National Health Insurance in Ghana: Evaluation of the Nzema-East District Mutual Health Insurance Scheme

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Ghana

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National Health Insurance in Ghana: Evaluation of the Nzema-East District Mutual Health Insurance Scheme

A thesis submitted in partial fulfilment of the requirement for the requirement for the degree of Masters of Public Health

By

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Table of Contents

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Abstract

Health Insurance is one of the main mechanisms of health care financing prominent on the global policy agenda. In 2004, Ghana implemented a health financing reform to replace user-fees with a National Health Insurance Scheme (NHIS). Prior to its implementation, access to healthcare was solely based on ability to pay, emanating from a policy in 1985 which introduced user-fees, popularly called "cash and carry" system. This caused a marked decline in health services utilization whilst apparently the NHIS, has increased outpatient department (OPD) utilization, with marked national enrolment. However, this is happening amidst poor operational capacity and scheme's governance.

It was with this background, that this study sought to evaluate the performance of the Nzema-East District Mutual Health Insurance Scheme (NEDMHIS), employing it as a descriptive case study using the Robert Stakes Model emphasizing the anticipated conditions and means for the NHIS implementation, and what pertains in the Nzema-East district (NED) for the NEDMHIS, with respect to the health financing sub-functions.

Findings of this study show that, the NEDMHIS enrolment seems commendable with just 2 years of implementation, and that its annual administrative costs were always within the 20% limit permitted by law. Aside the increased OPD utilization, with its attendant challenges of increased health staff workload, tending to compromise quality, it appeared that insured clients sought care earlier and hence presented with "less severe disease", as evidenced by less admissions and mortality; and that the non-insured tended to postpone seeking of health care. In addition, Axim hospital's revenue generation apparently has increased markedly with NEDMHIS implementation. However, the scheme is plagued with challenges relating to technical capacity, infrastructure and scheme's governance, and that the large informal sector in NED, which is difficult to reach, has made premium collection very challenging.

This study, therefore, recommends that a minimum administrative capacity and infrastructure should be in place before embarking on health insurance, and this needs to be addressed by the NEDMHIS. Furthermore, the indigents criteria need amendment as it undermines financial accessibility of perhaps the most vulnerable. Moreover, the NHIS needs to be really "mandatory" in order to increase risk pooling and financial sustainability of the Schemes.

Key Words: Social Health Insurance; health insurance; Ghana; evaluation; district based insurance schemes; out-of-pocket expenditure, premium, feasibility, equity sustainability, efficiency and low-income countries.

List of Abbreviations and Acronyms

DDHS	District Director of Health Services
DHA	District Health Administration
DMHIS	District Mutual Health Insurance Scheme
DHMT	District Health Management Team
OECD	Organization for Economic Co-operation and Development
EQUITAP	Equity in health care financing, delivery and health status in asia-pacific countries
GHS	Ghana Health Service
GNI	Gross National Income
GOG	Government of Ghana
GSS	Ghana Statistical Service
HI	Health Insurance
ILO	International Labour Organization
JSS	Junior Secondary School
MHO	Mutual Health Organization
MIS	Management Information System
MOH	Ministry of Health
MSLC	Middle School Leaving Certificate
NED	Nzema-East District
NEDA	Nzema-East District Assembly
NEDMHIS	Nzema-East District Mutual Health Insurance Scheme
NGO	Non-Governmental Organization
NHI	National Health Insurance
NHIA	National Health Insurance Authority
NHIC	National Health Insurance Council
NHIF	National Health Insurance Fund
NHIL	National Health Insurance Levy
NHIR	National Health Insurance Regulations
NHIS	National Health Insurance Scheme
NPP	New Patriotic Party
NGO	Non-Governmental Organization
OOP	Out-of-Pocket
OPD	Out Patient Department
THE	Total Health Expenditure
RHA	Regional Health Administration
SHI	Social Health Insurance
RHMT	Regional Health Management Team
SSNIT	Social Security and National Insurance Trust
VAT	Value Added Tax
WHO	World Health Organization

1.0 INTRODUCTION AND BACKGROUND INFORMATION ON GHANA

1.1 Introduction

This thesis is about health insurance (HI) in Ghana, and one particular scheme in the country will be evaluated. This scheme was implemented in the Nzema-East district (NED) in December 2005 and is the district where I worked from 2003 as the Medical Superintendent in the Axim Hospital, which is the public district hospital in NED till 2007, when I got the opportunity to pursue an International Course on Health and Development at the Royal Tropical Institute in Netherlands.

Health care financing is one of the key functions of a health system, with HI being one of the main mechanisms in its realization (McIntyre 2007). HI is currently prominent on the global policy agenda due to the realization that new methods beyond conventional ones are required. In the recent past, cost-recovery for public health facilities, primarily through out-of-pocket payments (OOP), was in vogue (Akin et al 1987). However in recent times, consensus has grown that *"prepayment health care financing, whereby people contribute regularly to health care costs of through HI contributions and/or tax payment, provides greater financial protection to households than- and is therefore, preferable to OOP health care financing"* (Preker & Carrin 2004; WHO 2000)***.***

In 2001, Ghana embarked on a health financing reform to replace OOP fees with a National Health Insurance Scheme (NHIS), as a more equitable and pro-poor health financing policy. Therefore in 2003, Act 650 establishing the NHIS was passed into law and implementation began in 2004 (Ministry of Health-MOH- 2004). The vision of the policy is as follows: ***"within the next 5 years, every Ghanaian resident shall belong to a HI scheme that provides adequate covers against the need to pay OOP at the point of service use, in order to obtain access to a defined package of acceptable quality of health service"*** **(MOH 2004).** The NHIS was a campaign promise of the current government- New Patriotic Party- NPP, and for its success, it therefore has great commitment. It appears its implementation was politicized, as happens traditionally when emphasis is put on policy content to the detriment of the dimensions of process, context and actors (Walt & Gilson 1994). With low premiums; generous exemptions; and high reimbursement rates, it is unsurprising that as at end of 2007, the enrolment nationally was about 55% and apparently was associated with a marked increase in outpatient department (OPD) utilization (National Health Insurance Authority-NHIA-2008). However, this is happening within the

context of poor operational capacity and weak control on schemes governance (NHIA 2008).

According to Grindle & Thomas 1991, *"operational processes can make or break a policy".* In other words, political reform can lead to marked changes, however if capacity constraints remain unaddressed, successful policy implementation can be difficult. It is with this background, that this study aimed to evaluate the performance of the Nzema-East District Mutual Health Insurance Scheme (NEDMHIS), with respect to the health financing functions, and the anticipated conditions. The study seeks to identify operational challenges and make recommendations for policy makers, and administrators in Ghana to ensure the realization of the Social Health Insurance (SHI) vision.

In this chapter, background information on Ghana and the NED will be provided, followed by a brief description of the Ghanaian health system and health care financing.

1.2 Background Information on Ghana

Geography & Demography: Ghana is in West-Africa, bordered to the south by the Atlantic Ocean; Burkina-Faso to the north; Togo to the east and west by Ivory Coast. It has a surface area of 238,537 sq km, like Great Britain, lying entirely within the northern tropics. The country is largely flat but with several peaks in the east. It is warm/hot throughout the year with 2 broad geographic zones- a moist south supporting a cover of rainforest and grassland, whereas the north has dry savannah vegetation.

Ghana's estimated population was 21 million as at 2006 with about 50% below 15 years (Agyepong & Adjei 2008). The population is largely rural (56%) and the rest is urban (Ghana Statistical Service-GSS-2004). Adult literacy is about 53% with male & female percentage of 66% and 50% respectively (GSS 2004). The population growth rate is about 2.2% according to the United Nations, which the government sees as an obstacle to development, because of the scarce resources. Ghana has 10 administrative regions; these are Ashanti, Brong-Ahafo, Central, Eastern, Greater Accra, Northern, Upper-East, and Upper-West, Volta and **Western**. NED is one of the 13 districts in the Western region with a population of about 172,539 projected from the 2000 census. NED happens to be one of the most deprived districts in the country and the main occupation of its citizens is fishing and farming.

Politics and Governance: Ghana got its independence from British colonial rule under the leadership of Dr. Kwame Nkrumah in 1957. Nkrumah having banned all political opposition was deposed in 1966 by what transpired to be

the first of 4 military coups that spanned 15 years. In 1992, the then government which had ruled since 1981 through a coup, reorganized itself the National Democratic Congress (NDC) party and won the first democratic presidential elections and served the two-term maximum up to 2000, when NPP was voted into power.

Socio-Economic Situation: Ghana is a low-income country with a Gross National Income (GNI) per capita of US$380 (Agyepong & Adjei 2008). It is an agricultural economy, with main exports of cocoa, timber and gold. About 31% of the population lives below the national poverty line (MOH 2005). About 20% of the population constitutes the total workforce and 70% of this workforce is formed by the informal sector (GSS 2004).

The Health System:
Public, Mission and Private Health facilities, with over 50% by the first, provide health care, whilst the MOH provides governance for all health facilities through its policies (MOH 2005). The Ghana Health Service (GHS) is in charge of most of the public health care delivery.

Public Sector Health care Delivery: The government owns most health facilities. These facilities are organized in 4 tiers. Village and community health posts constitute Level A. Sub-district health centres without and with a Doctor constitute levels B1 and B2 respectively. District hospitals form Level C, whilst Regional hospitals form Level D. The GHS also provides mobile health services including immunization and family planning. Regional hospitals provide mainly tertiary care whilst district facilities provide both curative and preventive care. Additionally there are 2 autonomous Teaching Hospitals that provide tertiary care and serve as referral points for all health facilities. The GHS links 3 levels of administrative units hierarchically. There are 139 District Health Management Teams (DHMT) lowest in the organizational structure, which manage policies/ programmes of the sector in the districts. The management of regional issues and supervision of DHMTs are undertaken by 10 Regional Health Management Teams (RHMT). At the top of the organizational structure are 8 Divisional Directors working under the leadership of a Director General and his Deputy. A 12-member Council governs the GHS.

Facilities operated by Non-Governmental Organizations (NGO): These include mission hospitals/clinics and organizations like the Red-Cross. Church-based facilities dominate this group, with most of owned by the Catholic Church. Financing is mainly through grants from charitable organizations and user fees. In some facilities, the government supports by bearing personnel costs and paying for exempt individuals who utilize the facility.

Private Sector Facilities: These facilities are private-for-profit, in the form of big clinics usually owned by the operating Physicians. They provide their own infrastructure, and pay staff salaries. Their charges are fixed to cover operating costs and a reasonable profit margin and therefore are usually higher than public/mission facilities. *In addition to these are Pharmacies and private Licensed Chemical Sellers. The former sell modern medicine and treat minor ailments whereas the latter sell non-prescription drugs.*

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Health Status: The 2003 Ghana Demographic and Health Survey (GDHS) put infant mortality rate at 64/1000 live births; maternal mortality rate at 200 per 100,000 live births; and birth rate & death rate at 24/1000 & 11/1000 respectively (GSS 2004). Malaria remains the most frequently reported cause of morbidity and a major cause of childhood mortality. Other frequently reported diseases are diarrhea, acute respiratory infections, pregnancy related complications and anemia. The most common chronic diseases are hypertension and diabetes. Life expectancy has increased from 53 in 1980 to 60 years in 2000 (GSS 2004).

Health care financing: Health care financing has a chequered history. After independence, health care provision was made "free" in public health facilities. This situation continued until 1985 when the Government introduced user fees. In ensuing years standard of health care provision fell and health services utilization declined and this notwithstanding, introduction of full cost recovery for drugs was implemented to address drug shortages. Then it became evident that of the 18% of the population who needed health care at any given time, only 20% could access it. This triggered the debate, which led to implementation of the NHIS (MOH 2004).

As at 2004, 80% of health financing in the public sector was through tax revenue and donor funds. The remaining 20% was from internally generated funds (IGF) from OOP payments and HI is gradually replacing this (MOH 2004).

2.0 PROBLEM STATEMENT, SIGNIFICANCE OF STUDY AND METHODOLOGY

2.1 Problem Statement

Nature of the Problem and Major Influencing Factors: In Ghana, OOP payments amidst the pervasive poverty leads to poor financial access to health services (McIntyre 2007). Prior to the NHIS introduction many households afflicted with preventable diseases, had limited access to quality care because of the then existing ineffective finance options especially for the rural poor (Osei-Akoto 2004).

As a result of poverty, traditional/religious beliefs, and ignorance among others, a number of people seek "*complementary care"* or "*do nothing"* when ill. The complementary care may take the form of self-medication, consulting a chemical-seller/traditional healer, or seeking solace at a religious camp/shrine. It is when these fail that there is a compulsion to seek care at a health facility, by which time the condition might have worsened. In such instances, most of them are usually admitted, and the prognosis is usually bad with attendant high mortality. Aside direct costs; indirect costs, opportunity costs and informal ("under the table") charges also deter seeking care at health facilities (Osei-Akoto 2004).

Ghana's budgetary allocation for health is 6.3% of total government expenditure, which is inadequate, and of the Total health Expenditure (THE) only 40% is borne by government whilst the remnant is borne by the private sector (WHO 2007). Furthermore of the private sector expenditure, private households' OOP payments constitute 80%. Therefore, with little/no savings, households risk becoming impoverished when illness requiring costly unexpected health care payments termed "*catastrophic expenditure"* occurs, because households are forced to reduce spending on other basic goods, sell assets or incur great debts (McIntyre et al 2007).

User fees was introduced as a World Bank recommendation, being one of the policy reforms to restructure Ghana's health care financing (World Bank 1987). Theoretically, the law establishing user fees provided full exemption for the poor; health workers; tuberculosis, leprosy and psychiatric patients; child welfare clinics; immunization services; antenatal and postnatal services; and some communicable diseases (MOH 2005). However, there was a big implementation gap and in 1988, the then government modified the law, on realizing the adverse effects on the health of households; however, this had little effect in bridging the gap (MOH 2005).

Ghana like most low-income countries has difficulties in providing the health care needs of its citizens, and improving or replacing existing health care financing systems, poses enormous challenges (McIntyre 2007). Thus, unsurprisingly that the 2005 World Health Assembly urged member states to put in place health financing systems that involved prepayment of financial contributions and risk & resource pooling to avoid catastrophic health expenditures (WHO 2005b). Act 650 makes it "compulsory" for all Ghanaians to join a HI scheme with the District Mutual Health Insurance Scheme (DMHIS) being the NHIS basic in a district (Government of Ghana-GOG-2004).

The functions of health care financing are **revenue collection, pooling of funds and purchasing** (McIntyre 2007). The targets of these health care functions are "to make funding available; set the right financial incentives for providers; and ensure that all individuals have access to effective personal and public care" (WHO 2000). The performance evaluation of HI with respect to feasibility; equity; efficiency and sustainability is largely dependent on the extent to which HI via its financing functions can achieve the health financing targets in the context of the 7 key design features (see details in Table 1, Chapter 3). Additionally for SHI a number of conditions must exist before a country can begin its establishment (Carrin & James 2004). These conditions relate to the labour market; administrative capacity; legal framework; availability of staff & health care infrastructure and consensus among the society's stakeholders. The problems and challenges emanating with implementation of NEDMHIS, for that matter the NHIS with the above context are discussed below.

Revenue Collection: NED is largely rural, with majority of the workforce being in the informal sector. Furthermore most of the rural population is scattered and live in hard to reach areas. Therefore premium collection might be fraught with difficulties amidst the seasonal income of the majority of them.

Risk Pooling: *Although* the Ghanaian society, hence the NED has an inherently high level of solidarity, it might not always apply in all settings, especially HI being a new concept to most of the populace, and even willingness might not necessarily translate into their ability to pay (Arhin 2003). Additionally mandatory enrolment is not yet operational, and this may cause adverse selection of those in the informal sector leading to minimal risk pooling, whereby the poor have to cross-subsidize the health care costs of other poor members of the community (McIntyre 2007).

Purchasing: Delayed reimbursement of contracted health facilities by the NEDMHIS seems to be the norm rather than the exception with apparent delays in transfer of NHIA subventions (DHA 2007). In addition the provider payment mechanism of fee-for-service, with apparently no remedial measures, is likely to lead to cost escalation as a result of overproduction of services (McIntyre 2007). This and the apparent comprehensive benefit package with low premiums, could threaten the scheme's sustainability.

Apparent Challenges in Health care Provision: With the implementation of NEDMHIS, partial attribution to unnecessary use cannot be ruled out, with regards to the increased OPD utilization at the Axim hospital especially with no co-payments. Furthermore the increased utilization with no additional staff can adversely affect the quality of health care.

2.2 Significance of Study

The NHIS has seen general evaluations during the health sector reviews, unspecific, and some district schemes like the Dangbe-West Scheme in the Greater Accra Region has being evaluated. Thus, NEDMHIS can be said to have undergone general evaluation, during the health sector reviews and not specifically since implementation. This study therefore seeks to evaluate the NEDMHIS performance, with respect to the health financing functions through its design features, within the context of the conditions in NED.

The study although might be limited in scope and generalizability, will provide some useful recommendations for policy makers and administrators to help streamline the ongoing implementation of the NEDMHIS in particular and the NHIS in general. Furthermore, Ghana's NHIS distinctly included both formal & informal sectors at the outset and therefore useful lessons will also be provided for other low-income countries seriously exploring the "*feasibility of introducing SHI"*.

Study Questions

- What is SHI in general and particularly in the Ghanaian context?
- What situation pertains in the NED with respect to the anticipated conditions and the proposed means?
- What strategies need adoption by Ghanaian policy makers, planners and scheme administrators to deal with emerging challenges, with the NHIS introduction, employing NEDMHIS as a case study?

If possible, this thesis also aims to tentatively answer the question,

- What are the apparent gains and challenges of health care provision with NEDMHIS implementation?

General Objective: To evaluate the performance of the NEDMHIS in terms of the health financing functions and make recommendations for policy makers, planners and scheme administrators in Ghana to, to improve performance of the NEDMHIS, the NHIS and provide lessons for countries considering SHI implementation.

Specific Objectives:

- To describe SHI in general and particularly in the Ghanaian context.
- To evaluate the NEDMHIS, with respect to the health financing functions.
- To describe the population coverage generally and by category, and identify the challenges of involving the informal sector at the outset.
- To determine the scheme's resource generation and how this affects funding of contracted health care providers.
- To describe the scheme's administrative capacity and identify the challenges of the available benefit package and the provider payment mechanism.
- To make recommendations for policy makers, scheme administrators, to improve performance of the NEDMHIS, the NHIS and provide lessons for countries considering SHI implementation.

Beneficiaries of Study: The MOH; GHS; Western Regional Health Administration (RHA); Axim Hospital; NEDMHIS; NHIA and National Health Insurance Council (NHIC).

2.3 Methodology

This study is a descriptive study with elements of comparison. A literature review on HI will be done with emphasis on low-income countries. The evaluation of Ghana's SHI will be done using NEDMHIS as a case study, chosen through convenient sampling, being in a district of which this study's researcher has country experience; and its socio-economic peculiarity. Emphasis for evaluation will be on the means; anticipated conditions and conditions existing in NED. The goals of scheme's implementation will not be delved into in detail, considering the scope and study's time limitation. However, apparent gains and challenges of health care provision, mainly by Axim hospital will be described. Therefore secondary data in annual reports (2003-2007), of Axim hospital, Nzema-East District Health Administration (DHA), NEDMHIS and Western RHA will be analyzed. Where necessary there will be personal communication with some key stakeholders.

2.4 Study Limitations

Since one DMHIS was chosen out of the 139 schemes, because of convenience and time constraint, generalizability of the study results may be limited. Secondary data is also used and hence any inherent defect that occurred in the collection and handling of the primary data, may threaten the validity and reliability of the study results.

Search Strategy: Information was sought from Pub Med; KIT Library; Vrije University Library; World Health Organization (WHO); Ghana Health Sector Reviews; GDHS; Annual Reports of Western RHA, Nzema-East DHA, Axim Hospital Review Reports and NEDMHIS; Course Books; Google search engine and others.

Key Words: Social Health Insurance, health insurance, community insurance, private insurance, voluntary insurance, district based insurance schemes, developing countries, low-income countries, middle-income countries, feasibility, equity, efficiency, sustainability, affordability, risk pooling, out-of-pocket expenditure, adverse selection, moral hazard, premium, benefit package, informal sector, Ghana and Africa.

3.0 LITERATURE REVIEW AND FRAMEWORK FOR EVALUATING THE NEDMHIS

This chapter reviews literature on HI in general and the Ghanaian context in particular, with emphasis on SHI.

3.1 Health Care Financing Mechanisms

Government Funding: This is achieved through direct and indirect taxes. Additionally domestic/international loans may be secured to cater for budget deficits. Development partners may furnish governments aid grants (McIntyre 2007).

Out-of-pocket payments:
These are payments made directly by a client for services provided devoid of a financing third party. Examples are user-fees paid at public health facilities and co-payments in HI (McIntyre 2007).

Health Insurance (HI): HI is whereby a managing institution (third party) pays partly/fully, health care costs of the insured, through pre-payment and risk pooling, protecting them from paying high treatment costs in an event of illness (Carrin and James 2004)

3.2 Types of HI

Criteria for classification is based on:

- Financing Source: Public/Private.
- Level of compulsion: Mandatory/Voluntary.
- Mode of Cover: Group/Individual.
- Method of premium calculation: Income/Community/Risk-rated.

The 3 main financing sources for HI are taxes; social security contributions and private premiums (Organization for Economic Co-operation and Development- OECD-2004).

Mandatory HI: The entire/specific part of the population is legally required to be members and is often called SHI. National Health Insurance (NHI) is the form taken when the entire population has coverage, inclusive of non-contributors such as indigents.

Voluntary HI: Participation is purely on a voluntary basis and is often called private HI and historically tends to be for high-income groups (Conn and Walford 2004).

Community-Based HI (CBHI): Essentially it is a kind of voluntary HI, usually in rural communities. In practice it is usually operated by an NGO or a private-for profit organization (Sara Bennett 2004).

It is also worth noting that, HI schemes may be a combination of different types, as in some countries where a mix of SHI and tax revenue have been used (Sekhri and Savedoff 2003). Combining the aforementioned criteria results these categories:

Public HI: Tax-based HI & Social security schemes (SHI). These are financed mainly through mandatory pay roll deductions and/or general taxation (McIntyre 2007).

Private HI: Private mandatory HI; Private employment group HI; Private Community-rated HI; & Private-risk rated HI. These are financed through private premiums (McIntyre 2007).

3.3 Universal Coverage

This implies securing access to adequate health care for all, at affordable cost and is the ultimate objective of SHI (Carrin and James 2004). It incorporates two dimensions; health care coverage (adequate health care) and population coverage (health care for all). Essentially the 2 main options for achieving universal coverage are SHI and general tax revenue, which task is very difficult and may be realized after decades (Carrin and James 2004).

3.4 Concept of SHI:

SHI as mentioned already is a mandatory HI scheme, founded on the principle of solidarity, whereby individuals contribute according to their ability to pay or income level, and benefit according to their need for health care (McIntyre 2007). In SHI, workers, the self-employed, enterprises and government pay contributions into a special fund. The contributions from workers and enterprises are usually from salaries, whilst the self-employed have either flat or income-based contributions. Additionally the government may provide contributions for those who otherwise cannot, such as the unemployed and low-income informal sector workers (Carrin & James 2004).

SHI design features may differ; however, they share the following characteristics (Carrin 2000):

Compulsory membership: Membership is usually compulsory for formal sector workers and their dependants (Carrin and James 2004).This minimizes adverse selection with voluntary schemes. **In Ghana, compulsory deductions from formal sector workers salaries are paid into the National Health Insurance Fund- NHIF- (MOH 2004).**

Contribution according ability to pay: In SHI, contributions to health care funding are made according to ability to pay and benefits are according to need (Wagstaff and Van Doorslaer, 1993). Financing mechanisms, whereby low-income groups contribute a higher percentage of their income compared to high-income groups is unarguably regressive; however it is debatable whether a progressive or a proportional system is the better option (McIntyre 2007). The percentage contributions are the same in a proportional system, unlike the progressive system whereby high-income groups contribute a higher percentage of their income. On equity grounds, income-related contributions are preferred; however for efficiency especially in countries where it is difficult to assess incomes, flat rates are preferred (Carrin & James 2004). **In Ghana the formal sector employees have 2.5% deduction from their salaries as their "premiums" (proportional system), whereas those in the informal sector contribute through categorized flat rates based on ability to pay (MOH 2004). The informal sector deduction "model" thus achieves an equity-efficiency trade-of (Carrin & James 2004).**

Pooling of Collected Funds: Pooling is whereby individuals contribute regularly to a fund, so that in an event of illness their health needs will be covered (McIntyre 2007). The funds are usually pooled by one or several insurance agencies (Sein et al 2004). For example, in Costa Rica there is a single pooling agency for SHI (McIntyre 2007). In countries where SHI is the main health care financing mechanism, maximum pooling is achieved and also true otherwise as in the United States, where a large proportion of the population is covered by private HI and not the state Medicaid/Medicare schemes, and therefore pooling takes place only within each of the insurance companies (Ayanian et al 2000). **Ghana's NHIS is unique in composition, being a hybrid of a single payer SHI for the formal sector and "multiple mutual health organizations" (MHO) for the informal sector through which pooling is achieved.**

Solidarity: Solidarity is "awareness of unity and willingness to bear its consequences" (Dunning et al cited in Arhin 2003). Furthermore, with solidarity people accept that accrued benefit(s) may not match the resources put ex ante in the system (Criel 1998a). Solidarity is therefore the crucial ethical and economic foundation for risk pooling and redistribution (Doetinchem et al 2006). It therefore ensures financial protection through cross-subsidization from rich to poor; low to high risks; very healthy/rarely ill, to the less healthy/frequently ill; young to the elderly and small families subsidizing large families (Arhin 2003). Thus, a society needs a sufficient degree of innate solidarity to implement and sustain the cross-subsidization inherent within SHI (Carrin & James 2004). **The Ghanaian society has an**

inherently sufficient level of solidarity. The socio-cultural system has an inbuilt solidarity mechanism conventionally centred on the extended family and even beyond the family to other citizens (Arhin 2003).

Access to Specified Benefit Package: The pooled contributions are used to purchase a set of health interventions, which ensures that insured members are entitled to a specified benefit package (Carrin & James 2004). The benefit package ensures beneficiaries access to a range of services, and types of providers for securing these services (McIntyre 2007). Therefore, health services which form an integral component of the benefit package must exist (Carrin 2000). A country's benefit package is largely dependent on affordability; however preferably it should be reasonably comprehensive to protect households from catastrophic health expenditure (McIntyre 2007). **In Ghana the benefit package is quite comprehensive, inclusive of primary care and hospital care (outpatient and inpatient care), covering the top 10 diseases (MOH 2004).**

Provider Payment Mechanism: In SHI different provider payment mechanisms are adopted singly or as a combination. These mechanisms can be classified as follows:

Payment by Individual Reimbursement: The patient after obtaining care pays for the bills and then sends the receipts to the insurer for reimbursement.

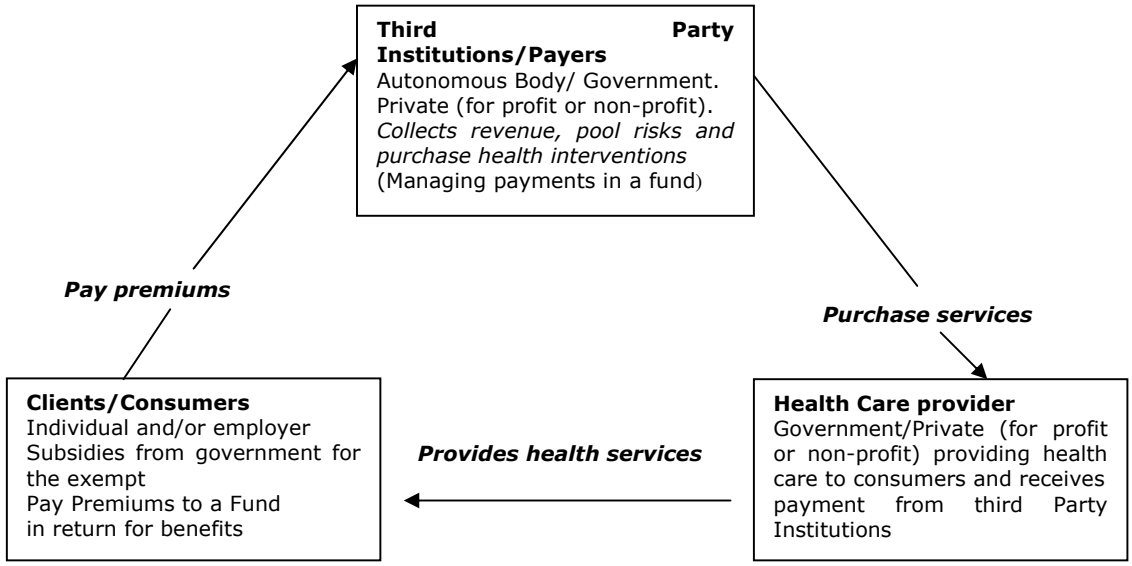
Payment by Assignment: The provider sends the bills of service provided to the insurer. Co-payments if any are charged directly to the patient, and similarly if the charges exceed the maximum permitted fee of the insurance contract, the patient is balance billed by the provider. Payments using assignment can be through fee-for-service; capitation; flat payment and diagnostic related groups ***(see details in Annex 3)***. **In Ghana fee-for-service is the provider payment mechanism of the NHIS.**

3.5 SHI Process

Payments are made regularly by a consumer to a managing institution, responsible for holding the payments in a fund and paying a health care provider for the cost of the consumer's care, or reimbursing the consumer for the health care costs incurred. SHI is a progressive health financing mechanism in terms of equity; "vertical equity" is achieved as premiums are based on one's income and "horizontal equity" achieved, as access to health care is based on health needs (Conn & Walford 1998). There is provider-purchaser split in SHI.

Figure 1 below, summarizes the SHI process.

Figure 1: The SHI Process



Source: Conn and Walford, 1998.

When studying actual country examples, usually a more complex picture emerges. There are various players at each stage of the process (individuals and institutions, both public & private). Different types of third party institutions manage insurance funds. In some systems, the managing institution also owns/manages the service provider.
(For country examples of SHI, see Annex 2).

3.6 Evaluation of the Performance of a SHI Scheme

The performance of a SHI can be evaluated in a two-stage manner, and this study will address primarily the first stage. In the first stage, the performance is evaluated in terms of pure health financing elements- revenue collection; resource allocation; and guaranteeing a specified benefit package. In the second stage, SHI is evaluated with respect to its impact on the health system goals- health; equality in health; responsiveness, equality in responsiveness; and fairness in financing (Carrin and James 2004). The first stage evaluation relates to the health financing targets, about which the seven key design features are analyzed to gauge performance of the NEDMHIS. Table 1 on the next page, shows the seven key design features used to evaluate performance of SHI in terms of the health financing sub-functions, and their relationship with the health financing targets.

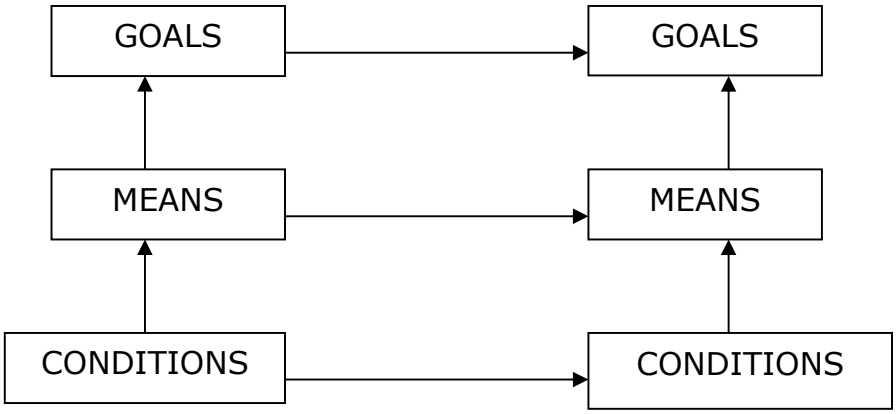
Table 1: Scheme Design Features, Health Financing sub-functions and Targets

Health Financing Sub-function	Scheme Design Feature	Health Financing Target
Revenue Collection	1. Population Coverage	Resource generation Financial accessibility for all
	2. Method of finance	
Risk Pooling	3. Level of fragmentation	Financial accessibility for all
	4. Composition of risk pools	
Purchasing	5. Benefit Package	Optimal resource use
	6. Provider Payment Mechanisms	
	7. Administrative Efficiency	

Source: Adapted from Carrin and James 2004

3.7 Conceptual Framework for Evaluation

Figure 2: PLANNED PROGRAMME REAL PROGRAMME



Source: Adapted from Robert Stake 1967
(See Annex 7 for details)

The framework for evaluation depicted in Figure 2 above, is an adaptation from a model of Robert Stakes, 1967. The conditions represent the context with respect to the scheme, whilst the means are the basic health financing sub-functions, represented by the scheme's seven key design features. The goals are the short, medium and long-term objectives of the scheme.

A full evaluation according to this framework consists of:

1. *An ex ante evaluation of the intended programme or in other words of the policy theory (analyzing whether given the conditions and the intended means it can be expected that the goals are going to be realized).*

2. *A comparison of the planned programme with the implemented/real programme (analyzing whether the goals are reached and the planned means have been implemented with the anticipated conditions).*

3. *An effect evaluation, in which it should be made plausible that the realization of the goals can actually be ascribed to the implemented means.*

In this study emphasis for evaluation, are on the means and anticipated conditions for the NHIS, and what exists (real programme) for the NEDMHIS in the NED.

4.0 RESULTS OF EVALUATION OF THE NEDMHIS

4.1 Evaluation of Planned Programme

4.1.1 Anticipated Conditions

A number of conditions must exist before a country embarks on SHI. These conditions are the labour market; administrative capacity; legal framework; availability of health care professionals & infrastructure and broad consensus amongst society's stakeholders to comply with the SHI rules and regulations (Carrin and James 2004).

Labour Market

Ghana as aforementioned has an agro-based economy, with about 70% of its workforce in the informal sector, with most living in rural areas as farmers. Some of them live in areas very hard to reach, due to poor road conditions or without even feeder roads. Urbanization varies from 16% in the Upper-East region to 88% in the Greater Accra region where the nation's capital is located (GSS 2004).

Administrative Capacity

The NHIC established under Act 650 will oversee and guide the establishment of HI schemes countrywide. The Chairperson and other members of the NHIC shall be appointed by the President of Ghana in consultation with the Council of state. It is an autonomous regulatory body, with additional functions of monitoring and evaluation. The NHIC shall be responsible for the creation and monitoring of an enabling environment for the development and operation of HI in Ghana. The NHIC is to have an Executive Secretary with the responsibility of ensuring that its policy decisions are implemented effectively. Each DMHIS will have a governing Board, which shall appoint a Scheme Manager in consultation with the NHIC. It is worth noting that, prior to NHIS implementation, certain key resources - administrative, human and material- were apparently assumed, as Agyepong & Adjei, 2008 said in a study that "*there were many unproven assumptions that heralded the implementation of HI in Ghana".*

Legal Framework

The Minister of Health, upon advice of the NHIC shall be responsible for making regulations for the effective implementation of Act 650, under section 103 of this Act. Act 650 is *"to secure the provision of basic health services to persons resident in Ghana through mutual and private HI schemes; to put in place a body to register, license, and regulate HI schemes, to establish a NHIF, that will provide subsidy to licensed DMHIS; to impose a HI levy and to provide for purposes connected with these"* (GOG 2004).

The NHI Act requires the formal and informal sectors to enroll together in government-sponsored district MHOs. All MHOs not district-wide government sponsored are classified as private and though recognized as not for-profit receives no financial support from the NHIF or subsidies to cover groups exempt from premium payment (Agyepong & Adjei 2008).

Availability of Health Professionals & Health Care Infrastructure

In 2004 Ghana had about 1500 Doctors and 12000 Nurses with a doctor to population & nurse to population ratios of 1: 13000 & 1: 1600 respectively. This is nothing to write home about, amidst perennial attrition to developed countries and rural to urban migration of health workers. Additionally due to lack of amenities, infrastructure & equipment, health staff tend to decline rural postings. Most districts have hospitals usually owned by the government and having only one Senior Medical Officer (possesses basic surgical skills learnt on the job post basic training), with few nurses. Medical Assistants run the health centres in the district with few staff, and these facilities tend to lack basic infrastructure and service quality is usually compromised. Additionally, though health centres cover most of the population by way of primary care, a significant number of cases have to be referred due to absence of doctors and inability to offer surgical and inpatient care.

There is a general lack of specialists outside the two Teaching hospitals, acute in district hospitals. Within the health sector, the government's commitment to health care delivery is marked, exemplified as follows: It ensures infrastructure provision for public health services; provision of drugs and other medical supplies for exempt category of users; payment of salaries and wages of health personnel in government and those seconded to some mission health facilities; and payment of training expenses for health personnel in public & most mission facilities. Furthermore the government finances health education and health promotion programmes (Osei-Akoto 2004).

Consensus among Stakeholders

There is considerable government support for successful implementation of the NHI as explained already (GOG 2003). In January 2001 when the NPP came to power, its Minister of Health inaugurated a Task Force, whose terms of reference was to support and advise the MOH on the development of the NHIS. In February 2003, the MOH allocated funds to support the creation of MHO in all districts (Agyepong & Adjei 2004). In July 2003, the final version of the NHI bill was placed before parliament under a certificate of urgency to be passed into law. Stakeholders met for discussions of drafts prepared by the ministerial Task Force in 2001 and early 2002. Organized labour comprising Civil Servants Association (CSA), and allied groups such as the

Ghana Registered Nurses Association (GRNA), Judicial Services Workers Union, and the Trades Union Congress (TUC), had shown a lot of interest in the NHI. However, upon study their leadership asked for deferment for deeper consultations and amendments. In 2003 the bill was passed by parliament, without the support of the minority NDC who walked out of the parliament in protest. This state of affairs arose from the major concern of the NDC that the 2.5% NHIL represented a rise in VAT from 12.5% to 15%, creating an unnecessary and regressive tax burden with the utmost adverse effect on those in the low-income groups and in the formal sector. The levy was a long bone of contention as the NDC introduced VAT when in office, during which time the opposition NPP organized mass street protests.

It suffices to say that the majority NPP had the required numbers, under the 1992 constitution to pass the bill into law. Aside this walk-out, there were protests by some organized labour groups with the media focusing more on the acrimonies than on the rationale behind the dissent. The major concern of the organized groups on the other hand with respect to the bill was that the 2.5% deduction from their monthly Social Security and National Insurance Trust (SSNIT) contributions had no clear benefit to them, to which parliament responded by modifying the bill so that as a benefit, the formal sector workers will not have to pay any premium; and the assurance that the viability of their SSNIT pension fund will not be affected. The NDC also backed these group concerns of organized labour. Furthermore the MHOs already in existence were unhappy about being classified as private and not eligible for government support. Being poorly organized and having the rural poor as major constituents it appeared their chances of success in converting to government-sponsored MHO was slim and this appeared to be the only pathway for survival.

4.1.2 Means of Planned Programme

The law makes it compulsory for all Ghanaians to join a HI scheme (however there are no specified penalties for defaulters). Specifically within the 5 years, the necessary bodies will be created, awareness created and consensus built amongst all stakeholders and the enabling environment developed (MOH 2004). There are 3 types of schemes available under the law:

- The DMHIS (SHI-Type).
- The Private Mutual Insurance Scheme.
- The Private Commercial Insurance Scheme.

The government is supporting only the DMHIS to ensure that all Ghanaians have;

- Equal opportunity of access to have HI.
- A sustainable HI option made available to them.

- An affordable "HI" that will replace the unaffordable "cash and carry" system.
- Quality health care provision not compromised under HI.

Revenue Collection

Population Coverage

The policy objective as enshrined in the vision states that it is expected that within 5 years of implementation all resident Ghanaians shall belong to a HI scheme.

Method of Financing

Contributions are based on one's ability to pay, due to obvious different socio-economic status of Ghanaian residents. Thus, there is differential contribution for residents in the formal and informal sector. With respect to formal sector workers a "painless" way has being devised whereby the law makes it mandatory for them to contribute 2.5% of their income (2.5% deduction from their 17.5% SSNIT contributions) to the NHIF to be subsequently disbursed to the DMHIS in the district of their residence and to which they are "automatic members". The minimum contributions payable by those in the informal sector are based on 6 social groupings: core poor; very poor; poor; middle-income; rich and very rich. The amount varies from GH¢7:20 to GH¢48:00[1] from the poor to very rich respectively (see Annex 3 for details). Children below 18 years are exempted provided both parents and even single parents have paid at least the minimum contribution (MOH 2004). Also pensioners who are SSNIT contributors, the aged above 70 years in the informal sector, and indigents are exempted from paying. The formal sector contributors experienced no waiting period, as deductions were made at least a year before the earliest implementation date. However, those in the informal sector had to wait for 6 months, on completion of payment to avoid adverse selection. Additional funding to the NHIF is through a government-instituted law of a 2.5% National Health Insurance Levy on selected goods and services (for example luxury goods & hotel acomodation) but not on food items.

Risk Pooling

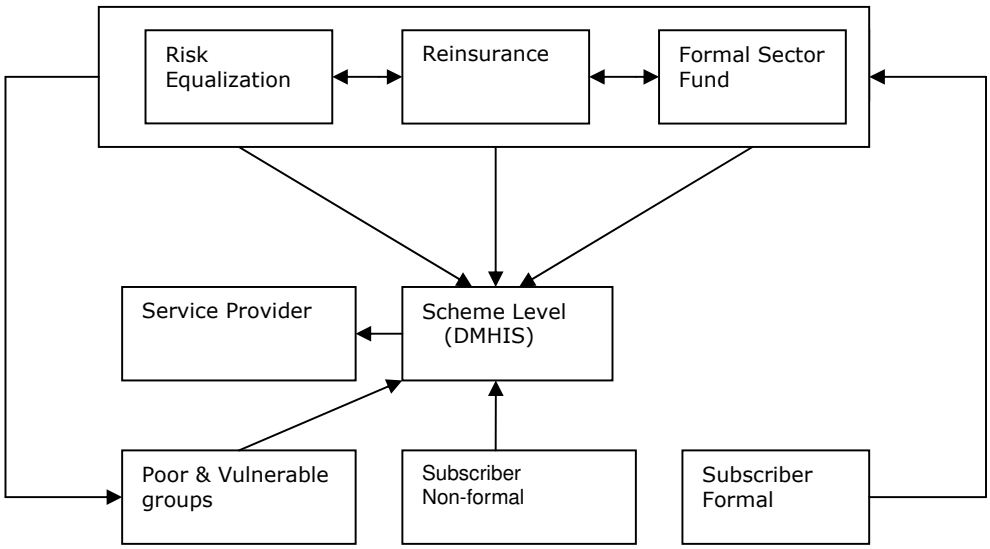
Composition & Fragmentation of Risk Pools

The NHIS as stated earlier is a fusion of a single pooling agency for the formal sector workers, and multiple pooling agencies in each district for the informal sectors via the respective DMHIS. The law establishing the NHIS allows the formation of private mutual HI schemes; community-based, faith-based or occupational not necessarily district focused.

[1] Exchange rate US$1:00 = GH¢1:07 (August 2008); GH¢ means Ghana Cedis.

Figure 3 below, shows the fund flow for the proposed HI programme. The cost of care varies depending on the disease burden in a geographical area/ district and additionally disease burden correlates positively with poverty. However utilization does not necessarily correlate with poverty as the inverse square law depicts. Thus a formula for risk-equalization will be developed to make up the cost differences based on the minimum contributions, as an apparent measure to unify these "multiple pooling agencies" for the informal sector in the various districts (MOH 2004). Reinsurance as a principle will be executed with earmarked central funds, to recapitalize schemes when they run into the risk of under-funding due to unforeseen catastrophic expenditures, in events such as epidemics or natural disasters (MOH 2004).

Figure 3: Fund Flow for NHIS



Source: Ghana NHIS Policy, MOH 2004

Purchasing

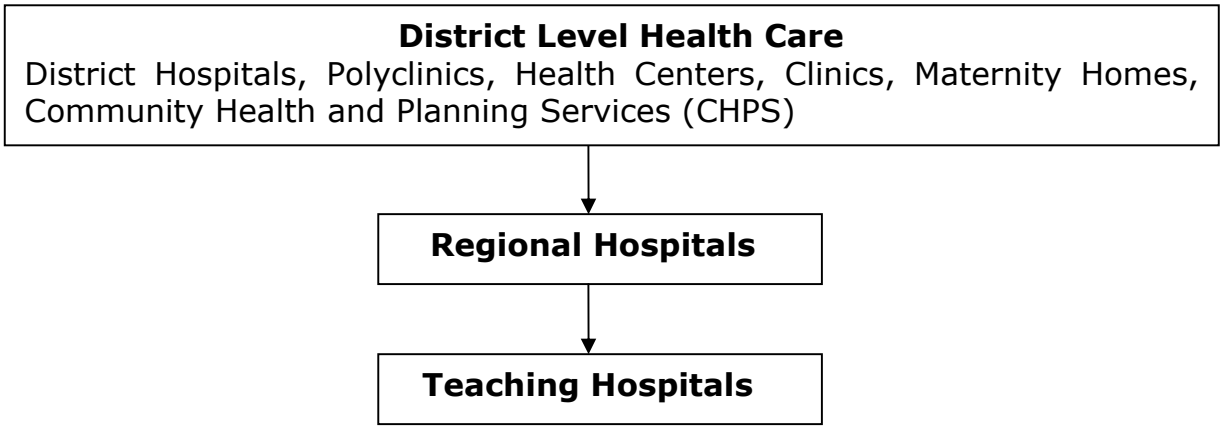
Benefit Package

The minimum benefit package was determined by NHIC and not specified in the Law to allow for flexibility. Thus, the NHIC will define this from time to time according to the National Health Insurance Regulations (NHIR) that guides the NHIS operations. The package was a compromise between what people want and need. The factors that influenced the defined package were the people's health needs shown by existing morbidity patterns; service availability at the various levels of care; service affordability; existing infrastructure; quality of care; financial resources availability and health care

services cost. The package covers about 95% of diseases in Ghana ensuring that, the top 10 diseases constituting 80% of the disease burden are covered. The package covers outpatient care at primary and secondary levels, in-patient care, and emergency care and transfer services (MOH 2004). All health facilities and providers have to be accredited by the NHIC, by meeting a minimum set of accreditation standards, before they can be contracted for service provision by the various DMHIS to provide the agreed minimum package.
(See Annex 4 for details of benefit package and health facilities that may be accredited).

Accessing Services under the NHIS
Figure 4 below, illustrates the gatekeeper system that will be put in place. The system will function with the first point of call for all outpatient services being the primary health care facilities.

Figure 4: The Gatekeeper System



Source: NHI Policy, MOH 2004

Provider Payment Mechanisms
In Ghana the provider payment mechanism is via fee for service, without any co-payments/deductibles. It is also worth mentioning that salaries of all public providers and some mission health facilities are borne by the government, and not by the insurance schemes.

Administrative Efficiency
Each DMHIS shall have a governing body called the Board, the membership of which shall not be less than 7 but not more than 15, and at least 2 of whom should be women. The Board is responsible for hiring & firing and the service conditions of scheme's staff, maintenance of discipline, and management of schemes finances and arbitrate in disputes involving the

various players. The Board should meet at least once in a quarter. It is worth noting that the DMHIS **administrative expenses should not exceed 20% of the total funds of the scheme,** according to the NHIR, unless the NHIC directs otherwise in writing.

4.1.3 Goals of the Planned Programme

It is as stated in the vision statement of the NHI Policy on page 1 in the Introduction.

4.2 Evaluation of the Real Programme

4.2.1 Conditions Existing in NED

Labour Market

The NED is classified as poor and is predominantly rural (74%). The informal sector workforce is involved in 86% of its economic activity, mainly in agriculture and fishing. With the main employment being seasonal, average incomes are very low, and have even declined over the last 3 years (NEDA 2006).

Administrative Capacity

The NEDMHIS has a 14-member Board of Directors (BOD), responsible for the scheme's governance in the district. The Medical Superintendent of the Axim hospital, the Health Services Administrator of St Martin de Porres hospital and the Nzema-East District Director of Health Services (DDHS) are also members of the BOD. **As essentially HI has the implicit of provider-purchaser split, this situation represents a conflict of interest.** See Annex 5 for details of the BOD. The members of the BOD working in consultation with the NHIC, appointed a Scheme Manager and the other scheme staff (NEDMHIS 2007). As at the end of 2007 the BOD had met 14 times, with 11 ordinary and 4 emergency sessions.

The NEDMHIS as at 2006 had 6 permanent staff- the Scheme Manager; Claims Officer; Accountant; Management Information System (MIS) Officer; Public Relations Officer; Data Entry Operator- and 125 Premium Collectors as non-permanent staff. All the staff were appointed on the 10th of January 2004, and all had the minimum required qualification (NEDMHIS 2006). Apart from the MIS Officer and the Data Entry Operator, the remaining permanent staff, although having basic computer literacy, had not had any formal computer literacy training, and this appeared to cause delays in claims processing and vetting **(*Personal Communication*)**. Furthermore, apart from the general orientation prior to their employment, none had had any formal training in HI. The temporary staff's qualifications ranged from Middle School Leaving (MSLC)/Junior Secondary School (JSS) Certificates to a basic general degree mostly Professional Teachers. The 2007 staff norm

was similar to 2006 except a reduction in number of the commissioned agents to 58, with the division of the district into zones to facilitate effective supervision and also ensure sustainability of paying the premium collectors (NEDMHIS 2007). The staff strength is inadequate and there is lack of decent office space and adequate computers and other basic amenities (NEDMHIS 2007).

Legal Framework

In addition to what pertains in the planned programme, which holds true for all schemes countrywide, the BOD of NEDMHIS secured the membership of a Legal Practitioner in 2006 (NEDMHIS 2006).

Availability of Health Professionals & Health Care Infrastructure

The NEDMHIS as at the end of 2007 had signed contracts with all the 9 health facilities in the district inclusive of 7 public facilities- the Axim Hospital and 6 health centres. The remaining 2 are one mission hospital (Saint Martin de Porres Catholic Hospital) and a private clinic (Nana Benie Memorial Clinic). All the 7 public health facilities and the mission hospital had automatic accreditation, and their contracts with the NEDMHIS were duly signed on the 28th of October 2005 with the exception of the mission hospital that sought a customized contract and eventually ratified it in October 2006 (NEDMHIS 2007). A month after ratification by the mission hospital the contract with the private clinic was also effected. It is worth mentioning that, not until mid-2007 after the mission hospital joined, only the mission hospital's staff were beneficiaries of HI at their facility (DHA 2007).

The NED has acute staff shortage like most districts in Ghana; however the situation is worse when compared to other districts in southern Ghana, although better than most districts in the 3 northern regions of Ghana (RHA 2007). NED has 4 Medical Doctors and 78 Nurses. The mission hospital has a bed complement of 136 and 3 Medical Doctors, one of whom is an Obstetrician-Gynaecologist (DHA 2007). Axim hospital has 81 beds, with a total staff of 86 of whom one is the Senior Medical Officer-In charge (Medical Superintendent), 22 professional nurses, 5 auxiliary nurses and the rest form the whole paramedical staff- administrative; finance; dispensary; laboratory; other clinical & non-clinical support staff (Axim Hospital 2007). During the period under review Axim hospital had no medical assistant(s). There is inequity in health facility distribution with concentration in the southern sector of the district. Most of the health facilities operate under stress, due to inadequate qualified staff and logistics. The Doctor to population ratio is about 1: 43, 150 and the Nurse to population ratio is 1: 2,215 and there is extreme difficulty in attracting health staff to the district (DHA 2007).

There is a "pseudo-blood-bank" at the Axim hospital with all its blood products accessed from the Effia-Nkwanta hospital (Western Regional Hospital). Thus the hospital's blood-bank operates on the goodwill of the Regional Hospital. Therefore a significant number of cases are referred which otherwise could have been managed in the hospital due to lack of blood products at the time of need. As there are no doctors at the health centres, lots of insured clients prefer to come to the Axim hospital for basic primary care and most surgeries of insured clients especially with hernias and fibroids (benign uterine tumors), not until last quarter of 2007 when the mission hospital started attending to the general public were done at the Axim hospital (Axim Hospital Midyear 2007). As aforementioned there are no specialists at the Axim hospital, however most basic surgeries, medical and paediatric cases are attended to and highly specialized ones referred to the Effia-Nkwanta hospital or the Korle-Bu Teaching hospital. These arrangements are associated with marked increase in workload.

Consensus among Stakeholders

The NEDA coordinated activities amongst all stakeholders; collaborating with supportive stakeholders and managing the resistance of those opposed to its implementation, emanating from political rivalry, ignorance, apathy and combination of these and others. The presence of numerous chieftaincy disputes and as many as 6 Paramount Stools within one district posed a great challenge for consensus building (NEDA 2006). Although overall awareness creation was poor, this policy was quite well embraced with the remarkable enthusiasm of stakeholders; service providers and the larger community. But, in completing the consensus picture it is worth mentioning that a few well-to-do individuals perceived HI to be for the poor and that once insured you will be given suboptimal care unlike those who pay upfront **(*Personal Communication).***

Furthermore education campaigns and preparations that led to the eventual implementation were fraught with occasional antagonisms from elements within the opposition parties in the community. Interestingly prior to its implementation the two constituencies in the district had Members of Parliament from the two main opposition parties outside the ruling government. Additionally there were misconceptions as some of the citizens perceived that the HI was to replace OOP payments, and that services will be free for all without any "premiums/prepayments", characteristic of the early post-independence era.

4.2.2 Means of Implemented/Real Programme

Revenue Collection

Population Coverage

Table 2: Cumulative Annual Registration for the Various Categories (2005-2007)

Category	2005	New 2006	Total 2006	New 2007	Total 2007
SSNIT –Formal	1,576**(14%)**	657	2,233**(6%)**	312	2,545 **(4.9%)**
SSNIT Pensioners	120 **(1.1%)**	180	300 **(1%)**	33	333 **(0.6%)**
Informal/Fully Paid	1,413**(13%)**	3,340	4,753 **(14%)**	4,334	9,087 **(17%)**
Below 18 years	678 **(62%)**	16,979	23,768 **(66%)**	10,662	34,430 **(66%)**
Above 70 years	878 **(8%)**	2,469	3,347 **(10%)**	1,872	5,219 **(10%)**
Indigents	154 **(1.4%)**	638	7 92 **(2%)**	40	832 **(1.6%)**
% Exempt Population	**71.4%**		**76.2%**		**77.6%**
Total Registered Population	10,930 **(100%)**	24,263	35,193 **(100%)**	17,253	52,446 **(100%)**
% Population Registered	**6.3%**		**20.1%**		**30.4%**

Source: NEDMHIS 2007 Annual Report.

The formal sector contributions were advanced to the scheme as part of the subvention from the NHIA, which included moneys for the exempt categories and releases were often late, per the terms of agreement in the contract. On children's benefits, a maximum of 4 children under 18 years of workers both formal and informal, are exempted from paying contributions, in so far as both parents had paid their contributions.

Although the scheme staff was supported in their efforts of identifying the informal members with respect to their income, it was a task that proved very difficult for them. Apart from the basic premium every contributors had to pay a processing fee of GH¢2:00. This amount notwithstanding during the first year of implementation the majority preferred dividing premiums into

12 monthly installments, and then having to wait another 6 months before enjoying HI benefits, this being the waiting period.

The premium collectors were entitled to 10% of amounts collected as premiums, with no commission for registering exempt categories initially. They had no means of transport and had to walk or find their own means of transport, and this coupled with the little by way of awareness creation and their own poor understanding of HI and the many hard to reach areas made premium collection very difficult. Furthermore there was hardly any supervision and monitoring of their activities, especially in the first year of implementation, which situation improved during 2007 after laying 50% off and putting them on regular allowances instead of the commission arrangement.

The NHIR stipulates that exemption shall cover only 1% of the population who represents "indigents" and in execution implied the percentage should not exceed 1% of premium contributors (GOG 2004). *Thus there were a significant percentage of citizens in the NED* who were unfortunately denied *membership* because *of this clause* ***(Personal communication).***

Risk Pooling

The NEDMHIS is the only HI agency that collects and pools funds on behalf of the citizens of NED. In reality the scheme collects funds from only those in the informal sector. In the district the usual Ghanaian solidarity is evident in various tribal groupings formed based on this philosophy, and supporting themselves during funerals, out-doorings and nuptial rites and during their (Nzemas) major festival called "Kundum". However, it was realized with time that some of the citizens inclusive of some traditional and opinion leaders were against the idea of similar benefits for different payments (NEDMHIS 2006). Furthermore amongst the informal sector most (over 90%) paid premiums for the lowest contributing category ("the very poor").

Purchasing

Benefit Package

In principle for there has been little/no amendment to the benefit package as prescribed in NHIR. However, in practice, some of these benefits cannot be provided in the district, and can only be accessed at the Effia-Nkwanta hospital or the Teaching hospitals (DHA 2006). For instance physiotherapy; dialysis for acute renal failure (not chronic failure); eye care and oral health services cannot be provided in the district. Breast and cervical cancer cases are referred usually to the Korle-Bu Teaching hospital and occasionally to the Effia-Nkwanta hospital. Additionally, though the Axim hospital has equipment to conduct certain laboratory investigations, like kidney function tests, patients have to travel to the Effia-Nkwanta hospital to get them done,

because the available laboratory personnel at the hospital not of adequate qualification to do them (Axim hospital, 2006). Nor is this all but also, ultrasound scans though included in the specified minimum benefit package were excluded initially and it was not until the last quarter of 2007, when decision was taken to include it in the package, perhaps as a result of General Electrics of the US donation of several equipments to the Axim Hospital in early 2007 which included a state of the art ultrasound machine (Axim hospital Mid-year 2007). It is worth mentioning that there have been no inclusions to the minimum benefit package from the exclusion list, although schemes can do so if able in consultation with their BOD.

Children under 5 years were covered by the exemption scheme under "cash and carry", however since implementation of the NEDMHIS the situation has arisen where some children have their parents unable to buy their medications, usually observed when they are on admission, because their parents/guardians have not registered with the NEDMHIS, and though potentially exempt this is tied to their parents registration (Axim hospital Midyear 2007). In principle there is a gate-keeping system, however in the districts, the district hospital and health centres can all be first point of call as stipulated in the NHI policy. Thus, due to absence of doctors in all health centres, most of the clients bypass these to seek care at the Axim hospital, resulting in marked congestion at the OPD. This is further compounded by the absence of co-payments/deductibles.

Provider Payment Mechanism

Essentially the only mechanism is fee-for-service. The health facilities at the end of each month submit their bills within 2 weeks of the ensuing month and expect payment within two weeks of submission but not later than the end of the ensuing month. There is no differential payment with respect to similar services rendered by public facilities, the mission hospital or the private clinic in the district (NEDMHIS 2007). It is worth noting that, the scheme's reimbursement does not cover staff salaries & personal emoluments; maintenance of infrastructure, equipments, estates; and procurement of capital items.

Administrative Efficiency

It was not until mid-2007, when government provided each DMHIS with one Nissan pickup and a motorbike (RHA 2007). The management of claims especially pertaining to the vetting process was done by a Vetting Committee constituted by the BOD and was supported by the DDHS. The Axim hospital claims when queried were initially not paid and no explanations were advanced to its Management Team, which led to unnecessary conflicts (Axim hospital Mid-year 2007). Some of the reasons

advanced later were in relation to few instances whereby the insured were billed more than the non-insured for similar ailments (NEDMHIS 2007).

Table 3*:* Administrative Costs (GH¢)

Description	2005	2006	2007
10% of Premiums	1,007.25	2,796.85	5,357.50
NHIC Support	5,600.00	21,000.00	18,000.00
Total Administrative Costs	6,607.25	23,796.85	23,357.50
Total Annual Funds	27,399.20	115,326.50	454,865.92
% of Total Funds used as Administrative costs	**24.1%**	**20.6%**	**5.1%**

Source: NEDMHIS 2007 Annual Report.

Table 4: Local Premiums & NHIC Subventions Percentage Contribution to Annual Funding 2005-2007- (GH¢)

Year	Local Premium	NHIC	Annual Funds
2005	10,075.20*(17%)*	17,324.00*(63%)*	27,399.20*(100%)*
2006	27,968.50*(24%)*	87,340.00*(76%)*	115,326.50*(100%)*
2007	53,575.00*(12%)*	401,290.92*(88%)*	454,865.92*(100%)*

Source: NEDMHIS 2007 Annual Report.

There were delays in the processing of claims, and payments to facilities were always late, sometimes delayed for periods between 2 to 5 months. There have been lots of disputes of the scheme with health care providers as a result of the above problem, and in early 2007 the Board Chairman and some members of the Board, together with the Scheme Manager, the Medical Superintendent of Axim Hospital, the DDHS had to visit the NHIA, due to these very prolonged delays that threatened to halt service delivery due to the near stock-out of consumables at the hospital (Axim Hospital Midyear 2007). The meeting was quite a success- from the hospital's point of view- and even subsequent to that only about 50% of arrears were advanced a fortnight later with the rest to be paid later.

Table 5: Total Annual Payments to Health Facilities- (GH¢)

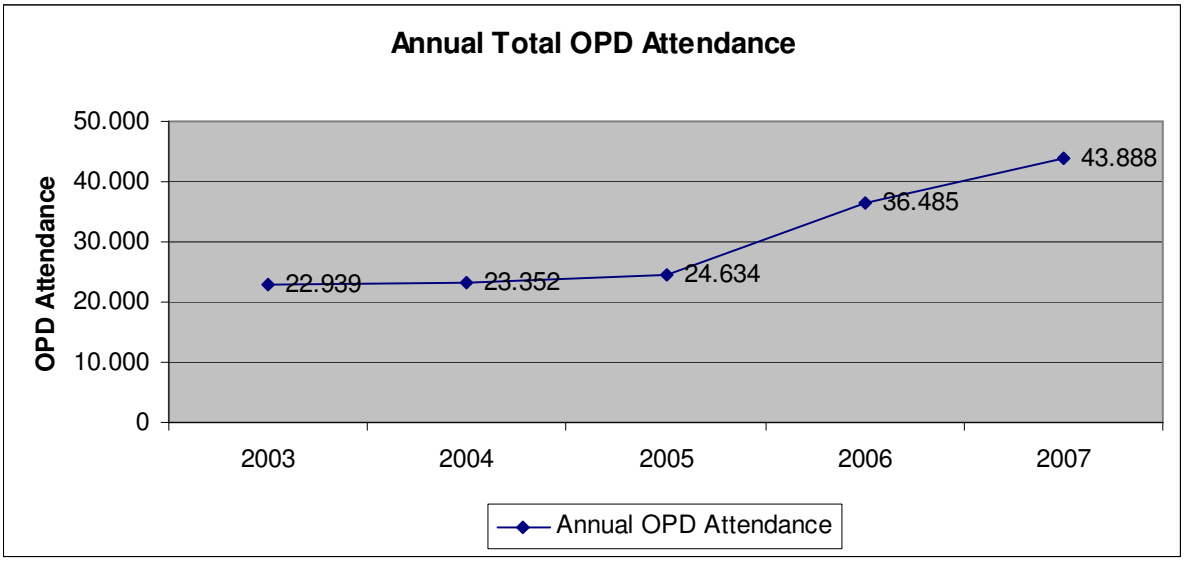
Year	Total Bills for the Year	Total Bills Paid by end of Year	Outstanding Bills at end of Year
2005	--	--	--
2006	153,618.23*(100%)*	107,546.71*(70%)*	46,071.52*(30%)*
2007	514,462.66*(100%)*	381,851.19*(74%)*	132,611.47*(26%)*
Total	668,080.89*(100%)*	489,397.90*(73%)*	178,682.99*(27%)*

Source: NEDMHIS 2007 Annual Report.

4.2.3 Apparent Gains & Challenges with Health care Provision using Axim Hospital as proxy

In figure 5 below, it is obvious that from 2003 to 2005 OPD attendance almost stagnated, and increased markedly from 2006 to 2007 with the NEDMHIS' implementation.

Figure 5: Annual OPD Attendance from 2003 to 2007



Source: Axim hospital Annual Report, 2007

The percentage admissions for the non-insured **(NI)**, was much higher than for the Insured **(I)** as depicted in Table 6 below, indicating the tendency for the NI to postpone OPD attendance. Table 7 below shows that, the percentage of admissions that die is higher for the NI than the Insured. This also, may be an indication that the NI to postpone health care consumption until it is too late.

Table 6: OPD Attendance and Percentage Admissions for the Insured & Non-Insured Clients

Indicators	2006 I	2006 NI	2006 Total	2007 I	2007 NI	2007 Total
OPD Attendance	27,743	8,742	36,485	39,492	4,388	43,880
Total Admissions	1,135	2,328	3,463	1,849	1,295	3,144
Percentage Admission (%)	4.1%	26.6%	(10%)	4.7%	29.5%	(7.2%)

Source: Axim Hospital Annual Report, 2007

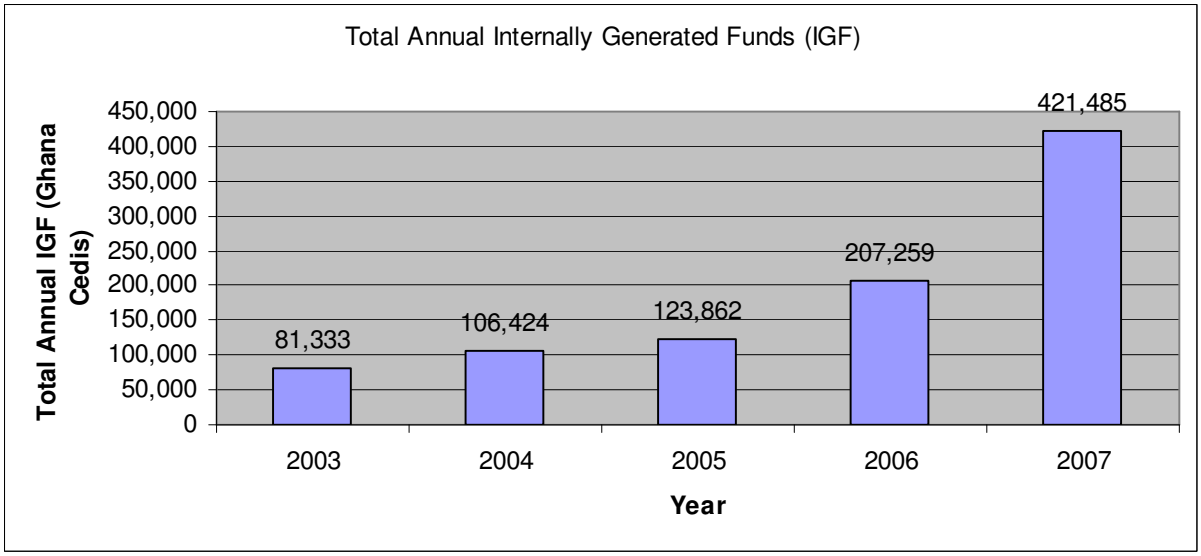
Table 7: Deaths amongst Insured & Non-Insured Clients per Hospital Admissions (2006 & 2007)

Indicators	2006 I	2006 NI	2006 Total	2007 I	2007 NI	2007 Total
Admissions	1,135	2,328	3,463	1,849	1,295	3,144
Deaths	7	93	100	38	63	101
Percentage Deaths (%)	0.6%	4.0%	(2.9%)	2.1%	4.9%	(3.2%)

Source: Axim Hospital Annual Report, 2007.

Figure 6 below, shows the total IGF with respect to drugs, non-drug consumables and other service charges from. Obviously there is a marked increase from 2005 through 2006 to 2007, having had negligible increase from 2003 up to 2005.

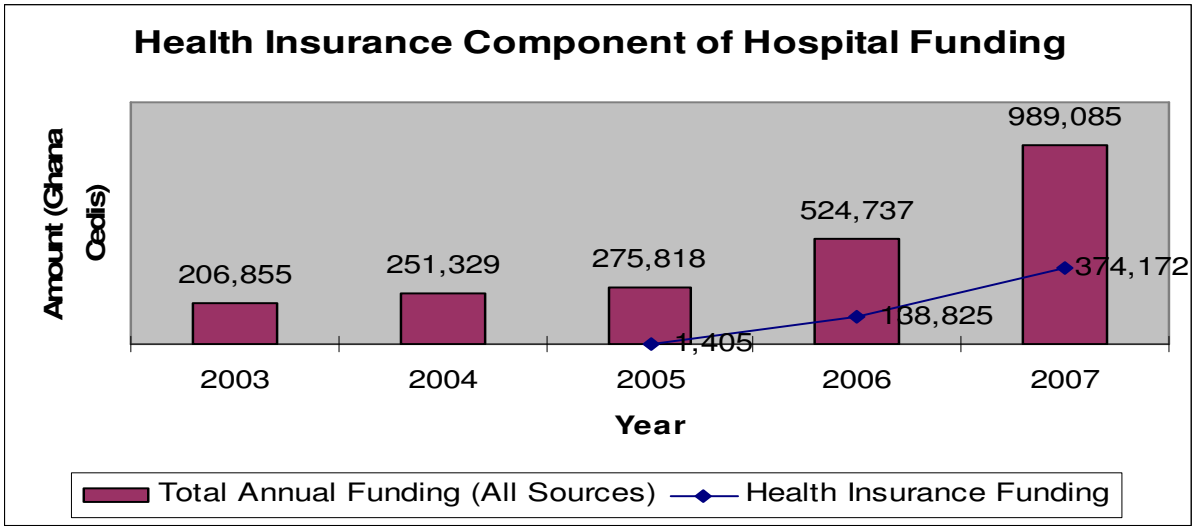
Figure 6: Annual IGF from 2003 to 2007



Source: Axim Hospital Annual Report, 2007

It is obvious in Figure 7 below with the implementation of HI, its component of the total Axim hospital funding rose gradually from 2003 to about a third in 2007.

Figure 7: HI Component of Total Hospital Funding (2003-2007)



Source: Axim Hospital Annual Report, 2007

Tables 7 & 8 below, show the HI component of Axim Hospital & Nzema-East DHA total annual funding respectively. Prior to the implementation of the NEDMHIS the sources of funding were IGF Services & Drugs; GOG Service & Administration votes; Donor Pooled Funds (DPF); and Salaries. It is the first item IGF Services & Drugs from user fees that health insurance is gradually replacing.

Table 7: Percentage Health Insurance Component of Annual Hospital Funding

Year	2005	2006	2007
Percentage (%)	0.5%	25%	38%

Source: Axim Hospital Annual Report, 2007

Table 8: Component of Health Insurance of Annual Nzema-East District Health Funding (DHA & Axim Hospital)

Year	2005	2006	2007
Percentage (%)	0.3%	14.5%	27%

Source: DHA Annual Report, 2007

5.0 DISCUSSION OF RESULTS

Based on the adapted evaluation framework, discussion of the results will be with regards to the HI financing functions, via the scheme's design features (means), in the context of the anticipated and existing conditions in NED, and the goals of the NHIS as anticipated briefly evaluated, using the apparent gains and challenges of the Axim hospital as proxy.

5.1 Method of Financing:

It suffices to say that under the "cash and carry" system patients paid 20% of treatment fees, with the remnant 80% and a similar proportion of overall health care funding borne by the government and it is this 20% that the NHIS was designed to replace (ILO 2007). This is evident from Table 8, where for 2005; 2006; and 2007 the HI components of the Nzema-East DHA funding were 0.3%; 14.5% and 27% respectively.

The rationale of the Ghanaian formal sector workers having their "premiums" deducted from their SSNIT contributions, and not from their net income is to minimize their health care component household budget to ensure that they have more disposable income during their working days. However it is worth mentioning that when payroll contributions occupy a major share of total SHI contributions it tends to have adverse impact on employment through increased labour costs (Carrin & James 2004).

The mandatory nature of the NHIS, especially for the formal sector allows the mobilization of funds from a considerable pool (Carrin 2002). However the Ghanaian formal sector workforce of 30% is even smaller in the NED (14%). Generally the higher the level of income of a country means **"ceteris paribus"-** better capacity to pay HI contributions (Carrin & James 2004). Thus higher per capita income is apt to increase citizens' capacity to prepay contributions and the converse in low-income countries like Ghana being also true. This is even truer in NED with more people living below the national poverty line of 31% of the population, and this coupled with the generally low salaries for those in the public service, has the implicit of very low contributive capacities. The NHIR that the indigent percentage should not exceed 1% of premium contributors of a DMHIS, when about 18% of Ghana's population is classified as poor in absolute terms is difficult to comprehend (MOH 2007). Since in the NED the population that lives below

the poverty line is greater than the national, the implicit is that a considerable number of people have been unfortunately denied coverage.

5.2 Population Coverage:

The NHIS policy objective was to achieve universal coverage within 5 years of implementation, however, the government recognizing the difficulties in extension of coverage and that this will be gradual and therefore aims to enroll 70% of Ghanaians within the 5 years (NHIA 2007). In Table 2, the percentage enrolment by the NEDMHIS from 2005 to 2007 is 6.3%; 20.1% and 30.4% respectively. From the 2007 NHIA operational report the following were the respective average percentage enrolments: ***Western region (W/R) - 50%****;* Greater-Accra region- 35%; Ashanti region- 61%; Brong-Ahafo region- 79%; ***National- 55%.*** In the W/R the NED is amongst the districts with relatively low enrolment. For example, the enrolment of the Bibiani-Anwhiaso district in the W/R is 71% (NHIA 2007). However considering the duration of implementation of the NEDMHIS, its percentage enrolment absolutely is commendable.

The Brong-Ahafo region having the highest enrolment is unsurprising, as it had had marked participation in CBHI, prior to the NHIS. It is also worth mentioning that in W/R, the Bibiani-Anwhiaso district was the first to implement HI in 2004, almost a year before NEDMHIS implementation. Furthermore, the relatively low coverage of the NEDMHIS may also be due to the pervasive poverty with an attendant inability to pay premiums. However it has the opportunity to improve. HI coverage is described in terms of breadth and depth meaning 'the proportion of the population covered" and the "composition of the HI benefit package respectively (the more comprehensive the greater the depth)" (McIntyre 2007). This seeks to clarify that all the coverage described above are in terms of breadth and not the depth.

5.3 Risk pooling & Solidarity:

To reiterate, in Ghana there is one single pooling agency for the formal sector and multiple pooling agencies in the districts for the informal sector (Doitinchem et al 2006). However these multiple risk pools are not synonymous to fragmentation of risk pools, because there is one benefit package for all insured and the NHIF acts as the umbrella organization in establishing connection across pools through risk-equalization and reinsurance. In Costa Rica there is a single pooling agency for mandatory insurance and presently has 90% population coverage and is regarded as one of the few success stories of the health sector as a "*middle- income"* with low-level economic development (McIntyre 2007). However, one must

be quick to mention that it achieved universal coverage through a combination of HI and tax funding. Similarly the NHI in Taiwan and China also has single pooling agencies (Carrin & James 2004).

The major challenge for many low-income countries is how to extend SHI coverage to the informal sector (McIntyre 2007). Although distinct to have included the informal sector at the outset, it appears that in its implementation generally in Ghana and specifically in the NED, serious challenges have emerged. This is evident when one considers the fact that in NED, although those in the informal sector are expected to pay between GH¢7.20 & GH¢48:00 based on ability to pay, over 90% of them registered paying GH¢7.20. The premium collectors had difficulties estimating the income of the majority of them and also had restricted access with most of them involved in farming/fishing in rural areas with a dispersed population. This situation was even made worse by the fact premium collectors had no means of transport (bicycles/motor cycles) and no commissions were given for registering those in the exempt category, though the NHIR had stipulated that commissions were to be paid irrespective of the category registered. However those in urban areas, especially Axim, were better covered due to ease of enrolment (DHA 2007).

In addition although according to Act 650 it is "compulsory" for all Ghanaians to join a HI scheme, it has the clause that compliance shall predominantly be through motivation, in the form of incentives rather than by punitive measures (MOH 2004). One then may infer that, this is akin to it being voluntary for the informal sector. This undermines the risk pooling potential due to adverse selection, whereby many low-risk and rich individuals are not likely to join, because they may judge that they receive less than what they put in as was the case in the NED (Carrin & James 2004).

5.4 Benefit Package:

Act 650 establishing the NHIS, for that matter the NEDMHIS prescribes a specified minimum benefit package (Kutzin 2001). The minimum benefit package is quite comprehensive inclusive of primary care, out and inpatient hospital care and concerns about affordability and sustainability have been raised (McIntyre 2007). It is advocated by many that since the central goal of financial protection is to prevent catastrophic health expenditure, emphasis should be on inpatient care and other high-cost low frequency services traditionally associated with catastrophic health care costs (McIntyre 2007). On the other hand this might stimulate the substitution of expensive hospital care for primary health care consumption.
Most respondents in a study of Dangbe-West Scheme in the Greater-Accra region of Ghana, thought of benefits as adequate with the services provided

and that HI had made health care more affordable and accessible (ILO 2007).

As some services cannot be provided in the NED **(*due to inadequate staff, health facilities, health equipments and general lack of specialist services*)**, clients have to access these benefits at Effia-Nkwanta hospital often with reluctance, due to transportation costs, and having to pay at times, especially in 2005 & 2006, when portability issues were not clear to service providers, clients and even scheme staff.

Although the composition of the HI benefit package, as aforementioned is very comprehensive, this is apparent because NEDMHIS/NHIS in reality does not pay for the full package of its clients as mentioned under the discussion on method of financing. For example salaries of all public sector health workers are borne by the government and it also provides additional funding to public and some mission health institutions in the form of administrative and service votes and DPF.

With family planning services not included in the benefit package, the decision of NEDMHIS to limit the number of exempt children to 4 was perhaps a good decision for sustainability. From Table 2 it is obvious that, children under 18 years constitute about two-thirds of registered beneficiaries, however a critical number still fell out of the safety net due to the fact that their parents to whom their potentially free benefit is attached had not registered for various reasons especially due to inability to pay.

5.5 Provider Payment Mechanism:

With service providers being paid only on a fee-for-service basis, the potential for overproduction (supplier-induced demand) is very great. In fact the main underlying reason for the NEDMHIS paying less than the bills presented initially by service providers, with its attendant conflicts was due to "overproduction" (NEDMHIS 2007). There is also the tendency with fee-for-service, to spend less time per activity, delegate to less qualified personnel and incur high administrative costs due to billing costs (Carrin & James 2004). In Ghana, it has been reported that some schemes experience cost escalation consequent to overproduction of service, whereby sometimes for a particular service the insured is billed more than the uninsured (Rajkotia 2007).

Furthermore daily accommodation costs are paid same amounts by the NEDMHIS, notwithstanding the length of stay which can also lead to overproduction. The payment mode of service providers significantly affects both the cost and quality of care and is thus instrumental in the optimal use of resources (Carrin & James 2004).

All the different modes of payment viz fee-for-service; capitation; budget allocation; salaries; daily payment; case based (includes diagnostic related groups payments), all have their relative strengths and weaknesses and it is therefore impossible to categorically state which is better or worse than the other (McIntyre 2007). Monitoring of over- and under-production by the NEDMHIS as a result of their employed payment mechanisms are important tasks, however they are seriously constrained in their efforts to do so which underlying reasons will become more apparent in discussion on administrative capacity & efficiency. It is also worth mentioning that notwithstanding the different sources of inputs employed in service production by public, mission and private facilities, reimbursement in essence is the same, which in principle is a serious disincentive for especially the private health facilities.

5.6 Administrative Capacity & Efficiency:

The NEDMHIS like other DMHIS are plagued with administrative difficulties due to inadequate/lack of qualified staff and infrastructure. This coupled with the inadequate means of transport, especially within the first year of implementation made it difficult and expensive to collect premiums from the geographically scattered rural population of the informal sector in NED (Conn & Walford).

A thorny challenge emerged with gross delay in reimbursement of service providers as happened to the Axim hospital for as long as 5 months due to lack of competent staff to process and vet claims and the marked delay of NHIA funds transfer (DHA 2007). Furthermore the gate-keeping mechanism is in "reality" non-existent in NED, like most other districts, because all the health facilities are at the first level in the gatekeeper system, which situation is worsened by the lack of qualified staff and absence of doctors at all health centres. Furthermore the lack of co-payments/deductibles has led to unnecessary use of health services by clients.

As essentially HI has the implicit of provider-purchaser split, having the situation whereby the Managers of the 2 hospitals in NED and the DDHS as members of the BOD represents a conflict of interest. Although their inclusion might have been beneficial in the initial stages in the long term if not amended or managed tactfully it might be unhelpful.

From Table 3 the marked decline of administrative costs as a percentage of total scheme funds from 24.1% in 2006 to 5.1% in 2007 can be attributed to increase in total funds. This is quite commendable as the NHIR, stipulates that administrative expenses should not exceed 20% of total scheme's funds, unless the NHIC directs otherwise in writing. Table 4 shows clearly

that the component of NHIA subvention of total annual scheme funds is very high, increasing from 63% in 2005 to 76% in 2006 and to as high as 88% in 2007. This implies that any delay of the NHIA subvention means the scheme will not even be able to pay a quarter of claims due, which situation seriously undermines the autonomy of the NEDMHIS.

It appears there is unnecessary centralization in decision-making of the NHIS and perhaps lack of competence of NEDMHIS staff especially in negotiations with the NHIA in terms of getting their timely support in the management of claims. This assertion is due to the unwarranted but inevitable trip of some BOD members, inclusive of the DDHS and the Medical Superintendent to NHIA in early 2007 due to very prolonged delay in reimbursement for about 5 months of vetted and approved claims which led to a near stock out of consumables. Even the trip notwithstanding as at the end of 2007, about a third of the bills presented to the NEDMHIS were still unpaid and thus outstanding, which situation was similar for the preceding 2 years as obvious from the outstanding percentages in Table 5.

5.8 Apparent Gains & Challenges of Health care Provision in the Axim Hospital

With the implementation of the Ghana NHIS there has been generally a marked increase in health services utilization with over-utilization in some situations (Rajkotia 2007). Similarly the Axim hospital has seen a marked increase in the OPD attendance with the implementation of NEDMHIS. In Figure 5 a very gradual rise was seen from 2003 to 2005. However by 2006 the OPD attendance had increased by about 50% and as at the end of 2007 the OPD attendance had almost doubled in comparison with that for 2005. This increased utilization of the hospital with inadequate staff has led to marked increase in workload affecting the quality of care with patients sometimes having to wait over 10 hours before being attended to (Axim Hospital Mid-year Report, 2007). However frivolous use by the insured most likely must have contributed to increased utilization.

From Table 6 one observes that from 2006 to 2007 the percentage of OPD attendance by insured clients rose from 75% to about 90%. Interestingly the admissions of insured clients in 2006 & 2007 were about 50% & 30% that for the non-insured respectively. ***It does appear that the insured patients sought care earlier and hence presented with less severe disease and or the non-insured tend to postpone health care consumption until it is rather late.*** This cautious assertion seems to be buttressed by the fact in Table 7, of the 100 deaths that occurred amongst the total patients admitted in 2006 only 7 were insured clients and similarly for 2007 of the 101 deaths 38 were insured.

It is argued that HI generates additional resources for health, since it appears clients prefer to pay regular affordable premiums rather than OOP payments when ill (Conn & Walford). However it suffices to mention quickly that, as HI replaces other payment mechanisms, it must be found out whether it results in additional funding in the absence of administrative difficulties (Carrin & James 2004). Clearly as shown in figure 6, the annual IGF of Axim hospital rose steadily from 2003 to 2005 akin OPD attendance. However compared to 2005, there was almost a doubling and quadrupling of the annual IGF for 2006 and 2007 respectively. However, it is interesting to note that, IGF which is largely from HI since 2006 constitutes a relatively small percentage of the total hospital funding depicted beautifully in figure 7, which shows it to be 25% & 38% for 2006 & 2007 respectively. This confirms the assertion that HI was essentially designed to replace the portion of health expenditure borne by patients, with the greater percentage remaining borne by the government through other funding sources.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Despite the fact that a little over two years of implementation of the NEDMHIS, might seem early to draw conclusions with this evaluation, lessons from the emerging challenges and apparent gains will help to address these challenges to guarantee the sustainability and eventual success of the NEDMHIS in particular the NHIS in general. SHI as a health financing mechanism is important in ensuring protection against health care costs, and hence better financial accessibility of health services for all; however it is equally important that the payment mechanism used generates sufficient revenue for schemes to function effectively (Carrin & James 2004). SHI contributions alone might not be able to generate sufficient resources, and therefore, most SHI systems are supplemented by general taxation (Carrin & James 2004). This is corroborated by Doitinchem et al 2006, that hardly any country implements the various financing mechanisms in their purest forms.

According to McIntyre 2007, most tax revenues are from direct income taxes and tend to be progressive with higher income groups taxed at higher rates, unlike indirect taxes such as VAT which are nearly always regressive (being flat rates), which was the concern raised by the NDC and the Ghanaian Civil Society prior to the NHIS implementation. However, in low-income countries it is usually proportional with the exemption of basic foodstuffs as in Ghana with a 2.5% insurance levy (VAT), and similar situations exist in Indonesia, Nepal, Philippines and Thailand (McIntyre 2007).

The premiums of the informal sector in the NEDMHIS constituted a small percentage (12%) of the total funds for 2007. The main underlying reason may be the low contributive capacity of the populace due to poverty. That notwithstanding NED seem to have a sufficient degree of innate solidarity, a necessary requisite to implement and sustain the cross-subsidization inherent in SHI, and the citizens arguably are quite enthusiastic about paying for HI, as benefits are specific and easily visualized, evidenced by the considerable enrolment (Carrin & James 2004). However this willingness to pay does not translate into their ability to pay, with most contributors in the bracket of "poor category" due partly to the pervasive poverty (Okello & Feeley 2004; Mathaauer et al 2007).

It is worth noting that, although the NEDMHIS percentage enrolment (30.4%) as at end of 2007, could be perceived as commendable just after 2 years of implementation, relatively it is low when compared to the western regional and national averages. This may be partly attributable to the fact that, the key determinant for HI demand is the ability and willingness to pay

contributions; hence lack of money is a major reason why many people choose not to join a scheme (Mathaauer et al 2007). However attribution can also be made to the clause in L.I 1809 of the NHIR on indigents that their membership should not exceed 1% of premium contributors for a DMHIS, and this may warrant an amendment if the goal of equity is to be achieved. Similarly, although children under 18 years constituted about two-thirds of the total enrolment annually, some of them especially those below 5 years fell out of the exemption safety net, since their parents had not registered. This makes true the assertion that HI may be progressive without actually fostering equity if only those who can afford contribute and benefit (EQUITAP 2005). Xu et al 2006, corroborates this in an expenditure study which revealed that the population in the higher-income quintile is more probable to be covered by HI.

Furthermore it was found out that in the NED; urban areas are better covered by HI due to ease of enrolment as a result of the dense population, better quality of infrastructure and communications. This also defeats the goal of equity and even tends to be regressive, with the "rural poor" paying for the benefit of the "urban rich", as they have little/difficult access to the health facilities (Conn & Walford). Furthermore, the majority of the workforce in the NED is in the informal sector, with the attendant difficulties in their identification and especially estimating their very low/non-existent income unlike the premiums of the formal sector workforce on payroll. Nor is this all but also the apparent "voluntary enrolment" of the informal sector into the NEDMHIS makes it prone to adverse selection, which problem can be averted when contributions are made mandatory. However in practice for low-income countries like Ghana, with significant poverty, it is very difficult if not impossible to implement such a measure.

Although one cannot be easily faulted in imputing a basic flaw in making the minimum benefit package of the NEDMHIS/NHIS very comprehensive, it is becoming increasingly clear that even small fees charged for primary care can have catastrophic consequences for vulnerable households for which reason SHI in poor countries should cover essential primary services (Whitehead et al 2001). Furthermore the available options for relief in this situation is either moderation of the benefit package offered or raising the premiums, both of which may result in yet a further number of members wishing to leave the scheme (Carrin & James 2004).

With respect to administrative ability, to achieve efficiency gains there is the need for adequate management capacity and infrastructure for establishing and managing contracts; monitoring service use; avoiding fraud; introducing performance measures and regulating providers (Conn & Walford). The generalization of the argument that, voluntary relief funds that preceded SHI

laws in developed countries, helped to develop HI administrative skills to its feasibility in low-income countries like Ghana, for that matter the NEDMHIS is flawed, because the existing conditions then were very different (McIntyre 2007). In fact, there is little in evidence to support feasibility with respect to the ability of low-income countries to administer SHI. The capacity to administer in low-income countries takes time to develop (Conn & Walford).

Unsurprisingly the NEDMHIS like other DMHIS in Ghana has weak management and regulatory capacities (lack of personnel sufficiently skilled in bookkeeping, banking and information processing). Additionally with over 70% of the NED population in informal employment and scattered geographically, premium collection tend to be expensive. This assertion notwithstanding the NEDMHIS was within the permitted percentage for administrative costs. The BOD on the whole appear to have performed creditably judging from their activities (inclusive of a compelled visit to the NHIA on account of seriously delay in fund transfer). However despite the good intentions of membership composition, the inclusion of personnel who are also service providers creates a conflict of interest that undermines its neutrality and the motive behind the provider-purchaser split.

On provider payment mechanism, with fee-for-service (with no co-payment/deductibles) being the only type employed with no mechanism in place to really control for moral hazards, over-production of services by providers is inevitable and has been a source of conflict between scheme staff and service providers. On the part of patients the marked increase in utilization rates may not be without unnecessary use.

Apparent Gains & Challenges of Health care Provision in Axim Hospital: There have been some gains apparently for the Axim hospital in terms of increased patient utilization and revenue generation and improved health-seeking behaviour of the insured. In fact there is a higher service & pharmaceutical reimbursement rate compared to the 'cash and carry" system, which situation is experienced countrywide (ILO 2007). *However with respect to the overall funding for the hospital, government funds (as tax revenue & donor funds) constitute more than two-thirds. Therefore at this juncture the picture of health care financing will be incomplete without the bold assertion that, in Ghana tax revenue will continue to form the significant part of the overall health sector financing strategy for a long time (MOH 2004).* It is also commendable that discrimination against insured clients although might have been perceived unknowingly, was not an issue of contention as was the experience in other districts in the W/R (RHA 2006).

However, the increased utilization with scheme's implementation has led to the emergence of some constraints and challenges. First and foremost the hospital's acute staff shortage amidst the above context has tremendously increased staff load, occasioned by burn-out of some key staff (Axim hospital Midyear 2007). This has compromised the quality of service provision evidenced by a marked increased patient waiting time with overcrowding of the OPD (Axim hospital Midyear 2007). Additionally the protracted reimbursement delays of submitted claims and the occasional detection of the moral hazard of service overproduction have sometimes led to conflicts between the Axim hospital and the NEDMHIS management teams.

6.2 Recommendations

For NEDMHIS:

- There is the need to broaden the consensus amongst the society's stakeholders to better embrace the SHI concept and comply with its rules and regulations.
- To scale-up education of the citizens about the replacement of the "cash and carry system", the benefits of the NHI Policy, and specifically on issues of solidarity/risk pooling and portability.
- To improve the NEDMHIS administrative capacity& infrastructure, inclusive of further training of scheme staff on the SHI concept and the need to depend more on the BOD rather than the NHIA for guidance.
- To improve networking of the NEDMHIS with the NHIA to ensure timely claim reimbursement.
- The NEDMHIS BOD needs to cautiously manage the potential conflict of interest of having on the Board members who are also Managers of contracted Health Institutions and having no provision in Act 650 to deal with this situation.
- Premium collectors should be incentivised by being paid a flat amount per head count of registered members regardless of being paying residents or exempt.

For NHIA, NHIC & Policy Makers:

- To develop and implement effective communication strategy (taking into account various cultural differences), depoliticizing the policy and having continuous dialogue with service providers to minimize moral hazards.
- Provider payment mechanism should preferably be a mix of methods, to control cost escalation and minimize moral hazards.
- Despite the need to reduce unnecessary use, co-payments/ deductibles should be avoided as they may lead to catastrophic health

expenditures and providers rather motivated to control this patient abuse.

- L.I. 1809 of the NHIR for indigents might need amendment, as it undermines the target of financial accessibility for all, with a redefinition of the criteria and the DMHIS working with key stakeholders in their identification.
- SHI may not be sustainable with voluntary membership as it undermines risk-pooling. Thus if policy makers wish to maintain the universal principle of SHI with averaged contributions that reflects totally a community's health risks, then membership needs to be compulsory at some point in time to avoid potential exodus from the scheme.
- To decouple children under 18 years from parents for purpose of registration in two phases spread over time, to ensure feasibility: for instance to initially decouple children under 5, then followed later with those above 6 and below 18 years. Concurrently there should be the exploration of including Family Planning (FP) services in the benefit package as an incentive to practice FP, whilst discouraging large family sizes to help ensure sustainability of this exemption.

Globally- For other Countries:

- Although there may be good reasons for adopting SHI, considering feasibility challenges, low-income countries should not rush in its adoption without proper feasibility studies and adequate preparation.
- SHI if adopted, could start with the formal sector and with time as expertise and capacity develop include the informal sector.
- SHI on its own might not generate sufficient resources; therefore premiums should be supplemented by government subsidies through general taxation, to achieve better coverage that includes the exempt categories who do not contribute.
- The minimum administrative capacity and infrastructure for SHI institutions should be in place before embarking upon this health financing mechanism.

- Prior to SHI implementation, there should be in place adequate health care infrastructure and staff to provide the minimum benefit package.

6.3 Areas for Future Research

- Health-seeking behaviour of Insured versus Non-insured Clients in the NED.
- The knowledge, attitude and perceptions of health staff with regards to the NEDMHIS.
- Implications for quality and efficiency of the NEDMHIS: Intra- and Inter-Regional Portability.
- Effective management of the informal sector: The Ghana NHIS.
- The Ghana NHIS: What are the most appropriate provider payment mechanisms?
- Cost of health services provided: A comparative study of Public versus Mission health facilities.
- The Ghana NHI Policy: Evaluation of Act 650.

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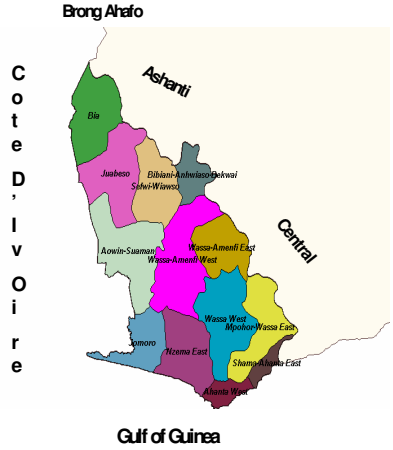
ANNEXES

Annex 1: Map of Ghana & Western Region

Map of Ghana

District Map of Western Region



Source: Adapted from RHA 2007

Annex 2: Examples of SHI

Box 1: Examples of SHI

In Costa Rica mandatory HI was introduced in 1941, but initially covered the low-income national and provincial workers, and in time was extended to rural workers (McIntyre 2007). Presently it has 90% of its population covered with HI, after a legislation in 1961 that made membership compulsory for all (McIntyre 2007).

In the Philippines, formal sector workers have mandatory HI with Philhealth; however provision has been made for voluntary membership for the self-employed and other informal workers (Oberman et al 2006).

In Kenya the NHIF membership is compulsory for all formal sector workers, but the informal sector workers and self-employed can join the scheme on a voluntary basis (Mathauer et al, 2007).

Developed countries like Germany and Austria which have universal coverage, adopted a gradual approach towards its achievement. Membership was voluntary initially for many years till enrolment was made mandatory for the entire population (Carrin & James 2004). However, in Germany individuals can opt out for private HI if their income is above a certain level (Wasem et al).

Annex 3: Informal Sector Categorization

Social Group	Class	Definition	Minimum Annual Contribution GH¢(Ghana Cedis)
Core Poor	A	Adults who are unemployed and do not receive Any identifiable and constant support from elsewhere for survival	Free
Very Poor	B	Adults who are unemployed but receive identifiable and consistent support from sources of low income	7.20
Poor	C	Adults who are employed but receive low returns for their efforts and are unable to meet their basic needs	
Middle Income	D	Adults who are employed but receive low returns for their efforts and are unable to meet their basic needs	18.00
Rich	E	Adults who are able to meet their basic needs and some of their wants	48.00
Very Rich	F	Adults who are able to meet their basic needs and most of their wants	

Source: NHI Policy, MOH 2004

Annex 4: Benefit Package

Out-patient Services: Consultations including reviews (general & specialist consultations).
Requested investigations-lab, x-rays & ultrasound; Medications- drugs on NHIS drug list and traditional medicines approved by FDB and prescribed by medical and traditional medicine practitioners; Treatment for opportunistic infections in HIV/AIDS; Out-patient/Day surgical operations incision & drainage; haemorrhoidectomy, and Out-patient physiotherapy. including hernia repairs,

In-patient Services: General and specialist in-patient care; Requested investigations-lab, x-rays & ultrasound;
Medications- drugs on NHIS drug list and traditional medicines approved by FDB and prescribed by medical and traditional medicine practitioners, blood and blood products.
Cervical and breast cancer treatment; Surgical operations; In-patient physiotherapy; Accommodation in general ward; Feeding (where available).

Oral Health Services: Pain relief which includes incision and drainage, tooth extraction and temporary relief; dental restoration which includes simple amalgam filling and temporary dressing.

Eye Care Services: Refraction; Keratometry; Visual fields; Cataract Removal; A-Scan; Eye Lid Surgery.

Maternity Care: Antenatal Care; caesarean section; deliveries (normal and assisted); postnatal care.

All Emergencies: Medical emergencies; surgical emergencies including brain surgeries due to accidents; Paediatric emergencies; Obstetric and gynaecological emergencies including caesarean section; Road Traffic Accidents; Industrial and Workplace Accidents; Dialysis for acute renal failure.

EXCLUSION LIST

Rehabilitation other than physiotherapy; Diagnosis and treatment abroad;
Appliances and prostheses including optical aid, hearing aids, orthopedic aids, dentures;
Cosmetic Surgeries and aesthetic treatments; Assisted Reproduction; Echocardiography;
Angiography Photography; Orthoptics; Dialysis for chronic renal failure
Heart and brain surgery other than those resulting from accidents
Cancer treatment other than cervical and breast cancer; Organ transplantation
All Drugs not on the NHIS Drug List; HIV retroviral drugs;
Medical Examinations; Accommodation on VIP wards; Mortuary Service

(Local Schemes may decide to offer any of the services in the exclusion list as additional benefits to their members).

HEALTH FACILITIES THAT MAY BE ACCREDITED BY THE NHIC TO OPERATE

Teaching hospitals; Regional hospitals; District hospitals; Health Centres; Mission hospitals; Quasi-Government hospitals and clinics; Private hospitals and clinics; Maternity Homes and Pharmacy shops & Drug stores.

Annex 5: Details of Board Members of the NEDMHIS

No.	Name	Designation	Representing	Background	Current Position
1	Francis Ackah	Chairman	Finance & Banking	Financial	Snr. Bank Manager
2	Rebecca Dadzie	Vice-Chairperson	District Assembly	Educationist	Reg. Director of Education, W/R
3	Francis Ehoma Kwaw	Member	Traditional Authorities	Educationist	Director of Bureau of Ghanaian Languages
4	Agartha Mensah	Member	Women (Gender)	Educationist	Tutor- Nsein Sec. School
5	Robert Edmund Nkrumah	Ex-Officio	Scheme/SchemeStaff	Educationist	Scheme Manager
6	Abraham Tachie-Menson	Member	Ghana Health Service	Medical Doctor	District Director of Health
7	John Abakah	Member	Private Providers	Health Administration	Hospital Administrator of St. Martin de Porres Hospital
8	Agnes Mozu	Member	Traditional Authorities	Educationist	Queen mother of Lower Axim
9	Michael Abaka Eyison	Member	Social Welfare	Social Worker	District Director of Social Welfare
10	Paul Awuah	Member	Christians	Religion	Rev. Father
11	Alhaji Abdulai Sophiano	Member	Muslims	Educationist	Circuit Supervisor- GES
12	Ebenezer Kojo Kum	Member	Legal Person	Legal Practitioner	Legal Practitioner
13	George K. Owusu	Member	Axim Hospital		Medical Superintendent
14	Joshua K. Alimah	Co-opted	Co-opted	Medical Doctor	District Chief Executive

Source of Table: NEDMHIS 2007 Annual Report.

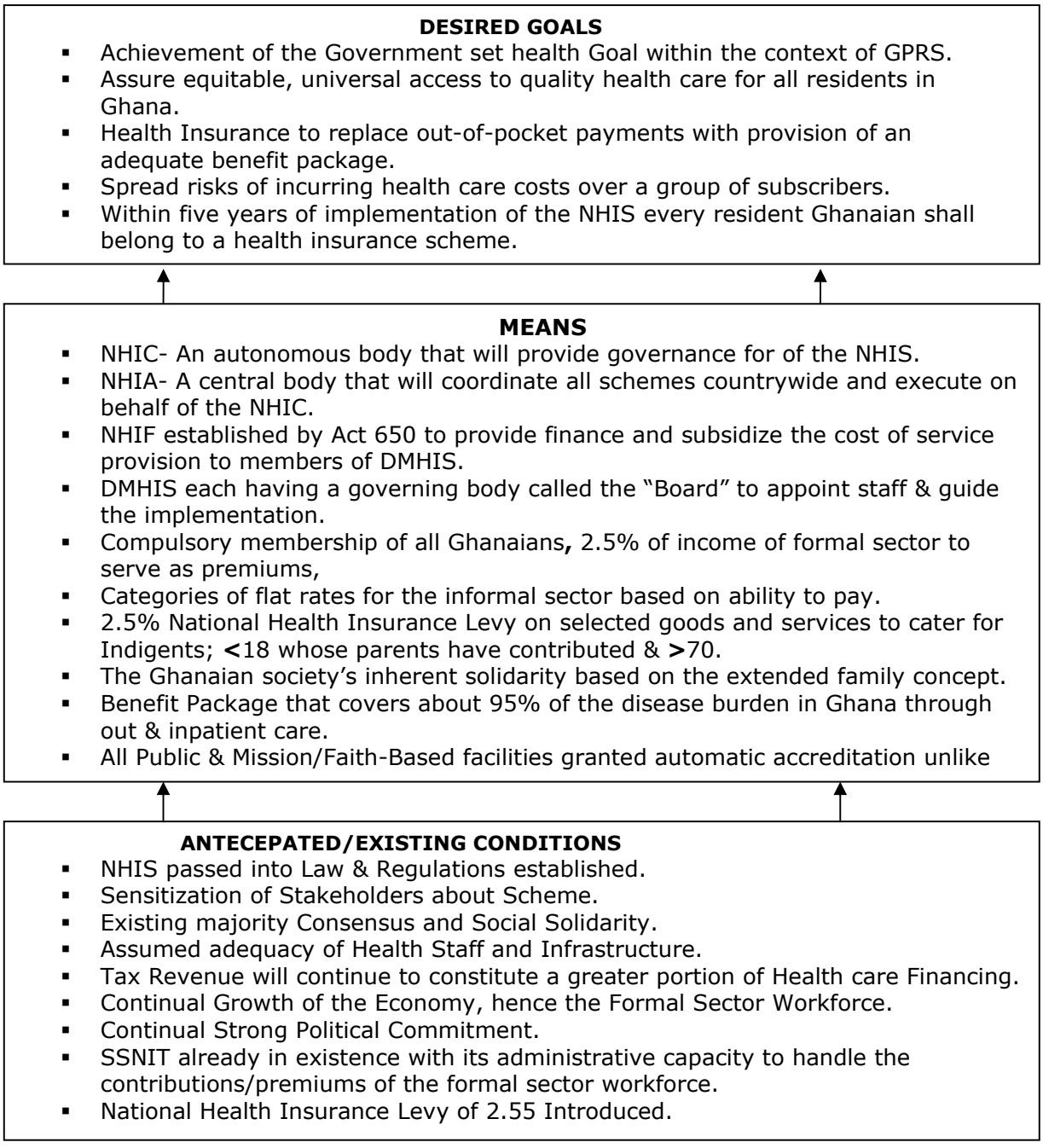
Annex 6: Advantages and Disadvantages of the Different Provider Payment Mechanisms

Payment	Advantages	Disadvantages	Ways of minimizing Disadvantages
Salary	Predictable expenditure. Low administrative Costs.	Possible under provision and/or poor quality care. Little incentive for efficiency & productivity unless linked with performance.	Peer review of provider practices. Link part of payment to performance.
Capitation	Incentive for technical efficiency and preventive care. Administrative costs reasonably low.	Incentive for under service. Possible cream skimming. Possible cost shifting (referral to another provider).	Adjust payment to risk. Monitoring & peer review of provider practices. Patient choice of provider.
Fee for Service	Incentive for technical efficiency (If fees are fixed).	Incentive for overprovision & cost escalation. High administrative costs.	Global caps and/or adjusting fee to keep within resource limits.
Budget Allocation	Predictable expenditure and tight control.	Limited incentives for efficiency. Can lead to under service & cost shifting.	Link part of payment to performance. Monitoring & Peer review of provider practices.
Per Diem	Incentive for technical efficiency	Incentive to extend length of stay and/or increase number of admissions.	Global caps and/budget limits. Lower fees for longer stays.
Case-based (Includes Diagnosis Related grp. Payments)	Strong incentive for efficient operation.	Unpredictable expenditure. Relatively high administrative costs. Incentive for cream skimming.	Adjust case mix- by grouping people according to their use of resources.

Source: Carrin & Hanvoravongchai, 2002; Kutzin, 2001 cited in McIntyre et al 2007

Annex 7: Model for Evaluating the NEDMHIS in Ghana

Planned Programme



Source: Adapted from Robert Stake, 1967