader sense in its 1948 constitution “as a state of complete physical, mental and emotional wellbeing and not merely the absence of disease or infirmity”

Health care on the other hand is the maintenance or improvement of health through the prevention, diagnosis, and treatment of disease, illness injury, and other physical and mental impairments in the human being.

The mechanism for paying for this health care is called Health care financing. It is the allocation of funds to the regions and the population groups and for specific types of healthcare (Agyei-Baffour, 2016).

To Hsiao, 2000 the term "health care financing" as cited in Agyei-Baffour, 2013 mean the approaches to mobilize funds for health care. According to him this definition, health care financing is a means to an end; an instrument chosen to achieve specific societal goals.

Health care financing is an important subject that needs to be treated because health care is a basic necessity that people cannot afford. As such the government has to determine means of mobilizing funds to finance and improve the health of the people.

In Ghana during the Colonial era, private out of pocket and public financing of healthcare was mainly for expatriate civil servants. After independence in 1957, healthcare services were free in Ghana and were financed through the general tax revenue. However, in 1970 Ghana experienced economic shock and made some structural adjustments after the World Bank and the International Monetary Fund (IMF) had instituted the general economic reforms. As a result Ministry of Health (MOH) introduced "User fees" (cash and carry) in 1985 but this policy excluded majority of the people especially the rural folks from accessing healthcare. The MOH thereafter decided to consider health insurance as an alternative in response to these problems. Several pilot schemes were implemented to test the viability and feasibility of this alternative financing arrangement.

Apparently, in 1990 the Community Based Mutual Health Insurance Scheme was introduced and it had its own challenges. Then came the high out-of-pocket payment

expenditure on health and very low utilization of health services in the year 2000. This system was the least efficient and most inequitable means of healthcare financing.

As a result the National Health Insurance Scheme (NHIS) was introduced in the year 2003, to replace Out-of-pocket Payment. The NHIS was recognized as an alternative tool to finance health in developing countries like Ghana. It also addressed equity, increased utilization of health institution, and protected people from catastrophic health expenses (MOH, 2004).

Health care financing thereafter has become an important subject to the government making it solicit for innovative and efficient means of exploring for funds to financing health care.

2.2 SOURCES OF HEALTH CARE FINANCING IN GHANA

There are several methods of financing health care, but each method has its own advantages and disadvantages. The method that a nation chooses to employ depends on its history, culture, and the government‟s sources of revenue and trades it is involved in. The sources of revenue to the government include taxes, donations, aids, grants and seigniorage.

Agyei Baffour, 2016 indicates that the mechanisms of health financing include General revenue, Social insurance contributions, Private Insurance premiums, Community financing and Direct out of pocket payments. Each method provides financial protection and affects those who will have access to health care. They also distribute the financial burdens and benefits differently to those who access them. The various mechanisms are explained below.

General revenue or earmarked tax is the most traditional way of financing health care used to finance a major portion of the health care usually found in low income countries. Social

insurance is compulsory meaning everyone in the eligible group must enroll and pay a specific premium contribution in exchange for a set of benefits. Social insurance premiums and benefits are described in social compacts established through legislation. Although they are specific premiums or benefits can be alerted only through a formal political process.

Private insurance is a private contract offered by an insurer to exchange a set of benefits for a payment of specified premium. It is marketed either by nonprofit or for profit insurance companies. Consumers voluntarily choose to purchase an insurance package that best matches their preference. A major concern in private insurance is the buyer‟s adverse selection. Private insurance is offered on individual and group basis. Under the individual insurance, the premium is based on that individuals risk characteristics. While premium for the group insurance is calculated on a group basis and risk is pooled across age gender and health status.

Community based financing refers to schemes which are based on three principles; community cooperation, local self-reliance and pre-payment. This financing mode thrives on technical strength and institutional capacity of a local group, financial control as part of the border strategy in local management and control of health care services. It further survives on support received from outside organizations and individuals and links with other local organizations, diversity of funding and its ability to adapt to a changing environment.

Direct out of pocket financing is made by patients to private provides at the time a service is rendered. User fees refer to fees the patient have to pay to public hospitals, clinics, and health posts not to private sector providers. The proponents of user fees believe that the fee can increase revenue to improve the quality of public health services and expand coverage. A major objection raised against user fees has been on equality grounds.

Among the above listed financial mechanisms of healthcare financing, the social insurance has been formally adapted by the government of Ghana. The NHIS was adapted because its benefits and premiums can only be altered through formal political processes.

2.3 GHANA'S NATIONAL HEALTH INSURANCE SCHEME (NHIS)

Insurance is a social device for dealing with risk. It is a provision against illness or bodily injury. Insurance coverage ranges from for medicine, visits to the physician or emergency room, hospital stays and other medical expenses.

Health insurance on the other hand is a type of insurance coverage that covers the cost of an insured individual"s medical and surgical expenses.

The National Insurance Scheme (NHIS) is a social intervention program introduced by government to provide financial access to quality health care for residents in Ghana. The vision of government in instituting a health insurance scheme in the country is to assure equitable and universal access for all residents of Ghana to an acceptable quality package of essential health services without out of pocket payment being required at point of service use.

The main goal of the NHIS is to replacement of out of pocket payment by providing a specified minimum health care benefit package at the point of service use. The objective of the NHIS policy includes the creation of necessary bodies, raising awareness and building consensus, passing needed legislation and developing enabling environment (MOH, 2004).

The principles upon which the NHIS was established includes equity, risk equalization, cross – subsidization, solidarity, quality Care, community or subscriber ownership,

partnership, reinsurance, sustainability, efficiency in premium collection and claims administration.

Measures ensured to achieving universal and equitable coverage included compulsory membership of an insurance scheme of choice for all within a specified period of time and encouragement to comply will be predominantly incentive rather than punitive measures. Membership shall also be by contribution. Government subsidy through the Health Fund will be provided to 'top up' the Premium for the poor and vulnerable groups according to a defined criteria, while minimum community premium or contribution will regularly be updated. It also includes exemption of indigents and other categories of persons defined by law.

Legally, the NHIS was established by an Act of Parliament in 2003 (Act 650) by LI 1809 National Health Insurance Regulation. It was an initiative by Government to secure financial risk protection against the cost of healthcare services for all residents in Ghana. The Act was revised in 2012 to NHIA Act 852 (MOH, 2004).

The significant revisions in the Law included a mandatory NHIS, a unified NHIS with District Offices, premium exemptions for persons with Mental Disorders, expenditure cap of 10% on non-core NHIS activities and relevant family planning package. A board of committee was set up to overlook Scheme Operations, Private Health Insurance schemes and Fund Management.

Key players in NHIS Architecture

The key players in the NHIS under the MOH are the Providers, the Purchaser and the Subscriber. The Subscriber is the individual who pays premium to the Purchaser (NHIS) and the purchaser ensures that he receives quality services from the Provider. The Provider that could be private or public health facility provides quality services to the subscriber

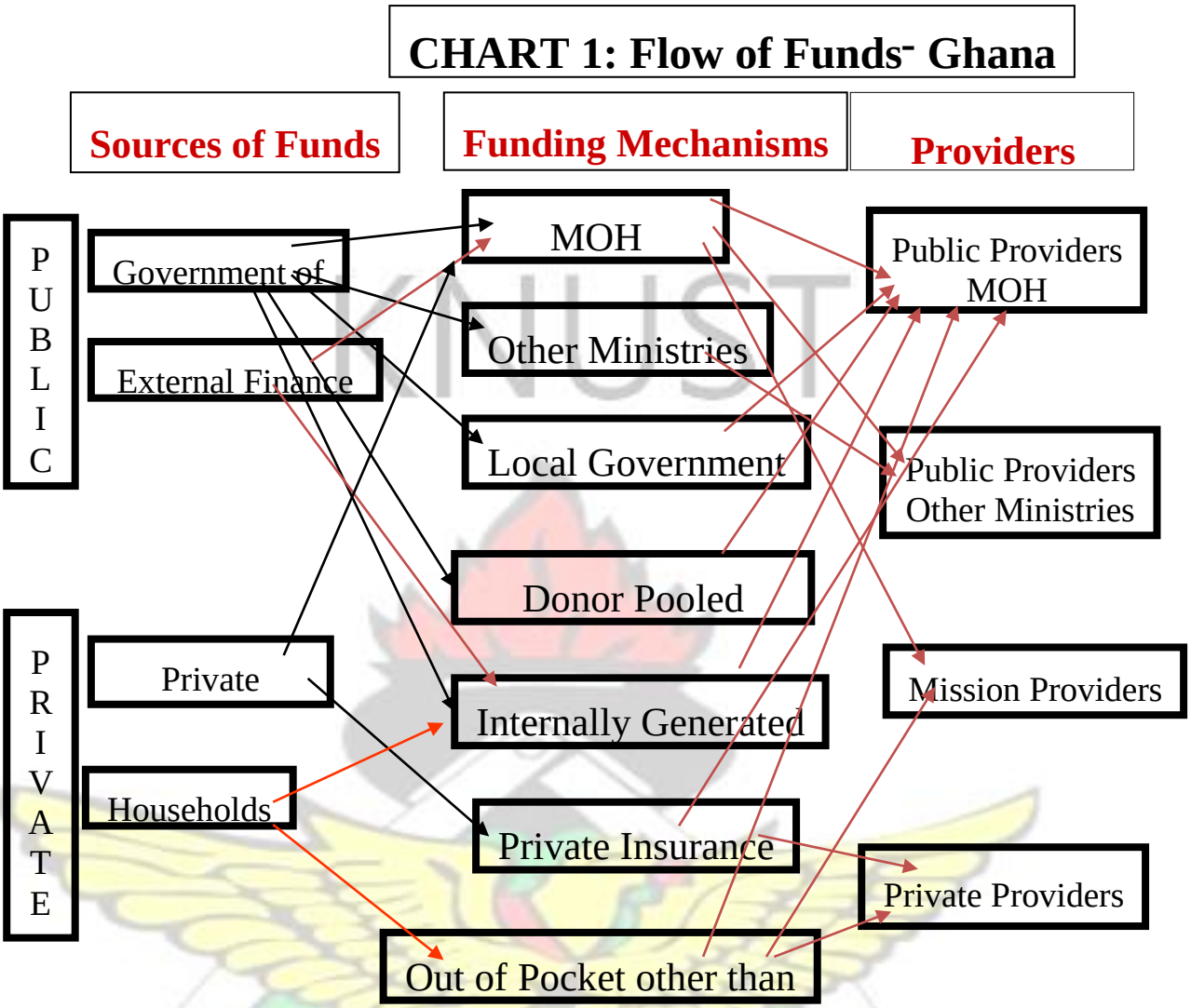
and submits claims to the purchaser afterwards for payment. (MOH, 2004) This is indicated in figure 2.0 below on page 16.

The NHIS healthcare service providers include Teaching, Regional and District Hospitals, Health Centers and Maternity Homes, Private Hospitals and Clinics, QuasiGovernment Hospitals and Clinics, Mission Hospitals, Pharmacy Shops and Drug Stores and Diagnostic service facilities.

A gatekeeper system is put in place involving all the different categories of service providers in accessing services in the NHIS. The system will function in such a way that the first point of call for all outpatient services will be the primary healthcare facilities then District level Health Care then to the Regional Hospital and Teaching Hospitals.

The funding of the NHIS is a combination of several models. The first is the Beveridgean model where two and a half percentage points (2.5%) of the Value Added Tax (VAT) is added to the National Health Insurance levy (NHIL). Bismarckian model on the other hand is where two and a half percentage points (2.5%) of the Social Security contributions is added to the National Health Insurance levy (NHIL). These earmarked funds (NHIL and SSNIT) constitute over ninety percentage (90%) of the total inflows as indicated in figure 2.0 on page 16. In addition to this the MOH has graduated informal sector premium based on ability to pay. The benefit package of the NHIS covers ninety five percentage (95%) of disease conditions.

Figure 2.1: Key Players in NHIS Architecture



Source : Agyei -Baffour, P

A study Akortsu and Abor (2011) revealed that the main source of financing the public healthcare institution are government subvention, internally-generated funds and donorpooled funds as indicate above.

2.4 CHALLENGES

The challenges of the NHIS can be put into Internal challenges and External challenges. The internal challenges include financial sustainability of the scheme, identification of the poor in the informal sector, ID card management challenges and ICT challenges. The external challenges includes moral hazard on both the demand and supply side,

pharmaceutical supply chain challenges thus high cost of medicines, payment of premium and renewal challenges, quality of care and waiting times at the health facilities.

This is indicated in a statement made by the president of the Pharmaceutical Society of Ghana (PSGH) Ohemeng Kyei (2015) in a press conference in Accra; that the pharmaceutical businesses are going through very difficult times suffering from harassment from bankers, suppliers and professionals debt collector and are at the point of collapse because the NHIA has failed to pay providers their claims for the pass eight (8) to ten (10) months (Mensah, 2015).

After provision of health care, payments are made to providers by use of a combination of Ghana – Diagnostic Related Groupings (G-DRGs) for services and Fee- For-Service (FFS) for drugs through the claim process. This claim processes also faced a lot of challenges such as administrative capacity, technical, human resource and working environment over the years. This has resulted in delayed submission of claims by providers and, vetting and payments by schemes (Owusu-Sekyere and Bagah, 2014).

Another challenge worth indicating is the rejection of claims, untimely reimbursement and reimbursement rates. Sodzi – Tettey *et al,* 2012 at Kassena Nankana and Builsa Districts indicated that both schemes rejected between 10% -14% total cost of claims. Also, though claims are submitted on time, there were significant differences between the Reimbursement Rates and Timely Reimbursement rates for both schemes (Sodzi – Tettey *et al*, 2012). In addition to this, delay in receipt of government subvention, delay in the reimbursement of services provided to subscribers of health insurance schemes, influence of government in setting user fees, and the specifications to which donor funds are put.(Akortsu and Akor, 2011).

Another challenge of the health care financing to consider is Capitation. Capitation is a provider payment method in which providers are paid, typically in advance, a predetermined fixed rate to provide a defined set of services for each individual enrolled with the provider for a fixed period of time. The amount paid to the provider is irrespective of whether that person would seek care or not during the designated period.

Capitation does not provide enough funding to enhance quality healthcare delivery as compared with the Ghana Diagnostic Related Groupings (GDRG). This is because the rate of capitation is low and efforts to improve or rule it out has proofed futile. Capitation was practiced in the Ashanti Region but because of the inadequate funds, some hospitals were practicing cash and carry although they were partners with the NHIS. Some of these hospitals resulted in use of inferior or less potent drugs in the treatment of diseases due to this inadequate funding increasing cost of treatment and lengthening recovery time of patients.

In addition to this low attendances at scheme at scheme centers and ineffective customer care are some perceived challenges within the region. Resource constraint and lack of enabling environment at the work places amongst also affect the implementation of capitation in the region.

2.5 SUSTAINABILTY

The first measure to ensure sustainability of the NHIS is Cost containment. This includes improving financial issues in clinical audits, claims processing center and consolidated premium accounts, Implementing Capitation, unique prescription form and linking diagnoses to treatment or E-claims. It also includes medicines list and prescribing levels thus; piloting NHIS medicines at negotiated price and contracting medicines to draw down prices at the various health care institutions.

A secondly measure to ensure sustainability is Additional funding. This could be achieved through increase in Health Insurance Levy (NHIL) and review of the NHIL policy. Funds could also be obtained from monies allocated for roads (5% of road funds) and communications service tax (20%). Levies on tobacco and alcohol beverages and petrochemical industry could also add to improve the NHIS funding.

On the other hand, in order to improve the NHIS there should be change in management of the NHIS activities. Thus; the NHIS team should enhance financial sustainability through cost containment and additional sources of funding. They should also intensify Clinical Audits at the various levels of health care. Moreover, they should scale up instant ID card issuance especially among the working group of the formal sector while they increase coverage of the poor. They should also improve computerization of operations at both the provider and the provider and the purchaser centers. Claims processing (CPC) and payment time should also be shortened. E-Claims and Additional CPCs (MOH, 2004, Agyei Baffour, 2016)

Generally, the NHIS should strengthen all audit and risk management systems as well as reward and sanction perpetuators so as to reduce fraud and abuse. They should scale up CPC claims management coverage and further roll out capitation in a stepwise approach.

Last but not the least, the NHIS should encourage high level evidence-based research into health insurance policy issues in order to inform and improve future policy direction.

2.6 ALTERNATIVE SOURCES OF HEALTHCARE FINANCING

The NHIS in the year 2003 was recognized as an alternative tool to finance health in the developing countries like Ghana. This was because it addressed equity, increased utilization of health institution, and protected people from catastrophic health expenses.

The main sources of funds are from the public and private sectors. Under the public sector, there are funds from the Government of Ghana (GOG) and from the External Finance Donor and Lenders (EFDL). As indicated in the 2015 Ghana budget donors are expected to fund as much as eighty seven percent (87%) of health infrastructure (Ghana Web, 2015). The private source has funds from the Private sector and Households. With the funding mechanisms, there are MOH budget, Local government, Donor pooled funds DPF, Internally generated funds (IGF), Private insurance and Out of Pocket payment (OFP). The GOG releases funds to the MOH budget, other Ministries like the ministry of Agriculture and Education, Local Government, DPF and IGF. The EFDL also funds IGF and MOH. The Private sector releases funds into MOH budget and the Households also release funds into the IGF and OFP other than the IGF.

After the MOH has prepared its budget it receives money from the GOG and then releases these funds to Providers such as the Public Providers like the MOH (government hospitals), Mission Providers like CHAG institutions after they have rendered services to the people. While the Private providers receive payments or funds from the private insurance and Out of pocket payment, the Mission providers are funded by the MOH and Out of Pocket other than the IGF. This is indicated in Figure 2.0 on page 16.

CHAPTER THREE

METHODS

3.1 Introduction

This chapter therefore elaborates on the research design, sources of data, study population, sample size, data collection procedure and methods of data analysis of this research.

3.2 Research Design

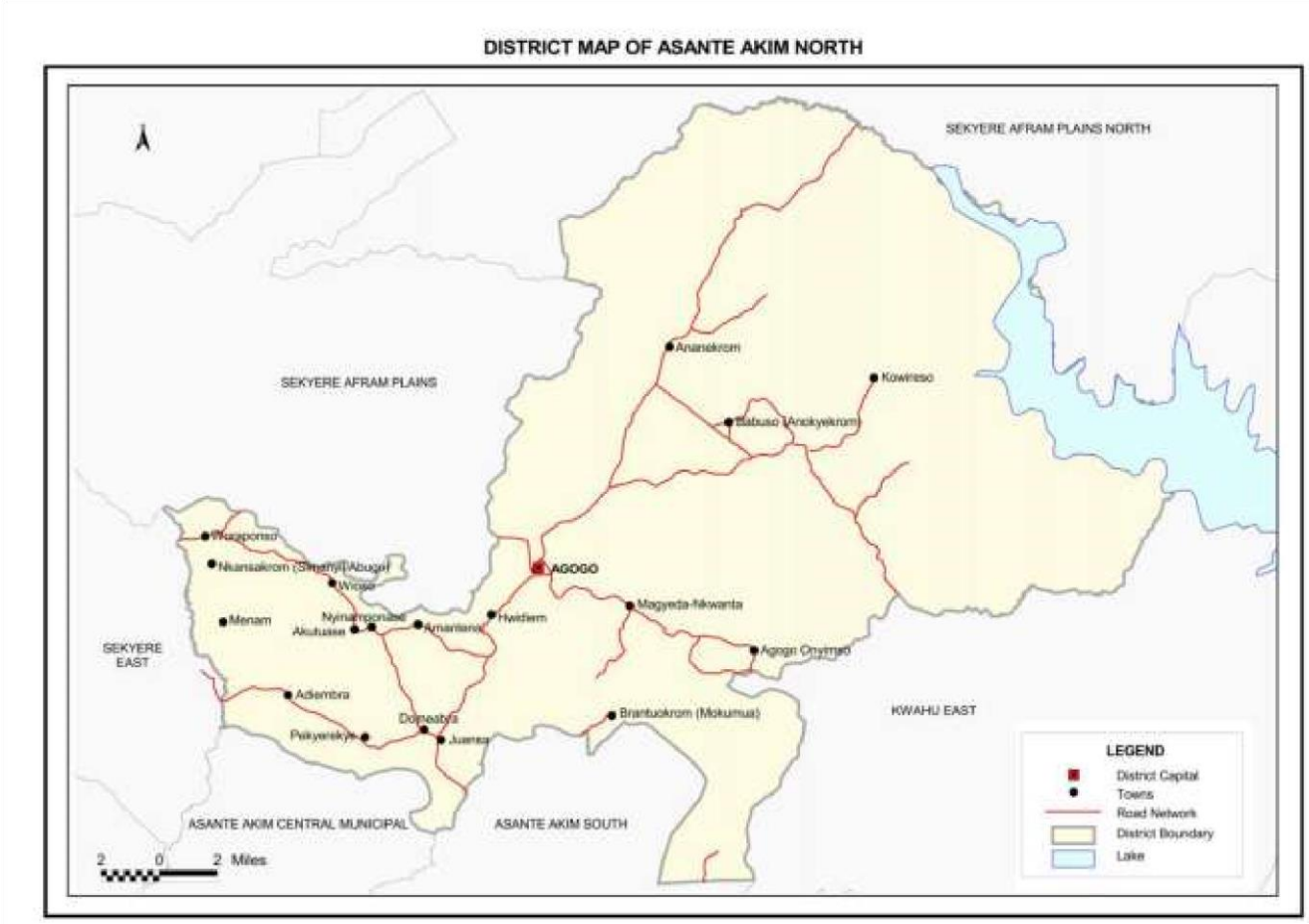
The research study type is an observational study that is descriptive in nature describing healthcare financing, using case study design.This design is adopted because healthcare

financing is a contemporary global phenomenon and to gain an in-debt understanding of its impact on healthcare services, the case study strategy is appropriate. On this basis, inferences can be made on alternative sources of healthcare financing in Asante Akim North District and in Ghana at large.

3.3 Profile of Asante Akim North District

Asante Akim North District is one of the newly created districts in Ghana in the year 2012. It was carved out of the then Asante Akim North Municipal and established by Legislative Instrument 2057 (Republic of Ghana, 2012). The District was inaugurated on 28th June, 2012 with Agogo as its capital. It has a land size of about 600 square kilometers and shares boundaries with Sekyere East, Sekyere Kumawu and Sekyere Afram Plains on the north, south by Asante Akim South, west by Asante Akim Central and east by Kwahu East as indicated below in figure 3.0 on page 22 (Ghana Statistical Service, 2014).

Figure 3.1: Map of Asante Akim North District



Source: Ghana Statistical Service, GIS

According to the 2010 Population and Housing Census, the population of Asante Akim North District was (69,186) but projected to about seventy five thousand, eight hundred and eighty five (75,885), with sixty four (64) communities from the 2016 District Annual Report (2016 Annual Report- AAND).

Among these communities, four health facilities namely; Juansa, Ananekrom, Nyamponase Health Centres and Agogo Presbyterian Hospital are located within the four sub-districts namely; Juansa, Ananekrom, Amantenaman and Agogo respectively (2016 Annual Report- AAND).

The Agogo Presbyterian hospital is the only hospital in the district and provides health services the people in the Ashanti-Akim North District and surrounding districts, the

region and country as a whole respectively. It provides medical, surgical, dental and psychiatry services to its patients. It also serves as a referral center for the surrounding healthcare institutions including the Konongo Government District Hospital in the Asante Akim South.

The total household population in the District is 68,423 with over one-half of the household population living in rural areas. Almost all of the people employed are engaged as skilled agricultural, forestry and fishery workers while very few are service and sales workers (Ghana Statistical Service, 2014).

Among these people, about 68,225 people from the informal sector representing 54% of the population have registered with the National Health Insurance Scheme in the district (Noah, 2005 as referenced by the Ghana Statistical Service, 2014)

This indicates that, majority of the clients of the health facilities in the district are NHIS card bearers; as such the source of financing for these health facilities in the district is mainly from the National Health Insurance Scheme; meaning bulk of the internally generated funds (IGF) is obtained from the NHIS funds (2016 Annual Report- AAND).

It is therefore prudently well noticing that delay in reimbursement of the NHIS funds could resulted in poor healthcare services in the health institutions in Asante Akim North District. This is the reason why this district is chosen among others to explore alternate sources of generating funds for healthcare financing.

3.4 Study Population

The study population was made of all the management members and other key informants like the administrator, accountant, pharmacist, purchasing officer, and the various department or unit heads as of the various healthcare institutions in the Asante Akim North

District. The criterion for selecting the study population was people having adequate knowledge in healthcare financing and health insurance.

3.5 Sampling

A non-probability sampling was used. A combination of quota and purposive sampling was used to select the participants. Quota sampling is used in order to represent different categories of the people within the health sector like the hospital manager, the administrator, accountant, pharmacist, purchasing officer, nurses and others so as to obtain their various opinions. Purposive sampling is also done to select these people because of their knowledge in the subject matter; healthcare financing. For example the hospital manager, administrator, and accountant are selected because of their adequate knowledge in financing and the pharmacist, purchasing officer and the various unit heads (nurses) because of they are involved in requisition and purchasing of the goods and consumables; and also in the entry of the NHIS forms within the hospital.

3.5.1 Sample size calculation

3.5.2 Method of sampling

The method of sampling was non probability sampling method with quota and purposive sampling techniques.

Table 3.1: Respondents and their districts

NAME OF INSTITUTION	NUMBER OF RESPONDENTS
AGOGO PRESBY. HOSPITAL	11
JAUNSA HEALTH CENTER	2

ANANEKROM HEALTH CENTER	1
NYAMPENASE HEALTH CENTER	1
TOTAL	15

Source: Field data, 2018

3.6 Study Variable and measurements

The study variable and measurements includes the dependent variable, independent variable and conceptual definition of dependent variable, scale of measurement, indicators, data collection method and type of statistical analysis.

The table 3.2 on page 26 indicates the logical frame work of the study

Table 3.2: Logical framework of study

Objective	Dependent Variable	Independent variable	Conceptual Definition of dependent variable	Scale of measurement	Indicators	Data Collection Method	Type of statistical analysis
To evaluate the current system of healthcare financing.	Current system of healthcare financing	Government revenue, internally generated funds	New systems of healthcare financing	Nominal: High, low	Proportions, frequencies	Questionnaire, interview guide, records	Descriptive
To assess the adequacy of the revenue generated.	Adequacy of the revenue generated.	Sources of funds, donors available	Sources and utilization of funds in the health care facilities	Nominal and ordinal	Proportions and percentage	Questionnaire, interview guide	Descriptive Students -t test/ ANOVA

To investigate challenges posed by the current health care financing.	Challengespose d by the current health care financing	Unavailability of funds, delayed submission and reimbursement	Work output due to delay submission and reimbursem ent of funds	Nominal and ordinal	Proportions and frequencies	Questionnaire, interview guide	Descriptive
To identifying alternate sources of generating income in the health institution.	Alternative sources of generating income in the healthcare institution.	Sources of generating income in the health institutions	Funds from the government revenue, donors	Nominal	Proportions and frequencies	Questionnaire, interview guide	Descriptive

SOURCE: Author‟s construct, 2017

3.7 Data Collection

The research study gathered both primary and secondary data from primary and secondary sources respectively. Primary data was gathered through interviews on the current system of healthcare financing, the adequacy of the revenue generated, challenges posed by the current health care financing, and alternate sources of generating income in the health institution. Secondary data, on the other hand was gathered from records of the various health institutions in the district on the types of healthcare financing and the sources of income generation over the past three years. The secondary data is used in this study because; it will improve the measurements by expanding the exposure of the variables and concepts. It will also increase validity and reliability of the primary data gathered from the field.

3.7.1 Data Collection Techniques and Tools

Data collection techniques or methods refer to the „how‟ of collecting your data for example interview, focus group discussion while data collection tools refer to what you will use in gathering your data like questionnaires, interview guide and recorder. The research study used both qualitative (interview with the heads and focus group discussion)

and quantitative methods through the administration of structured questionnaires. Primary data was collected by face-to-face in-depth interview with heads of the various institutions; the hospital manager and other key informants like the administrator, accountant, pharmacist, purchasing officer, and focus group discussion for the various unit heads using structured and pretested questionnaire. Total number of respondents included was fifteen**.** The individual‟s questionnaire was designed to capture information on the current system of healthcare financing, the adequacy of the revenue generated, challenges posed by the current health care financing, and alternate sources of generating income in the health institution.

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3.7.2 Data Handling

Data obtained from the participants was kept private and confidential.

3.7.3. Data Analysis and Reporting

The data was processed and analyzed with the statistical software Stata version 12.0 and Microsoft Excel were employed after collecting the data. First, the collected data was edited to ensure that the questionnaire are properly administered and filled completely. Then coding and data entry is done. After this, data cleaning is done to ensure that there are no errors in the entries made. The data is then generated into Tables, charts and graphs. The quantitative data collected which was made up of the number of claims submitted, number of claims rejected and the amount reimbursed, was analyzed with Stata software version 12.0 and Microsoft office Excel. Analysis of the results was presented in frequency and percentage distribution tables and charts.

Qualitatively, the respondents were interviewed and recorded. The recorder was later played and compared with the field notes and the necessary corrections made before

analysis. Descriptive analysis of variance (ANOVA) was used, independent t-test was conducted to determine the significant difference in the adequacy of the revenue generated in the health institutions.

3.8 ETHICAL CONSIDERATIONS

Ethical clearance was first be sought from the Committee for Human Research Publications and Ethics (CHRPE) board of the School Public Health-KNUST. Permission was then sought from the District Directorate of Health Services of the Asante Akim North District prior to data collection in the health institutions involved in the study. The relevance of the study was explained to the participants and institutions involved in the study. Then informed consent was sought from them before administering questionnaires and the interviews.

3.9 EXPECTED OUTCOMES/OUTPUTS

It is expected that the research would reveal that the main sources of financing in the public healthcare institution are government subvention, internally-generated funds and donor-pooled funds as indicated by Agyei-Baffour, 2016. Also, of these sources, the internally generated fund was the most reliable, and the least reliable was the donorpooled funds as indicated in the 2016 Annual Report, AAND.

The study would also reveal that, there are several challenges associated with the various sources of healthcare financing. These may include delay in receipt of government subvention, delay in the reimbursement of services provided to subscribers of health insurance schemes, influence of government in setting user fees, and the specifications to which donor funds are put (Akortsu and Akor, 2011).

3.10 ASSUMPTIONS OF STUDY

It was assumed that participants will be candid and honest in answering the questionnaire and interview. Also, it was assumed that the inclusion criteria of the sample are appropriate and therefore, assures that the participants have all experienced the same or similar phenomenon of the study.

3.11 LIMITATIONS OF STUDY

Limitations are the influences or conditions that cannot be controlled by the researcher. The limitations of this study includes; qualitative sampling, small sample size of fifteen (15) and as a result the inability to generalize the findings throughout the nation.

3.12 RELIABILITY AND VALIDITY OF STUDY CONCLUSIONS

Reliability is the degree to which the assessment tool produces stable and consistent results. Validity is how well a test measures what it is purported to measure. The study conclusions was reliable because the results (data) obtained from the pretested questionnaire was highly consistent and stable as the results obtained from the final study. The study conclusions were valid because the objectives are clearly defined and the questionnaire matches with the objectives of the study. Also it is valid because the results can be generalized within healthcare facilities in Ghana.

3.13 LINKS TO OTHER STUDIES

The study is linked to the NHIS therefore the results obtained could be used by the NHIS office. It could also be used by the healthcare financing institutions.

3.14 DESSEMINATION OF FINDINGS PLAN

These results would first be disseminated to the authorities of researcher thus; in the form of thesis for the partial fulfilment of the requirements for the award of Master of Public Health (Health Service Planning and Management).

It would then be sent to Asante Akim North District office and also the health institutions where the research was conducted.

The results could also be given to the Ministry of Health because of its valuable information for enhancing policies, guidelines and procedures that will be used to develop alternative sources of generating income in healthcare institutions (hospitals). It could also be disseminated to policy makers in the Ministry of Education to formulate comprehensive workable policies for teaching and giving education in healthcare financing program.

Finally, the result of the research would be published in the mass media to add to the global literature on alternative sources of generating funds for healthcare financing in the healthcare institutions.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter comprises analyses of alternative means of generating funds to finance healthcare in the Ghana with the Asante Akim North District. Data for analysis was taken from sampled health institution and facilities in the district. This comprised the Agogo hospital, Juanse Health centre, Ananekrom health centre and Amantenaman health centre.

Stata version 12.0 and Microsoft Excel were employed to answer the objectives of the study.

4.1 Demography of study participants

A total of 15 people from three of the health institutions in the Asante Akim North District were involved in this study. Participants included the Accounting Manager, Administrative Manager, General Manager and Nursing Officers from the Agogo hospital and Faculty Heads of the healthcare facilities. The ages of participants were between 28 and 58 years. Table 4.1 shows the demographic description of respondents understudy.

Table 4.1: Demography of respondents

Age range		
Age Range (years)	**Frequency**	**Percentages (%)**
26 – 30	3	20.0
31 – 35	6	40.0
36 – 40	4	26.7
41 – 45	1	6.7.
46 – 50	0	0
51 – 55	0	0
56 – 60	1	6.7
Total	15	100.0
Gender		
Male	7	46.7
Female	8	53.3
Total	15	100.0
Religion		
Christianity	14	93.3
Muslim	1	6.7
Other	0	0.0
Total	15	100.0
Marital status		

Single	11	73.3
Married	3	20.0
Divorced	1	6.7
Total	15	100.0
Academic qualification		
Diploma/HND	3	20.0
Undergraduate	9	60.0
Postgraduate	3	20.0
Total	15	100.0
Duration in health institution		
0 – 5	7	46.7
6 – 10	6	40.0
11 – 15	1	6.7
> 15	1	6.7
Total	15	100.0

Source: Field data, 2018

The modal age range was 31 – 35 years with 40.0 % (6/15) of participants. Only one participant was within the age range of 41 – 45 years as well as 56 – 60 years. However, 20.0% (3/15) and 26.7% (4/15) of the participants were within the age ranges of 26 – 30 years and 36 – 40 years respectively. Participants included 46.7% (7/15) males and 53.3 (8/15) females. A substantial number of participants – 93.3 %(14/15) - were Christians with only one participant, (6.7%) being a Muslim.

Further, 73.3% (11/15), 20.0% (3/15) and 6.7% (1/15) of participants understudy were married single and divorced respectively. Study showed that more than half, 60.0 (9/15), of participants hold an undergraduate degree with 20.0% (3/15) holding a diploma/HND as well as post graduate degree. Also, 46.7% (7/15) of participants have spent 0 – 5 years working with their health institution while 40.0% (6/15) of them have spent 6 – 10 years. Only one participant, 6.7% (1/15), has spent 11 – 15 years as well as more than 15 years.

4.2 Current state of healthcare financing

The opinions of participants on the current state of healthcare financing were varied. With regards to the current sources of revenue in the Agogo Presbyterian hospital, the reference hospital, 16.67% of participants are of the view that funds of the institution are mostly internally generated. The institution does not depend largely on support elsewhere. However, one-quarter (25%) of them are of the opinion that the institution gets its revenue from donations, both local and foreign, as well as GOG- staff charges. Thus, the institution opens up for external support in order to augment its revenue. This enables equipment to be properly maintained and ensures better healthcare for all patients. In addition to this, response from each participant, at least, reveals that the current sources of revenue in the institution are from the sale of drugs, consultation and other related fees charged and interest gained on investments done by the institution.

Response from the heads of the healthcare facilities indicate that the current sources of revenue are from the National Health Insurance Scheme (NHIS) claims and the practice of cash and carry for patients who are not insured. The cash and carry system serves as a cushion to these facilities when funds from the NHIS claims are delayed. Although this is serves as a buffer, most of the patients are insured. Hence, there is greater dependence on funds from NHIS claims.

However, response on the practice of capitation in the institutions understudy shows a negative turn. Only 6.7% (1/15) of the participants believe that this practice is still maintained in the institutions. According to 33.3% (5/15) of the participants, capitation is no more being practiced in their institution. Interestingly, 60% (9/15) of the participants do not know whether or not this system is still being practiced. This includes all responses from the healthcare centers. This could be largely as a result of challenges it has posed in healthcare services in recent times. Thus, people are no more interested in knowing

whether it is in operation or not. This is because it no longer seems to be attractive. However, participants agreed that the practice of capitation has the effect of reducing indebtedness of the NHIS. This enables the scheme to work efficiently and effectively for the benefit of the institution and patients. Consequently, the institution will experience an increase in its revenue. This has a great possibility of strengthening its financial stability.

4.3 Adequacy of revenue generated

The total number of patients accessing the health facility annually increased sharply from 137,619 in 2014 to 154,422 in 2015. The number of patients then increased at a decreasing rate from 154,422 to 154,487 in 2016. Generally, there were more insured patients in attendance to the hospital as compared to non-insured patients over the period of study (Figure 4.1). However, the number of insured patients reduced from 129,250

(93.9%) in 2014 to 116,834 (75.7%) in 2015 and later on to 96,321 (62.3%) in 2016. This decrease could be accounted by the full acceptance of the use of the NHIS by people together with the benefits it covers. The number of non-insured patients on the other hand increased more than four times as much as 2014 (8,369, comprising 6.1%)in 2015 (37,588, comprising 24.3%). It further increased to 58,166 (37.7%) in 2016.

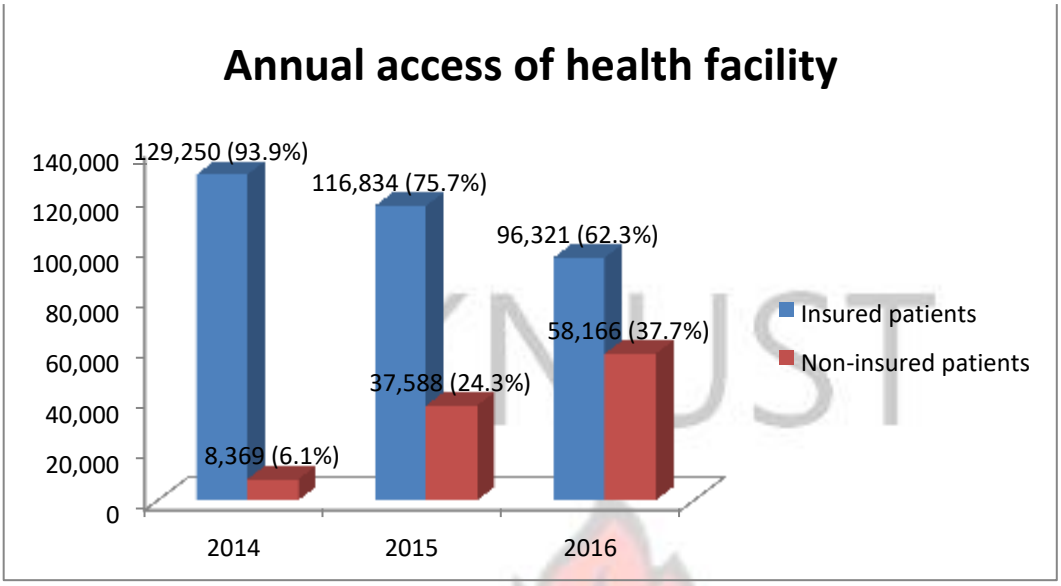

Figure 4.1: Annual access to health facility

Source: Field data 2018

A look at the three consecutive years understudy (2014 – 2016) shows that total income for the Agogo Presbyterian hospital has been increasing at a fairly constant rate (Table 4.2). Most of the income generated by the hospital is from sources other than the National Health Insurance Scheme (NHIS) and Cash and Carry. Out of the total income generated, total NHIS income and total Cash and Carry income accounts for 38.7% and 14.8% in 2014, 30.5% and 16.1% in 2015 and 25.3% and 25.4% in 2016 respectively. Thus, the hospital had to generate 46.5%, 53.4% and 49.3% of their incomes in 2014, 2015 and 2016 respectively from alternate sources, This clearly shows that the hospital heavily depends on funds from other sources to enable them operate efficiently.

Table 4.2: Income generated by the Agogo Presbyterian hospital (in GHC)

Year	Total Income	Total NHIS Income (%)	Total Cash and Carry Income (%)	Other (%)(funds from donars)
2014	12,774,608.09	4,946,920.05 (38.7%)	1,888,564.64 (14.8%)	5,939,123.40 (46.5%)

2015	16,525,449.38	5,042,281.37 (30.5%)	2,664,781.71 (16.1%)	8,818,386.30 (53.4%)
2016	20,527,266.54	5,186,768.17 (25.3%)	5,223,137.19 (25.4%)	10,117,361.18 (49.3%)

Source: Field data 2018

The adequacy of revenue generated shows the amount of income retained by the hospital after incurring expenses associated with its operation. This was found by taking all expenses incurred by the hospital from their total generated income. The income retained was expressed as a percentage of the total income generated for the respective years. Generally, revenue generated by the hospital was adequate (GHC758, 900.94) for the three years under consideration (Table 4.3). This accounted for 1.5% of income generated. Adequate revenue was generated for 2014 (GHC44, 475.03) and 2016 (GHC1, 450,612.47). This also accounted for 0.3% and 7.1% for the respective years. However, revenue generated for 2015 was inadequate to meet expenses incurred (loss of GHC736, 186.56).The alternate sources used by the hospital in this year were insufficient to defray the cost incurred. The probability of dependence on the hospital‟s reserves or other government interventions in order to stay in operation is very high in this year (2015). However, the hospital had more funds from alternate sources to defray more than half (50%) of their expenses in 2016.

Table 4.3: Adequacy of revenue generated by the Agogo Presbyterian hospital (in GHC)

Year	**Total Income**	**Expenses**	**Adequacy (%)**
2014	12,774,608.09	12,730,133.06	44,475.03(0.3%)
2015	16,525,449.38	17,261,635.94	-736,186.56(-4.5%)
2016	20,527,266.54	19,076,654.07	1,450,612.47(7.1%)
Total	**49,827,324.01**	**49,068,423.07**	**758,900.94(1.5%)**

Source: Field data 2018

A look at the revenue generated and expenses incurred by each of the three health centres under study showed that these facilities generated adequate revenue for the years under consideration (Table 4.4). Adequate revenue generated in these years summed up to GHC475, 979.91, GHC142, 550.10 and GHC145, 555.78for Juanse health centre, Ananekrom health centre and Amantenaman health centre respectively accounting for accounted for 50.8%, 56.7% and 56.0% of their total incomes generated. This implies that these health centres are not dependent on alternative sources of funding to remain in operation as compared to the Agogo Presbyterian hospital (hospital of reference). This is because their total incomes generated can sufficiently defray the expenses incurred. Juanse health centere generated adequate revenue of GHC119, 015.57, GHC153, 664.89 and GHC203, 299.45 in 2014, 2015 and 2016 respectively accounting for 47.9%, 50.2% and 53.1% of total incomes for the respective years. For Amanekrom health centre, adequate revenue generated was GHc51, 584.80, GHC39, 251.09 and GHC51, 714.21 for the respective years. Although these were lesser than that of Juanse health centre, they accounted for 62.7%, 52.1% and 54.9% of total incomes for the respective years.

Adequate revenue generated by Amantenaman health centre was GHC39, 858.15, GHC45, 744.00 and GHC59, 953.63 accounting for 55.4%, 54.8% and 57.5% of total incomes generated for the respective years. These were higher than the proportions of income generated by Juanse health centre but lesser than proportions generated by Ananekrom health centre. This implies that Ananekrom health centre generated the most adequate revenue among the three health centres. This is because they incurred the least expenses although they generate lower incomes.

Table 4.4: Adequacy of revenue generated by other health centres (in GHC)

Year	Total NHIS Income (%)	Total Cash and Carry Income (%)	Total Income	Expenses	Adequacy (%)
JUANSA HEALTH CENTRE					
2014	240,794.52(96.8%)	7,905.00(3.2%)	248,699.52	129,683.95	119,015.57(47.9%)
2015	290,416.24(94.8%)	15,818.00(5.2%)	306,234.24	152,569.35	153,664.89(50.2%)
2016	363,020.30(94.8%)	19,772.50(5.2%)	382,792.80	179,493.35	203,299.45(53.1%)
Total	**894,231.06(95.4%)**	**43,495.50(4.6%)**	**937,726.56**	**461,746.65**	**475,979.91(50.8%)**
ANANEKROM HEALTH CENTRE					
2014	76,109.09(92.6%)	6,112.20(7.4%)	82,221.29	30,636.49	51,584.80(62.7%)
2015	66,245.22(88.0%)	9,048.80(12.0%)	75,294.02	36,042.93	39,251.09(52.1%)
2016	82,806.53(88.0%)	11,311.13(12.0%)	94,117.66	42,403.45	51,714.21(54.9%)
Total	**225,160.84(89.5%)**	**26,472.13(10.5%)**	**251,632.97**	**109,082.87**	**142,550.10(56.7%)**
AMANTENAMAN HEALTH CENTRE					
2014	69,230.30(96.3%)	2,691.00(3.7%)	71,921.30	32,063.15	39,858.15(55.4%)
2015	78,676.35(94.3%)	4,789.00(5.7%)	83,465.35	37,721.35	45,744.00(54.8%)
2016	98,345.44(94.3%)	5,986.25(5.7%)	104,331.69	44,378.06	59,953.63(57.5%)
Total	**246,252.09(94.8%)**	**13,466.25(5.2%)**	**259,718.34**	**114,162.56**	**145,555.78(56.0%)**

Source: Field data 2018

Although the reference hospital has the highest amount of adequate revenue generated in the period of study (Figure 4.4), it accounts for a very small proportion (1.5%) of its income generated. The health centres in the district account for more than half of their income generated in this period (50.8% for Juansa, 56.7% for Ananekrom and 56.0% for Amantenaman health centres). The hospital did not generate adequate revenue in 2015. This is mainly because the increase in its funds from alternative sources was not enough to defray the increase in expenses incurred for that year.

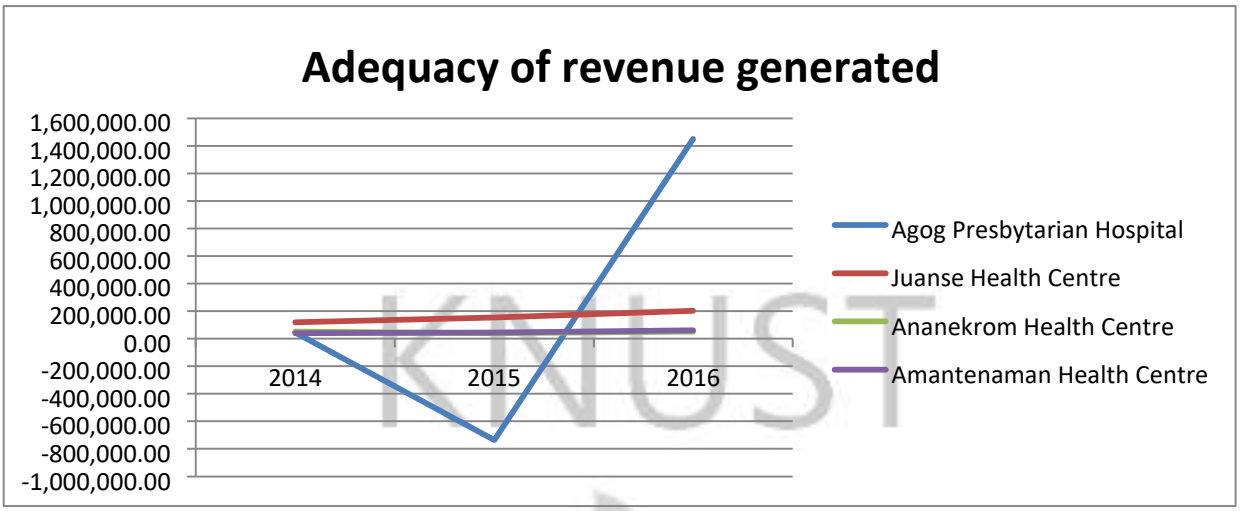

Figure 4.2: Adequacy of revenue generated

Source: Field data 2018

An analysis of variance (ANOVA) test conducted on the difference in adequacy of revenue generated of the health centers in the years under study shows that there is no statistically significant difference $((F_{(2,11)} = 1.586, p > 0.05)$ among the adequacy of revenue generated in the years understudy. In addition, there was no statistically significant difference $((F_{(3,11)} = 0.095, p > 0.05)$ among the adequacy of revenue generated by the health center

Table 4.5: ANOVA test conducted on difference in adequacy of revenue generated between groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	664158210431.265	2	332079105215.632	1.586	0.257
Within Groups	1884036185398.888	9	209337353933.210		
Total	2548194395830.152	11			

Source: Field data 2018

Table 4.6: ANOVA test for adequacy of revenue generated from 2014 to 2016

	Sum of Squares	df	Mean Square	F	Significance
Between Groups	88040794206.296	3	29346931402.099	.095	.960
Within Groups	2460153601623.856	8	307519200202.982		
Total	2548194395830.152	11			

Source: Field data 2018

An independent T-test conducted to determine the significant difference in the adequacy of revenue generated between Agogo Presbyterian hospital and the other healthcare centers shows that there is no statistically significant difference $(p > 0.05)$ between them.

Table 4.7: Independent sample t-test for adequacy of revenue generated between health facilities

	t	df	Sig.	Mean difference	Std Error difference	95% Cl of the Difference	
						Lower	Upper
Adequacy	0.263	10	0.817	168068.55889	332307.65897	-572359.04688	908496.16465

Source: Field data, 2018.

In addition, a significant amount of total income was generated from income received from NHIS. This was about two times the expenses incurred and hence, very sufficient to defray cost incurred by expenditure. Total NHIS income and expenses for Juanse health centre were GHC240,794.52 and GHC129,683.35, GHC290,416.24 and GHC152,569.35 and GHC363,020.30 and GHc179,493.35 in 2014, 2015 and 2016 respectively. Ananekrom

health centre recorded total NHIS income and expenses of GHC76,109.09 and GHC30,636.49, GHC66,245.22 and GHC36,042.93 and GHC82,806.53 and GHC42,403.45 in the respective years while Amantenaman health centre recorded GHC69,230.30 and GHC32,063.15, GHC78,676.35 and GHC37,721.35 and GHC98,345.44 and GHC44,378.06. This means that the adequacy of revenue generated by the health centres solely depended on income generated from the NHIS the highest income generated from cash and carry was GHC26, 472.13. This was generated by Amanekrom health centre and accounted for 10.5%of total incomes generated (from 2014 – 2016). However, the other health centres generated less than 6% (4.6% for Juanse health centre and 5.2% for Amantenaman health centre).

4.4 Challenges of healthcare financing

Every institution, in one way or the other, faces challenges in its operation. One major challenge that can be detriment to institutions is in the area of finance. This is no different in healthcare institutions. Half of the participants – 50% (6/12) – from the hospital of reference are of the view that the institution faces financial challenges. Other participants refrained from responding. However, all participants from the healthcare centres are also of the view that their institutions face financial challenges. Financial challenges of these institutions include the unavailability of funds to purchase equipment, delayed re-imbursement from the National Health Insurance Authority (NHIA) and high dependency on the NHIS. This raises questions on the efficiency and effectiveness of the NHIS. Other challenges include high level of charges for utility, increased non-merchandised staff charges and patient abscondment mainly due to their low level of poverty.

Regardless of these financial challenges, participants believe that the proper placement of certain measures can result in the absolute resolution of these challenges. Ensuring prompt re-imbursement by the NHIA as well as its effective extensive education for patients to

register with them can resolve these financial challenges. In addition, financial clearance and absorption of utility bills by the government has the propensity to reduce financial burden on healthcare institutions. These eliminate potential stumbling blocks to healthcare availability and accessibility in the district.

Concerning the prompt submission of NHIS claims, 50% (6/12) of participants from the reference hospital responded affirmatively. Respondents from other healthcare centres also ensure their NHIS claims are submitted on time. These submissions are mostly made on a monthly basis. However, only a third of participants from the reference hospital affirmed re-imbursement of claims made by the institution. This re-imbursement is mostly irregular. Institutions only receive payment when the NHIS has money

available in that period.

4.5 Alternative sources of healthcare financing

Among the current sources of income generated in the health institutions, the main sources of income were identified. According to 50% (6/12) of participants from the reference hospital, fees charged for services rendered are the main sources of income generation. This includes consultation, dispensary and all other related services provided by the hospital that come a t a charge. Also, 33.3% (4/12) of participants regard internally generated funds (IGF) as one of the main source by which the institution receives income. This goes beyond fees and charges from the institution to include its involvement in other business ventures that brings returns. A primal venture that the institution engages in is the provision of accommodation facilities. Although rent and other related charges may be lower than other facilities, their cash inflow, to an extent, reduces the financial burden on the institution. Lastly, 16.7% (2/12) of participants regard donor supports to be one of the main sources of income in the institution. As more organizations provide support for the

institution, financial stability becomes established. Comparatively, the main sources of income for the other healthcare centres stem from the NHIS claims and the practice of cash and carry. These institutions heavily depend on claims from the NHIS to ensure smooth operations. The cash and carry system is practiced to cushion the facility and ensure constant availability of funds when reimbursement of claims is delayed.

Most of the participants for the reference hospital – 66.7 %(8/12) – acknowledge that there are other means by which the institution can generate income. This includes the practice of the cash and carry system if patients are not insured, operation of the psychotherapy center to boost income. In addition, extension of accommodation facilities to include recreational and hospitality facilities are other means of generating more income for the institution. Lastly, participants are of the view that following the footsteps of leading healthcare institutions in building schools and other educational facilities is another key source of generating income for the institution. Among these alternatives means, participants are of the view that opening of investments accounts, support from NGOs and the government, sale of medical equipment and internally generated funds can be implemented immediately to generate additional income for the institution.

With regards to the other healthcare facilities, participants are of the view that extension of services to include laboratory, scan and ultrasound services as well as the operation of a pharmacy in the facilities are other means of generating income. Among these, participants are of the opinion that the immediate implementation of laboratory and scan and ultrasound services can help boost the financial standing of the healthcare facilities.

CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter entails the discussion of results obtained from the analysis of alternative means of generating funds to finance healthcare in Ghana with the Asante Akyim North District as a case study. Discussion is linked to the outlined research questions, objectives, key variables and appropriate literature on the research topic.

5.1 Demographic characteristics

The study was carried out in the four communities in the AAND namely Jaunsa, Ananekrom, Amantenam and Agogo which is the district capital. The Agogo Presbyterian hospital is the only hospital in the district. The others are all health care centers namely; Jaunsa, Ananekrom, Amantenam health centers.

A total number of .fifteen (15) participants from the health institutions in the Asante Akyim North District were involved in this study. Participants included the Accounting Manager, Administrative Manager, General Manager and Nursing Officers from the Agogo hospital and Faculty Heads of the healthcare facilities. The ages of participants were between 28 and 58 years. Further, 73.3% (11/15), 20.0% (3/15) and 6.7% (1/15) of participants understudy were married single and divorced respectively. Study showed that more than half, 60.0 (9/15), of participants hold an undergraduate degree with 20.0% (3/15) holding a diploma/HND as well as post graduate degree. Also, 46.7% (7/15) of participants have spent 0 – 5 years working with their health institution while 40.0% (6/15) of them have spent 6 – 10 years. Only one participant, 6.7% (1/15), has spent 11 – 15 years as well as more than 15 years.

5.2 Current state of healthcare financing

Every participant agreed that a current source of healthcare financing is from the sale of drugs, consultation and other related fees charged. This mechanism is predominantly user fee financing. It is also referred to as the cash and carry system. As described by Agyei-Baffour (2016), it has the potential of increasing revenue in order to ameliorate the quality of healthcare services. However, this turns the balance in the favor of those who can afford the fees charged. Response from the healthcare facilities also shows that current source of healthcare financing does not only include the cash and carry system but also revenue from the National Health Insurance Scheme (NHIS). Thus, the introduction of the scheme with the ultimate aim of bringing balance in healthcare benefits in order to ensure a form of quality (MOH 2004, NHIS) has been well appreciated by stakeholders. This is an alternative to (if not a replacement) of the out of pocket payment mechanism. Although this scheme is a health fund provided by the government to serve as a "top up" for payment of services, claims are sometimes delayed. Hence, healthcare providers will have to rely on revenue from the cash and carry system. However, this and other related health service schemes are main sources of income for healthcare financing in other countries (Kutzin 2001). These schemes are closely checked and reformed in situations when necessary. This strengthens the efficiency of the schemes. Results also show that 25% of participants from the reference hospital regard donor support as one of the main source of revenue. This is also in line with research by Kurtzin (2001) which shows that donor support is another major source of healthcare financing in other countries. This means that there is a form of dependence on funds from NGOs, both local and foreign.

Less than 10% of participants are of the view that capitation grant is still maintained in healthcare institutions. This indicates a loss of trust in the practice. According to a third (33%) of the participants, the practice of capitation is no longer in existence. Also, about

two-third (60%) of them do not even know whether or not this system is still in operation. This shows the negative attitude and response towards the capitation system (Andoh-Adjei, 2016). Adverse attitude has been built towards capitation mainly because of perceived unpleasant experience of its payment. Other factors include reduced quality in healthcare provision, potential danger to the existence of private health facilities and to patients due to the recognition it gives to people outside the pharmacy profession. This is not only obvious to healthcare providers but to patients as well. In addition, there is a misconception that the system has been politicized. This has made people lose interest looking at the experience of healthcare being intertwined with politics. However, some healthcare providers still have interest in capitation (Agyei-Baffour, 2013). According to them, it would check the provision of quality healthcare, treatment continuity, reduction in the ill-usage of services by clients and provide funds before service production.

5.3 Adequacy of revenue generated

The number of patients attending the reference hospital has increased over the period of study (2014 – 2016). Generally, insured patients outnumbered the non-insured patients. However, the number of insured patients reduced generally from 129,250 (93.9%) in 2014 to 116,834 (75.7%) in 2015 and later on to 96,321 (62.3%) in 2016. This gives indication of problems participants faced with the scheme in the early years. Any reform in this period would possibly have stabilized attendance as in the case of Mohan et al. (2013). Although there may be differences in the number of attendance for insured patients, it will not be significant especially when people are aware that changes are actively taking place. This would reduce the quadruple increment in non-insured patient attendance from 2014 (8,369) to 2015 (37,588) and further increment in 2016 (58,166).

More non-insured patients would register to the scheme. Thus, reducing the intensity of out of pocket payment mechanism (Tangcharoensathien *et al*., 2011; Shiva Kumar *et al*., 2011). Although income from cash and carry and carry, a form of out of pocket payment, increased over the years (14.8% in 2014, 16.1% in 2015 and 25.4% in 2016), cash inflows were recorded from other sources. This further confirms that there are alternative sources of healthcare financing Kurtzin (2001). This sometimes forms a greater proportion of income generated. Revenue is directly or indirectly collected from the population to re-reimburse income coming from the mainstream (Mossialos *et al*., 2002). This, in this case, could include loans, grants and donations. Over the years, expenditure on healthcare delivery has increased. As a result, a lapse in revenue for a period has a potential effect on the adequacy of revenue generated in a healthcare institution. Although revenue generated is adequate over the period of study for the reference hospital (GHC758, 900.94), the rate of increase in revenue in 2015 was not able to absorb the rate of increase in expenditure for that year. Hence, revenue was inadequate. This could be due to contextual factors (situational, structural or environmental) that did not work in favour of the hospital (Mossialos *et al*., 2002). Results further show that there were no statistically significant differences among the adequacy of revenue

generated in the years understudy $((F_{(2,11)} = 1.586, p > 0.05)$ and health centres$((F_{(3,11)} = 0.095, p > 0.05)$. There was also no significant difference between the reference hospital (Agogo Presbyterian hospital) and the other healthcare facilities. Unlike the reference hospital, the significant source of financing for the healthcare facilities is income from the NHIS. Although, expenses over the years increased in line with (Mossialos *et al*., 2002), they could only defray only half of income from the NHIS. This shows that the scheme has been successful in minimizing out of pocket payment mechanism in healthcare facilities (Tangcharoensathien *et al*, 2011; Shiva Kumar *et al*.,

2011; Hu *et al*., 2008). In addition, it tends to prove the reason why the proportion of adequate revenue generated is higher (50.8% for Juanse, 56.7% for Ananekrom and 56.0% for Amantenaman health centres) in the various healthcare facilities than the reference hospital (1.5%).

5.4 Challenges of healthcare financing

Findings from the healthcare institutions show that a substantial number of challenges they face are internally related. Unlike the case of Owusu-Sekyere and Bagah (2014) where healthcare providers delayed in their submission of claims for vetting and payment, half of the participants from the reference hospital and every participant from the various healthcare centres responded they ensured prompt submission of claims. This reflects appreciable improvement in the administrative capacity, technical, human resource and working environment of healthcare providers. However, only one-third of participants from the reference hospital asserted to regular re-imbursement of claims. This tends to imply that although submissions of claims are on time, re-imbursements are usually delayed due to unavailability of money for the scheme. This was also affirmed in the findings of Sodzi – Tettey *et al* (2012). Their research revealed significant differences between re-imbursement rates and timely re-imbursements although claims were submitted on time. .Akortsu and Akor, (2011) also confirmed this challenge in addition to others including delay in the receipt of government intervention. Every health related scheme functions of financial sustainability without its values being undermined (Thompson *et al*., 2009). Delayed re-imbursement of claims to a large extent has the potential of causing instability in the financial standing of the scheme. Thus, undermining its value. This will result in a lack of trust in the scheme although its potential of financial stability is known. In the end, dependence on out of pocket payment mechanism will

increase which will adversely affect healthcare to the less endowed (Tangcharoensathien *et al*., 2011; Shiva Kumar *et al*., 2011; Hu *et al*., 2008).

5.5 Alternative sources of healthcare financing

One main sources of income for the reference hospital as regarded by 16.7% of participants should be from donor support whereas participants from the healthcare centers regard this to be from the NHIS claims. According to statement in the 2015 budget (Ghana Web, 2015), donors were expected to fund over 80% of healthcare infrastructure. This is also confirmed in a study by Akortsu and Abor (2011).However, results give an indication that participants may be of a different perspective. This may be either due to the fact that donor supports do not come in as expected or expectation from that source makes them over dependent on other institutions. In addition, their study (Akortsu and Abor, 2011) revealed that another main source of financing public healthcare institutions is through internally generated funds (IGF). Results show that one-third (33.3%) of participants from the reference hospital are in total agreement to this assertion.

Alternative sources of healthcare financing are very important to provide a boost for cash inflows. This is the reason why various researches have recommended that the NHIS enhances their financial sustainability by engaging in additional sources of funding (MOH 2004, Agyei Baffuor, 2016). This is no different for healthcare institutions. Results show that more than half of the participants in the healthcare institutions require that the institutions put measures in place and strengthen existing ones for the provision of additional sources of income. Extension of accommodation facilities to include recreational and hospitality facilities, construction of educational facilities, inclusion of laboratory, scan and ultrasound services for healthcare centres among others are alternative sources of financing that can be considered. Immediate generation of additional income

from investment accounts, support from NGOs and government and sale of medical equipment can also generate additional income for the institutions **CHAPTER SIX**

CONCLUSION AND RECOMMENDATION

6.0 Introduction

This chapter gives a summary on alternative healthcare financing in the Asante Akyim North District of Ghana in the period of 2014 to 2016. Conclusion is made based on analysis of the research objectives. Recommendations are made on strengthening financial sustainability and also enhance further studies in this subject area.

6.1 Conclusion

Conclusions are based on the current state of health care financing, adequacy of revenue generated, challenges of health care financing and alternative sources of Health care financing.

6.1.1 Current State of Healthcare Financing

Results reveal that donations and internally generated funds are one of the main current sources of revenue in the reference hospital. 25% and 16.67% of participants respectively are of the opinion that the revenue from the hospital is sourced from these areas. In addition, every participant regards user fee charges (a form of out of pocket payment) and investments by the institution as a current source of revenue. Healthcare facilities regard NHIS claims and the practice of the cash and carry system as their current prominent sources of income although dependency on NHIS claims is higher. However, only a small fraction of them (6.7%) hold the view that capitation is still being maintained. Two- thirds (60%) of them do not know whether or not it is still in existence while one-third (33.3%) of them have concluded on its non-existence.

6.1.2 Adequacy of Revenue Generated

Regarding the adequacy of revenue generated in the reference hospital, revenue generated has generally been adequate (GHC758, 900.94) accounting for 1.5% of **(yes pls)** income generated for the three years understudy. However, the hospital experienced revenue inadequacy in 2015 (loss of GHC736, 186.56). Adequate revenue was generated for 2014 (GHC44, 475.03) and 2016 (GHC1, 450,612.47). This accounted for 0.3% and 7.1% for the respective years. Adequate revenue generated in the years understudy summed up to GHC475, 979.91, GHC142, 550.10 and GHC145, 555.78 for Juanse health centre, Ananekrom health centre and Amantenaman health centre respectively, accounting for accounted for 50.8%, 56.7% and 56.0% of their total incomes generated.

6.1.3 Challenges of Healthcare Financing

Every participant from the healthcare centres admit their institutions in one way or the other are faced with challenges. These include the unavailability of funds to purchase equipment, delayed re-imbursement from the National Health Insurance Authority (NHIA) and high dependency on the NHIS. Notwithstanding, participants are of the view that measures such as prompt re-imbursement by the NHIA as well as its effective extensive education for patients to register with them, financial clearance and absorption of utility bills by the government have the propensity to reduce financial burden on healthcare institutions. Participants also ensured prompt submission of NHIS claims. However, one-third of them from the reference hospital affirmed regular reimbursements.

6.1.4 Alternative Sources of Healthcare Financing

Lastly, more than two-thirds (66.7%) of participants from the reference hospital acknowledge alternative source of financing. This includes the practice of the cash and carry system if patients are not insured, operation of the psychotherapy center to boost

income. Extension of accommodation facilities to include recreational and hospitality facilities, opening of investments accounts, support from NGOs and the government are also other means of generating more income for the institution. Participants are of the view that following the footsteps of leading healthcare institutions in building schools and other educational facilities is another key source of generating income for the institution. For healthcare facilities, extension of services to include laboratory, scan and ultrasound services as well as the operation of a pharmacy in the facilities are other means of generating income.

What was the proportion of alternative sources of funding? How significant was it?

The proportion of the alternative sources of funding is 2: 3. Thus two thirds of the participants in the study acknowledges that alternative sources of healthcare is a major source of income to the institution. This includes practice of cash and carry, operation of psychotherapy center, extension of accommodation, recreational and health facilities, provision of means of transport to patients and clients, support from NGOs and extension of pharmaceutical and laboratory facilities. This is similar to the healthcare centers because the participants are of the view that extension of services in the health centers to include laboratory, scan and ultrasound services as well as the operation of a pharmacy in the facilities are other means of generating income.

The proportion which 66.7% is significant because it indicates that the more the sources of the healthcare financing the higher the income of the institution.

6.2 Recommendations

The following recommendations are made based on the conclusions of the results of the analysis. This will be disseminated to the following areas and policy makers respectively

6.2.1 MINISTRY OF HEALTH (MOH)

Results from the study indicates that one-quarter of current revenue of the Agogo hospital is from donor support. It is recommended that the government, MOH for that matter should encourage the private sector and other Non-Governmental Organizations to take keen interest in funding both mission and public healthcare institutions to reduce the burden on them. This will enable these institutions to use internally generated funds to enhance their financial sustainability and improve healthcare.

6.2.2 MOH AND NHIS AND AUTHORITY

It was realized from the study that funds from NHIS claims are adequate to support healthcare facilities but not the hospitals. Re-imbursements are also delayed although submissions of claims are prompt. It is recommended that appropriate reforms in checking the functionality of the scheme in the hospital should be made since patients are usually referred from the healthcare facilities to the hospitals. This will reduce abscondment mainly due to poverty. Also; policies governing the NHIS should be enforced by the government and ensured by the MOH especially those concerning reimbursement.

6.2.3. HEALTH CARE INSTITUTIONS

Adequate revenue was generated in the period understudy for healthcare institutions. It is recommended that this be maintained however, attention be given to contextual factors so as to prevent inadequacy in subsequent years. In addition, these institutions should institute policies that will enable them to consciously invest in viable alternative financing sources in order to remain financially stable.

Secondly, alternative source of healthcare financing includes accommodation, recreational and educational and transport facilities. It is recommended that every healthcare institution allocates a substantial fraction of its revenue to invest in these facilities since they are long-

term investments. Other NGOs can invest in these healthcare facilities to improve their revenue.

6.2.4 MOH AND CHRISTIAN HEALTH ASSOCIATION OF GHANA

One of the challenges faced by healthcare institutions is increased utility charges. Attention should be given to less costly but quality means of utility production. The government (MOH) as well as the mission institutions should therefore absorb some of the utility charges in the health care facilities.

6.2.5 WORLD HEALTH ORGANIZATION AND MINISTRY OF HEALTH

All the Millennium Development Goals (MDG) influence health. They are interdependent; and affect each other. For example, better health enables children to learn and adults to earn. Gender equality is essential to the achievement of better health. Reducing poverty, hunger and environmental degradation positively influences, but also depends on, better health. It is therefore prudent that there is adequate health care financing so as to achieve all the eight MDGs in Ghana.

6.3 Areas for further research

1. Methods of enhancing prompt reimbursement of NHIS debts to the health care facilities.
2. Challenges of health care financing in the district health centre in Ghana.

REFERENCES

Agyei- Baffour, P. (2016, October 20-28) *Public Finance,* Class lecture for Health Sector Financing and Management, Kwame Nkrumah University Science and Technology, Kumasi, Ghana.

Agyei-Baffour, P., Oppong, R., Boateng, D., (2013) Knowledge, perceptions and expectations of capitation payment system in a health insurance setting: a repeated survey of clients and health providers in Kumasi, Ghana. *BMC Public Health,* 2013 13:120 https://doi.org/10.1186/14711-2458-13-1220. Received: 13 September 2013. Accepted: 17 December 2013

Akazili, J.,Welaga, P., Bawah, A., Achana, F. S., Oduru, A., Awoonor-Williams, J. K., Williams, J. E., Aikins, M., Philip, J. F. (2014) *Is Ghana's pro-poor health insurance scheme really for poor? Evidence from Northern Ghana*, BMC 14:637 Retrieved from http://www.biomedcentral.com/1472-6963/14/637

Amoateng, S. (2017) An interview with Dr. Fredua-Agyeman Rudolph in Ghana at British Library on 29th September, 2017.

Amoateng, S. (2017) An interview with Mr. Yeboah, accounts manager, Agogo Presbyterian Hospital in Agogo on 29th September, 2017.

Amoateng, S. (2017) An interview with Mr. Alex Nyame-Kesseh, general manager, Agogo Presbyterian Hospital in Agogo on 29th September, 2017.

Amoateng, S. (2017) An interview with P.A. Ofori Fredrick in Ghana Health Center at Juansa on 29th September, 2017.

Amoateng, S. (2017) An interview with Mr. Ezekiel , administrative manager, Agogo Presbyterian Hospital in Agogo on 29th September, 2017.

Andoh-Agyei, F.X.,Cornelissen, D., Asante, F.A., Spaan, E., Van der Velden, K.,(2016) Does Capitation payment under national health insurance affect subscribers‟ trust in their primary care provider? Across-sectional survey of insurance subscribers in Ghana. *BMC Health Services* Research BMC series. https://doi.org/10.1186/s12913-016-1622-0. Received: 4 May 2016. Accepted: 2 August 2016. Published 24 August 2016

Asante Akim North District Assembly (2016) *2016 Annual Report- Asante Akim North District* pg. 1-10, 53 & 66.

Ghana News Agency (2017) Asante Akim North District Assembly Retrieved on 22nd April, 2017

Ghana Statistical Services (2014, October) *2010 Population and Housing Census District Analytical Report, Asante Akim North District*, pg. 1-40. Available at http…. [Accessed on 23rd April, 2017].

Gobah, F. F. K. and Zhang, L. (2011) The National Health Insurance Scheme in Ghana: Prospects and Challenges: a Cross-Sectional Evidence. *The Global Journal of Health Science*.3 (2); October 2011 pg……. www.ccsenet.org/gjhs doi:10.5539/gjhs.v3n2p90

Hu, S., Tang, S., Liu, Y., Zhao, Y., Escobar, M.L., Ferranti, D.D. (2008) Reform of how health care is paid in China: challenges and opportunities. Health System Reform in China 6. Published Online October 20, 2008. DOI: 10.1016/S0140-6736(08)61368-9

Kale-Dery, S. (2017) "Hospital managers decry delays in reimbursing claims", *The Daily Graphic*, 18 June 2017, p.1- 4.

Kutzin, J. (2001) A descriptive framework for country-level analysis of health care financing arrangements. Health Policy Manas Analysis Project, World Health Organization, Regional Office for Europe, Bishkek Kygyz Republic. Received 23 July 2000, accepted 18 October 2000

Mensah, M. (2015, April 22) Press conference by pharmaceutical society of Ghana. *The Daily Graphic.* Retrieved from http://www.graphic.com.gh

Ministry of Health (MOH), (2004) National *Health Insurance Policy Framework of Ghana*.

Mohan, A., Grant, J., Batalden, M., McCormick, D. (2013) The health of safety net hospitals following Massachusetts health care reform: changes in volume, revenue, costs and operating margins from 2006 – 2009. *International Journal of Health Services,* 43(2), pp. 321-335. Baywood Publishing Co., Inc. DOI: http://dxdoi.org/10.2190/HS.43.2. http://baywood.com

Mossialos, E., Dixon, A., Figueras, J., Kutzin, J. (2002) Funding health care: options for Europe. Open University Press, Celtic Court, 22 Ballmoor, Buckingham ISBN 0 335 20924 6 (pb)

Ohemeng, K. J. (2015, April 22) Press conference by Pharmaceutical Society of Ghana (GPSGH), on: Delay in reimbursement of health service providers and recommendation for a sustainable national health insurance scheme (NHIS) Kama Conference Center, Accra, Ghana, April 2015. Retrieve from http://www.graphic.com.gh

Owusu-Sekyere, E. and Bagah, A. D. (2014) Towards a sustainable health care financing in Ghana: Is the National Health Insurance the Solution? *Public Health Research*, 4(5):185-194. Retrieved on 3rd March, 2017.DOI: 10.5923 /j.phr.20140405.06

Regoniel, P. A. (2015) *Conceptual Framework: A Step by Step Guide on How to Make One. In Simply Educate. Me*. Retrieved on 1st July, 2017 from http://simplyeducate.me/2015/01/05/conceptual-framework-guide/

Sodzi-Tettey, S., Aikins, M. Awoonor-Williams, J.K., and Agyepong, I.A. (2012) Challenges in Provider Payment under the Ghana National Microfinance, *Ghana Medical Journal*, 46 (4): pg. 189(46)

Shiva Kumar, A.K., Chen, L.C., Houdhury, M., Ganju, S., Mahajan, B., Sinha, A., Sen, A. (2011) Financing health care for all: challenges and opportunities. India: Towards Universal Health Coverage 6. Published Online January 12, 2011. DOI: 10.1016/S01406736(10)61884-3

Tangcharoensathien, V, Patcharanarumol, W., Ir, P., Aljumid, S.M., Mukti, A.G., Akkhavong, K., Banzon, E., Huong, D.B., Thabrany, H., Miills, A. (2011) Health in Southeast Asia 6 Health-financing reforms in southeast Asia: challenges in achieving universal coverage. *Lancet*, 377 (9768), pp. 863-873. ISSN 01-40-6736 DOI: https://doi.org/10.1016/S0140-6736 (10)61890-9

Thompson, S., Foubister, T. Mossialos, E. (2009) Financing health care in the European Union: challenges and policy responses 2009 pp.xxiii + 200 pp. ref. many. LSE Health, London School of Economics and Political Science, Observatory on Health Systems and Policies, London, UK. ISBN: 9789289041652, Record Number: 20093282958, Pub: World Health Organization.

APPENDICES

KWAME NKRUAH UNIVERSITY OF SCIENCE AND TECHNOLOGY/SCHOOL OF PUBLIC HEALTH/DEPARTMENT OF HEALTH POLICY, MANAGEMENT & ECONOMICS

RESEARCH TITLE:

ALTERNATIVE SOURCES OF HEALTH CARE FINANCING IN GHANA: A CASE STUDY OF ASANTE AKIM NORTH DISTRICT

QUESTIONNAIRE

Introduction

Good morning/afternoon. I am a student at School of Medical Sciences, KNUST. I will be conducting several meetings with people like you in The Asante Akim North District to find out your views and ideas about "Alternative healthcare financing in Ghana: A case study in Asante Akim North District". Your opinions are highly essential at the same time vital as they will help us to improve the kind of service we provide. Whatever you say will be treated confidential, so feel at ease to express your candid opinion. Be assured that your responses will not in any way be linked to your identity. You are kindly requested to answer the questions below by indicating a tick or writing the appropriate answer when needed.

THANK

Date of Interview:

SECTION A: BACKGROUND CHARACTERISTICS

Institution……. Position……..

1. Gender: Male [ ] Female [ ]

2. What is your age? [ ] years

3. What is your religion? Christian [ ] Moslem [ ] Traditionalist [ ]

4. What is your marital Status? Single [ ] Married [ ]

Separated/ Divorced [ ]

5. Level of Education Secondary [ ] Diploma / HND [ ]

Graduate [ ] Post Graduate [ ]

6. What is your occupation? …….

7. What is your status or position with the hospital? ……...

8. How long have you been working with the hospital …..……

SECTION B: CURRENT STATE OF HEALTHCARE FINANCING

1. What are the current sources of revenue in your institution?

……..……..

…….

…….

…….

……..……

2. Does your institution practice Capitation?

Yes [ ] No [ ]

2(b). If yes,

What are the effects of capitation on the state of financing of your institution?

…….....

…….……

……..……

……..……

……..……

3. How many patients assess you health facility annually?

Year	Total number of patients	Insured patients	Non-insured patients	Patients on capitation
2014				
2015				
2016				

4. How much did your institution generate in the last three years? Break revenue down as in the table below

Year	Total Income	Total NHIS Income	Total Cash and Carry Income	Total Donor Funds
2014				
2015				
2016				

SECTION C: CHALLENGES OF HEALTHCARE FINANCING

1. Does your institution face any financial challenges?

YES [ ] NO [ ]

1(b). If yes,

List the financial challenges

……

……

……

……

2. How can these challenges be resolved?

……..

……...

……...

……...

3. Do you submit your institution"s NHIS claims on time?

Yes [ ] No [ ]

3(b). If yes,

How often do you submit your claims to the NHIS office?

Monthly [ ] Biannually [ ] Annually [ ] Other [ ]

4. Does the NHIS reimburse the claims of your institution?

Yes [ ] No [ ]

4(b). If no,

State the reasons……

……

……

If yes,

At what interval does the NHIS reimburse its claims to the institutions?

Monthly [ ] Biannually [ ] Annually [ ] Other [ ]

If other ,

Specify……

……

……

……

5. How much do you receive per year?

Year	Amount
2014	
2015	
2016	

6. How much does your hospital spend in a year in carrying out its activities?

Year	Amount
2014	
2015	
2016	

7. How does the answer in question 10 compare with 11?

……..

……

……

……

8. How is the gap, if any is funded?

……

……

……

9. How many claims are rejected and its amount?

YEAR	Number of claims rejected	Amount
2014		
2015		
2016		

SECTION D: ALTERNATIVE SOURCES OF HEALTHCARE FINANCING

1. What are the main sources of income of your institution? B.

   C.

   D.

2. Are there other means of generating income?

Yes [ ] No [ ]

2(b). If yes,

List all the alternative means of generating income for your institution.

1.

2.

3.

4.

5.

3. List the alternative sources of generating income that can be implemented immediately

1.

2.

3.

4.

4. List the alternative sources of income that can be generated / implemented later.

1.

2.

3.

4.

THANK YOU FOR YOUR TIME