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Assessing Factors that Influence Sustainability of the National Health Insurance in Ghana: A Study of Nadowli District Scheme in Northern Ghana

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Abstract:
Background: In Ghana close to 70% of the economy is dominated by informal sector, and being the first ever to initiate a nationwide implementation of the National health insurance scheme, funding of the scheme, attractiveness of the benefit package, and the quality of health service delivery remain threats to the sustainability of the health insurance scheme. The study sought to find out the factors that influence sustainability of the national health insurance scheme in Ghana with reference to the Nadowli District scheme in northern Ghana.
Methods:The study was a descriptive cross-sectional in design aimed at eliciting information on views of community members, the health facility, and the scheme regarding premium levels, benefit package and quality of health care service provided to members. The study employed questionnaires for households, health facilities and scheme manager. A sample size of 260 respondents comprising registered and non- registered members were randomly selected. 10 Health facilities managers and the scheme Manager were purposively included. Univariate analysis using tables and diagrams and content analysis of key informant interviews was used to summarize results.
Results:The study revealed that, the Nadowli District health insurance scheme has prospects given the availability of technical support, the various measures introduced to check insurance markets risks, quality of care for drugs and supplies (65.0%), generous benefit package (95.0%) disease conditions covered, solidarity that exists in communities (75.1%), Development partners and government commitment to the scheme as well as increasing community recognition that the scheme is a convenient means to increasing access to health care. However, the scheme some challenges such as its limited benefit cover and the design weakness ("fee-for-service") payment system are a treat and can hamper the scheme's sustainability.
Conclusion: The problems identified are not necessarily inherent but are related to design and management weaknesses, for which adequate and feasible solutions exist, though their application may require the active role of government and other development partners so as to enable the scheme to realize their true potential.

Keywords*: Sustainability, Health insurance, Market risks, benefit package, Nadowli*

1. Introduction

Globally, Health care financing is under severe strain and particularly in Africa and other developing Countries where health care cost is ever increasing. For over three decades, calls have been made for communities in developing Countries to plan, finance, organize and operate health care services. The question that often arises is how and how much should the poor from poor Countries contribute towards this (1,2). Increasing the access of African populations to health care is one of the biggest challenge facing Africa and the global community. At independence, when most African economies were strong, with abundant resources to cater for relatively smaller population sizes, it was possible to provide health care services free of charge, without compromising quality, though

geographical accessibility was more limited as compared to today. Rapid population growth, decline of the economies and severe financial constraints in later years have placed great limitations on the capacity of subsequent regimes to continue to support and subsidize or expand health care services. Environmental health risks and the tragedy of disease like AIDS have come to place an even greater stress on African fragile health care systems. As resources dwindled, investment in the health sector also fell considerably. This and other circumstances such as high cost to the user of access to care of acceptable quality, as well as external pressure and conditionalities, services of low quality, ill-equipped facilities and poorly maintained equipment, abuse by the narrow segment of society, frequent shortages of drugs and other consumables made implementing cost recovery systems favorable" (Atim et al., 2008; Atim, 1998; Creese, 1991; Kutzin, 1995).

The health sector is central to Ghana Government's developmental agenda. While improving health is intrinsically desirable, it is broadly recognized that health is a necessary pre-requisite for socio-economic development. Improving health will improve human capital, productivity and wealth (7). Many health care financing options have been explored and experimented by the government of Ghana since independence till date. Among them include the "cash and carry" which existed since the 1980's to Health Insurance which was piloted in 2001 and finally enacted into law in 2003(8).

The Nadowli District has majority of the inhabitants in the informal and such a population coupled with wide spread poverty, adversely affected the people's (particularly those in the informal sector and the rural dwellers) access to Health services both physically and financially. Majority of these people either do not use the health facilities when ill (leading to low utilization of health facilities) or stay at home until illness is out of proportions because of financial reasons (9,10). In view of this, alternative health financing mechanisms known as Health Insurance Schemes emerged in all Districts throughout the country as a way of tackling the problem of financial accessibility in 2004 (9,11). Although laudable an initiative, the sustainability of these schemes are threatened to stagnate and terminate at inception (3,4). Against this background, little documentation exists on these financing mechanisms and, no effort has been made to evaluate their, sustainability, the kinds of prospects they present as well as the problems and constraints they have to grapple with, so as to serve as lessons to other schemes. District Health Insurance Schemes are believed to have tremendous potential to contribute to financing access to health care (3,12), but what is more crucial and clear is that, there is a lag in knowing that, Districts Health insurance Schemes can increase access to health care and the ability of communities and management to design viable and sustainable schemes for increasing access to health care. Also, while this seems laudable, systemic and managerial problems exist. This study seeks to find out the factors that influence the sustainability of the National health insurance scheme in Ghana with particular reference to Nadowli District Health insurance Scheme in Northern Ghana.

2. Methodology

2.1. Study Settings

The study was carried out in Nadowli District in Northern Ghana Though the district was recently divided into two (Nadowli-Kaleo and Daffiama-Busie-Issa) Districts. For this study purpose, we shall refer to the district by the old name 'Nadowli district'. This because the mandate of the schemes activities still cover the newly established District as well. The Nadowli District is one of the Eleven (11) Districts in the Upper West Region of Ghana. It was created in 1998 is located in the heart of the Upper West Region of Ghana. It is bordered to the south by Wa Central, North by Jirapa and the east by Sissala Districts. It also shares boundary with Burkina Faso to the west. The District capital is Nadowli. The district covers a total land area of 2,746.50 km^2 extending from the *Billi* Bridge (five kilometers from Wa township) to the Dapuori Bridge near Jirapa. The district had a population of 82,716 (2000 census) and currently 94,388 (Ghana statistical service 2010 population & housing census report).The district is the home of two major tribes, the Dagaaba who are the majority constituting about 96% of the total population and other minor tribes with the Sissala being bout 3%. The district has 179 Communities, 15 sub-Districts Health Centers and further sub-division of the sub-Districts into 16 Community-Based Health Planning Service (CHPS) Zones. There is a hospital at Nadowli (Government Hospital) and an Ahmadiyya Islamic clinic at Kaleo.

2.2. Study Design, Population and Sample Size

The study employed the descriptive cross sectional design between July and August 2008. Study participants of 18 to 70+ years were selected from 40 communities. The sample size was determined by the proportion of members covered under the scheme in relation to the total population of the District. Total members = 21.264% of 89,900 which is approximately 19,116 registered members under the scheme (Nadowli DMHISStatus Report, 2006). The sample size at 95% confidence interval with 0.05 error margin was approximately 258 respondents. Using the formulae; $N = Z^2 * (p\ q) / d^2$ (Corlien et al 2002).

Where N = Sample size, Z = Confidence Interval, P =Population proportion, q= 1-p and d= being degree of freedom/error margin. A Multi-stage sampling technique was adopted. A Systematic sample of including every other forth community was used to select 40 communities and 7 People from each community to approximately reach 260 respondents. Purposive sampling was used to reach the scheme Manager and Staff from the ten (10) Health facilities.

2.3. Analysis

Quantitative data was summarized into percentages, tables and diagrams using SPSS software while content analysis was employed to categorize responses from key informants. Univariate descriptive analysis was employed to explain the frequency distribution of the variables.

3. Health Care Financing in Ghana

Health Care Financing in Ghana has gone through a chequered history. Immediately after independence health care provided to the people was "free" in the public health facilities. Financing of health in the public sector was, therefore, entirely through tax revenue. The sustainability of this form of financing became questionable as the economy began to show signs of decline in revenue coupled with competing demand for other social services from the same dwindling revenue source (13,14). The world economic recession in the early 1980's led to heavy pressure on provision of social amenities. This led to drastic reduction in government's expenditure on health care. This mid 1980's therefore witnessed a withdrawal of health care subsidies. (8,15). What is important to note here is that, the general tax revenue did not allow for a percentage earmarked for health as we now have in the case of VAT funds earmarked for education. This situation continued until August 1985 when the Provisional National Defense Council (PNDC) government revoked the Hospital Fee Regulation, 1963, (Legislative Instrument L.I.1277) and replaced it with the Hospital Fee Regulation, 1985(L.I 1313) mandating fees to be charged for consultation, laboratory and other diagnostic procedures, medical, surgical and dental services, medical examination and hospital accommodation (10) termed as the "cash and carry", this was a way of raising additional funds from the public to supplement shortfalls in government's budgetary allocation to the health sector. Though the system seemed to have been successful at raising additional revenue, and improving the quality of services, other difficulties were created. Financial constraints led to people either staying at home when they were sick, or going to health facilities so late that not much could be done for them (illness worsening). Some of those who were admitted absconded when they felt a little better. The policy of cost recovery led to increasing concerns about equity and access for the poor (16–20). The charges under the user fee exempted certain specified communicable diseases and people termed as the vulnerable groups from out-of-pocket payments. This free exemption policy however was badly implemented in that although communicable diseases were supposed to have been exempted, in practice no one enjoyed this facility. It was saddled with several institutional and managerial problems as outlined by Atim et al (2001:14). For instance, definition and identification of poor and core poor (paupers) was difficult because basic data on ages and births, income levels of people were not properly documented. Other problems included, unclear and non-existent guidelines on how to implement the policy, no conscious system was designed to prevent possible financial leakages including reimbursement procedures, uneven implementation leading to considerable variations between regions on the impact of the exemptions to target groups and health facilities, inadequate supervision and monitoring, institutions claiming different amounts for similar services leading to differential average cost of the exemptions to the MOH, frequent complain that the budgetary allocations for exemption is inadequate, lack of adequate information to the public about the exemption policy. It is however encouraging that, policy makers are increasingly recognizing that converting revenue gains into productive service quality and access requires some accompanying, or even prior changes in managerial and institutional capacity (5,21).

In the ensuing years the standard of health care provision in Ghana fell drastically. There was acute shortage of essential drugs in all the public health facilities. Most importantly, the introduction of the user fees resulted in the first observed decline in utilization of health services in the country (22). In spite of this the government went ahead to institute full cost recovery for drugs as a way of generating revenue to address the shortage of drugs. This "Cash and Carry" compounded the utilization problem by creating a financial barrier to health care access especially for the poor. It is estimated that out of the 18% of the population who require health care at any given time, only 20% are able to access it. Implying that about 80% of Ghanaians who need health care could not afford it. Hospitals at the time became death traps due to the 'cash and carry' system introduced (9,22).

The government noting the problems associated with the "Cash and Carry" system initiated action to replace this out-of-pocket payment for health care at the point of service. The implementation of the programme to replace the "Cash and Carry" was in phases. This approach took cognizance of the fact that uptake of health insurance is dependent on various factors including level of confidence, perceived quality of care, willingness of individuals to subscribe to it and the attractiveness of the benefit package (23–25).

Given the high latent demand for health care services of a good quality, and the strong criticism of alternative forms of health care financing and cost recovery strategies like user fees, coupled with the extreme underutilization of health services in several countries, it has been hoped that District health insurance schemes may improve access to health care of acceptable quality. The option of insurance therefore seems a promising alternative as it is a possibility to pool risk transferring unforeseeable health care costs to fixed premiums (11,26). Partly as a response to this lack of social security, to the negative side effect of user fees and to persistent problems with health care financing, non-profit voluntary insurance schemes for urban and rural self-employed and informal sector workers have emerged. These schemes are characterized by an ethic of mutual aid, solidarity and the collective pooling of health risks (3,27).

The system of upfront payment at service delivery posed a financial barrier to health care access. By 2001 the government initiated a policy to deliver accessible, affordable and good quality health care to all Ghanaians especially the poor and vulnerable in society. The policy objective of this insurance is that, within the next succeeding five years (2003 – 2008), every resident Ghanaian should belong to a health insurance scheme that adequately covers him or her against the need to pay 'out of pocket' at point of service delivery (NHI Policy Framework for MOH 2004). The Government is currently financing these district health insurance schemes through a 2.5% out of the 17.5% social security & national insurance trust (SSNIT) of formal sector workers contribution, a 2.5% national health insurance levy (NHIL) which is a consumption tax placed on value added tax (VAT) commodities, Donor support from development partners (DANIDA, UNICEF, WHO etc). Adult Ghanaian residents aged between 18-70year in the informal sector (non SSNIT Contributors) as well as non SSNIT pensioners pay a yearly minimum of 7.20 Ghana Cedis ($2.50) and a maximum of 48.00 Ghana Cedis ($12.00) according to the categories of ability to pay and economics status. The Government is paying for those under the premium exempt category comprising; the aged (70+ years), the poor and core poor (indigents), pregnant women, livelihood

empowerment against poverty beneficiaries (LEAP beneficiaries) as well as children less than 18 years (22,28–30) MOH- NHIS, Policy Framework 2004).

3.1. The Concept of Health Insurance

Key words that often run through health insurance literature are, 'risk pooling' and 'risk sharing'. Indeed, the aim of health insurance is to spread the risks of incurring health care costs over a group of subscribers that is "a system of risk sharing where the wealthy subsidizes the poor and healthy subsidizes the sick"(11,11). The mechanism operates in such a way that, resources of the insured are pooled and are used to cover the expenses only of the people affected by the risk. Those affected by the risk, benefit from the contribution of those who are not affected and as a result, they receive compensation that is greater than the amount they themselves have invested in the insurance. They renounce ownership of contribution made and cannot therefore reclaim them if the risky event has not occurred. (ILO, 2001).

3.2. Factors that Influence Scheme's Viability and Sustainability

Available evidence on health insurance by Nyanator &Kutzin 1999, Dror et al 2007, Bennett et al 1998, Atim 1998, Musau 1999, Criel 1998, Jakab et al., 2001, and Arhin-Tenkorang 2001, all contend that, the main factors determining sustainability, membership and improvement to health care are related to;

- General problems of insurance markets (market risk)
- Scheme design
- Scheme management
- Community participation/perceptions
- Existence and behavior of health care providers.

4. General Problems of Health Insurance Markets

4.1. Moral Hazard

It is the tendency of individuals, once insured, to behave in such a way as to increase the likelihood or size of the risk against which they have insured. Can be classified into 'supply side Moral hazard' (when the doctor provides unnecessary care because the patient is insured) or 'demand side moral hazard' (when the patient demands unnecessary care because he is insured)- (31). Simply put, moral hazard is the tendency of those insured to use the services more intensively than if they were not insured. Such often-unnecessary use results in over consumption and imperils the financial viability of the insurance system (4). Moral hazard behavior of insured persons presents a permanent threat to the financial sustainability of schemes. As insurance lowers the price of care at the point of use and removes barriers to access, utilization of health facilities will increase (32). Surely, a desirable effect, given the current under-utilization of health facilities in developing countries, but health care cost may grow far more rapidly than resources mobilized through contributions. This behavior can easily jeopardize a scheme's financial viability. Moral hazard is different from fraudulent use of the services because it relates mainly to the fact that, to those insured, the price of using the service is often much lower than the actual price of the service especially in the absence of co-payments and deductibles (4,33). Furthermore, some provider payment mechanisms like fee-for-service reimbursement give incentives for the provision of unnecessary and expensive treatment to insured patients implying that moral hazards could also emanate from the provider side.

4.2. Adverse Selection

There is the tendency of those who are at greater risk of falling ill (high risk), or who are already ill, to subscribe to the insurance scheme in greater numbers than those who are less at risks -low risks (3,4). Voluntary scheme is also prone to adverse selection problems, when the people most likely to join a voluntary scheme are high-risk individuals such as the chronically ill, who anticipate a high need for care. Due to this self-selection, the claims made to a scheme will exceed its revenue if contributions are based on the average risk in the community. As a consequence the premiums will have to be raised and insured persons with a relatively lower risk than other members would drop out of the scheme, and would therefore increase the health care cost per insurance member (34).

4.3. Fraud and Abuse

Health insurance fraud is an intentional act of deceiving, concealing, or misrepresenting information that results in health care benefits being paid to an individual or group. Fraud can be committed by both a member and a provider(3). This is a situation where the insurance system is open to the dangers of free riding, that is, individuals would want to enjoy the scheme's benefits without bearing the cost involved. Some individuals who are not entitled to services may use the identity cards of those entitled to services, particularly where identity cards do not bear pictures of members, to receive the benefits without paying for them. If no effective system of checking identities is in place, knowing whether the benefit is due them or not is difficult. Insurance is particularly open to such risks, because people often perceive that somebody else is paying for the services, not the direct user of the services, which arguably gives incentive for abuse.

4.4. Cost escalation

This denotes increasing cost to the health insurance schemes. This situation can arise where providers can cause increase in health care costs by prescribing expensive and unnecessary treatment, prolonging the hospital stay days of insured members and so on. Other factors that escalate cost include the behavior of scheme members through fraud and abuse as explained earlier and covariant risks. CBHI schemes are often small size and cover only a limited area making them especially prone to covariant risks. A person's risk of needing care is not independent from his or her neighbor's health: the risk of falling ill are correlated especially in cases where mutual disaster hits a certain region or village. The fact that such disasters can rapidly deplete the financial reserves of the scheme calls for public-private partnerships, either in the form of reinsurance contracts with private insurance companies or as an agreement with public institutions that can provide subsidies to minimize defects (35,36).

5. Design of District-Mutual Health Insurance Schemes (DMHISs)

Studies and literature reviews of sub-national health insurance schemes (often referred to as community financing schemes or micro-financing schemes) targeting rural or informal sector populations in developing countries frequently conclude that schemes have design weaknesses that hinder their performances. Arhin-Tenkorang (2001) contends that, technical factors relating to data (its nature and quality) and the methodology used to specify contribution levels, the benefit package, and the level of external financial subsidy are important in designing viable and sustainable schemes. Other factors he identified were experiences of health providers with third party contractual arrangements and payments, participation of and consultation with all stakeholders, that is a consultative process of scheme design, situation analysis in which information is collected about proposed or existing target populations and about health care provider(s), are very important in the design of DMHISs.

5.1. Benefit package, premium level, payment schedules/mechanisms and contractual relations

From the point of view of public policy, an important problem of local organizations providing insurance, health care or other services is their difficulty to prevent social exclusion. Whereas donor agencies and policy makers tend to take it for granted that with the help of these institutional innovations also the poor and the poorest are reached, empirical evidence questions this assumption (37). Hence, it is important that the benefit package of schemes is affordable and includes basic services tailored to the health care needs and preferences of the local population. The availability of Out Patient Department (OPD) services and emergency care as part of the benefit package has been found to be a critical factor in the decision to participate in a scheme. The outpatient department (OPD) benefit package provided by lower level providers (health centers) in the Dangme West District Scheme has had influence on participation and also contributes to ensuring that insured patients present illnesses early when treatment resource requirements are minimal (1). Wider benefit cover, however, presents challenges to scheme managers on how to control fraud and abuses and administrative difficulties particularly when a scheme is at its initial years of operation (33).

On premiums, accessibility will be high when the premium specified in a scheme does not exceed the non-critical income of targeted individuals. Too low premium however, has implications on the benefit cover whiles too high premium limits enrolments**(38,39)**. Besides the total amount of the premium, certain flexibility in the paying procedure (payment schedule) has an influence on the targeting of the poor. Payment in installments as well as the compatibility of the collection schedule with the cash flow patterns within target households, for example taking into account seasonal availability of cash income among agricultural workers, enhances accessibility **(1)**.

Another design feature that can influence schemes sustainability is payment mechanisms used by the schemes. Schemes design must incorporate efficient provider payment mechanism that will enable them avoid providers pushing up their inefficiency on the scheme (38). This may be done through the use of capitation, budget payment system, and bonus payment instead of on the basis of "fee-for-service", simple case payment or fee per episode of illness. Also, whether the schemes have written contracts upon which commonly agreed standards could be established for monitoring of performance with providers have been identified to have influence on schemes sustainability (33). Waiting period has also been identified as a design feature that relates to scheme sustainability. It serves not only as a check to adverse selection, but allows schemes to prepare administratively, for a take-off.

5.2. Scheme's staff and financial management

Besides initial scheme design, management capacity is important to run the scheme on a day-to-day basis and make necessary adjustments (40). DMHISs act as an insurance broker between the interest of a health care provider and the expectations and needs of their members and therefore need special training. Scheme managers are usually charged with financial control, thus, proper handling of fund to prevent erosion of resources, negotiation with providers (in case the scheme is not managed by a health facility), keeping records of all members, receiving contributions, and making expenses. Proper bookkeeping that provides essential information about the scheme's financial balance and accountability of scheme management vis-à-vis the community has been found to be important (21). Abuse of funds, a detrimental type of mismanagement, can quickly erode confidence in the scheme. In relation to this, Doris and Jutting (2000) indicted that, staff of schemes need to be strengthened as a critical factor in their sustainability. It is important that schemes that are designed as health insurance schemes with pooling of risks as guiding principle are managed by those who have sufficient knowledge of insurance theory and practices. The Ghana's National Health Insurance Act 650; 2003 requires that the scheme manager must have a minimum of Bachelor degree, while the other employees must have higher national diploma in their respective fields.

5.3. Community participation, involvement and perception

The degree of community participation in the design and running of the DMHIS can vary widely and is usually greater if funds are owned and managed by the members themselves than if schemes are run by health facilities (21,41). If members can identify themselves with "their" schemes because they control the funds and have decision making power, they will turn less to unnecessary use of health care services. Evidence from (42) suggests that creating a sense of ownership and trust is important to control for moral hazards and for the acceptance and institutional stability of the scheme in general. To achieve this, regular community level meetings and workshops, where the members of the communities could express their view on the design of the scheme are helpful.Community involvement in needs assessment, leadership, management and resource mobilization can facilitate education and sensitization of members in order to promote healthy behavior and the use of preventive services, as the members share a common interest in keeping the health care cost low. Participation is very important in community health financing schemes (43). On perception, the demand for health insurance is crucial factor if the benefits expected from DMHISs are to be realized. The demand of households for health insurance depends not only on the quality of care offered by the health provider, on the premium and benefit package, but also on socio-economic and cultural characteristics of households and communities (41)(44).

5.4. Availability health facilities and behavior of health care providers

The success or failure of health insurance schemes is largely dependent on the existence of viable health care providers,"the existence of good quality services is necessary for achieving better penetration of target groups, because few people would be prepared to subscribe to a DMHIS for health care benefits of unacceptable quality" (2). In some settings it would even not be possible to set up a viable insurance scheme and mobilize demand before quality of care is improved, because if people feel that they will get no "value for money" at the hospitals or health posts, they would be unwilling to pay premiums. Frequently complaints have been raised about shortage of drugs and other supplies, rude personnel, dirty hospitals, or poor security (45,46). Such problems need to be addressed but quality improvement should not be expected as a necessary precondition for successful implementation of DMHISs.

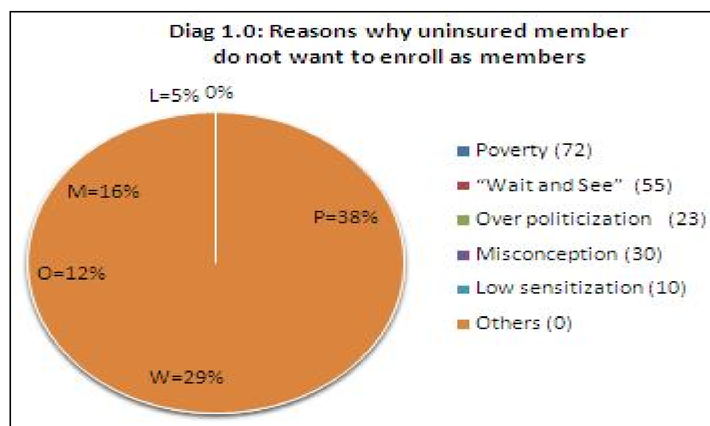
6. Results

6.1. Characteristics of Respondents

6.1.1. Community

The community component looked at data collected from the ten (10) Area councils and forty (40) selected communities in which a total of 260 questionnaires were administered. It was organized under background characteristics of respondents two (2) of the research objectives i.e. the factors that influence schemes sustainability concerning community perception on premium levels, benefit package, service quality, satisfaction and community participation/involvement.

- **Age and Sex Characteristics**
  For the purposes of the study, the Age – cohort was divided into 18 – 34, 35 – 69 and 70+. The ages of those within the first cohort interviewed were 36.5%. Those within the middle age cohort were 51.9% and those within the last age bracket constituted 11.5%. Also 47% males and 53% females were interviewed which reflects the fact that, the females population in the District is probably more than the males.
- **Marital Status**
  The Analysis revealed that of those interviewed, 69.2% were married, 13.4% were single 1.9% were divorced, 1.9% separated and 13.5% widowed showing that a fairly strong family ties exist in the District which the Scheme can take advantage to increase enrolment.
- **Occupation of Respondents**
  From the analysis 57.6% of the respondents said they were engaged in Agricultural related activities, 9.6% said they were professional and technical personnel. The least were disabled respondents (1.1%). The fact that majority are engaged in agricultural related activities, it means that majority of inhabitants in the district may be peasant farmers and for that matter the scheme can capitalize on that and increase enrolment during harvesting season.
- **Insurance Status**
  The insurance status denotes respondents who have either enrolled as card bearing members of the Scheme or not. 26.9% (70) interviewed were card bearing members while 190 (73.1%) represented those who have not enrolled as members of the scheme. This means that, from January, 2007 till the time information was been gathered from respondents, a considerable number of people joined the Scheme considering the records of December, 2006 status report of the Scheme.
- **Reasons for people not been insured**
  From the analysis in Diagram 1.0 below, 15.8% of the respondents who are uninsured still have some misconception about health insurance in the District. Majority of the respondents (38%) indicated that it is due to poverty that they are not insured. This figure is closely related to data on records which indicate that nearly 40% of Ghanaians live below the poverty line (GPRS, 2005) and (NHI Policy framework 2004). It should be noted that, of the uninsured 83% indicated that the yearly premium was between GH¢7.00 – 8.00, 10.5% and 5.3% indicating between GH¢8.00 – ¢9.90 and ¢10.00 – ¢20.00 respectively. These figures meant that education should be ongoing.



Source: Author's Filed Survey, August, 2007

6.1.2. Health Facilities

The Age cohort was divided into 18-34, 35-60 and 60+. The ages of those within the first cohort were 30% while the middle was 70%. The male respondents were 40% and females formed 60%. In identifying health facilities the two (2) Hospitals in the District were; Nadowli District Government Hospital located Nadowli and the Ahmadiyya Muslim Hospital located at Kaleo. Apart from these two Hospitals, the study also considered eight (8) of Sub- Districts Health facilities.

6.2. Factors influencing schemes viability and sustainability

6.2.1. General Problems of insurance market (risks)

Risk (pitfall) is anything that has the potential to jeopardize the viability of a scheme. Risks are pitfalls that threaten the financial sustainability of schemes. Some measures employed by the scheme to reduce adverse selection, moral hazard, fraud and cost escalation are shown in table 1 below.

RISK TARGETED	MEASURES EMPLOYED
1. Adverse Selection	Observe waiting period, Household registration, Education.
2. Moral Hazard	Gate keeper system, Standard treatment guidelines, health insurance drug list, waiting period, sickness covered by NHI Act.
3. Fraud	Use of laminated ID cards, use of expiry dates, Computerize system, vetting of claims by the MIS officer.
4. Cost escalation	Vetting of claims, uniform benefit package, occasional review of premium, generic drug list, mandatory referrals.

Table 1: Measures adopted by scheme to reduce Health Insurance Market Risks
Source: Author's Filed Survey, August, 2007

The scheme maintains strict control of claims by examining the prices of services against what has been approved by the NHIA standard guidelines, checking mistakes in the calculation and removing names of expired members from the claims forms. Sometimes the claims officer goes to the Health facility when in doubt of submitted claim for clarification. These mechanisms are at the moment working well to reduce risk of fraud.

6.2.2. Other problems of Nadowli District scheme

The scheme is faced with problems some of which include;

- Unrealistic charges of some of services by some Health facilities in the Region eg Hernia repair was GH¢ 52.00 as against ¢ 136.00 in other facilities within the Region.
- Refusal of some Medical officers to always indicate medical diagnosis as well as tests that are carried out.
- Late submission of bills to schemes by some health facilities.
- Failure to mention total bill to insured clients at the health facilities.
- Reluctance of premium collectors to register the exempt group because they do not get the 10% commission from that category.

6.2.3. Respondents ever sick before

Out of the 260 respondents 67.3% said they have been sick before while the remaining 32.7% said they have not fallen sick in the past six (6) months. Out of those who were ever sick and sought treatment at the hospital was 54.9% while those who resort to prayer was 21.7%. The analysis is shown in Diagram 1.1 below.

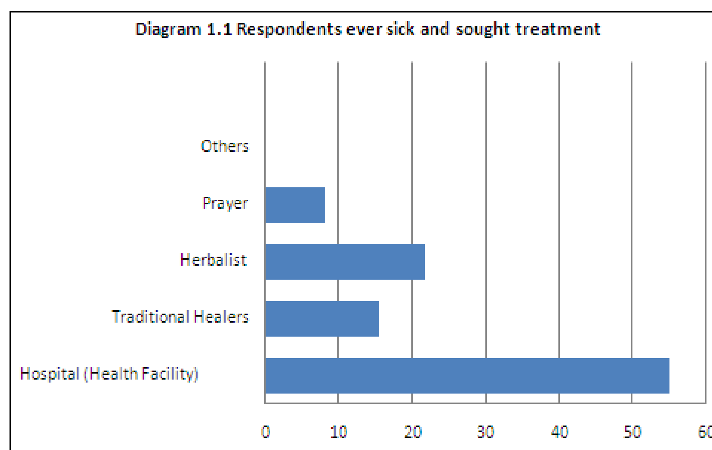


Diagram 1.1 Respondents ever sick and sought treatment.
Source: Author's Filed Survey, August, 2007

6.3. Health facilities perspective

6.3.1. Problems faced by Providers in offering services to the scheme

Quality care as noted in the literature is significant for the smooth formation, growth and sustainability of DMHISs. When health Care providers are entangled with many problems, then quality services will be compromised. Apart from inadequate personnel; responses from health facilities revealed problems such as low staff morale, shortage of some consumables as shown in diagram 1.3 below.

CATEGORY	FREQUENCY	PERCENTAGE (%)
Inadequate Personnel	10	100
Brain Drain	2	20
Low Staff Morale	9	90
Poor Staff Attitude	5	50
Poor Roads	8	80
Inadequate Transport	10	100
Poor Sanitation	7	70
Inadequate Staff Accommodation	10	100
Shortage of Consumables	7	70

Table 2: Problems faced by service providers in offering services
Source: Author's Filed Survey, August, 2007

6.3.2. Challenges faced by health facilities with the advent of National health insurance.

The following have been put forward by some health manager as challenges they face with the introduction of Health Insurance.

- Increase attendance of both OPD and In-Patient
- Increased workload
- Need to expand hospital facilities ie
  - Office Accommodation for NHIS in the health facilities.
  - Beds for clients on admission
  - Need for computerizing and Networking of facility and
  - Need for MIS and Data Entry Clerk at facilities.

6.3.3. Complains received by health facilities from scheme office

The following are the complaints received by health facilities from scheme office

- High service charges eg. Sanitation charges for OPD attendants and cost of Hospital attendance cards/Booklets.
- Insufficient information on client's treatment to facilitate claims vetting procedure.

6.3.4. Challenges facing Nadowli DMHIS (Health providers view)

Responses from the Health facility managers revealed the following challenges;

- Prompt payment of claims
- Clients do not use Health Facility Attendance card
- Waiting period for ID card holders is long

- Funds generated from the Informal Sector is small
- Lack of sustainable public education to deal with misconceptions
- Inadequate logistics to check fraud
- Low incomes and poverty levels of inhabitants.

6.4. Scheme's Perspective

6.4.1. Benefit package and waiting period of the scheme

The benefit package denotes the services covered by a scheme. The benefit package of the scheme as determined by the NHI under Act 650 (2003) is uniform for both in-patients and out patients. This attracts a minimum annual contribution of GH¢ 7.20 and a maximum of GH¢ 48.00 depending on the social class and financial ability of the client to pay. The waiting period was six (6) months from inception but at the time the survey was been conducted the scheme Manager confirmed that the Board had reduced it to three (3) month with effect from 1st July, 2007.

6.4.2. Contributions and form of registration

Contribution level or premium level is the amount paid by members or paid on behalf of members to DMHIS for coverage by the benefit package in accordance to the NHIS policy. The premium levels changed slightly over the years. Between 2003 and 2004 members paid annual contribution of GH¢ 3.60 while for 2005 and 2006 members paid GH¢7.20. The premium payable for 2007 is GH¢ 8.00. Premium collecting agents have been trained and engaged in the communities to facilitate the collection of premium. These agents are paid a commission of 10% for every adult they register from the informal sector who is not in the exempt category. This means currently GH¢ 72.00 is paid to the scheme as contribution from members in the informal sector who are not in the exempt category after deducting the commission. The NHIA currently pays an annual contribution of GH¢ 36.00 per individuals in the exempt category as well as the formal sector workers who are SSNIT contributors. Mechanisms put in place to broaden the base of fund accumulation include; ID cards processing fees, registration fees, waiting period and occasional review of minimum premium levels.
The registration period is all year round registration. Installment payment is allowed and the form of registration is all individuals in the formal and informal sector as well as those in the exempt category.

6.4.3. Providers payment schedules

The scheme adopted a monthly fee-for-service method of reimbursement for paying providers recommended by the NHI Act 650. By this system service providers submit claim forms of clients to the scheme. The scheme vets these forms and makes payment within two (2) weeks on receipt of the forms. The scheme manager indicated that this payment mechanism had the following strengths;

- It strengthens transparency and ease in detecting fraud.
- It led to efficiency and lower cost in administration.
- Ability to sustain the provision of quality services.
- Easy to use with the installed MIS system and
- Ability to sustain interest of health providers and scheme operations.

On the other hand he indicated few challenges of the fee-for-service system. It encourages wasteful practices such as;

- Over prescription of drugs to increase the income of the service provider.
- Prolonged hospital days or unnecessary detention at the health facilities.
- Encourages frequent visits to the facilities since providers are paid according to the services supplied.

6.4.4. Contractual relations/agreements

The scheme signed written agreements with the following service providers.
The two (2) hospitals in the District, all the thirteen (13) Sub-District health centers, all the ten (10) functional CHPS compounds, Wa Regional Hospital, Arch Bishop Dery's Hospital-Wa, Green Beam Pharmacy-Wa, Yarssin Pharmacy-Wa, West-End Pharmacy-Wa and Bills Laboratory-Wa. Apart from the above listed, the scheme also negotiated with other sister District Schemes in the country to always verify ID Cards of members who travel out of the District and wish to access health care. Such bills are usually forwarded by these sister schemes for refund.

6.5. Community's perspective

6.5.1. Community perception on premium level

From the analysis, it emerged that 28.8% of the respondents in the various communities held the view that the level of premium paid is low while 61.2% perceive the premium paid to be high. Also 30.7% are of the view that the level of the premium is affordable while 69.3% think it is not affordable.

6.5.2. Community perception on Benefit package

The benefit package denotes the services covered by the Scheme. 92.3% of the respondents are aware of some of the diseases covered by the health insurance scheme. The remaining 7.6% are not aware of the diseases. According to some of the respondents with

knowledge of the diseases covered by the Scheme are malaria, accidents, diarrhea, skin diseases, hypertension, asthma, diabetes, body pains, fever, stomach ache, maternity care, etc. On other services respondents would want to be covered, some mentioned transport cost to the facility.

6.6. Management of Resources

6.6.1. Scheme's Perspective
In designing and implementing DWMHIS require a large number of tasks. The effective implementation of these tasks requires some level of capacity. The scheme's capacity was in terms of personnel, logistics/equipments.

6.6.1.1. Personnel situation
The scheme has seven (7) permanent staff. They receive salaries from the Government (consolidated fund). Staffs at the moment have undergone a series of training to be able to handle new trends in the Health Insurance Programme. The scheme has qualified staff to manage the scheme in accordance with Act 650 which specifies that the scheme Manager should have at least a First Degree and other staff members of the scheme should have Higher National Diploma.

6.6.1.2. Management of scheme expenditure
The scheme's total expenditure for the year 2005 and 2006 were GH¢ 10,180.00 and GH¢ 67,294.06 respectively. This was spent on eight (8) major items which are represented in the Table 3 below.

ITEM	2005	%	2006	%
Claims	-	-	54,958.00	81.7
Fuel and Maintenance	1,585.00	15.6	2,576.00	3.8
Workshops and Seminars	3,000.00	29.5	2,570.00	3.8
Stationary and Printing	1,015.00	9.9	1,520.00	2.3
Computers Servicing	1,735.00	17.0	1,400.00	2.1
Publicity and Radio Announcement	2,145.00	21.1	2,500.00	3.7
Office Rentals	-	-	720.00	1.1
Miscellaneous	700.00	6.9	1,050.00	1.5
TOTAL	10,180.00	100.0	67,294.00	100.0

Table 3: Expenditure of the scheme for 2005 and 2006
Source: Author's Filed Survey, August, 2007

From the table above claims formed the major expenditure component in 2006 constituting 81.7% and the least been office accommodation 1.1%.
In 2005, there was no payment for claims because the benefit package became operational in 2006 while during that same period the office accommodation was a single room given at the District Assembly block to house the computers and the six (6) Scheme staff hence no rent was paid for that single room.

6.7. Community involvement/participation, perception and accountability:

6.7.1.. Community perception on ownership of Scheme
On ownership of the Scheme, majority of the respondents indicated that the Scheme was for the Government. 38.5%; 37.7% said it was for the community and 23.8% perceive it to be for the District Assembly. I suppose members think it is for the Government simply because it was the Government who initiated the concept of the Health Insurance.

6.7.2. Meeting with Management to deliberate on issues of Health Insurance
The level at which community members are informed about the progress of the Scheme often helps to enhance the sustainability of health insurance schemes. In view of this, members were assessed on the frequency with which meetings are organized by Management with Community members. From the analysis, 34.6% (90) of the respondents said they meet Management quarterly and Mid-yearly respectively. 11.5% said monthly while 19.2% said yearly.

6.7.3. Community Involvement in leadership management resource mobilization
For Community involvement /participation in Need assessment, leadership management and Resource mobilization; 71.1%of the respondents said community was involved, 25.9% said there was no community involvement while 28.8% said they did not know.
On how the community was involved on need assessment, leadership management and resource mobilization, the responses from the 71.1% (185) of the respondents who said the community was involved are presented on the Table 4 below.

Involvement Category	Frequency	Percentage
Need Assessment		
1. Community consultant	90	48.6
2. Government Policy	95	51.4
Total	185	100.0
Leadership		
1. Board Members	45	24.3
2. Scheme Officers	50	27.1
3. Community Committees	58	31.4
4. Health Insurance Assembly Members	22	11.9
Total	185	100.0
Management		
1. Decision making	35	18.9
2. Meeting attendance	139	75.1
3. Risk Management & Scheme Activities	6	3.3
4. Planning	5	2.7
Total	185	100.0
Resource Mobilization:		
1. Premium payment	93	50.3
2. Annual Renewal Fees	90	48.6
3. Communal labor	2	1.1
Total	185	100.0

Table 4: Community Involvement in Need Assessment Leadership Management Resource Mobilization (Community Perspective)
Source: Author's Filed Survey, August, 2007

From the responses; Need Assessment which looked at Community consultation was lower (48.6%) than their perception as a government policy (51.4%). This is particularly because it was the Government who initiated it and formed Regional and District focal persons to sensitize the communities.
Leadership looked at community perception on their involvement as Board Members, Scheme Officers, Community Committees and Health Insurance Assembly Members. 31.4% of the respondents said community members were in the Community Committees, 27.1% said the community members were Scheme Officers while small proportions 11.9% perceive that community members were in the HIA members. This is probably because, respondents are not aware that, the HIA members were also members (chairmen and secretaries of the committee members) of the community committees.
On Management, 75% respondents said meeting attendance was the way community was involved in management of the scheme while on control Scheme activities risk management a small proportion (3.3%) said the community was involved in that regard.
In terms of resource mobilization, majority of respondents 50.3% said premium payment was how the community was involved in Scheme's resource mobilization. Community labor was the least 1.1%.This may be because Government provided initial capital for community sensitization, rented premises as scheme office.

6.7.4. Community perception on service quality at Health Facilities

Community members had different perception about quality of care offered by service providers. During the analysis, 69.2% (180) of the respondents said they ever visited a health facility to access health. Out of this proportion who ever visited a health facility, 52.2% said the sanitation was good while 3.3% said it was poor. Regarding Health staff attitude, 41.1% said it was good. This analysis is shown in Table 5 below.

SERVICE QUALITY	INDICATORS		
1. Hours spent in Hospital	Very long (39.4%)	Not too long (45%)	Short (15.6%)
2. Diagnoses of disease	Very careful (40.6%)	Careful (50.0%)	Not careful (9.4%)
3.Prescription of drugs	Very right (33.3%)	Right (47.7%)	Poor (19.0%)
4. Care and attention to the sick	Very prompt (30.0%)	Prompt (62.2%)	Not prompt (7.8%)
5. Attitude of Health Staff	Very good (40.0%)	Good (41.1%)	Poor (17.8%)

6. Sanitation at the Hospital	Very good (44.4%)	Good (52.2%)	Poor (3.3%)
7. Hospital Equipments	Very good (5.6%)	Good (39.4%)	Fair (55.0%)
8.Drugs and supplies availability	Very good (29.4%)	Good (65.0%)	Fair (5.6%)

Table 5: Community perception on service quality at Health Facilities
Source: Author's Filed Survey, August, 2007

7. Discussion

7.1. Scheme
At the scheme level, the scheme manager is Male was the respondent. Hewas 33 years and holds a BSc. Degree. This confirms the Act 630 of 2003 which indicates that the scheme manager should hold a minimum of first Degree.

7.2. Community

7.2.1. Age and Sex Characteristics
For the purposes of the study, the Age – cohort was divided into 18 – 34, 35 – 69 and 70 – 90. The ages of those within the first cohort interviewed were 36.5%. Those within the middle age cohort were 51.9% and those within the last age bracket constituted 11.5%.
It means majority are in the working group, hence they can work and pay their premiums to sustain the scheme. On the other hand 47% males and 53% females were interviewed which reflects the fact that, the females population in the District is probably more than the males.

7.2.2. Occupation of Respondents
From the analysis 57.6% of the respondents said they were engaged in Agricultural related activities, 9.6% said they were professional and technical personnel. The least were disabled respondents (1.1%). The fact that majority are engaged in agricultural related activities, it means that majority of inhabitants in the district may be peasant farmers and for that matter the scheme can capitalize on that and increase enrolment during harvesting season.

7.3. Scheme perspective on Insurance market risks
From the results, Health Insurance market risks that were identified included moral hazard, adverse selection, fraud and cost escalation. Prudent measures aimed at reducing such risks were being employed. This confirms Atim 1998 assertion in the literature which states that "if such risks are not properly managed, they will eventually threaten scheme's prosperity, financial viability and sustainability of schemes".

7.4. Prospects of Nadowli District health insurance scheme
In ensuring scheme's sustainability, the scheme's design took into consideration measures such as waiting period, restricted benefit package, premium levels and use of photo ID cards.
The benefit package as determined by the NHIS Act 650 is uniform for both in-patients and out-patients. This was generally good as it covers common cases for OPD and in-patient and emergency care. This confirms what is stated in the literature thus; "*when OPD and emergency care are included in the benefit package, it sells better for clients to enroll in the scheme*". The availability of OPD, in-patient and emergency care are found to be crucial in a decision to participate in a scheme (1). The design weakness here relates to the fact that, the benefit package does not cover some specified OPD and inpatient cases. For instance, drugs not covered by the NHIS drug list, organ transplant, mortuary services, diagnosis and treatment abroad, VIP ward accommodation, cosmetic surgeries, assisted reproduction like artificial insemination to mention a few.The waiting period which was previously six (6) months has been reduced to three (3) months. This further goes to support Atim's 2000 assertion in the literature that, waiting period relates to scheme viability and sustainability. It serves not only as a check to adverse selection, but also allows for scheme to prepare financially and administratively for a good take off. On premium levels; the clients paid GH¢ 3.60 per head in 2004 and 2005. For 2006 it was raised to GH¢ 7.20 to match with the national minimum rate per year. In 2007, the premium was further raised to GH¢ 8.00 per adult in the informal sector excluding the exempt category (children under 18 years, SSNIT pensioners, aged 70+ years and the indigents). The NHIC sends ¢ 36.00 per individual yearly as subsidy to cater for those in the exempt category.

7.5. Community perception on benefit package and premium level
In terms of benefit package, greater proportions i.e. 92.3% are aware of some of the diseases covered under the Scheme. They believe the disease coverage is wide enough. However, a few mentioned that transport cost should be added when referrals are made. A small proportion of the community members 28.8% said the premium was low while 71.2% see the premium as high. Given the fact that,

they can pay on installments 30.7% say it is affordable and 69.3% say it is not affordable. The fact that some said the premium was high may be the fact that Nadowli District was the first in the region to adjust its premium to GH¢ 8.00 Cedis a year.

7.6. Management of Resources

7.6.1 Scheme's perspective

Personnel of the scheme are occasionally motivated with capacity building trainings to sharpen their skills to handle current trends in health insurance. The MIS officer is occasionally given allowance for overtime work due to pressure on work load. The staff report early for work and often closing late ensures inspection and supervision. The scheme manager also mentioned increased access to health care for members as their main source of encouragement. This might be seen as a major source of motivation which sustains their commitment and dedication to duty. As stated in the literature, management capacity in health insurance is important to run a scheme on a day to day basis and make necessary adjustments (40,47).

On expenditure management, the Scheme reserves 80 – 85% of its funds to pay claims submitted by service providers. Available records show that, basic accounting and procurement principles are followed to reduce unnecessary expenditures and cut down cost. As a backup from the literature; proper-book-keeping that provides essential information about the Scheme's financial balances and accountability of Scheme Management vis-à-vis the Community has been found to be very key to sustainability while abuse of funds is a very dangerous type of management and can easily collapse a scheme (21,41).

The Scheme does not employ mandatory referrals as cost containment strategy although health care cost is lower at the lower facilities than at the higher facility levels. In view of this clients who would have had treatment at these Sub-District health facilities tend to cluster at the hospitals. It is against this background that the MOH Policy from work 2004 suggested the Gate Keeper System of accessing health services under the NHIS.

7.7. Community view on Service quality

Community participation / involvement and perception:

From the analysis, community involvement in terms of need assessment, leadership, management and resource mobilization was high in some of these areas. On General involvement 71.9% respondents indicated that community was involved.

Need assessment looked at community consultation while leadership tried to find out whether community members were involved in leadership positions as Board Members, Scheme Officers, and Community Committees.

This community involvement is a clear prospect for DMHIS and hence the need to strengthen. When community members are involved, new ideas and practices are widely and rapidly diffused. Perhaps reaching hard-to-reach on their own terms may be most valuable contribution to community involvement. This will greatly contribute to sustainability (42,48)

Community perception on service quality under the Scheme is generally favorable except for inadequate equipments in some of the clinics. For areas like where respondents expressed satisfaction, it is important for providers to strengthen those areas. Where respondents had fair or average perception, particularly areas relating to staff attitude, efforts must be made to improve them. It should be noted that, some of the problems at the health facilities may be beyond the providers control, for instance inadequate personnel like say Doctors may lead to long waiting time. In some cases however, the perceptions may not be necessarily right, but that is how the people think about the health facility and hence education will be needed to keep community members informed. Interestingly, community perceptions on service quality from this study may not confirm findings in the literature where, frequent complaints have been reported about shortage of drugs and supplies, rude personnel, dirty hospitals (45).

8. Conclusions and Recommendations

8.1. Conclusion

From the study, it is significant to acknowledge that, the DMHIS may not be the panacea to the Health Care financing problems of the District and may not be appropriate in every circumstance. It is currently not without challenges. For instance;

- Its limited benefit cover and its inability to cover all health care cases of the target population may sometimes limit its efficacy as pivot for sustainable financing of health care.
- The design weakness such as the monthly use of "fee-for-service" payment system gives incentive for providers to push up their inefficiencies to schemes and the lack of mandatory referral mechanism as well as use of the Gate-Keeper-System that cannot be enforced does not allow the Scheme to minimize cost.

Nevertheless, the study revealed that these problems are not necessarily inherent but are related to design and management weakness (adverse selection, fraud and abuse, poor payment mechanism, lack of mandatory referrals mechanisms, etc.) for which feasible solutions exist, though their application may require active Government and other development partners involvement.

Fortunately, prospects exist to foster the Scheme's growth because Government and development partners like DANIDA have commitment for the development of DMHISs under the NHI Act 650 of 2003. Such technical, logistic and financial support needs to be taken advantage of by the Scheme.

With this in mind, Nadowli District Health Insurance Scheme presents tremendous prospects for increasing access to health care delivery in the District. The current performance of the Scheme is due to the following:

- Prospects exist for its development and sustainability. For instance, quality of care the members receive from health facilities, as well as the increasing recognition that DMHISs are convenient means to increasing access to health care.
- The uniform benefit package which covers common cases at OPD and In-patient as well as emergency Care is a plus for sustainability.

8.2. Recommendations for the Scheme's Sustainability

- MOH should encourage their staff to mention the bills members would have been paying if they were not registered under the scheme. This will enable members appreciate the cost of care paid by the scheme, through this other members will be encouraged to enroll.
- The Scheme's Management should ensure claims forms from Service Providers receive more attention during vetting. Possibly the Board of Directors should compose a team to include technical personnel to help the claims Officer do the vetting monthly since claims constitute 81% of the Scheme's expenditure and pay claims due to service providers to ensure quality service delivery and smooth running of the health facilities.
- Efforts should be made at channeling the 2.5% NHIL from VAT and the 2.5% SSNIT contributions from the formal sector workers direct into a separate account of the NHIA for immediate reimbursement to health care providers to avoid undue delay in receiving such funds from the MOF.

9. Study Limitation

The study was conducted in only one district in Ghana, which may limit generalization of the results. In addition, the data was collected in 2007 barely few years after the nationwide introduction of the Ghana nation health insurance scheme. Nonetheless, the findings and recommendations are very relevant for the sustainability of the Nadowli scheme and other schemes across low resource settings.

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