ARTICLES

PRINCIPAL-AGENT PROBLEMS IN IMPLEMENTATION OF GHANA'S HEALTH INSURANCE SCHEME

ABSTRACT

principal-agent relationship exists between health service providers and their authority and clients. It asserts that health service providers as 'imperfect agents' of the authority and clients will take actions that aim to maximise profits at the expense of authority and clients (principal). The situation is possible when reimbursement is based on fee-for-service or a diagnosis-related groups. It looks at relationships between health service providers as agents and health insurance authority, and clients as principals in areas of provision of health services, supply of drugs, medicines and reimbursement. Results showed the private health service providers prescribed more drugs and medicines for clients towards profit maximisation (agency) than their public counterparts. Also, it was found that the public health service providers continued to provide health services and drugs despite health insurance authority indebtedness to them exhibiting more stewardship towards health insurance authority. It recommends strict regulations in tariffs/vetting claims and prompt reimbursement.

KEYWORDS | Principal-agent, health service providers, health insurance clients, pharmaceutical supply chain, Tamale Metropolis.

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INTRODUCTION

This article focuses on three actors namely National Health Insurance Authority, health service providers and health insurance clients. NHIA is responsible for the implementation of National Health Insurance Scheme (NHIS) in Ghana. In this principal-agent relationship, NHIA (principal) contracts health service providers (agents) to provider healthcare services, drugs and medicines to health insurance clients. Another relationship is between health insurance clients as principal, who expect their agents (NHIA) and health service providers (hospitals and clinics) to provide them health insurance services, supply of drugs and medicines at health facilities. The aim of this study is to examines the implementation of National Health Insurance Scheme (NHIS) in the context of principal-agent relationships in the provision of health services, supply of drugs and medicines and the processes of reimbursement for the services and drugs supplied to health insurance clients in a developing world context of Ghana.

The agency theory provides the theoretical perspective. This study adopts largely a qualitative research design. The main research questions addressed include: do agents shirk responsibility? What about principals? in the implementation of National Health Insurance Scheme in Ghana. The study adds to existing literature on 'agency shirking', it also adds to knowledge in a new direction that, it is not only the agents that 'shirk responsibilities' but principals were found to be engaged in what the authors termed 'shift of responsibility' in the implementation of NHIS in Ghana. This study further adds to public-private partnership in the pharmaceutical supply chain (supply chain management) in a developing world context, with Ghana as a case study. In this regard, it strongly recommends stronger collaboration between public and private sectors and strict monitoring in supply of drugs and medicines in the implementation of NHIS in Ghana. The study attempts to bridge the seemingly gap between public and private sector management and supply of drugs and medicines in retail and bulk distribution as well as managerial interests couple with principal interests. Thus, it examines issues of interests' divergence in both sectors.

Theoretical perspective: Principal-agency theory

The agency theory (principal-agent relationship) provides the theoretical insights for the study. It helps to understand key issues of interests' divergence or incongruences in the supply chain particularly relationships between public and private suppliers, distributors of drugs in Ghana. The incongruences may be due to profit orientations of agents in the provision of services and drugs to health insurance beneficiaries. We look at relationships that exist between principal(s) and agent(s) in implementation of National Health Insurance Scheme (NHIS). The relationship emerges when the 'principal' contracts the 'agent' to perform some task(s) for the principal. The principal in this relationship takes a back stage (passive role) while the agent takes front-line role (active role) of executing principal tasks or duties on behalf of principal. The agent in carrying out the task(s) of principal, takes some decision or action which tend to have some consequences and the consequences in turn affect the welfare or wellbeing of 'both the principal and the agent' (Petersen, 1993, p. 277; 1995, p. 188). The principal-agent relationships abound in many fields of study and daily encounters like teacher-student, doctor-patient, insurer-insured, employer-employee, lawyer-client, owner-manager relationships among others. At organisational levels, such relationships may be between government agency and private organisation(s). In case of this study, this relationship takes the form of public-private health service providers partnership in provision of healthcare. At managerial levels, it takes the form of owner-manager relationship, the manager(s) has managerial skills and the capacity to perform the task of managing the activities of the organisation on behalf of the owner. In this relationship, the agent (manager) is assumed as skilful with expertise to manage or perform the task of the principal (owner of organisation).

The principal-agent relationships are without problems. Petersen (1993; 1995) identifies some two problems of the principal. The first is how to choose the agent-get the right, effective and competent agent or may be face with the risk of wrong agent ('adverse selection'). In situations where the principal cannot observe agent action(s), agent may have the incentive to 'shirk' duties/responsibilities-'asymmetrical information' (Winter, Skou, & Beer, 2008, p. 4). This may undermine the task(s) of the principal. Petersen has two assumptions on human nature on principal-agent: one, 'humans are hyper-rational' based on 'omnipotent calculators/computation'. The second assumption is 'actors behave selfishly and do so with guile' (Petersen, 1995, p. 190). Similarly, Moe (1984) asserts that bureaucratic

agents want to maximise their own interests against their principals. Thus, in the principal-agent relationship, there is issue of self-interest/self-seeking of one actor against the interest of another- 'moral hazards' (Bossert, 1998; Worsham & Gatrell, 2005; Winter, et al., 2008; Erlei & Schenk-Mathes, 2016). Another issue or problem in principal-agent relationship is the procedure use in rewarding the agent (benefits/rewards). It may be based on translation of action (input) into outputs or outcomes or both, or based on financial incentives to change the agent behaviour. Thus, principal and agent decide the kind of reward systems or 'incentives' to operate in their contractual relationships or dealings in agency cost and interests of managers of hospitals, clinics or pharmaceutical companies (Holmstrom & Milgrom, 1991; Pratt & Zeckhauser, 1991; Rees, 1985; Jensen & Meckling, 1976; Kipo, 2011).

On health policies implementation a number of studies have explore the relationships between principals and their agents in service provision, diagnoses, supply chain management and or pharmaceutical supply chains among others across the globe, across countries and or within countries. Nguyen (2011) examines principal-agent relationships in areas of prescribing patterns (drugs/medicines) and behaviours of health service providers' especially private ones.

Brinkerhoff and Bossert (2014) examine principal-agent relationship on behaviours of health system actors as well as their performance problems (multiplicity of social actors in health systems). The first actors being state actors-politicians, policy makers and implementers who work in public sector health bureaucracies like health ministries, agencies and other public sectors. Second actors as health service providers (hospitals, clinics, laboratories et cetera) in public and private sectors. The other actors are the citizens/clients (service users). Brinkerhoff and Bossert (2014) argue reforms that introduce elements of competition among service providers can increase clients' power and increase health service providers' incentives to be more accountable to health service users. Also, service users have the power/capacity to choose among service providers where to access health care while state actors provide policy direction. In Brinkerhoff and Bossert (2014) work, state actor acted as the principal while service providers as agents likewise the citizens as principals in a new public management sense and health service providers as agents satisfying the health needs and demands of the citizens/clients. Brinkerhoff

and Bossert (2014) identified three principal-agent problems as: accountability failures, power gap, perverse incentives and service users overconsumption of health services.

Winter et al. (2008) utilised principal-agent theory in the implementation of Danish welfare and employment policy at the front-line level. They conceived national government/parliament as principal while managers of local authorities (local politicians/ management) as agents. They found that multiple principals created 'conflicting loyalties' of front-line workers to either superiors (national policy mandates) or keep to the preferences of local politicians/ management. Bossert (1998) applied the principal-agent in decentralisation of health systems in developing countries with Ministry of Health as principal (initiator of health policy objectives) while the local authorities act as agents. The work focuses on what happens at the centre and periphery. Bossert (1998) work implies that centre (principal) should focus on designing appropriate health policies with right communication systems, incentives to monitor periphery to achieve goals. Nguyen (2011) also looked at principal-agent relationship issues or problems in health care in a developing country perspective 'from prescribing patterns of private providers' in Vietnam. This article focuses on principal-agent relationship in public-private health providers in Ghana.

Pharmaceutical supply chain

Pharmaceutical Supply Chain (PSC) is the medium through which essential pharmaceuticals are delivered to the end-consumers or end-users at the right quality, right time and at the right place (Enyinda & Tolliver, 2009; Mckabe, 2009). Pharmaceutical Supply Chains (PSCs) are 'major drivers' of the health care sector and their effective management is crucial in healthcare system (Narayana, Pati, & Vrat, 2014). All over the world the public sector alone cannot meet the health needs of the public in terms of supply and distribution of pharmaceutical products. Thus, there is the need for private sector engagement in the supply and distribution of drugs and medicines to complement 'state-run drug procurement and distribution systems' more especially in Africa (Ballou-Aares et al 2008; Mckabe, 2009).

Pharmaceutical supply chain in Ghana

Pharmaceutical supply chain in Ghana is 'complex and interconnected', it involves interaction between the public, private self-financed and private faith-

based sectors. Public-private supply chain is two-directional: The Public Procurement Act (2003) permits public health providers to buy medicines/drugs directly from private sector suppliers under certain conditions (Government of Ghana, 2003b) and private self-financed and private faith-based health providers. The faith-based health providers are the religious-Christian/Muslim health service providers, they can also purchase from the Central Medical Store (CMS)-public source. CMS (located in Tema near Accra) supplies all public hospitals and clinics medicines through the ten (10) Regional Medical Stores (RMSs) for healthcare service delivery as well as private sector health care facilities in Ghana. In this respect, Seiter and Gyansa-Lotterodt (2008) argue that some RMSs in Ghana purchase drugs and medicines up to

80% from the private sector. They identified some challenges in private sector particularly the 'informal sector' where a number of unlicensed or unregulated drugs and medicines are sold to end-consumers/end-users (patients). This exposes the end-consumers (patients) in Ghana to substandard, counterfeit or low-quality drugs/medications. Despite these challenges, the private sector supply chain helps to fill some lapses, gaps and deficiencies in the public sector supply chain. The public-sector supply chain also has some weaknesses such as 'bottle necks and persistent drug stock outs' at health care facilities in Ghana (Ballou-Aares et al., 2008). Figure 1 illustrates Ghana's pharmaceutical supply chain (product flows) between public and private sectors.

Figure 1. Supply Chain (product flows) between
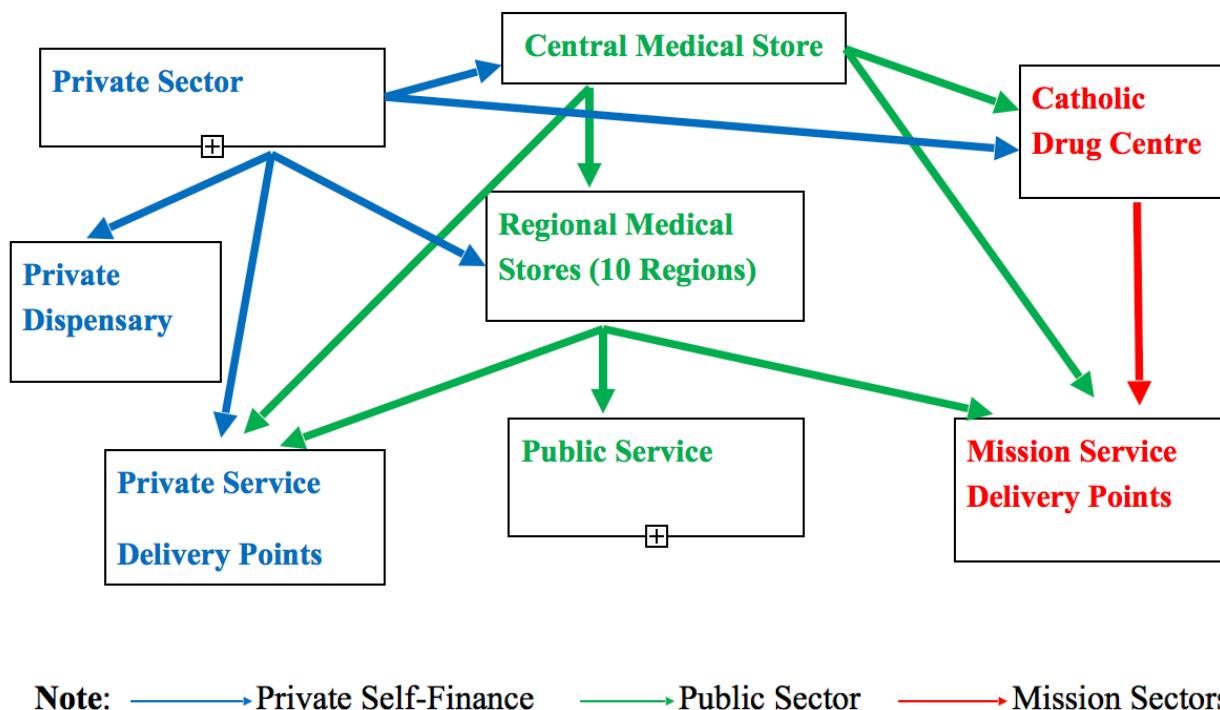
Source: Developed from Ballou-Aares et al, 2008

Figure 1 shows the three main players in pharmaceutical supply chain in Ghana. The extreme *left* is the private self-finance sector which supplies thousands of private dispensaries, hospitals, clinics, maternity homes. The public sector (*middle*) shows CMS supplies all 10 RMSs, which then supply all public service delivery points (public hospitals, clinics) as well as mission and private self-finance sectors. The mis-

sion/faith sector at the *extreme right* supplies mission service delivery points and sometime supply public and private self-finance sectors in Ghana.

Pharmaceutical Supply Chain and NHIS Payment Mechanisms in Tamale Metropolis

In Tamale Metropolis, the Claims Processing Centre at NHIA regional office handles claims issues. The local level pharmaceutical supply chain and claims payment system is in Figure 2.

Figure 2. Pharmaceutical Supply Chain and NHIS Claims Payment System in Tamale
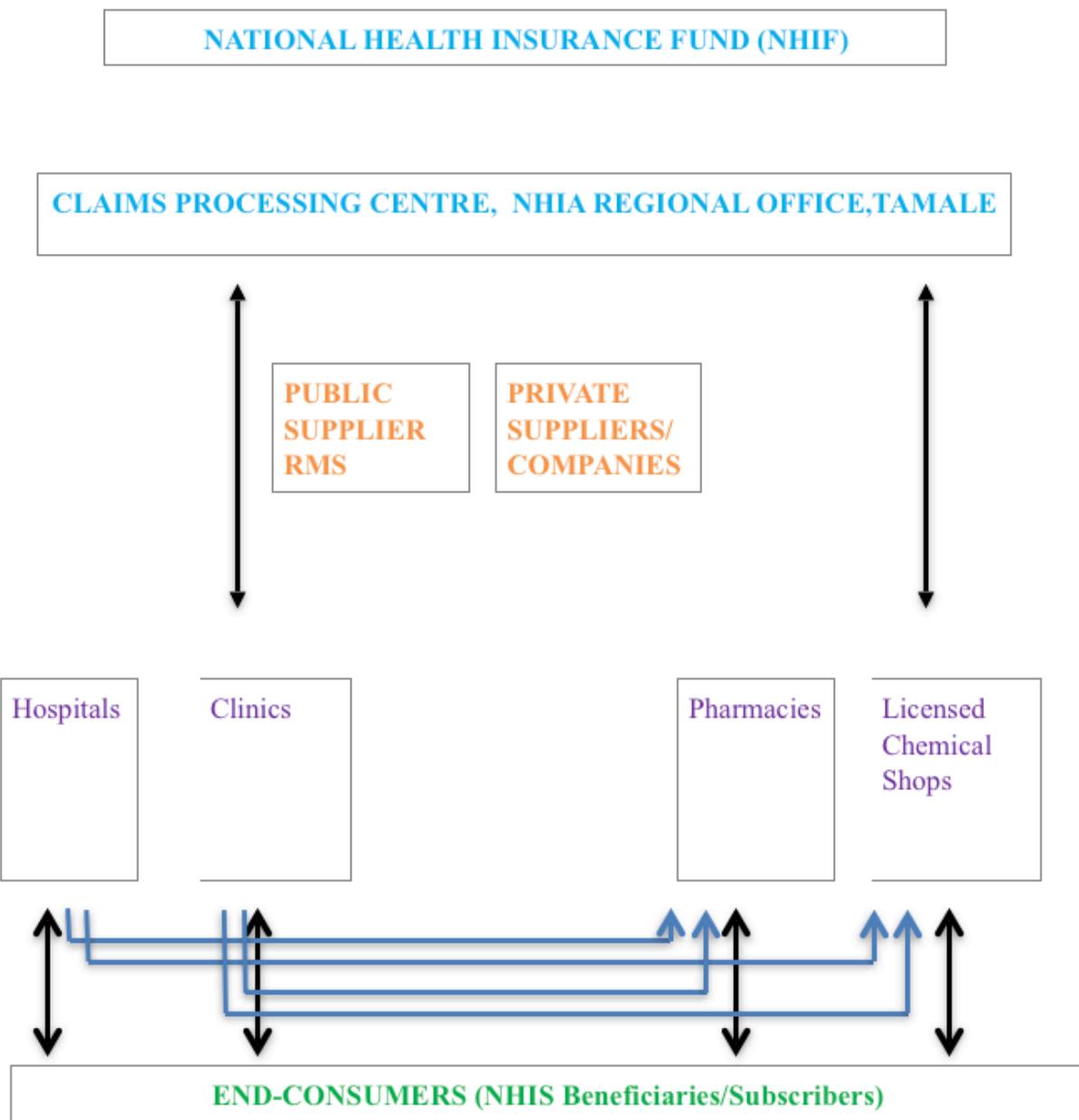
From Figure 2, the main source of funding for implementation of NHIS is the *National Health Insurance Fund (NHIF)* which is located and administered at the national capital (Accra). The funds are release from the top to NHIA regional or district offices for payments as subsidies (for people exempted from payment of annual claims) and re-insurance (other cost/expenses). Besides the NHIF other local level funds include payment of premiums and registration fees. The Claims Processing Centre (CPC) vets all claims submitted by health service providers in Tamale Metropolis and pay monthly claims into bank accounts of public and private health service provider. The health service providers monthly claims shall be paid 'within four weeks by schemes' (GoG, 2003, p. 17) or for a period 'determined by scheme and service providers' (GoG, 2012, p. 39). Public and private health service providers (clinics, hospitals, pharmacies and licensed chemical shops) purchase (buy) the pharmaceutical products from private suppliers or companies or from public suppliers (Regional Medical Stores) and stock their pharmacies or dispensaries to be provided to health insurance clients. Hospitals, clinics, pharmacies and licensed chemical shops are the Service Delivery Points (SDPs) who provide pharmaceutical products (drugs/medicines) to end-consumers (health insurance clients) in the implementation of NHIS at local level in Ghana. This shows the local level pharmaceutical supply chain.

RESEARCH METHODOLOGY: DATA COLLECTION TECHNIQUES AND ANALYSIS

This study was conducted in an urban setting of Ghana (Tamale Metropolis) with a population of 371,351 based on 2010 population and housing census (Ghana Statistical Services [GSS], 2012). Our choice of Tamale Metropolis is premise on its cosmopolitan nature and the city with the largest number of accredited health service providers in North of Ghana. We used duration, and number of services provided criteria to select four health service providers. Beside the four health service providers, we selected some pharmacies, pharmaceutical companies, suppliers in public-private supply chain. Table 1 shows the selected health service providers, suppliers and retailers in implementation of National Health Insurance Scheme (NHIS) in Tamale Metropolis.

Table 1. Selected NHIS Health Service Providers, Suppliers and Retailers

Health Service Providers	Ownership	Suppliers and Retailers	Ownership
West Hospital	Public	Regional Medical Store	Public
SDA Hospital	Private	Ernest Chemists	Private
Bilpeila Health Centre/Clinic	Public	Opac Drug House/Pharmacy	Private
Haj Adams Clinic	Private	Peekay Gombi Pharmacy	Private
		Tobinco Pharmaceuticals Ltd	Private
		S.M. Licensed Chemical Shop	Private

Note: S.M-Seidu Mashud

Most studies on the pharmaceutical supply chain adopt quantitative research methods and data sources like (Shah, 2004; Mckabe, 2009; Nguyen, 2011; Narayana et al, 2014). Our choice of qualitative methods of data collection and analysis is to help us explain this phenomenon better. Our use of in-depth interviews and focus group discussion enabled us interact with participants in their 'natural setting' (Yin, 2014). We interviewed pharmacists at their service delivery points, pharmaceutical product suppliers in their offices, reach out with licensed chemical shop dealers on-site, health service providers at workplace and then meeting various health insurance clients at homes, health insurance offices and at service delivery points in Tamale Metropolis. There have been many studies on Ghana's health insurance as well as studies on pharmaceutical supply chain like Ballou-Aares et al, 2008; Catherine et al, 2008; Mckabe, 2009; Makinen, Sealy, Bitran, Adjei, and Munoz, 2011). But not many studies on the principal-agent problems in the implementation of NHIS in Ghana. In contributing to the principal-agent problems in the implementation of NHIS, we specifically focus on patterns of prescribing and dispensing of drugs and medicines to health insurance clients in Ghana. The reason or motive for examining patterns of prescription of drugs and medicines from medical practitioners and dispens-

ing of drugs and medicines from pharmacies and drug stores aim to solicit the views of medical doctors, physician assistants and pharmacists on the administration of drugs. Moreover, we aim to get better understanding of the supply chain from both public and private service providers perspectives. Most literature on the principal-agent problems or relationships come from the western or developed countries, we are hopeful that our research or study will contribute to the little literature in the developing world especially Ghana. This area of research and the data collection strategies and analysis will hopefully add to the understanding of the relationships that exist between the two principals (NHIA and clients) and their agent (health service providers- hospitals, clinics). Qualitative research strategy is multi-method in focus, interpretive and naturalistic in approach.

Also, qualitative data provides useful insights into human behaviours. Such data sources include collecting life stories, personal experiences, interviews, historical, visual texts, observations, documentation and physical artefacts (Twumasi, 2001; Gray, 2009; Bryman, 2012; Yin, 2014).

We used 'purposive sampling method to select participants (health insurance officials, service providers officials and health insurance clients). We consciously selected the insurance clients based on categories through 'quota sampling' technique' (Twumasi, 2001, p. 28). This technique enabled us to have the various categories from contributors (formal/informal sectors) and those exempted from paying annual premium (children and those below 18 years, pregnant women, the aged (70 years and above), core poor in society (indigents) and pensioners (social security). The categorisation of beneficiaries was done in line with the health insurance policy documents; thus, we took those categories from the health insurance policy documents (GoG, 2003; 2012). To enable us understand task of the principal (NHIA), we solicited the views of health insurance officials at district and regional levels. Officials handling claims on drugs and medicines at the claims processing centre and officials handling registration and renewals of clients. We also sought the views of agents (health service providers-officials in hospitals, clinics, pharmacies, licensed chemical shops, public-private pharmaceutical product suppliers and retailers). We probed during interviews, we also used both 'closed and open-ended questions' in our interview guides. We administered the semi-structured questions in the study area (Bryman, 2012). In doing so, we created a friendly atmosphere for participants to share their life stories, experiences on supply of drugs and medicines, reimbursement and the problems they encounter in the daily implementation of NHIS in Tamale Metropolis. Table 2 illustrates the selected participants. Information obtained from various sources including interviews were analysed through coding, transcription, typing and using direct quotes, as well as content analysis along thematic areas. Towards 'reliability' of findings, we used data triangulation/multiple sources (Yin 2014) and 'credibility' (Zhang & Shaw, 2012) study research design was rigorous and back with theory. These validity strategies were used: 'member checking' participants having an opportunity to determine the accuracy of fieldwork information, this was possible due to 12 months fieldwork. We used 'rich thick description' with participants shared experiences and reliability procedures like transcription as we carefully translated local languages into English, 107 participants in all.

Table 2. Categories of Participants

Categories	Service Providers	NHIA Officials	Suppliers & Retailers	NHIS Exempt Group	NHIS Contributors	**Total**
Number	8	3	6	12	8	**37**

EMPIRICAL EVIDENCE: RESULTS/FINDINGS

This study is guided by the agency theory (principal-agent relationships) in provision of health services and the supply of drugs and medicines to health insurance clients in Ghana. For 'clarity of results' (Zhang & Shaw, 2012), we categorised findings along major themes in answering our research questions. Results, is followed with discussions of findings with theoretical insight.

Relationship between health service providers and suppliers of drugs and medicines

The questions asked focused the on suppliers of pharmaceutical products as in Figure 3 and the terms of payments. We tried to find out from health service providers (clinics/hospitals) where they take their pharmaceutical products from and how they pay their suppliers. The responses were mixed between the public and private health service providers. The public clinic officials (pharmacists/administrators) indicated that most of their pharmaceutical products came from Regional Medical Store (public supplier) through Ghana Health Service (GHS) Metropolitan Health Management Team (MHMT). The private clinic officials indicated that they have more suppliers to procure drugs and medicines. Also, they said the private clinic is free to procure drugs and medicines from the public supplier (RMS) and the numerous private sector suppliers.

On the two hospitals, we interviewed two officials, one in general administration and the other in the pharmacy unit. The public hospital main supplier of pharmaceutical products is Regional Medical Store (RMS). The public hospital administrative staff indicated that they had to follow procurement rules strictly to enable them procure other pharmaceutical products from private sector suppliers when the main public supplier (RMS) is not able to meet all their product needs. A pharmacist in private hospital revealed that they often take their supplies from three sources namely Ghana Adventist Health Services (GAHS), Regional Medical Store (RMS) and the various suppliers in private sector. We noted less bureaucracy in private hospital procurement.

We also made efforts to reach out with the main suppliers of pharmaceutical products on how they work with health service providers in the implementation of NHIS in Tamale Metropolis. The various pharmaceutical companies and other suppliers indicated that they prefer inter-bank payments through use of cheques than cash payments. We realised that due to fear of robbery, most suppliers especially salesmen preferred payments through the banks than cash payments.

Relationship between Principal (NHIA) and Agent (Health Service Providers)

All interviews and documentations were obtained from accredited facilities and their staff. The four selected health service providers received accreditation for the past years and have since been reaccredited periodically in line with the National Health Insurance Acts, 2003 and 2012 as well as the legislative instrument (1809), 2004 (GoG, 2003; 2004; 2012). The public hospital and clinic received some 'automatic' accreditation license from the National Health Insurance Authority (to operate NHIS in 2005 while the private clinic and hospital applied for accreditation and received 'provisional' accreditation license in 2005 to implement NHIS in the Tamale Metropolis of Ghana. However, this practice has changed since the passage of the new act (Act 852) passed in 2012 which require that both public and private health service providers must be credentialed (accredited) by NHIA before they implement NHIS in Ghana.

It is required for health service providers (agents) to submit their monthly claims to the NHIA (principal). The NHIA is expected to vet the monthly claims thoroughly and reimburse health service providers. Act 650 (2003) require NHIA to reimburse monthly claims within 4 weeks upon receipt of claims while Act 852 (2012) require that reimbursement should be made within an agreeable period between NHIA and health service providers. During interviews, we noted that both agreed that payments should be made within reasonable periods without exceeding six months after submission of claims to NHIA. Table 3 illustrates the responses (direct quotes) of participants (officials of NHIA as principal, and health service providers as agents).

Table 3. Direct Quotes from Participants

1. Public hospital pharmacist	"My bro health insurance is the surest way to health care, without it many lives will be lost. It is a guarantee for life once one subscribes to it. For the hospitals it has reduce fear for service utilisation and that led to increase patronage for health services. Drugs that the poor cannot buy with cash they get them free of charge so what is more than this? But do you know the sad story of health insurance? It is delays in claims payments".
2. Public hospital pharmacist	"The delays though mild in the public sector yet contribute to stock-outs in many pharmacies and dispensaries because we need cash to procure some essential drugs since we cannot get all from the regional medical store".
3. Private hospital pharmacist	We like the health insurance scheme because it is a major source of revenue for the hospital; it also helps the poor to access healthcare services and have free access to drugs and other medications. However, payments of claims are the biggest problem. Sometimes it takes over six months without payments. Can you imagine how the hospital will manage to buy drugs and pay its staff salaries and other incentives? How can you provide services and drugs and will have to wait for over six months to be paid? That is bad and this affects us a lot. No wonder we sometimes go on strike to get our claims".
4. Public clinic administrative officer	"We are part of GHS we are paid by the state so why should we go on to boycott health insurance, we get our salaries and products from GHS".
5. Private clinic physician assistant	"What is the point embarking on strikes and losing lots of revenue? The more you refused to provide services and drugs to insurance clients the more you lose revenue to the facility that's why we don't embark on strikes".
6. Peekay Gombi pharmacist	"Eeeii we usually receive prescription forms from patients from all hospitals and clinics in Tamale. We don't discriminate between patients whether from public or private facility, once the prescription form is signed and stamped that is all, we accept it and provide the patients the drugs as prescribed. However, frequent delays in payments of claims are our biggest problems".
7. Licensed chemical shop seller	"Health insurance people don't often visit our drug store but those who come with prescription forms, we do provide them the needed drugs but delays in reimbursement is what affect our revenue and affect both quantity and quality of drugs. It is too bad that it can take over six months".
8. Metropolis NHIA officer	"We are very much aware of how some facilities refused to dispense drugs to clients but take their prescription forms to demand claims from us".
9. Metropolis NHIA line manager	"National health insurance fund is main source of funding from national, those we generate locally: registrations and payments of annual premiums. Most people are interested in health insurance and they do register and renew their membership. Though we cannot say it openly there is secret politics"
10. Regional NHIA officer at Claims Processing Centre (CPC, Tamale)	"We usually vet the monthly claims of facilities to see that right prescriptions and tariffs are charge. Also, we check to see if subscribers indeed visited their facilities. Payments of claims take two forms: services rendered and drugs supplied to subscribers. Deductions or additions are given to facilities for wrong charges or for fairness. On payments we sometime encounter delays due to rigid vetting at processing centre to check fraud. We always try to avoid non-payments beyond three months and not exceeding six months".

We asked questions in relation to reimbursement from NHIA for drugs and medicines provided to health insurance clients. These questions were directed to the principal (NHIA) regional and district officials. The same questions were also directed to the agents (health service providers). The responses of the NHIA officials are in Table 3, quotes 8-10. They indicated that they have fulfilled their contractual agreements through the rigorous vetting of claims, checking wrong charges and multiple entries as well as wrong application of tariffs on drugs and medicines. In addition, the principal (NHIA) indicated that periodic clinical audits are conducted as additional measures to check fraud and abuses from their agents (health service providers-hospitals/ clinics and other service providers). NHIA officials admitted to delays in reimbursement for services, drugs and medicines but associated such delays to rigorous vetting and monitoring on agents.

On the other hand, the agents from both public and private indicated that their principal (NHIA) has failed in carrying out its contractual agreements such as payments within four weeks or not exceeding six months upon receipt of health service providers claims. The agents' responses to delays and non-payments of claims for months or over six months in Table 3, quotes 1-3, 6-7). But the agents were divided on the use of strikes or protests to demand for prompt payments.

While the faith-based hospital joined other Christian Health Association of Ghana (CHAG) to embarked on strikes across Ghana in 2013 and 2014, other private suppliers of drugs and medicines joined the strikes (Daily Graphic Newspaper publications on July, 2, 2014, p. 11) and other online publications (Ghanaweb News). Most private health service providers and pharmaceutical companies joined strike to boycott NHIS. But private for-profit clinic declined to join other private groups on strikes on grounds that the facility will lose revenue if it embarks on strike (see Table 3, quote 5). Public service providers did not embark on strikes as state health providers (Table 3, quote 4). They received more pharmaceutical products from the public supplier-regional medical store. We found that the private health service providers felt the delays in reimbursement more because they had to pay their workers salaries, procure drugs and medicines on their own. Thus, we noted more financial pressure was on the private sector health providers than public ones.

Despite the challenges or problems between the principal and the agents in reimbursement, we asked if there were some prospects in the implementation of NHIS. The responses of officials of the two hospitals showed that NHIS is a very good social intervention programme that has benefited the people of Ghana in terms of access to healthcare services and drugs. It has also contributed to increased patronage for healthcare services thus increased service utilisation. It has removed some financial barriers to healthcare since health insurance clients have free access to number of essential drugs (approved drugs) and wide range of services. Moreover, since the implementation of NHIS, the fear for payments for medical bills especially drugs and admission fees have been removed as such services are part of NHIS benefits package for clients.

Issues of Prescription Forms for Drugs and Medicines in Implementation of NHIS

When health service providers (hospitals and clinics) do not have certain drugs or medicines in their pharmacies or dispensing stores, the health professionals will normally issue a prescription form usually signed and stamped with details of health insurance client. The prescription form is presented to the client to be taken to other accredited pharmacies, licensed chemical shops (drugstore) for drugs and medicines that are out of stock at the hospital or clinic. This medical practice of issuing prescription forms to clients is an effective way of helping health insurance clients to have access to drugs and medicines that are not available at hospitals or clinics visited.

The accredited pharmacies and licensed chemical shops in turn provide health insurance clients drugs and medicines and forward their monthly claims to NHIA for payments. A pharmacist in one accredited pharmacy in Tamale Metropolis (Peekay Gombi Pharmacy) commented on their working relationships with health service providers (hospitals, clinics) and NHIA (Table 3, quote 6). An accredited chemical shop seller confirmed receiving prescription forms (Table 3, quote 7). However, we observed certain bad practices at accredited pharmacies and licensed shops which include the practice of receiving prescription forms without dispensing drugs and medicines to health insurance clients, problems no drugs, demand for some cash payments from clients due to differences in tariffs, the practice of not providing clients all the drugs prescribed by health professionals at hospitals and clinics, and the prac-

tice of 'go and come for drugs the next day'. These were observed at those accredited pharmacies and licensed chemical shops in Tamale.

We then interviewed officials of NHIA to solicit their views on some issues/complaints from four health service providers and the other accredited pharmacies and licensed chemical shops officials. Officials of NHIA admitted to delays in reimbursements and how it can affect quality of services, drugs and medicines but blame some of the accredited health facilities for engaging in malpractices which made them spend more time in vetting claims. Some accredited health service providers/facilities are busily cheating our subscribers and doing wrong things (Table 3, quote 8). Thus, decision to critically examine claims and vet them properly (Table 3, quote 10).

Moreover, NHIA officials at district and regional offices confirmed that some deductions were made on monthly claims of some accredited health service providers/facilities as complained by officials of health service providers. The NHIA officials maintained that those deductions were due to some abuses, errors or fraudulent deals. NHIA officials disagreed that they often owe their agents claims beyond six months contrary to the agreement they had with their agents.

Documentary evidence from the field confirmed deductions of health service providers monthly claims. The national office of NHIA was suspicious of some malpractices at local level across Ghana between local NHIA officials and some health service providers. There was suspicion of connivance between some NHIA officials and health service providers with the feeling that local health insurance officials were not diligent in vetting and verification of monthly claims at local level. In this regard, NHIA instituted *clinical audits* across the country. In the Tamale Metropolis clinical audit took place in March 2010 in which eight health service providers claims were audited. The clinical audit aimed to cross check claims vetted by local level NHIA officials. After the audit it was discovered that a huge amount of GH¢279, 069.81 (72,485.67 USD) was wrongly paid to the eight selected health service providers in 2010. A second clinical audit was conducted in June 2012 in Tamale Metropolis by the national audit team. An amount of GH¢486,268.31 (125,679.33 USD) was deducted from thirteen health service providers. The national audit collected relevant documents including attendance books, monthly claims

reports, NHIS attendance registers et cetera. They thoroughly audited them and recommended that all wrongly paid monies be deducted from the affected health service providers claims. The most affected health service providers with more deductions was the private clinic, followed by the private hospital while the least affected was the public clinic (Tamale Metropolitan Mutual Health Insurance Scheme (TMMHIS) Annual Reports, 2010; 2012).

Relationship between Principal (Clients) and Agents (Health Service Providers)

The second principal-agent relationship is between health insurance clients (the principal and health service providers (agents) in the implementation of NHIS in Tamale Metropolis. We solicited the views, opinions and experiences of health insurance clients (end-consumers) of pharmaceutical products on the implementation of NHIS at the local level. We used both in-depth and Focus Groups Discussions (FGDs). The health insurance clients freely expressed their opinions and shared their experiences on the provision of drugs and medicines at the four selected health service providers (hospitals/clinics). The health insurance clients confirmed that they often receive drugs and medicines free from health service providers. Many mentioned of receiving drugs and medicines from accredited pharmacies like Peekay Gombi and Opac Drug House with their prescription forms. Few also mentioned of receiving drugs and medicines from licensed chemical shops in Tamale Metropolis. Some pregnant women interviewed confirmed receiving pregnancy medications without payments at the four health service providers as well as other accredited facilities. We also made on-site observations on the issuing of prescriptions forms and the dispensing of drugs and medicines to health insurance clients (end-users or end-consumers of pharmaceutical products). We noted there were long queues of clients at various Out-Patient Departments (OPDs) pharmacies and dispensaries waiting for drugs and medicines. Our observations confirmed the medical practice that in some instances where some drugs and medicines were not available at facilities pharmacies and dispensaries, prescription forms were issued by medical personnel to their clients to visit other accredited pharmacies and chemical licensed shops. Most responses from end-consumers or end-users of pharmaceutical products showed that private health service providers dispense more ex-

pensive drugs than their public counterparts (Table 4, quotes 2) in implementation of NHIS in Tamale Metropolis in Ghana.

Despite prospects of clients increased access to drugs and medicines and revenue for hospitals and clinics (see Table 4, quotes 10-11) and other accredited pharmacies and licensed chemical shops some clients still shared their frustrations in other areas. These frustrations/problems were noted during the in-depth interviews and FGDs. The health insurance clients indicated that some expensive drugs were either excluded or service providers demanded cash payments for them. Some health insurance clients were of the view that most of the drugs and medicines provided them free were less expensive particularly those obtained from the public sector. These observations revealed that the principal (health insurance clients) were not so happy with the performance of some agents (health service providers) in terms of access to expensive and effective drugs and medicines at point of service delivery (hospitals, clinics other providers).

We also found from the field habits like 'shopping spree' where some health insurance clients (end-users/consumers) visit many health service providers/ facilities to be provided with drugs and medicines for other family members or friends (Table 4, quotes 7) at the expense of NHIA. The principal (some clients) abusing the agent (NHIA) through use of other persons insurance cards to access drugs and medicines by fraudulent means. In some extreme cases some incidence of expired drugs and medicines were supplied by health service providers to health insurance clients (end-consumers) especially to the illiterates (those who cannot read English). We observed a similar case at a private pharmacy where the dispensing officer mistakenly dispensed expired drugs to health insurance client and when the client checked expiry date, he quickly returned those drugs. The dispensing officer apologised and promised it will not happen again since expired drugs are often removed from dispensing shelves and wondered why they were left there. If the client was an illiterate he or she would have gone with the expired product. Thus, the agents (health service providers) also abused the principal (clients) in some areas like supply of expired products/supply of less quantity as required. The end-users of pharmaceutical products (clients) responses at both in-depth interviews and FGDs are in Table 4, quotes 1- 9.

Table 4. Interview/FGDs Responses from Beneficiaries and staff of health care facilities

1. **Indigent**	"They don't respect we the poor ones. I sat here and many people are by-passing me to see the doctor".
2. **Pregnant woman**	"The drugs we get from facilities especially government clinics and hospitals most of them are cheap para, they don't cost much, expensive drugs like foreign pregnacare plus omega 3 will not be given to insurance people only those with cash will get them".
3. **SSNIT contributor**	"I don't normally fall ill but had to join health insurance it times of emergency or at periods of no money so it is my social security".
4. **Aged**	"Some NGOs helped to register me and they come to pick my card for renewals I don't pay pesewas when I go to hospital with health insurance".
5. **Pupil (basic level)**	"It is my mother who registered me for health insurance, I am always sick of malaria that is why my mother registered me".
6. **Premium Payee**	"I am a carpenter so I registered for myself, wives and all children, we don't pay money at clinics it is a good insurance for life".
7. **Student(secondary)**	"In the school we use friends' cards and we us this insurance card for mobile money, also my school authority asked all to register for it".

(continue)

(conclusion)

8. Lamashegu FGD	Most participants complained of long queues at hospitals and clinics with health insurance, poor treatment from facilities. Four supported this while one praised health insurance saying. "it is my survival card when I visit hospital, no fears for medical bills".
9. Moshie-Zongo FGD	Members showed praises on health insurance as when there is no money, one can visit any hospital for drugs and medicines. A group member said this about health insurance "it saves life and reforms life and brings hope to the hopeless with health insurance card".
10. Private facility staff	"Health insurance is the main source of funding; we used money to buy drugs and pay workers and it is far better than cash and carry".
11. Public facility staff	"The people of Ghana are happy for this policy, which is very friendly to poor and vulnerable ones is society for free health care. The poor don't run away from bills".

DISCUSSIONS OF FINDINGS

Principal-Agent Issues and Problems in the Implementation of NHIS

The results or findings confirmed that there is a contractual relationship between the principal (NHIA) and agents (health service providers-the selected hospitals, clinics and other providers) through accreditation and re-accreditation in accordance with health insurance Acts (650; 852).

Findings on prescribing and dispensing patterns for drugs and medicines for health insurance clients from the various private health service providers concur with Moe (1984) assertion that 'bureaucratic agents want to maximise their own interests against their principals'. But this finding was not consistent with those in the public sector. The findings also agree with Nguyen (2011) that private service providers have desire to prescribe and dispense more drugs to insurance holders for profit maximisation. However, such prescribing patterns were not noted with public health service providers. These principal-agent problems were noted between NHIA and health service providers in the area of prescribing and dispensing of drugs and medicines to clients. The private health services providers were more 'self-seeking' or 'selfish' with more moral hazards than their public counterparts, which agrees with a number of studies on agents' self-interests/self-seeking (Worsham & Gatrell, 2005; Winter, et al 2008; Erlei & Schenk-Mathes, 2016). Other problems identified in this study is that the reward system for performance is not clear, this created some

mistrust or suspicion between the principal (NHIA) and the agent (service providers).

On the issues of monitoring of the agents (health service providers) by the principal (NHIA), The principal was found proactive in monitoring the actions of the agents in areas of rigorous claims vetting and clinical audits which helped in checking fraudulent acts from some agents. But, on reimbursement for services, drugs and medicines provided by health service providers, we realised that the NHIA as principal was not able to honour the agreement in terms of prompt payments of claims (reimbursement), it was indebted over six months to agents (health service providers). The agents honoured their part by rendering more services, drugs and medicines to clients but principal failed in keeping to its contractual agreement in line with insurance law. This confirmed shifting of responsibilities by the principal-NHIA as it concurs with Holmstrom and Milgrom (1991) and Pratt and Zeckhauser (1991) works on breaches on contractual relationships. The agents (health service providers) on the other hand, we noted breach of trust. For instance, the faith-based private hospital, some private pharmacies and suppliers of drugs and medicines embarked on nationwide strikes, denying clients access to healthcare services. For instance, the Ghana Chamber of Pharmacy (pharmaceutical distributors) on February 10, 2014 decided to withdraw the supply of drugs and medicines to NHIS accredited health service providers across Ghana. This behaviour amounts to 'breach of contract' or 'breach of trust' for their principals (NHIA and cli-

ents). This finding on agents particularly the private health service providers use of strikes to demand payments of claims in Ghana concurs with findings of Fusheini, Marnoch, and Gray, 2016.

We also found problems of 'conflicting loyalties' between the public and private health service providers where public providers were more loyal to NHIA than the private ones in areas of prescriptions, applications of tariffs, invoicing as reflected in both interviews and documentary sources of data (clinical audits). Such finding on 'conflicting loyalties' among the agents at the local level is consistent with Winter, Skou, & Beer (2008) findings in which multiple principals created conflicting loyalties in the implementation of Danish welfare and employment policy at front-line level. At some point the service providers appear loyal to one principal (NHIA or clients). Some abuses were found that affect the implementation of NHIS from health insurance clients in the forms of over-utilisations (frequent visits) in getting drugs for other relatives and friends. Some facilities also engaged in over-invoicing, over-billing, demanding cash payments etc. Some NHIA officials' connivance with facilities to cheat scheme through poor claims vetting.

Implications of findings for policy makers and international audience

The empirical evidence from the field suggests health service providers and medical stores have to strengthen pharmaceutical supply chain networks, build human resource capacity and take measures against pilfering of drugs to prevent frequent stock-outs particularly in public sector. The growing number of private drug suppliers is worrying at the local level with the influx of substandard and counterfeit drugs and medicines and this call for a stronger regulation and control by the pharmacy and drugs authorities in the distribution and retailing outlets. This is in line with McCabe (2009) suggestions for Ghana, Mali and Malawi pharmaceutical sector. Our findings also show that there is persistent pharmaceutical drug stock-outs in public sector (Ballou-Aares et al., 2008 and Makinen et al, 2011). Also, there is too much bureaucratic procedures at public sector and growing numbers of unregulated salesmen, middlemen and drug dealers at the local level. This Narayana, Pati & Vrat (2014), call for effective collaboration between public and private sectors partnerships in purchasing processes and supply chains networks. This study recommends that NHIS need to re-strategize in its payment mechanisms to include capitation systems where healthcare

facilities are pre-finance for some particular clients to minimise its indebtedness to service providers. Moreover, there is room for improvement in its recruitment processes to enable the scheme recruit highly qualified and competent staff to vet, to process and manage claims at various claims vetting centres and scheme offices across Ghana. Another problem identified is the politics of recruitment. This study recommends for stringent measures to minimised this practice to get the right personnel to save the scheme from possible collapse from its persistent high indebtedness to health service providers. This study finding on politics concurs with Fusheini Marnoch, and Gray (2016) findings that over-politicization, political interference and poor gate keeping system are key challenges affecting implementation of NHIS in Ghana. Thus, effective gate keeping mechanisms for referrals and prescription is very necessary for NHIS. Similarly, effective control measures should be instituted against abuses by clients by limiting the number times they will visit health service providers and with strict checking of clients' identities before services and provision of drugs at facilities. Financial malpractices by both health insurance officials and health service providers should be severely punished to deter others.

Contribution

This study found a new dimension, that not only agents 'shirk their responsibilities' but it noted a new pattern with principal engaged in 'shift of responsibility'. We recommend that future research or researchers would examine this new dimension and pattern of behaviour between principal(s) and agent(s) in supply chain management in Ghana or elsewhere in the world.

This study may have a geographic limitation but the findings can be transferable to other places with similar settings. It adopted largely a qualitative research approach which focuses more on 'analytical generalization' rather than 'statistical generalization' (Yin, 2014, p. 48).

CONCLUSION

Health policy formulation and design factors seriously need to be considered in order to make health policies more implementable. Framers of NHIS should have assessed the relationships between principals (NHIA) and agents (health service providers) in terms of incentives, profit maximisation and quality assurance in order to select the right agents. This

suggest that rigorous accreditation process is needed before granting health facilities license to implement NHIS. This will help to get agents whose interests and goals are in congruence with NHIS in Ghana. We recommend strict regulations in tariffs, vetting of claims and prompt claims reimbursement.

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