An exploration of moral hazard behaviors under the national health insurance scheme in northern Ghana: a cross sectional study

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Abstract

Background

The government of Ghana introduced the National Health Insurance Scheme (NHIS) in 2003 through an Act of Parliament (Act 650) as a strategy to improve financial access to quality basic health care services. Although attendance at health facilities has increased since the introduction of the NHIS, there have been media reports of widespread abuse of the NHIS by scheme operators, service providers and insured persons. The aim of the study was to document behaviors and practices of service providers and clients of the NHIS in the Kassena-Nankana District (KND) of Ghana that constitute moral hazards (abuse of the scheme) and identify strategies to minimize such behaviors.

Methods

Both quantitative and qualitative methods were employed. A total of 588 patient exit interviews, 14 Focused Group Discussions and 5 Individual In-depth Interviews were conducted between December 2009 and January 2010.Thematic analysis was performed with the aid of QSR NVivo 8 software.

Results

From the exit interviews, insured individuals formed about 90% of the total facility attendants during the period. We discovered that community members, health providers and NHIS officers are aware of various behaviors and practices that constitute abuse of the Scheme. Behaviors such as frequent and 'frivolous' visits to health facilities, impersonation, feigning sickness to collect drugs for non-insured persons, over charging for services provided to clients, charging clients for services not provided and over prescription were identified. Suggestions on how to minimize abuse of the NHIS offered by respondents included: reduction of premiums and registration fees, premium payments by installment, improvement in the picture quality of the membership cards, critical examination and verification of membership cards at health facilities, some ceiling on the number of times one can seek health care within a specified time period, and general education to change behaviors on abuse of the scheme.

Conclusion

Attention should be focused on addressing the identified moral hazard behaviors and pursue cost containment strategies to ensure the smooth operation of the scheme and enhance its sustainability.

Keywords

Health insurance, moral hazard, Kassena-Nankana District, Ghana.

Introduction

Ghana has gone through a checkered health care financing history. Before independence in 1957, there were user fees at the point of health care access. After independence, health care became free and financed by general taxes and donor support [1]. However in the 1980s, there were economic crisis and sustainability of the free health care became questionable [2]. In the light of this, the government reintroduced user fees popularly known as "Cash and Carry" in 1992. The introduction of the user fees decreased the utilization of health care services at the public health facilities, and in 2002 alone about 80% of Ghanaians needing health care could no longer afford it [1, 2].

The abolishment of the "Cash and Carry" became a critical issue and it became one of the key issues in the manifesto and campaigns of the main opposition party, New Patriotic Party (NPP). Consequently, in fulfilment of the campaign promise, the NPP government established the NHIS under Act 650 of 2003[3].

Although pilot mutual health insurance schemes have been in existence in many parts of sub-Saharan Africa since the 1990s, Ghana remains one of the few African countries to establish a nationwide health insurance scheme. The scheme is being described in Ghana as the "passport to health care". Essentially, the scheme is intended to replace out-of-pocket payments for health services through prepayment of insurance premiums. The health insurance scheme is seen as one of the pillars of the poverty reduction program in Ghana. The NHIS is generally financed by a 2.5% National Health Insurance Levy (NHIL) on selected goods and services, a 2.5% Social Security and National Insurance Trust (SSNIT) deductions from the formal workers, premiums from the informal workers and non-SSNIT contributors, and government budget allocations. The informal sector workers would pay an annual minimum premium between Gh¢7.2 to Gh¢48 (approximately US$4.8 to US$32, using an interbank exchange rate as at November 2010 of US$1=GH¢1.5) per person. Children below 18 years with at least one parent paying membership fees or covered by the exemption, pensioners who are formal contributors to SSNIT, the aged (70 years and above) in the informal sector and indigents are exempted from paying premium. In addition, in 2008, the government of Ghana introduced a free maternal care policy that exempted all pregnant women from paying premium [4, 5].

The NHIS has a minimum benefit package which every district mutual health insurance scheme (DMHIS) should cover. This package covers about 95% of diseases in Ghana, including malaria, diarrhea, upper respiratory tract infections, skin diseases, hypertension, diabetes, and asthma. The package also includes services such as outpatient services, inpatient care and hospital accommodation, dental care, maternity care (including normal and caesarean deliveries), eye care, and emergency care. Some services considered unnecessary or very expensive such as cosmetic surgery, cancer treatment (except breast and cervical cancer), organ transplant, drugs not listed in the NIS drugs list (including antiretroviral drugs), assisted reproduction, and private inpatient accommodation are not included in the benefit package [6].

Implementation of the national health insurance scheme required the establishment of mutual health insurance schemes at the district level and private commercial health insurance schemes. At the end of 2010, 145 district mutual health insurance schemes were operational in the country with a cumulative membership of over 18 million, out of which 8 million, representing 34% of Ghanaians were active card bearing members [7].

Available records suggest that facility attendance has increased since the introduction of the scheme. For instance, out-patient attendance is estimated to have increased from 2.9 million in 2005 to 6.1 million in September 2007 [8]. In addition, studies have shown that health insurance schemes do improve access to health care and reduce out of pocket payments for services for insured individuals [6, 9, 10].

Recent concerns raised by the National Health Insurance authorities indicate that costs of health care on the insured are soaring due to moral hazards from clients and health providers. Generally, client moral hazard behavior (demand side moral hazard) amounts to 'taking advantage of' insurance mainly because the individual does not have to make payment at the time of seeking health care services. On the other hand, provider moral hazard (supply side moral hazard or supplier induced demand) is over supply at the initiative of the health provider who takes advantage of the near absence of any financial considerations on the part of the patient if he/she agrees to buy the excess health care because cost will be transferred to the health insurance provider [11].

The Ghana NHIS faces several challenges that threaten its sustainability and effective operation. These challenges range from the management and administration of the scheme through the behavior and practices of service providers to the behavior and practices of scheme members. This calls for an examination of the behaviors and practices of service providers and consumers (clients) that constitute moral hazards with a view to identifying ways to minimize such behaviors and enhance the sustainability of the Scheme. To this end this study to explored behaviors and practices of providers and consumers of the national health insurance scheme in the Kassena-Nankana District (KND) that constitute moral hazards and identified strategies to minimize such behaviors.

Methods

Study site

The setting of the study is the Kassena-Nankana district. Though the district has been divided into the Kassena-Nankana East and West districts since 2008, both districts were covered by one mutual health insurance scheme at the time of the study. For this reason we use the original name of the district – Kassena-Nankana District – to cover both districts. The Kassena-Nankana District (KND) is located in the north-eastern corner of the country bordering Burkina Faso, and occupies an area of about 1675km^2. The predominant occupation is subsistence agriculture. As in many parts of the savanna zone of Ghana, poverty is endemic in this district.

The KND has a population of 147,536 with females constituting 53% [12]. There are two main ethnic groups: the Kassena who form about 49% of the district's population and the Nankana who constitute about 46% of the population. The remaining 5% is made up of minority tribes, mainly Builsa and migrants belonging to other ethnic groups [12] .

The district has a district hospital located in Navrongo that serves as a referral point for the Kassena-Nankana district, the Builsa district and neighboring towns in Burkina Faso. There are seven health centers, and two community clinics jointly run by the Catholic Diocesan

Development Office and the District Health Administration that provide services to the communities. There is one private clinic and 27 functional Community-based Health Planning and Services (CHPS) compounds with resident Community Health Officers (CHOs) offering doorstep services [13].

Data sources

Both quantitative and qualitative methods were employed. Exit interviews were conducted among persons attending selected health facilities in the district, namely the district hospital (the War Memorial Hospital), the Paga Health Centre, the Kassena-Nankana East Health Centre and the St. Jude Clinic. These facilities represent the major public and private health facilities in the district. The interviews obtained information on NHIS membership status, reasons for attendance and services received at the facility. In addition, respondents were asked questions about attitudes and behaviors that constitute moral hazards. At each facility the exit interviews included both insured and non-insured attendants. We systematically sampled every 5^{th} patient identified when patients registered at the records department upon arrival and then interviewed them when they were exiting (i.e. after receiving medicine from the dispensary). Since majority of attendants at the facilities were insured, we interviewed as many non-insured patients as we found during the period of data collection to enable us obtain the views of both insured and uninsured persons.

To explore community knowledge, perceptions and attitudes towards health insurance and behaviors that border on moral hazards, focus group discussions (FGDs) were conducted with various categories of people in the district. Interviews were conducted among subgroups defined by gender, age and ethnicity. Participants in the FGDs were drawn from the catchment population of the health facilities where the exit interviews were conducted.

For data collection purposes, the Navrongo Demographic Surveillance System (NDSS) has divided the Kassena-Nankana district into five zones - the East, West, North, South and Central zones. The East and South zones are predominantly Nankani speaking while the West and North are Kasem speaking (with the Central zone having a mixture of ethnic groups). The zones are further divided into clusters. The health facilities selected for the exit interviews are located in three zones (War Memorial Hospital and St. Jude Clinic in central zone, Paga Health Centre in the north zone, while the Kassena-Nankana East Health Centre is in the east zone). We randomly selected three clusters in each zone as the location for the FGDs. Individuals who met the age (adults: 18-59 years; the aged: 60+), gender and ethnicity (Kassem and Nankana) criteria were then targeted for participation in the group discussion. Using the NDSS database, a list of twenty eligible individuals in each category was generated and the first twelve eligible individuals who consented were invited to participate in each FGD.

In addition to FGDs, we conducted individual in-depth interviews (IDI) with at least one medical assistant at the health facilities selected for the exit interviews to further explore issues of client behaviors from the providers' point of view. Two in-depth interviews with Kassena-Nankana District Mutual Health Insurance Scheme officers were also conducted to obtain further information on the Insurance Scheme and the behavior of clients and service providers.

Data collection and processing

Eight individuals with Bachelor degrees (who are conversant in the local languages) were recruited and trained to collect data for this study. Actual data collection occurred between December 2009 and January 2010.

Questionnaires from the exit interviews were entered and verified using Epidata 3.1 with built in consistency checks to control data input. Data cleaning and analysis was done using Stata 9.0©. The FGDs and IDIs were tape recorded, transcribed verbatim and typed. Guided by the objectives of the study and the themes of the discussion, a coding list was prepared to guide the data analysis. Thematic analysis was performed with the aid of QSR NVivo 8 software.

The study protocol was reviewed and approved by the NHRC Institutional Review Board prior to study implementation. Prior approval was obtained from the health facilities before conducting exit interviews. Individual consent was obtained from respondents in all interviews.

Results

Socio-demographic characteristics of exit interview respondents

The primary quantitative data for this study come from the exit interviews that were conducted among patients seeking care at selected facilities in the Kassena-Nankana District. In all 588 exit interviews were conducted at four health care facilities over a three weeks period. Table 1 presents information on the respondents in the exit interviews. Over sixty percent (374 out of 588) of the respondents were females. With respect to age, about 41% (215 out of 588) of the facility attendants were children under 18 years, 47% were adults (18-59 years), while the aged (60+) formed about 12% (71 out of 588). The mean age of respondents was 25.9 years with standard deviation of 22.8. In terms of education, about 40% of respondents had no formal education, 35% had basic level education (i.e. Primary and Junior Secondary level), while 20.6% had post-basic education (secondary education or higher).The informal sector workers constituted 32.2% , while those in the formal sector were only 3.9%, with students and the unemployed forming 30.6% and 33.3% of respondents respectively.

Less than half (46.3%) of the respondents reported that they were attending the facility for the first time with the current health condition. The majority of the attendants (53.7%) were at the facility for a review or revisit. An overwhelming majority, 91.3% (537 out of 588) of facility attendants were insured with the NHIS. Of those respondents who had insurance, majority (56.2%) are exempted from paying premiums (that is those below 18 years or above 69 years of age). Cash paying members formed about 40% while SSNIT contributors formed less than 5 percent. Majority of the insured (87%) reported that they would like to re-register when their membership expires.

Although the exit interview respondents were attending the facilities to seek health care, they were asked to rate their general health status. Over three quarters (78.4%) rated their health status as "good" while about 18% considered their health to be either "bad" or "very bad".

Moral hazard behaviors by insured members

A primary interest in this study is to identify behaviors exhibited by insurance scheme members that constitute moral hazards. Consequently FGD and IDI participants were asked about various behaviors that insured persons engage in that could compromise the efficient operation of the scheme. Various moral hazard behaviors were disclosed by participants.

Frequent visit to health facilities by the insured was one such behaviors mentioned. Respondents held the opinion that insured persons visit the health facilities more frequently compared to the non-insured. They also visit the health facility with the slightest ailment and even visit different facilities within the same period with the same ailment to collect more drugs.

> *They feel cheated if they don't go; once they are card bearing members any small cut on their toes, they are there (at the health facility to seek treatment). (Young Man, under 30 years).*

> *Some of them when you give them the drugs within a day or two they are coming again without waiting for the drugs to work. Even we have detected that some immediately after they have collected the drugs will go to another facility with the same complaint and collect drugs again. (Medical Assistant).*

However, some FGD participants felt that insured persons were justified in going to hospital with the least ailment. According to them one runs the risk of incurring the anger of nurses when you wait for the situation to become serious before you go for medical care, as explained by this FGD participant:

> *If you are insured and you happen to fall sick and you don't go immediately for treatment and you wait till your situation worsens and you then go, the nurses will insult you and ask you why you are insured and you did not want to come early? (Adult Women 30-45 years).*

Results of the exit interviews suggest that insured persons attend health facilities more frequently than their uninsured counterparts. The average number of health facility visits during the past twelve months was 3.6 for insured persons compared to 2.0 for non-insured persons, confirming the FGD views that insured persons attend health facilities more frequently.

The other behavior identified in the interviews was the issue of insured persons collecting drugs to keep at home. Insured people know that their membership will expire at the end of one year. So when the card is due to expire some who are not sick visit the health facilities to collect drugs to store at home. Some people feel cheated that they have paid to register and have not utilized the services. To avoid being cheated they go to the health facilities even if they are not sick so that they can use the services.

> *Others too feel cheated by the scheme since they have not fallen sick since their registration, so they feel they should just go and collect the drugs (Adult Woman, 30-45 years).*

Every year in October cards will expire and so the hospitals are normally very full or the attendance is high because there are some people who will like to use their cards before they expire (KND MHIS official).

Another moral hazard behavior revealed has to do with the insured persons using their cards to collect drugs for the uninsured. Respondents said that some people go to the health facility and describe the symptoms of their sick relations or friends who do not have the NHIS cards in order to get drugs to give to them.

In addition, the interviews revealed that sometimes the insured give out their cards to their sick relations or friends to go to a health facility to receive treatment. Some FGD participants however blamed the NHIS authorities for making it possible for such behaviors to occur. They stated that the pictures on the cards are sometimes blurred thus making it easy to impersonate.

People who are insured sometimes give their cards to those who are not insured to go to the hospital for care. I however think that we need to blame the authorities for the success of this act because the pictures on some of the cards are so blurred that it is easy to deceive others that it is your card when it is not yours. (Adult Man 30-45 years).

In the exit interviews however, very few respondents admitted engaging in such moral hazard behaviors. For instance, only one respondent admitted ever using his/her card to collect medicine for an uninsured person, while 6 percent of respondents thought that it was acceptable for an insured person to collect medicine for a person who is not insured.

Prescribers also mentioned the issue of the insured persons asking for particular drugs (most often expensive ones) to be prescribed for them. In response to the question whether health insurance members ask for particular drugs to be prescribed for them, one medical assistant had this to say:

Yes, that one is big yes! Somebody will just come and ask you to write a certain drug for him/her. Sometimes when we tell them that we do not have that drug, they say we should just write it for them to go and collect at the pharmacy. I am always against that and because of that I do not have a friend here. (Medical Assistant).

Moral hazard behaviors are not limited to only the NHIS clients. There are various practices and behaviors by service providers that constitute moral hazards. We explored issues relating to reimbursement of service providers through interviews with MHIS officials to identify moral hazard behaviors. Some of the behaviors identified include over charging for drugs and services provided to clients, charging for services not provided, as well as inflating the number of clients provided with services.

For now the payment to the health facilities is such that the more clients go to the facility the more we pay. Every client is by law supposed to visit the health facility three times within two weeks; that is first visit and the other two visits are for you to go for review. So within the two weeks, some clients can make one visit but once providers know that more visits attract more money they can take the folder and write the rest of the visits and charge accordingly. Some of these things may be funny but we get cases like that. (KND MHIS official).

Furthermore, the tendency of health providers to assign particular diagnosis to clients was mentioned. Specifically, it was pointed out that health providers tend to report simple malaria cases treated as severe malaria. The cost for treating severe malaria (GH¢89.00 or US$59) is higher than for simple malaria (GH¢28.00 or US$19); so some providers treat for simple malaria and charge the NHIS for severe malaria, or diagnose simple malaria as severe malaria.

There was a time when every malaria that was reported was captured as severe malaria at the health facilities. But the issue is that we all know severe malaria and you cannot treat it at the OPD level and say it is severe malaria. The person comes and you give him/her treatment and he/she goes away and you say that is severe malaria, no. The person comes and you just detain the person for some few hours and you say that is severe malaria. So we had to talk to them and thank God at least it is better now (KND MHIS official).

Interviews with the scheme officials revealed that some NHIS officials condone with health providers to exploit the scheme. Over prescribing was also mentioned in the interviews as an issue that has the potential to affect the sustainability of the scheme.

There were instances where one client could be given ten different types of drugs for one illness. We used to tell them (the prescribers) that it was not good and we at times tried to tell them that they are not supposed to do that. That is poly-pharmacy (giving so many drugs to a client). Even going by the Ghana Heath Service standard guidelines it says that you should not give more than five drugs for a particular illness. (KND MHIS official).

Community perceptions on the effects of moral hazard *behaviors*

From the focused group discussions it was clear that community members are aware of the negative consequences of these moral hazard behaviors. Discussants indicated that such behaviors make health workers unwilling to treat insured people or give them good drugs when they go to the clinic because they think that they are just taking advantage of the NHIS.

Such behaviors have also discouraged really sick people with NHIS cards from going to the health facility, as they have to join unnecessarily long queues (due to large numbers of people attending the facility). Respondents indicated that such behaviors could lead to the collapse of the Scheme as there will be less contribution and more utilization.

Such behavior can cause the scheme huge debt and a time will come government will not be able to finance card bearing members and they can die out of that. (Adult Male, 30-45 years)

In fact, because many people go, they (health providers) don't give them better drugs because they (health providers) also know it is because of the insurance people are just trooping in any how. (Mother with under five child).

Suggestions to minimize moral hazard behaviors

FGD and IDI participants gave some suggestions that they felt if implemented would go a long way to discourage people from indulging in such morally hazardous practices. Some respondents were of the view that if the registration and renewal fees are reduced, people would find it easy to register themselves and their relations; this would reduce the need to give one's card to an uninsured relative or to collect drugs for an uninsured relative.

The government should reduce the registration fee. It is one of the causes why people don't insure. If the amount is low everybody can be insured and the abuse of the scheme will be minimized drastically. (Young Woman under 30 years).

Also, in the exit interviews, affordability of the premium was mentioned by over 55% of the respondents as the major barrier to enrolment. Some respondents in the FGD and IDIs were of the view that provision should be made for people to pay their premium in installments.

If you can get agents to always go round the community so that when the card is about expiring, we can be paying bit by bit so that by the time it is due for renewal we would have finished paying. (Adult Woman, 30-45 years).

FGD respondents were also of the opinion that the problem of impersonation could be minimized if health workers take their time to look at pictures on the cards well before attending to the patient. Also, those in charge of taking the photos should improve on their quality of work to make the pictures on the cards much clearer.

I think the problem is always from the doctors because if they look critically, they will know the picture difference as well as the age. So government should have monitors who can from time to go round and monitor the behavior of such doctors and punish them." (Adult Male, 30-45 years).

The prescribers (medical assistants) interviewed suggested that the unnecessary visits by members could be reduced if the scheme could give a ceiling on the number of times a member could visit a health facility per month or per year.

I would suggest that they should come up with a ceiling with regards to the number of times people could visit the health facility in a year. I think when they do this people will reduce the way they come to the health facility for treatment. For instance, if they say people under the health insurance scheme are supposed to visit the health facility two or three times in a year and beyond that you are supposed to pay, I think that will go a long way to address the issue of people coming for treatment very often. (Medical Assistant).

The NHIS officials emphasized education as a key tool that can change such morally hazardous behaviors from card members and health providers.

"… on the part of the clients, I think the best way to address this situation is education. …. I think we cannot force them because some of the things that they do (like going to the hospital three times) because it is their right to go, you cannot force them. You can only educate them or convince them that the facility is for them and so they should not abuse it because when it collapses they are the ones who will suffer. On the part of the providers, I think education will help and again if there are prescribed punishment for providers who engage in such activities and offenders are punished, it will serve as deterrent to others" (KND MHIS official).

NHIS officials were of the view that when they have some training on the relevant drugs for treatment of some ailments it will help address the issue of over prescribing or wrong billing.

Yes, I think that we the claims managers do not have the technical expertise and so sometimes you may not be able to tell whether the drugs given for a particular diagnosis are the right drugs or drugs that they should give for such diagnosis. The issue is that you know the symptoms for typhoid fever may be the same as that of simple malaria and since simple malaria is only GH¢28.00 (US$18.67) and that of typhoid fever is GH¢109.00 (US$72.67),when you identify a drug that is not supposed to treat typhoid fever and you draw their attention, you have a problem with them because they tell you what do you know and where have you done medicine. So these are some of the problems and so we really need to be given some training on some of these things (KND MHIS official).

Discussion

The introduction of health insurance is a major step in Ghana's efforts to make health care accessible to the people of Ghana. By removing user fees payment at the time of seeking care, the financial barrier to health care access is removed thus making it much easier for people to seek care. Indeed, the increased attendance at health facilities since the introduction of the scheme strongly suggests that access to health care has been enhanced. However, the operation of the national health insurance scheme has faced various challenges which border on the behavior of insured persons, service providers and scheme officials. These abusive behaviors result in high health care expenditures that threaten the sustainability of the scheme.

Results from our study (the exit interviews) revealed that insured individuals formed about 90% of the total facility attendants during the period. It is possible that the less healthy may have selectively enrolled in the scheme knowing that they have greater need for health care. However, what is more likely is that the insured have better access to health care and as such patronize the health facilities much more than those who are not insured. This finding is consistent with evidence elsewhere concerning the effects of health insurance on health care utilization [5, 6, 14–18].

The views expressed by community members in the focused group discussions highlight the significant impact of the national health insurance scheme in enhancing access to health care, especially for the poor. Nevertheless, some people are unable to pay the premiums and register with the scheme. This is consistent with other studies in which premiums was a major barrier in enrolment into a health insurance scheme [5, 14, 18–21]. Currently in the KND, all adult informal workers pay a premium of GH¢8.00 or US$5.3 in cash plus a registration fee or administrative charge of GH¢3/US$2 to join the scheme. Those who are exempted from paying the premium such as the SSNIT contributors and the aged (above 70 years) only pay the registration fee (GH¢3/US$2) to become a member. Though enrolments into the scheme over the past years have been increasing in the district, as at the beginning of 2012, only 50% of the population in the district had valid membership cards [22]. Majority of those unregistered are the poor and vulnerable who are least able to pay for health care when they need it. It is therefore important to strengthen the exemption policy for the poor and vulnerable to enable them benefit from the scheme so as to achieve the equity goal of the NHIS and also accelerate universal health coverage.

Community members, health providers and NHIS officers are aware of various behaviors and practices that constitute abuse of the Scheme (moral hazard). In the FGDs and in-depth interviews, behaviors such as frequent and 'frivolous' visits to health facilities, impersonation, collecting drugs for non-insured persons, over charging for services provided to clients, charging clients for services not provided and over prescription were identified. As expected, hardly any respondent in the exit interviews, FGDs or in-depth interviews admitted to personally engaged in these practices. Nevertheless, participants acknowledged that these practices exist and some even provided instances of people engaging in these practices. Other studies also reported moral hazard behaviors by clients such as the insured offering their cards to the uninsured to use to access care [17].

Various suggestions on how to minimize abuse of the NHIS were offered by community members, health providers and NHIS officials. Community members were of the opinion that a reduction of premiums and registration fees would make it possible for everyone to register and thus avoid the need to use someone's card or collecting drugs for uninsured relations and friends. To further make it easy for people to pay their premiums some suggested that arrangements should be made for people to pay by installments. Regarding the problem of impersonation participants suggested an improvement in the picture quality of the membership cards as well as a critical examination of membership cards at health facilities to ensure that the photograph on the card is really that of the person attending the facility.

Currently, there is no limit to the number of times an insured person can visit an accredited health facility for care. Hence, to discourage people from unnecessarily attending health facilities some ceiling on the number of times one can seek health care within a specified time period was also suggested. Education was also identified as a key strategy in changing moral hazard behaviors from card members and health providers. Generally, when people are aware of the concept of social health insurance such as the Ghana NHIS build within key principle of cross-subsidization, moral hazard behaviors may change. For instance, with cross-subsidization, membership is based on ability to pay, and the rich will pay more while the poor pay less, thus the rich-cross subsidize the poor and vulnerable, the healthy cross-subsidize the sick [1].

The study also revealed some moral hazard behaviors by providers such as diagnosing simple malaria as complicated malaria, over charging for drugs and services provided to clients, charging for services not provided, inflating number of clients provided with services and over prescribing. NHIS officials suggested that when they have some training on the relevant drugs for treatment of some ailments it will help address the issue of over prescribing or wrong billing.

To address some of these moral hazards from the health care provider side and to reduce operational cost of NHIS, capitation payment mechanism is being contemplated to augment the current payment mechanism which is the DRG (Diagnostic Related Group). Initially, a fee for service type of provider payment mechanism was used to reimburse accredited health providers. However, this type of payment mechanism (fee for service) was reported to be low for providers to cover their cost of operation, especially the private providers and it also involved a lot of paperwork as they are required to provide detailed information on all services and charges for claims also [17, 23].In general, fee for service payment methods create the enabling environment for providers to provide unnecessary services to maximize profits[24]. In the light of these and other factors, in 2008, the system was replaced by the Ghana-Diagnostic Related Groupings (G-DRGs) [5, 17, 25].The G-DRGs is a tariff system that groups diseases that are clinically similar, have comparable treatments or operations and use similar healthcare resources. With this system, the accredited providers are paid an already decided all-inclusive fixed payment for patient's treatment according to their diagnostic group regardless of the costs [23]. The DRG for services also still holds some incentives for cost escalation though they are less than the fee for service. Because medicines at all levels continue to be under itemized fee for service, there is strong potential for moral hazard behaviors and consequently cost escalation [24].

Currently, the NHIS is piloting the capitation payment system. Capitation is a provider payment mechanism in which the health service providers such as physicians and nurses in the payment system are paid in advance a pre-determined fixed rate to provide a set of defined services for each enrolled person assigned to them for a period of time, whether or not the person seeks care [24]. This system aims at improving cost containment, controlling cost escalation by sharing risk between schemes, providers and subscribers, and improving efficiency in the use of resources [5, 26].

Conclusions

Although the current premiums are considered to be low (in relation to the cost of medical care), community members observed that the premiums are high and so some people are unable to pay. In view of this, the policy within the Scheme to enhance participation of the poor and indigents need to be applied rigorously. Also, appropriate sanctions and punishments for various forms of abuse of the scheme should be identified and rigorously applied. Punishing or sanctioning people who engage in behaviors that negatively affect the scheme will serve as a deterrent to others and help minimize the occurrence of such behaviors. On the other hand, mechanisms for rewarding individuals who regularly renew their membership for a specified time period without consuming health care services should be instituted.

Consent
Oral informed consent was obtained from respondents for the publication of this report.

Competing interests

The authors declare not to have any financial and non-financial competing interests.

Authors' contributions

MAD contributed to the concept and design of the study, development of the data collection instrument, the acquisition of data, data analysis, interpretation of the data, and drafting of the manuscript. SC contributed to the concept and design of the study, development of the data collection instrument the acquisition of data, data analysis, interpretation of the data, and drafting of the manuscript. PA contributed to the concept and design of the study, development of the data collection instrument, data analysis, interpretation of the data, and drafting of the manuscript. All authors read and approved the final manuscript.

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Tables

Table 1: Background characteristics of Exit Interview Respondents

Variable	Insured(N=537)	Uninsured(N=51)	Total(N=588)	P-Value
	Frequency (%)	Frequency (%)	Frequency (%)	
Age				0.133
Under 18 years	215(40%)	27(52.9%)	242(41.2%)	
18 – 59 years	254(47.3%)	21(41.2%)	275(46.8%)	
60 or more years	68(12.7%)	3(5.9%)	71(12%)	
Sex				0.004*
Male	186(34.6%)	28(54.9%)	214(36.4%)	
Female	351(65.4%)	23(45.1%)	374(63.6%)	
Ethnicity				0.000*
Kassem	343(63.9%)	19(37.3%)	362(61.6%)	
Nankam	153(28.5%)	29(56.9%)	182(30.9%)	
Other	41(7.6%)	3(5.9%)	44(7.5%)	
Religion				0.000*
Christian	413(76.9%)	29(56.9%)	442(75.2%)	
Other	124(23.1%)	22(43.1%)	146(24.8%)	
Marital status				0.665
Never married	293(54.6%)	33(64.7%)	326(55.4%)	
Currently married	194(36.1%)	14(27.5%)	208(35.4%)	
Previously married	50(9.3%)	4(92.2%)	54(9.2%)	
Educational level				0.002*
Never been to school	188(35%)	29(56.9)	217(36.9%)	
Pre-school	44(8.2%)	0(0%)	44(7.5%)	
Primary	100(18.6%)	13(25.5%)	113(19.2%)	
Junior High	90(16.8%)	3(5.9%)	93(15.8%)	
Senior Secondary	74(13.8%)	6(11.8%)	80(13.6%)	
Tertiary	41(7.6%)	0(0)	41(7)	
Occupation				0.018*
Farmer	76(14.2%)	8(15.7%)	84(14.3%)	
Trader	70(13%)	9(17.7%)	79(13.4%)	
Artisan	23(4.3%)	3(5.9%)	26(4.4%)	

Government Worker	22(4.1%)	1(2%)	23(3.9%)	
Students	175(31.8%)	5(9.8%)	180(30.6%)	
Unemployed	171(31.4%)	25(49%)	196(33.3%)	
First visit to facility?				0.000*
Yes	229(42.6%)	43(84.3%)	272(46.3%)	
No (Revisit)	308(57.4%)	8(15.7%)	316(53.7)	
Self-reported health status				0.112
Bad	57(10.6%)	11(21.6%)	68(11.6%)	
Very Bad	31(5.8%)	5(9.8%)	36(6.1%)	
Good	428(79.7%)	33(64.7%)	461(78.4%)	
Very Good	20(3.7%)	2(3.9%)	22(3.7%)	

*Chi-square test is statistically significant at 5% level