The Lancet Global Health
Commission on
Financing Primary Health Care

Ghana's Experience with Changing Provider Payment to Capitation in Primary Health Care

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WORKING PAPER 5

JANUARY 2022

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Lancet Global Health Commission on Financing Primary Health Care

The Lancet Global Health Commission on Financing Primary Health Care (2020 – 2022) is committed to drawing on robust, evidence-based knowledge to generate useful findings and actionable recommendations to inform decisions made by governments and partners that shape the effective financing of primary health care. Our work is focused on enhancing, protecting and enabling the appropriate resourcing of primary health care as a critical engine for the achievement of universal health coverage.

Country case studies

The Commission organised 10 case studies. Each country lead consultant and team undertook a scoping review to identify 'hot topics' in the financing of PHC in the respective countries. The teams then chose a 'deep dive' topic on which to undertake primary research. The 10 case studies were undertaken in: Brazil, Chile, China, Estonia, Ethiopia, Finland, Ghana, India, New Zealand and the Philippines.

Funding

This work was funded by a grant from the Bill & Melinda Gates Foundation. However, the views expressed in the case study reports are those of the case study authors and do not necessarily reflect the views or policies of BMGF.

Suggested citation

Amporfu E, Arthur E. Ghana's Experience with Changing Provider Payment to Capitation in Primary Health Care. *Lancet Global Health Commission on Financing Primary Health Care.* Working Paper No. 5. 2022

Acknowledgements

Report edited and formatted by Becky Wolfe.

Table of contents

Acronyms

CHPS	Community-based Health Planning and Services
DMHIS	District Mutual Health Insurance Schemes
MoH	Ministry of Health
NHIA	National Health Insurance Authority
NHIL	National Health Insurance Levy
NHIS	National Health Insurance Scheme
OPD	Outpatient Services
PHC	Primary Health Care
PPM TSC	Provider Payment Mechanism Technical Steering Committee
PPP	Preferred Primary care Providers
SSNIT	Social Security and National Insurance Trust
UHC	Universal Health Coverage

Executive Summary

The National Health Insurance Scheme (NHIS) was introduced in Ghana in 2003 to provide universal health coverage (UHC) for all citizens. The aim of the Scheme was to eliminate the practice of direct user payments for health care services (the 'cash and carry' system) that followed the abolition of the 'Free Health Care for All' policy. The devastating consequences and poor health outcomes resulting from the system highlighted a need to reform health financing. The NHIS amalgamated existing District Mutual Health Insurance Schemes (DMHIS) and covers about 95% of disease conditions reported at health facilities in Ghana. It is financed primarily by the National Health Insurance Levy, SSNIT deductions and premium payments.

The NHIS started off with a fee-for-service (FFS) payment system, where providers were reimbursed after providing itemized bills to the National Health Insurance Authority (NHIA). This payment system, however, resulted in cost escalation that threatened the sustainability of the Scheme. The cost escalation has been associated with moral hazard on the part of patients and cost inflation on the part of providers. To control costs, the NHIA introduced the Ghana Diagnostic Related Groups (G-DRG) for both outpatient and inpatient services. The G-DRG was used to pay for services while medicines remained under the FFS system. Unfortunately, this payment system did not achieve the desired objective of cost containment and the cumbersome nature of claims processing meant that the system was not sustainable as it imposed significant delays in claims payment. In response to the challenges of cost escalation, the NHIA decided to pilot a capitation payment method in the Ashanti region for primary health care (PHC) in 2012.

This study documents the journey through piloting the capitation payment system and assesses the political and economic factors that supported or hindered its planning and implementation. This was achieved by reviewing documents related to the capitation reform, key literature and engaging in key informant interviews.

The research revealed that a multi stakeholder technical committee was formed to design the capitation policy and plan its implementation. The design of the reform focused on seven key components: package of services, providers accredited to provide services under the preferred primary care providers (PPP), base per capita rate, adjustment coefficients, enrollment/registration, financial management and reporting system, and quality monitoring system. Ashanti region was chosen for three reasons: i) the multicultural nature of the region with its population dynamics, which made it an interesting site to pilot the reform; 2) the region had a good blend of public and private health facilities; 3) there was a suspicion of possible leakages in the region given the high costs of claims from health facilities. Enrollees were allowed to select their health care provider and to change this after six months if they were not satisfied with the services. The committee applied a base per capita rate to pay providers but not an adjustment coefficient due to a lack of available data.

Studies show that capitation led to a marginal reduction in utilization of care. In addition, there were reports of a small number of providers engaging in preventive care programs for

their clients to improve health and reduce the need to use healthcare. Implementation, however, faced several challenges: first, opposition from the Ashanti region, linked to politics, marred the implementation. At the time, the Ashanti region happened to be the stronghold of the major opposition political party that introduced the NHIS, hence the choice of the region was looked at with suspicion. There was also opposition from providers with respect to the per capita rate, which was initially interpreted by some as the per encounter rate, for being too low. Indeed, agitation from the providers led to a review of the policy to adjust the per capita rates upwards as well as to exclude medicines and maternal health care from the capitation package. While the payment for maternal healthcare was moved to G-DRG, medicines were to be paid for under the FFS system. The removal of medicines from the capitation package was due to the health system's inability to separate prescription from dispensing, while maternal care was removed to ensure access to maternal care in all facilities including maternity homes. This, however, was a major compromise to ensure that the reform could be implemented.

The lack of trust in the NHIA's ability to pay the capitation tariffs on time weakened the system's ability to contain costs. The NHIA had been notorious for delays in paying providers' claims, hence some providers took advantage of occasional delays in capitation payments to justify charging informal fees. Another important challenge was the cost of implementation, despite funding support from the World Bank, including the cost of gathering critical data on providers to guide decision making for proper implementation. The substantial cost caused delays in the start date of the pilot, discouraged the adoption of group practice of PPPs, and accredited all providers as single providers regardless of their ability to provide all the services in the package. Inadequate education of subscribers was also a strong hinderance to the implementation of the reform as there was a lot of misinformation among the general populace heightening the tension with respect to the implementation of the capitation reform.

While the historical paths to the NHIS are important, lessons from the scheme must be considered when designing future schemes that seek to improve efficiency in service provision. Indeed, this requires the application of the principles of strategic purchasing and proper principles of provider payment systems. Key lessons include the need to ensure adequate funding for the design and implementation of reform, proper education of the general populace, and ensuring that providers have adequate knowledge of the capitation reform and financial management practices to manage the pre-payment of the capitated amount. As capitation may create an incentive for providers to cut costs, there is a need for good monitoring and evaluation systems to measure the quality of care and utilization. It may also result in increases in out-of-pocket payment (informal payments).

While it was hoped that capitation would induce competition, this did not happen due to the limited number of providers, particularly in remote areas. There is a need to upgrade all participating health facilities to be capable of providing all services in the capitation basket in future policies, or to ensure the concept of 'group practice' is implemented to induce competition. Overall, it is not clear whether capitation implemented in Ghana was able to improve quality or contain costs. Research is needed in the area.

Introduction and motivation

The aim of the third Sustainable Development Goal is to improve health and wellbeing for all and includes a target to achieve UHC, including financial risk protection and access to essential healthcare services and medicines (WHO, 2021a). Because human resources are important for development, health and wellbeing of the population is fundamental to development - a population with poor health cannot provide the human resources required for production, thus slowing down development. Many countries have made significant progress in improving access to healthcare for their populations by making health services available and providing financial risk protection. Countries such as Uganda have removed user fees on services provided in public health facilities (WHO, 2005). Other countries, such as Ghana, have introduced national health insurance schemes as a tool to provide financial health protection to its residents with the aim of achieving UHC.

UHC is achieved when a population can have access to the required healthcare when needed regardless of ability to pay (WHO, 2021b). The achievement of universal coverage depends, critically, on how strategically health services are purchased from healthcare providers. Purchasing is strategic when it is linked to information on providers' performance as well as the health needs of the population (WHO, 2021c). Strategic purchasing can improve efficiency, equity, and hence contain the cost of healthcare (WHO, 2021c). Purchasing is strategic when the healthcare services selected are linked to the population's health needs, when providers can deliver services effectively, and when the method of provider payment ensures efficient and equitable use of resources (WHO, 2021c).

The Ghana National Health Insurance has a clearly defined benefit package covering about 95 percent of disease conditions in Ghana (NHIS, 2012), a clear criteria for accreditation of providers, and has made efforts to adopt payment methods that incentivise providers to use resources efficiently. Since the introduction of the NHIS in 2003, the provider payment method has moved from fee for service (FFS) to the Ghana Diagnostic Related Groups (G-DRG). More recently, the capitation payment mechanism was piloted in the Ashanti region with the aim to expand it nationwide; however, this has now been suspended. Neither the FFS nor the DRG methods of payment succeeded in containing costs and so capitation was introduced in January 2012 to improve the efficiency and effectiveness of healthcare services through cost sharing between providers and the Scheme (Cashin, 2014). Several studies have examined the impact of Ghana's capitation on claims cost, utilization (Andoh-Adjei, Boudewijns, Nsiah-Boateng, Asante, Velden and Spaan, 2018), out of pocket payment (Siita, Cox, and Hanson, 2019), and people's trust in the health system (Andoh-Adjei, Cornelissen, Asante, Spaan, Velden, 2016). What is missing is a comprehensive study on Ghana's experience with capitation starting with what led to the introduction of capitation, how it was designed, up to the factors that affected its implementation. Such a study is important because it would document important lessons that could guide future decisions on provider payment mechanisms and how to achieve success in such instances.

Objectives of the study

The main objective of the study is to examine the capitation experience of Ghana. Specifically, the study seeks to:

- present a historical perspective of the implementation of the capitation in Ghana;
- examine the design of the capitation system in Ghana;
- investigate the factors that enabled or hindered the implementation of the capitation system in Ghana.

Approach to the study

The study used a qualitative methodology to gather information for analysis. The main sources of information were a literature review and interviewing stakeholders relevant to the design and implementation of the capitation reform. The literature review focused on both published articles on capitation and unpublished documents from the NHIA. The key informants interviewed came from the following groups:

Table 1: Key Informants

Key Informant Group	Key Informant Codes
National Health Insurance Authority	KI1 – KI3
Provider Representatives Private Provider Association Christian Health Association Ghana Medical Association	 KI4 KI5 KI6
Pharmaceutical Association of Ghana	KI7 – KI8
Members from the Technical Steering Committee	KI9
Insurance Consumers Association of Ghana	KI10

A key informant guide, in the Appendix, was used to interview the stakeholders. The focus of the interview depended on the group the key informant was representing. For example, interviews with providers focused more on the impact of the reform than on the reason for some of the aspects of the reform including the choice of the pilot area. The respondents were first contacted for agreed interview dates. Interviews were done on the phone or on zoom. Notes were taken during interviews which were also recorded to allow interviewers to cross check their notes. Each interviewee was interviewed by two interviewers. All interviewees were approached and requested for the interview. There was no coercion; and confidentiality was assured. Overall, ten people were interviewed, each representing one of the groups above. To ensure confidentiality, the interviewees are referred to as Key Informant 1 to 10 (e.g., KI1, KI2, ..., KI10) as shown in Table 1 above. Only information provided by interviewees that fell within the scope of the study were reported. The outcome of the interviews and literature reviews are reported below under three sections in accordance with the objectives of the study.

Section A: Historical perspective of the National Health Insurance Scheme in Ghana

Introduction of NHIS

The National Health Insurance Scheme (NHIS) was introduced in 2003 to provide UHC in Ghana (World Bank, 2014). This was an amalgamation of several DMHIS to eliminate fragmentation, as such schemes limited health access in the sense that health care could only be accessed within the district of operation (World Bank, 2014). Prior to the introduction of the NHIS, payment for health care services in Ghana had gone through many phases.

The provision of health care in Ghana began with the "Free Healthcare for All" policy provided by the government for the citizens after independence in 1957 (Kipo-Sunyehzi, Ayanore, Dzidzonu, & Yakubu., 2019). However, this policy was limited to public health facilities and excluded private health facilities. The policy was perceived by the government to be unsustainable over time, leading to the introduction of user fees for all services and medicines, where people paid for services they received in health facilities. The user fees policy in Ghana started in 1969 under the Hospital Fees Decree, which was amended in 1971 to the Hospital Fees Act (1971). This created more inequities, particularly for the poor and the vulnerable in society who could not afford services or obtain basic medication (Waddington, and Enyimayew, 1990). By 1985, health facilities practiced what popularly became known as the "cash and carry system" in Ghana, where people had to pay cash before accessing health care. The system became unsustainable as it led to underutilization of basic health services (Johnson and Stoskopf, 2009) driven by an increase in out-of-pocket payment per patient at the health facility (Biritwum, 1994).

The opportunity to charge fees created incentives for health facilities to generate profit through over prescription of drugs (Biritwum, 1994). Health facilities prescribed medicines that were profitable to facilities rather than alternative medicines that were equally effective for treatment but less profitable (Biritwum, 1994). Perinatal mortality was about 50 percent higher in the 'Cash and Carry' period compared to the period after the introduction of NHIS (Ibrahim, Maya, Donkor, Agyepong, and Adanu, 2016). Some districts introduced the DMHIS to address the inequalities in access to health care (Kwarteng, Akazili, Welaga, Dalinjong, Asante, Sarpong, Arthur, Bangha, Goudge, and Sankoh., 2019). This was however hindered by geographical access as subscribers could only access services in the communities in which they registered. Besides, most communities did not have such schemes (Waddington, and Enyimayew, 1990). Thus, the negative health outcomes of the 'Cash and Carry' scheme prevailed extensively among the population.

The introduction of the NHIS was seen as a timely intervention to ameliorate the burden of negative health outcomes (Schieber, Cashin, Saleh, and Lavado, 2012). The NHIS was an amalgamation of the various DMHIS that were already in operation (Kwarteng, Akazili, Welaga, Dalinjong, Asante, Sarpong, Arthur, Bangha, Goudge, and Sankoh, 2019). The NHIS started as a campaign promise by the then-presidential candidate, Kufuor, in 2000 (World

Bank, 2014), as a replacement for the 'Cash and Carry' system. This demonstrates the political dimension of the NHIS. Its establishment was a political campaign promise that had to be fulfilled (Wahab and Aka, 2021). The goal of the NHIS is to provide equitable access and financial protection for basic healthcare services to all residents in Ghana (NHIS, 2012). The NHIS was established by the National Health Insurance Act (Act 650), which was passed in 2003 and revised in 2012 (Act 852). The law also established the National Health Insurance Authority (NHIA) to oversee the activities of the NHIS. The NHIS covers about 95% of disease conditions reported at health facilities in the benefits package (NHIS, 2012). The benefits package, as defined by the scheme, includes the most necessary outpatient diagnostic and curative services, medicines according to the published list, inpatient services, emergency care, maternity care and oral health. The benefits package excludes services such as cosmetic treatments and some high-cost services such as most cancer treatment, renal treatment, organ transplants and parallel government programs such as TB and HIV/AIDS anti-retroviral medications (NHIS, 2012).

The NHIS was not initially designed as a mandatory scheme until 2012 when Act 852 required that enrolment be made mandatory. However, this provision has not been enforced and most of the population are still not enrolled on the scheme, partly due to the large informal base of the economy. While formal sector workers are enrolled through the payment of their Social Security and National Insurance Trust (SNNIT) contributions, informal workers are required to register and pay premiums annually. This could be a reason for the low enrolment and/or retention of informal workers. As argued by Otoo, Awittor, Marquez, and Saleh, (2014), the law is silent on the consequences of non-enrolment, neither does it automatically enroll residents, hence the scheme, while mandatory, is operating as a voluntary scheme. Those in the informal sector have a choice whether to join since they need to register and pay the required premium. Those who have not enrolled on the scheme continue to pay fees at the point of use at both government and private facilities (Otoo, Awittor, Marquez and Saleh, 2014). Recent estimates suggest that about 40% of the population is covered under the scheme (NHIA, 2020).

A key feature of the scheme is its financing structure, which is predominantly tax based: the National Health Insurance Levy (NHIL) provides about 74% of NHIS revenue, SSNIT deductions comprise another 20%, and premium payments provide 3% (Wang, Otoo, and Dsane-Selby (2017). The NHIL as a VAT has been shown to be progressive due to the exemption of many goods including agricultural goods, which are largely consumed by the poor (Akazili, Gyapong and McIntyre, 2011). The study further argues that the deductions of SSNIT contributions from the payroll for formal sector workers is progressive, but the contributions from the informal sector workers is regressive due to the flat premium for all (ibid).

All residents of Ghana, including non-citizens, are eligible to enrol in the NHIS scheme, even though not all of them are required to pay premiums and/or processing fees. Contributors to SSNIT do not pay premiums. This is because 2.5% of their contributions to SNNIT is used to support the scheme financially (Takyi, 2017). Besides, pregnant women, beneficiaries of the Livelihood Empowerment Against Poverty (LEAP) programme and indigents are completely exempted from paying premiums and processing fees. They do, however, need to register

and hold valid NHIS cards. Children below the age of 18 years and the elderly above 70 years are only required to pay processing fees and not premiums (NHIA, 2012).

How the NHIS system evolved

In every health insurance system, three important functions must be performed to ensure an effective and efficient health insurance system (NHIS, 2021). These are: how money is collected from residents and pooled to pay for services, what services are covered by the insurance or the benefits package, and how these services are purchased or paid for on behalf of the citizens who are part of the insurance scheme (the provider payment method) (NHIS, 2021). The third function is particularly important in this discussion, as this is also an important factor in the financial sustainability of the schemes. The provider payment method is the mechanism used to transfer funds from the purchaser of health care services to providers (NHIS, 2021). Three methods that have been used by the NHIS are the itemized FFS, the Diagnosis Related Groupings (G-DRG) and Capitation. The ability of each of these methods to induce the desired outcome of ensuring efficient and equitable use of resources depends on the various stakeholders whose behaviour differs depending on the type of payment method. Each of these has its own strengths and weaknesses.

The NHIS started with an itemized FFS system of reimbursing providers (Koduah, van Dijk and Agyepong, 2016). Under this arrangement, providers from both the public and private facilities listed the different services they provided for their clients and the cost of each service and requested payment from the NHIA. The advantage of the FFS payment method is that the provider has the incentive to deliver all necessary care. The disadvantage, however, is that since the provider is also the agent recommending services and owns the services due to the specialized knowledge, there is likely to be the provision of unnecessary services with the view of maximizing profit (supplier induced demand). This can lead to rapid inflation of costs and threaten the financial sustainability of health insurance.

This payment system in the NHIS was accompanied by cost escalation/cost inflation (Otoo, Awittor, Marquez., and Saleh, 2014; Agyie-Baffour, Oppong and Boateng, 2013; Debpuur, Dalaba, Chatio, Adjuik, and. Akweongo, 2015), due to significant moral hazard behaviours on the sides of both the subscribers and providers. For instance, a study reports behaviours such as multiple visits, impersonation, feigning of sickness to pick drugs for non-insured clients (Debpuur, Dalaba, Chatio. Adjuik, and. Akweongo, 2015). While such behaviours may not be directly driven by FFS, providers had no incentive to correct it because under the FFS, increased utilization represents more resources to the provider. On the part of the providers, Debpuur, Dalaba, Chatio, Adjuik, and Akweongo (2015) reports behaviours such as over charging for services provided to clients, charging clients for services not provided, and over prescription. Claims cost during the FFS era, 2005-2008, for example increased from GHc7.6 million in 2005 (Wang, Otoo, and Dsane-Selby, 2017) to GHc154.94 million in 2008 (NHIA, 2009). This was driven mainly by the high rate of utilization that drove the average number of claims per subscriber to increase by 524.1 percent during that period (Wang, Otoo, and Dsane-Selby, 2017).

Another challenge with the FFS payment system was to do with the nature of the scheme. As previously mentioned, the NHIS was an amalgamation of various district mutual health insurance schemes (Kwarteng, Akazili, Welaga, Dalinjong, Asante, Sarpong, Arthur, Bangha, Goudge, and Sankoh, 2019). There was, therefore, no agreed uniform rates of reimbursement, hence each of the district schemes negotiated with their providers itemized fee rates for services, consumables and medicines. This led to growing concerns over inefficiencies related to random price variations for the same procedures and consumables, cumbersome billing and claim vetting procedures and cost escalation (Koduah, van Dijk, and Agyepong, 2016). The fragmentation of the schemes weakened the bargaining power of the NHIS in negotiating with providers for competitive and efficient prices. The lack of standardization contributed to cost escalation with serious consequences for the financial sustainability of the Scheme. During the fee-paying period 2005-2008, for example, the cost per claim increased by 51.4 percent (Wang, Otoo, and Dsane-Selby, 2017).

Because of the challenges of cost escalation associated with the FFS payment method, in 2007/2008 the NHIA introduced the G-DRG for both outpatient and inpatient services and standard itemized fees for medicines for NHIS clients (Takyi, 2017). There are about 500 G-DRGs, including bundled payment for outpatient services (Otoo, Awittor, Marquez, and Saleh, 2014). In this revision, services were paid for under the G-DRG, while medicines remained under the FFS system, but this time with uniform prices negotiated by both the NHIA and the providers, both public and private, to ensure that the issues of controversy and uniformity that was a source of confusion under the FFS method, were dealt with. This helped in restraining costs compared to the FFS schedule earlier practised under the scheme. Under the G-DRG, payment rates to providers were fixed for a given group of diagnoses that required similar services. In the G-DRG payment method, related diagnoses were grouped and the cost of treatment in that group determined. Providers were therefore paid according to the diagnosis group into which their services fell (Otoo, Awittor, Marquez, and Saleh, 2014).

The tariffs for each G-DRG group were set through a combination of a costing exercise and negotiation with providers. For inpatient services, the payment included cost for the average length of stay as computed by the NHIA. In the case of outpatient services (OPD), the NHIA was unable to set tariffs based on average numbers of visits due to strong opposition from providers (Otoo, Awittor, Marquez., and Saleh, 2014). Instead, the outpatient service bundles contained the cost of services per visit (Ibid) similar to FFS. Providers were supposed to receive a fixed amount for providing the bundle of services. Where the provider was unable to deliver certain services such as a diagnostic test, the patient was referred to another facility. In this case, the service for the visit was unbundled and payment made according to services provided in a facility on a FFS basis. There remained some "unbundled" services that paid separately through FFS, and all medicines were paid under FFS (Otoo, Awittor, Marquez., and Saleh, 2014). Given that medicines accounts for about 50 percent of NHIS spending, separating it from the bundle had the potential of major cost escalation (KI1).

Even though the increase in number of claims per subscriber reduced to 13 percent under the G-DRG, the rising costs and complicated claims management process both for providers and the NHIA staff meant that this was not a financially sustainable alternative to the FFS (Otoo,

Awittor, Marquez., and Saleh, 2014; Takyi, 2015). In 2009, for example, the total cost of claims, which forms about 77.7 percent of total cost, increased by 151.3 percent, while the total income of the NHIA increased by 18.6 percent, compared to that of 2008 (NHIA, 2009). The NHIA recorded its first deficit in 2009 and has not recorded a surplus since then (Wang, Otoo, and Dsane-Selby, 2017). The rising costs were mainly driven by an increase in the number of subscribers by about 139.2 percent during 2008-2011 (Wang, Otoo, and Dsane-Selby, 2017). By 2011, membership increased to 8.22 million, forming about 32 percent of the population (NHIA, 2011). In addition, similarities between the designed G-DRG for OPD and FFS under the influence of the providers, as well as the frequent need to unbundle services, contributed significantly to the cost escalation (KI1 & KI2). OPD claims, even at the implementation of the G-DRG, accounted for about 90 percent of total NHIS claims volume, over 70 percent of total claims costs and 30 percent of total costs (Otoo, Awittor, Marquez., and Saleh, 2014). Furthermore, between 2007 and 2009 the average outpatient claims increased by nearly 50 percent (KI1). Thus, the G-DRG payment system did not succeed in containing costs, particularly for outpatient services.

The continued rising costs and cumbersome processing of claims led to delays in processing claims, and these were matters of concern to the NHIA (KI1). The law establishing the NHIS, Act 650, requires that claims are paid within three months of receipt (NHIS, 2003). Unfortunately, there were significant delays in the payment of claims due to the cumbersome nature of processing claims by the Authority as well as the increase in the membership (KI4 & KI6). Besides, medicines at all levels remained under itemized FFS the agreed price list (Ibid).

The NHIS was also concerned about the high transactional costs in the processing of the bulky claims. Clinical audits at facilities and DMHIS offices suggested that a significant percentage of the fraudulent activities and leakages within NHIS occur at outpatient facilities, with providers billing for multiple visits that did not occur (Mensah, 2010). This is due to the fact that the G-DRG system encourages three visits per illness episode for the purposes of ensuring quality (Mensah, 2010).

In response to these challenges, the NHIA piloted a capitation payment method in the Ashanti region for primary health care level of outpatient care and reserved G-DRG for inpatient services and higher levels of care, while using itemized fee for medicines (KI1). It must be stated that the law (LI 1809) that established the NHIS in Ghana provided for the institution of multiple payment methods including capitation. Under the capitation system, each subscriber is able to select a preferred provider. Providers are paid a pre-determined fixed rate per subscriber to provide a defined set of services for each individual enrolled for a fixed period of time (NHIS, 2021). The amount paid to the provider is irrespective of whether that person seeks care or not during the designated period. The fixed amount is typically expressed on a per member, per month, basis for NHIS subscribers assigned to the accredited providers (Ibid). This means that the cumbersome process of claims processing and delays in claims payment is reduced, and cost can be contained in the system (Ibid). Capitation also aimed to increase efficiency in the provision of service since providers have the incentive, under the capitation system, to minimize cost to increase their revenue (KI3). The rest of this study focuses on the design of capitation, and on factors affecting the implementation of capitation.

Section B: Capitation

A key focus of the Government of Ghana, as far as providing affordable care and making health care accessible to all, revolves around an efficient health system (KI2). The decision to choose among the various payment mechanisms should be premised on the objectives of the healthcare system and should be consistent with the broader goals of the health financing and delivering system (Ibid). In this instance, the objectives of the capitation for the NHIA (NHIS, 2021) are as follows:

1. Improve cost containment
2. Share financial risk between schemes, providers and subscribers
3. Introduce managed competition for providers and choice for patients (compatible with portability) to increase the responsiveness of the health system
4. Improve efficiency and effectiveness of health services through more rational resource use
5. Correct some imbalances created by the G-DRG (e.g., OPD supplier-induced demand)
6. Simplify claims processing
7. Address difficulties in forecasting and budgeting (NHIS, 2021)

Some of the key informants, KI1-K3, and K9, identified advantages of capitation including the ability of capitation to contain costs as providers are incentivised to reduce unnecessary utilization. Under capitation, providers receive a fixed fee per patient regardless of his or her health outcome. Providers have an incentive to minimize the cost of treatment to retain excess funds. In addition, providers benefit when their clients are in good health and so are incentivised to improve the quality of care if it is cost minimizing to do so. Some informants argued that under capitation, the system would ensure the efficient use of resources because providers, upon receiving the capitated amount for the population under its catchment, can minimize costs by engaging in preventive health care to reduce disease incidence and therefore reduce costs of treatment. Further, given that providers are aware that the amount of money paid as capitation to facilities depends on the numbers enrolled, and that the subscribers are free to change provider, the system ensures that there is an improvement in quality of services rendered to prevent the loss of subscriber base. The use of PPP implies a gatekeeper system that prevents subscribers from seeking PHC from higher level health facilities and attract higher tariffs for the NHIS.

KI9 also argued that incentives from capitation could induce the efficient use of resources and hence help to improve the health system. Because payment is fixed it is much easier for the NHIS to predict its expenditure with greater accuracy than under the G-DRG. All these combine to make capitation a very attractive method of provider payment. However, the question that is being asked in this study is whether these objectives were achieved and to

what extend did stakeholders contribute to its success or failure. To be able to answer such questions a good examination of the design is imperative.

Design of the capitation system

According to KI3, the decision to move to capitation was made by the NHIA who received support for design and implementation from the World Bank Group. The design of the payment method was undertaken by a multi-stakeholder Provider Payment Mechanism Technical Steering Committee (PPM TSC) with health financing, implementation expertise and authority to design the capitation policy. The members of the committee comprised officials of the NHIA, Ministry of Health, Ghana Health Service, Christian Health Association of Ghana, Korle Bu Teaching Hospital and a national representative of the Society of Private Medical and Dental Practitioners (Koduah, van Dijk and Agyepong, 2016). The committee met through June 2010 to December 2011 to brainstorm the specific objectives and the design of the payment scheme, and to oversee the pre-implementation work related to the pilot (MoH, 2013). As shown in MoH (2013), the design of the capitation has seven technical components:

1. Package of services that are covered by capitation
2. Providers accredited to provide services under the PPP
3. Base per capita rate
4. Adjustment coefficients
5. Enrollment/registration
6. Financial management and reporting system
7. Quality monitoring system

Package of services covered by Capitation

The original design of the capitation system covered a defined package of primary care outpatient's diagnosis that can be found in any walk-in outpatient department (MoH, 2013). The content of the original package included OPD consultation with a trained primary care prescriber, primary maternity care services (anti-natal, normal delivery (including episiotomy), and postnatal care), basic laboratory tests that can be carried out anywhere because of the availability of rapid diagnostic tests, routine maintenance care for non-insulin dependent diabetes and hypertension (ambulatory care sensitive chronic conditions), and the basic medicines needed to treat the conditions in the package. The diagnostic tests included urine routine examination, B/F for Malaria parasites, Hb, Blood Sugar, Urine for a pregnancy test, Blood for VDRL (Ibid). Access to services beyond the defined package, whether specialist OPD care or inpatient care, was to be by referral and paid for by the G-DRG for services and itemized fees for medicines (Ibid).

However, after engagement with providers, the package was altered. All maternity services were removed from the package for two reasons. First, small health facilities such as maternity homes that offer only maternity services are not likely to be selected by subscribers since such facilities would not be capable of providing other services in the package (KI4 & KI5). These providers could not participate in the capitation and would lose their business. Second, adding maternity care to the capitation package could decrease the quality of

maternal care and increase maternal mortality (KI2). This was not consistent with the government's program to achieve the Millennium Development Goal 5 to reduce maternal deaths (KI2). Medicines were also removed from the package and paid for under FFS. The main reason for this was, again, due to the inability of the health sector to enforce separation between the services of prescribers and dispensers (KI7). The Pharmaceutical Society of Ghana opposed the inclusion of medicine in the package arguing that the inclusion would collapse community practice pharmacy (KI7 & KI8). Including medicine in the package would give health facilities an incentive to prescribe and dispense at the same time and hence disadvantage pharmacists (KI7 & KI8).

Provider Eligibility for Participation

All NHIS accredited health facilities in the piloted region that could provide the services in the package were deemed eligible to participate in the capitation (KI9) including community-based health planning and services (CHPS) compounds, health centres, polyclinics and district hospitals (MoH, 2013). The PPM TSC undertook a facility mapping exercise which showed high variation in the capacities of the existing health facilities (MoH, 2015). There followed a discussion of introducing a group practice of providers. According to the group practice guideline, eligible providers could either be a single institution or a group of providers that could provide all the services in the capitation package (MoH, 2013). Under the group practice concept, a group manager would receive the capitation fee and disburse funds according to an agreed disbursement process (Ibid). The group would then be accredited as a single provider on condition that it was able to demonstrate the ability to manage the group (Ibid). The group practice was, however, not implemented during the pilot because of a lack of information on the capacities of the health facilities before the deadline for the implementation of the reform (MoH, 2013). All providers were therefore accredited as single providers.

Calculation of the base per capita rate

To calculate the per capita rate, historical data was used by the committee to compute an average rate, which was applied to all providers. They used a combination of a top-down/bottom-up method to calculate the base per capita rate after examining available utilization, population and revenue data from Ashanti Region and Ghana (MoH, 2013). It was decided that because actual claims may be inflated due to supplier-induced demand, the calculated base per capita rate may be adjusted downward. Alternatively, if the utilization of PHC services was still low given the built-in inflation of the claims, the rate could be adjusted upward. The rate was computed using historical data from the NHIS (MoH, 2013).

The PPM TSC also considered the ownership of the facilities in arriving at the base per capita rate. The health sector has three types of providers by ownership: public health facilities subsidized by the government and under the Ghana Health Services, mission hospitals which receive some financial support from government (but not for infrastructure), and private health facilities which receive no support from government. Each of these comes with its unique characteristics and financial incentives (MoH, 2013). The private health facilities receive no subsidy for human resources, other recurrent expenditure or infrastructure

development from the government. Similarly, the mission facilities only receive a subsidy in the form of secondment of staff on government payroll but does not receive any subsidy for infrastructural development (KI5). It was also recognized that though the public sector receives support from the government for infrastructure development, the amount of subsidy was much less than the actual needs, making the public sector facilities very reliant on internally generated funds (KI6). Given these considerations, the capitation rates were calculated separately for private facilities, mission facilities and the Ghana Health Service quasi-government facilities (MoH, 2013).

The per capita rate is the average rate per person who has chosen a particular PPP and has been enrolled. Hence, the per capita rate is based on active NHIS subscribers and therefore different from the per *encounter* rate based on actual visits to a provider by active NHIS subscribers (Cashin, 2014). The denominator for calculating the two rates is different. Calculation of the per capita rate was based on historical data on the total outpatient claims in the Ashanti region (Cashin, 2014). Under capitation, the total cost of providing care under the defined basket of services was divided by the total number of subscribers registered with the PPP. The per capita rate arrived at was GHC 1.75 (USD 1.03) per capita per month. This amounted to GHC 21 (USD 12.36) per annum for each subscriber enrolled with a PPP to cater for only OPD cases that were included in the capitation basket, whether the subscriber used the services or not (Cashin, 2014). Since providers were to be paid in advance, monthly, for all subscribers enrolled with the provider, irrespective of whether they fell sick and seek medical care, the capitation amounts were based on enrolment and not encounters or visits. It is also important to note that the per capita amount was calculated based on payments for outpatient services at the time and covered outpatient non-specialty cases only (Cashin, 2014). The initial per capita rate calculated was adjusted upward by 22% to cater for the interim tariff increase announced by the Minister of Health and implemented in July 2011 (Ibid). Providers were to be reimbursed for all OPD specialty cases not included in the capitation basket as well as all inpatient cases under the G-DRG (Ibid).

The capitation rate was reached after negotiation with service providers that led to the exclusion of antenatal and post-delivery care and the reversion of payment for medication to the itemized FFS as a compromise to be able to carry out the planned implementation (Aboagye, 2013). Following these negotiations, the capitation rates were adjusted as USD 0.35 per subscriber registered with government health institutions per month, USD 0.46 per subscriber with the Mission facilities, and USD 0.65 to Society of Private Medical and Dental Practitioners (SPMDP) members and other private providers (Aboagye, 2013). However, after much agitation for higher capitation rate the NHIA announced increases in the capitation rates that would take retrospective effect to January 1, 2012. The new rates announced were USD 0.58 for government health institutions, USD 0.79 for Mission facilities, and USD 0.84 for SPMDP members and other private providers (Aboagye, 2013).

Adjustment Coefficients

In the design of the capitation payment the PPM TSC agreed that there were two ways of paying the capitation amount; either they pay the base rate, or they pay the risk-adjusted rate. This is because the capitated payment recognises that some individuals enrolled with a

provider will be costlier than others, considering risk factors and other associated conditions (Rice and Smith, 1999).

In the design of the scheme, risk adjustment coefficients were intended to be added to compensate providers for variations in the expected costs of treating different population groups, including age/sex groups, chronic disease status, historical medical expenditures, or other factors that may be associated with expected individual cost variations and use of health care services at a rate higher than the average expected rate (MoH, 2013). Geographic adjustment coefficients were also meant to be developed if there were significant cost variations for delivering the same package of services in different locations, such as rural areas where fixed costs may be higher (MoH, 2013). Other adjustments to the per capita rate could also be added to achieve specific policy objectives, for example, to provide additional resources or incentives to focus on priority services or populations. However, given data challenges, the NHIA decided to use only the base rate and gather data in the process to enable the authority to develop the risk coefficients that could be used for such adjustments. The NHIA acknowledged that they did not possess the necessary data for such adjustments at the implementation stage of the pilot program, and hence proceeded without incorporating any adjustment coefficients at the pilot stage (MoH, 2013).

Enrollment/registration

Enrolment refers to the process by which a client is linked to a PPP. There are two ways of linking clients to a PPP; random assignment by the authority based on location and closeness of health facility or voluntary assignments where clients are asked to choose their preferred providers (MoH, 2013). In other words, individuals can be enrolled with providers through (1) administrative assignment (e.g., catchment areas); or (2) open enrollment (free choice). The transparency and organization of the enrollment process are critical to its credibility, so clear regulations needed to be developed and communicated to PHC providers and the population (MoH, 2013). Under the Ghana capitation model, clients were asked to voluntarily choose their PPP (MoH, 2013). That is, the enrollment systems designed used an open enrollment to register individuals with PHC providers; NHIS subscribers were asked to select their PHC provider at the time of enrollment. They had the chance to change provider twice a year. Thus, after six months, the clients are free to change the PPP if need be and payments will be redirected to the new PPP (MoH, 2013). At the registration point, clients were asked to make a first, second and third choice of PPP. This was to ensure that if for any reason they could not be tied to their first choice PPP, it would be clear to which new PPP to tie them (MoH, 2013). The implementation of the capitation system relies heavily on the enrollment of individuals with the provider for a fixed, defined period since payment is tied to the client being tied with the provider. A system was needed to carry out the enrollment registration process and to establish, maintain, and update the individual enrollment database after each enrollment registration period (MoH, 2013).

It is important to note that the enrolment of clients to providers must be seen as a transparent process (Gingong, 2015). Enrolment is important to providers because it is the number of enrollees that informs their total capitated amount per month. For the subscriber, a transparent enrolment system will foster trust and confidence in the provider (Ibid). In the

case of the NHIS, it leads to greater satisfaction of the subscriber thus making the more likely to renew upon expiry (Ibid). There was also the need for the NHIS to facilitate the process of enrolment to ensure all its subscribers had access to facilities when necessary. Thus, it is important for all three groups to show interest in the enrolment of subscribers for capitation (Ibid). Providers who do not show interest in enrolment may end up with low numbers but high utilization rates if their enrolees are sick. When subscribers do not voluntarily pick their PPPs they risk being allocated to one that they might not prefer by the NHIS (Ibid). Data on enrolment must be consistently cleaned and shared with providers to limit suspicion and possible faulty membership (Ibid).

The PPM TSC (MoH, 2013) reports of providing a draft enrollment regulation which covered:

1. The roles and responsibilities of schemes, providers, and subscribers
2. How portability will be maintained/managed
3. What choice individuals have in emergencies and how those providers will be paid
4. Length of period (how long will a person be assigned to a provider before allowed to choose again)
5. Maximum number of enrollees per providers
6. How to assign individuals who do not choose their provider themselves

The PPM-TSC acknowledged the potential gains from open competition between providers in terms of improving the quality of services, but were also careful to admit possible negative effects, particularly for public facilities if they do not receive support to upgrade their services (MoH, 2013). Many providers, especially in deprived areas needed assistance to improve the base range and quality of their services, personnel, equipment, and infrastructure in advance of the pilot, to participate competitively in attracting subscribers (Ibid). Moreover, in very deprived /remote areas, public providers were likely the only immediate option available to clients to enrol with as their PPP. The committee, therefore, agreed that there was the need to support facilities to upgrade by acquiring staff and equipment to ensure that the basic services defined in the capitation basket could be provided (MoH, 2013). This, however, needed to be done together with the Ministry of Health and the NHIA. Unfortunately, this did not happen as communication with the Ministry of Health was poor and their representative on the PPM TSC dropped out without providing any reasons for such actions (KI2; MoH, 2013).

The system was designed to ensure managed competition across providers, implying that public providers would not be fully exposed to competition (MoH, 2013). Should public facilities not be able to enrol enough subscribers, they would not be closed but, instead, receive government support to operate (Ibid). It is also important to note that under the capitation payment system, services beyond the primary care package were only paid for if the client was referred by the PPP by filling in a standard National Health Insurance referral form (MoH, 2013). Bills from accredited non-primary care providers would only be reimbursed if accompanied by the standard referral form as evidence that the client first passed through the PPP (MoH, 2013). This is where the gatekeeper role became important to ensure the success of the capitation system.

Financial management and reporting system

The implementation of the capitation system of payment required that PHC providers understood the incentives in the system and had the capacity to rationally plan and use available resources to improve their services and attract enrollees (NHIS, undated). The pilot was required to test different approaches to training and tools for providers to manage their resources and services. Clear and unambiguous common management arrangements for the NHIA, district schemes and providers on the implementation of capitation were also needed (MoH, 2013). There was also the need to examine the implications of the capitation arrangements for the existing financial reporting and accountability systems of the NHIA, providers and the district schemes, and to make sure that appropriate general and financial management arrangements were developed, agreed upon and put in place (NHIS, undated).

The PPM TSC provided draft guidelines for a financial management and reporting system. They also developed training modules for providers on the financial and other management changes that the capitation payment system would introduce (MoH, 2013). To do this, they needed to carry out a situational analysis of the human resources capacity, to determine the kind of support providers needed to upgrade existing internal management systems or develop and implement new systems (Ibid). These were support services to ensure proper and efficient management of resources from the capitated payments and ensure effective utilization of the revenues or monies received to provide services for the clients of the provider (Ibid).

Quality monitoring system

The capitation system can create incentives for providers to reduce the quality of care in a bid to maximize profits from the capitated amount. Providers may have the incentive to enrol more patients beyond their capacity and hence reduce the time and intensity of treatment (Torrey, 2020). Alternatively, it is intended that capitation encourages providers to shift towards less expensive health promotion and disease prevention activities, making the clients within their catchment more healthy and reducing the use of health services, thus increasing profits on the capitated amount (MoH, 2013). As reported by K2, there were reports of a couple of providers who engaged in such activities during the pilot. However, depending on how resources were managed, the shift could mean a reduction in resources available for the provision of quality care to patients, which may have adverse effects on the health of patients or may cause the NHIS to lose subscriber base due to dissatisfaction with the services provided. All these meant the need to put in place a quality monitoring system (Ibid).

Hence, checks and balances are needed in the capitation system to ensure that resources are devoted to maintaining quality and access to necessary services. A monitoring and evaluation system was designed by the PPM-TSC which involved the use of indicators to measure the impact of capitation on trends in quality of care, utilization, access to healthcare, cost containment, and provider experience (World Bank, 2011). The indicators used included changes in referral rates within higher level facilities (MoH, 2013). The data for the indicators mainly came from NHIA claims, expenditure and enrolment data, District Health Information Management System data, and GHS/MoH health facility expenditure data (MoH, 2013). The

committee decided that although claims data were no longer necessary for calculating reimbursement under capitation, it was advisable to require providers to continue submitting claims data for the computation of the monitoring indicators (Cashin, 2014). Some new data collection was also supposed to be initiated including a provider survey and patient focus group discussions (World Bank, 2011). This was to enable close monitoring of the capitation payment system for intended and unintended effects and provide information for continuous quality improvement. However, the monitoring and evaluation system was not adequately implemented and so could not provide timely information and rapid responses (Cashin, 2014).

Section C: Impact of Capitation

In this section, we focus on the impact of capitation on the targeted areas that led to the introduction of the reform namely quality of care, utilization, and efficiency. The section has two parts. The first part focuses on the effect of capitation on quality of care, utilization, out of pocket payment, and the cost of care in accordance with the literature. The second part focuses on factors that enabled or hampered the success of capitation.

Evidence of effects of capitation from the literature

The first part of the section focuses on evidence of the impact of capitation on quality of care, utilization of care, and efficiency in the health sector of the piloted areas. Information here is only based on the literature.

Capitation and the quality of health services provided

One important aspect of the capitation policy is the impact on the quality of services received. The argument in favour of capitation for quality is that providers have an incentive to improve quality of care per visit in order to reduce unnecessary utilization and increase profit (James and Poulsen, 2016). Such quality should include both clinical quality, such as safety, timeliness, and health gained from care which may be unobservable; or waiting time, staff availability, the comfortability of the environment, and staff attitude towards patients which are observable. There are limited studies on the impact of capitation on the quality of care. Andoh-Adjei, Cornelissen, Asante, Spaan, and Velden (2016) suggest that subscribers still maintained a high level of trust in their primary care provider giving them quality care under capitation payment despite their negative attitude towards capitation payment. However, in a study that compared quality perception across regions, Andoh-Adjei, Nsiah-Boateng, Asante, Spaan and Velden, (2018b), showed that the perception of quality of care by both providers and subscribers was lower in the Ashanti region, the pilot region, than the other two regions in the study, implying that capitation must have lowered perceptions of quality.

With the exception of perceived quality, there has not been much work done on the unobservable quality such as safety, efficiency, and timeliness in the use of treatment inputs. The possible competition among providers that is driven by capitation could improve the

quality of care indicators that are observable. However, Siita, Cox, Hanson (2019) argue that capitation in Ghana may not have been able to induce competition as anticipated since most areas, particularly rural settings, did not have any alternative providers to fall on when patients were not satisfied with the service. The authors highlight a need to introduce a quality benchmark to ensure some minimum level of quality of services are guaranteed. Much more work is therefore needed to assess the impact of capitation on clinical quality such as effectiveness of treatment. This is important because it will inform policy makers on the need to include maternal care in the capitation package.

Capitation and out of pocket payments

Another important impact of capitation policy is on out-of-pocket payments, especially in Ghana's case where there was some confusion among providers on the difference between per capita payment and per treatment payment. Siita, Cox and Hanson (2019) examined the impact of capitation on out-of-pocket expenditure and perception of service quality among insured clients in both the capitated region (Ashanti region) and the non-capitated region of Ghana. The study showed that NHIS insured clients exposed to capitation had 10 percentage points higher probability of encountering out-of-pocket payments than their unexposed counterparts. These, the authors suggested, are likely to be informal charges by providers. The authors argued that while it is possible that these could be payments for other services not covered under the scheme, the NHIS covers 95% of disease conditions in Ghana, and does not practice balance billing nor does it have co-payment. Hence, the out-of-pocket payments of clients in the capitated region are more likely to be informal charges by providers. Providers therefore received higher payment for treatment than what had been agreed with the NHIA. The study then drew attention to the possible inefficiencies caused by the capitation and, hence, its inability to contain cost. This is contrary to the general expectations of capitation that the tendency for capitation to reduce unnecessary care could reduce out-of-pocket payment.

Capitation and utilisation rates

Another important aspect of the capitation system is the impact on utilisation of services at the health facility. While providers were paid per head at the start of the period, their profits are based on the rate of utilisation of services. Andoh-Adjei, Boudewijns, Nsiah-Boateng, Asante, Velden, and Spaan (2018a), used survey data from 2010 to 2014 from the Ashanti, Volta and Central regions of Ghana to examine the pattern of claims expenditure and utilization before and after the piloting of the capitation in the Ashanti region. The authors report that there was growth in utilization of outpatient services in both the period before and after the introduction of capitation in the Ashanti region, even though growth in utilization in the period after the capitation was slower. The authors further report that utilization in the Ashanti region exceeded those of the other two regions before the capitation but find no significant difference in utilisation after the introduction of the capitation. The authors concluded that capitation could have marginally reduced healthcare utilization rates.

Factors enabling or hampering the success of the reform

In this part of Section C, we explore the various factors that either hindered or served as enabling factors to the implementation of the capitation scheme in the Ashanti region. We consider issues related to the health system and political actors. We also consider the roles played by various interest groups, economic factors and social factors, that either served as factors enabling the implementation of the scheme or hampered the progress of the implementation of the scheme.

Health system factors

Effect of Health Facilities Capacity Variation on PPP Formation

As part of the preparation for the implementation of the reform, a mapping of all the facilities was undertaken and the results showed the existence of high variation in the capacities of the health facilities (MoH, 2015). According to the results, only 25 percent (106 out of 424, i.e., excluding maternity homes) of the health facilities qualified to operate as stand-alone PPPs, if the presence of a physician or a medical assistant, a nurse or midwife, a dispensing technician, and a community health nurse at the facility were required. (MoH, 2015). This implied that the remaining 318 health facilities needed to form group PPPs in order to operate under the capitation. By relaxing the condition for provider participation to include facilities who had at least a nurse present for consultation, the qualified stand-alone PPPs increased from 106 to 324 representing 76.4 percent of all facilities. The remaining 100 facilities were therefore expected to operate as group PPPs and be governed by group managers who would determine the distribution of the capitation fee. However, during implementation all facilities, whether or not they could provide all the capitated services, were accredited to operate as stand-alone (MoH, 2013). This approach was used because the mapping information was not disseminated early enough for the PPM TSC to use for the implementation (MoH, 2013). This means that in urban areas where there are large numbers of facilities, the facilities that could not provide all the services must have had lower enrolment rates than those with larger capacities. According to KI3, KI9, and KI10, people are likely to view the facilities with more capacities to be capable of providing quality care than the smaller ones.

Allowing the 23.5 percent (100 out of 424) of facilities to operate as single PPPs, even though they did not qualify, must have posed problems that could have impeded the ability to achieve the objective of the reform. First, these facilities received the same capitation fee per subscriber as those facilities belonging to the same ownership category, that were fully equipped and fully staffed to provide all the capitated services. All things being equal, facilities that were not fully equipped or fully staffed, especially CHPS, (MoH, 2013) were likely to refer patients to other facilities for capitated services. It is therefore possible that referred capitated services were paid for under the G-DRG payment system in accordance with the payment method for referrals. Second, the health facilities that were fully qualified to operate as full PPPs must have been motivated to increase referrals to shift cost to secondary care facilities (indirectly to the NHIS) when they observed other providers offering fewer services at

the same fee. Thus, allowing facilities who did not qualify to operate as stand-alone PPPs to operate as such must have increased the cost of treatment for the capitated services and hence weakened the ability of capitation to contain costs. A cost containment approach would have been to either implement the group PPP concept or calculate capitation rates according to the capacity of the facilities and compute additional rates for referred capitated cases. However, there has not been any study on the impact of the variation in capacities on the ability of the reform to contain cost. Such a study will be very useful.

The concept of group practice appears to be a good solution to the high variation in the capacities of facilities. However, its implementation, given the nature of the health sector in Ghana, would have been challenging. The facility type that is least likely to qualify for PPP is CHPS compound which are publicly owned (MoH, 2013). These facilities are in rural areas and are often isolated, serving several rural communities (Ibid). CHPS are therefore geographically far apart, making it difficult, if not impossible, for a patient who does not receive a service in one CHPS to travel to another CHPS. Forming a cluster of PPPs of CHPS as group PPPs, or linking them with more equipped health facilities, may not be feasible due to geographical reasons. The government then may have to equip all CHPS to qualify as PPPs if the capitation is to be reintroduced.

Given that PPP is fundamental to the functioning of capitation, it may be important for the health sector to be organized accordingly. Currently, the health system lacks comprehensive information on all the health facilities that exist and their capabilities. As explained, information on the variability in capacities of health facilities is very important for the success of capitation in containing costs. Knowledge of the capacities of the health facilities is important in determining the capitation package. When there is high inequality in facility capacity, the capitation package that is feasible in every facility may be too narrow to generate enough efficiency gains. Thus, for successful implementation of capitation, the requirement for accreditation of health facilities could be improved to ensure that the lowest level health facilities are able to provide a significant percentage of primary care services. Strong collaboration between the NHIA and the Ministry of Health is therefore needed to ensure a capitation friendly health system.

Providers Bargaining Power

As already mentioned, before the introduction of the NHIS, the Cash and Carry payment mechanism was a FFS payment method. This method of payment seems to be the preferred method to providers, and they tend to resist any payment method that deviates from the FFS principle. At the introduction of the NHIS, there was no report of providers resisting the FFS method of payment which was not financially sustainable. However, there was a strong resistance at the introduction of the G-DRG until the NHIA compromised to alter the bundled fee to a fixed FFS per visit (Otoo, Awittor, Marquez, and Saleh, 2014).

Providers showed similar resistance at the introduction of the piloting of capitation. At the start of piloting capitation, there were several agitations and protests from providers. Despite repeated explanations, many public and private sector providers interpreted and presented the monthly per capita rate as a per client encounter rate (MoH, 2013), which means two

different things. The per capita rate is paid to the PPP monthly whether the person visits the hospital or not. A per-client encounter on the other hand is how much is paid at each visit. The provider fought to avoid the cost sharing role they play with capitation. By moving the rates to that of per encounter, providers were able to push all risk unto the NHIA and hence reduce the incentive to minimize cost. According to a KI3 & KI9, the effect on subscribers and massive negative media reportage led to a crisis, with providers demanding a higher fee per capita. The crisis was made more acute by the fact that 2012 was an election year, making the government very sensitive to any form of social unrest (MoH 2013). In response to the agitations, there were major compromises by the Ministry of Health (MOH) and the NHIA, leading to a drastic watering down of the original package of services and increasing the per capita rate by 22 percent (MoH, 2013).

Thus, providers in the NHIS have a strong bargaining power. This bargaining power goes beyond the capitation and has significantly affected the implementation of the two cost containment payment methods, G-DRG and capitation, that have been introduced in the system. The NHIA needs to come up with some communication strategies to direct such strong bargaining power of the providers to the interest of the NHIA.

Payment Delays from NHIA

Another important factor that made capitation less attractive to providers was NHIA's frequent delays in paying the capitation tariffs on time. The NHIA had been notorious for delays in paying providers' claims, with some providers even threatening to withdraw services for NHIS patients (Ghanaweb, 2020). Thus, the aspect of capitation that was supposed to be attractive to providers was that the per capita tariffs are paid at the beginning of the period, which in the case of Ghana, is one month, and hence no delays in payment were expected. However, there were reports of delays on the part of the NHIA. As KI4 and KI9 argued that the private health facilities and even some of the public facilities had to charge fees from subscribers to remain in business. Since the capitation tariffs are necessary for the survival of facilities, the delays from the NHIS induced the charging of user fees and weakened the ability of the capitation to contain costs. Even if the delays were not frequent, the possibility of its occurrence created opportunity for rent seeking providers to cash in by charging fees, defeating the very purpose of the NHIS. The NHIA thus needs to commit to its role of paying providers at the agreed time.

Political economy factors

Actors

There are three main political actors whose interests appear to have played a very important role in the design and implementation of the reform, as well as its ability to contain costs and ensure efficient utilization of resources. These actors are the NHIS, health care providers (including provider groups), and the government.

The NHIS has the mandate to implement the reform within a given time and it was not in its interest to cancel the reform. The PPM TSC observed during the planning stage that the preparation was not adequate for proper implementation. For example, the data collected from facility mapping was not put to its logical use of including group practice; however, the NHIS set the deadline for implementation irrespective of the readiness to implement a plan that could achieve the purposes (MoH, 2013).

Providers, as already explained, resisted the planned reform to ensure the implemented reform favoured them. Hence, maternal care and medicines were removed from the package. The inclusion of maternal care did not favour maternity homes who are not likely to be selected as PPP since they do not provide any of the services in the package apart from maternal care. Medicines were also removed, according to KI8, because the Ghana Association of Pharmacists threatened to sue the NHIA should medicines be included. The inclusion of medicines in the package disadvantaged pharmacists because the health system has not succeeded in separating prescription from dispensing. Additionally, providers were able to negotiate for higher capitation tariffs. In the end the NHIS compromised to a watered-down policy (MoH, 2013) that was not adequate for significant cost containment.

The government plays an important role in ensuring availability of information on the capacities of the existing health facilities. Without this information, the formation of PPPs needed for the gatekeeper system was inadequate. The government's inability to meet the financial requirement to provide such information before the pilot, made it impossible to implement the group PPPs and resulted in some unqualified health facilities operating as stand-alone PPPs. In other words, Government did not put enough priority on the implementation of the capitation in its budget allocation. The collaboration of these actors is important to ensure that the approach for implementation of the reform ensures achievement of objectives of the reform.

The choice of Ashanti Region

According to the NHIS, Ashanti region was chosen for the pilot capitation scheme because it had about 20 percent of the membership but contributed to about 30 percent of the total claims cost (Mensah, 2010). The Greater Accra region on the other hand, formed about 15% of the total membership, but accounted for only 17% of the total payments. One of the interviewees, KI1, revealed that while the provider characteristics and population dynamics of the Ashanti region and Greater Accra were similar, the Ashanti region recorded on average a higher cost and therefore the NHIS suspected possible leakage in the Ashanti region.

Another reason for the choice of Ashanti region, according to KI2 and KI3 was that the Ashanti region is a typical Ghanaian region with a good balance of the various categories of health facilities in the health sector according to ownership and service. The region is centrally located in the country, with urban, municipal, and rural populations and a wide variation in socio-demographic and socio-economic conditions from the highly sophisticated urban metropolis of Kumasi to parts of the rural, hard to reach and under-served Afram plains. The rationale was that overcoming challenges during piloting in the Ashanti region would enable the NHIA to roll out the reform to the rest of the country without much difficulty. The NHIA thus

expected that piloting in the Ashanti region could provide all the needed lessons for the implementation of capitation in any part of the country.

Given that the Ashanti region is the largest region in the country with its capital, Kumasi, being the commercial city of the country and it is highly multicultural, the health system characteristics may not be typical of other regions. For example, the population per doctor ratio in 2015 was 8,934 at the national level while that of the Ashanti region was 7,196 (WHO, 2017). In fact, a close look at the ratios of the other regions shows that the Ashanti region and the Greater Accra region (3,186) are outliers because the ratios for the remaining eight regions ranged between 15,956 (Brong Ahafo region) and 30,601 (Upper West region) (WHO, 2017). Besides the mapping of facilities in the four regions: Ashanti, Volta, Upper West and Upper East showed that the Ashanti region had disproportionately more private health facilities compared to the other regions (MoH, 2016). Since managing private providers in the health sector adds to the complexity of the dynamics of the health system, the health system in the Ashanti region is more complex than the other smaller regions. One can conclude, then, that it would have been better to pilot the reform in the smaller regions to learn lessons that could be applied to the complex regions.

Given that the NHIS provider tariffs are highest for private health facilities compared to public and mission health facilities, the relatively high proportion of private health facilities in the Ashanti region could be the cause of the high proportion of claims cost that was observed in the region. Thus, piloting the reform in the Ashanti region due to the high claims cost in the region presupposes that first, studies have been done to examine the source of the high claims cost in the region and second, that capitation reform, as implemented will address the problem. According to Mensah (2010), at the end of the first year of the pilot, NHIS enrollment in the Ashanti region dropped to 17 percent of national membership and the share of cost also reduced to 20 percent. According to the NHIS, this is an indication of the cost effectiveness of the reform. To the extent that the cost is not transferred to patients through out-of-pocket payments, the reform was effective in reducing cost. Otherwise, the cost containment objective was not achieved. Further research is needed to confirm that the reduction of the cost to the NHIS was not accompanied by an increase in out-of-pocket fees paid by patients. As already mentioned, the delay on the part of the NHIA in paying the capitation rates was used by providers as a justification to charge fees from patients. Besides, Siita, Cox and Hanson (2019) have shown increase in out-of-pocket payment during the piloting of capitation. The decrease in enrolment could be an indication of subscriber dissatisfaction at least partly due to higher out-of-pocket payment (KI10). Thus, the reduced cost to the NHIA may not necessarily be an indication that capitation was able to contain costs.

From the in-depth interviews, KI2 mentioned that Ashanti region at the time was not a good choice. This is because, at that time, the region was the stronghold of the opposition political party who happened to be the party that introduced the NHIS. During the period of the preparation for the introduction of capitation, some members of the political party of the ruling government went on air in the Ashanti region to inform the public that the capitation was being piloted in the Ashanti region to check all the providers who were stealing from the NHIS (KI10). This created much agitation among the people in the region who accused the

government of trying to destroy the NHIS. The challenges posed by such politicization and the negative impact on the implementation would have been eliminated if a politically neutral region had been selected.

Economic factors

An important economic factor that delayed the piloting of the reform was funding. The introduction of the reform was more costly than anticipated and so even with funding from the World Bank (Cashin, 2011), roll out was delayed and suboptimal. The cost of preparation, including mapping of all health facilities in the Ashanti region, logistics for series of meetings for all stakeholders, and development of monitoring and evaluation system was substantial, and funds were not readily available (MoH, 2013). The budget for situational assessment was delayed, hence delaying the data collection and validation. The budget for the entire pilot was not clear and unavailability of needed funds for the preparatory stage delayed the process (Ibid). Funds available for monitoring and evaluation provided by the World Bank was linked to hiring a consultant firm to do the monitoring and evaluation (Ibid). This consequently meant the NHIA and the providers did not have a budget of their own for monitoring and evaluation.

The inability of providers and NHIS staff to understand the impact of capitation on financial management and reporting process was due to inadequate training before the implementation of the reform. The available budget was not adequate for training enough providers and NHIS workers, leading to lack of understanding of the process during implementation (MoH, 2013). Lack of funds also delayed the mapping of facilities, and the data collected was not used because more funds were needed to make the data readable for dissemination (MoH, 2013).

An important lesson here is that adequate planning and budget is needed for implementation of capitation. In developing countries where adequate information on facilities and implementation skills for capitation may be lacking, a large budget may be required to implement capitation and ensure that the gains of capitation are achieved.

Besides the two factors mentioned above, some providers expressed concern about potential discrimination in the enrolment process. At the introduction of the capitation system, some providers felt that the enrolment process was influenced whereby favoured facilities enrolled more clients, while the unfavoured ones did not reach the desired numbers or only had the high-risk base (MoH, 2013). KI2 explained that, at the onset of the policy, smaller facilities did not get the numbers since subscribers prefer one shop facilities instead of relying on the referral system. Besides, facilities that were near bigger facilities as well as CHPS compounds had low enrolment rates. According to KI1, there is a preference in the Ghanaian community for public and CHAG facilities when subscribers are given the option to choose their preferred primary providers.

Social factors

It has been suggested that one of the social factors that hindered the success of the scheme was inadequate education of the general populace (Aboagye, 2013). For instance, in a bid to twist the story, providers misinformed the general public about the per capita rate as per encounter rate, causing outrage among the general public of the inadequacy of the rate (MoH, 2013). This probably could have been handled better if both the providers and subscribers were adequately informed about the difference between the two and how this could work to the benefit of both the subscribers and providers alike. Even though efforts were made to educate the media on the concept and the process of capitation, negative media reporting contributed to the confusion and agitation from providers and subscribers (MoH, 2013).

Aboagye (2013) suggests that the theoretical benefits of capitation could have been enjoyed through proper education of both subscribers and the providers before the implementation of the reform. Opinion leaders, including traditional leaders, could not intervene either because they were not well educated about the reform or did not want to be involved with the politicization. It was obvious that the NHIA had to deal with the challenge of political interference. For instance, KI2 noted that while the NHIA expected the political leaders and members of parliament in the region to support the implementation openly, some of them refused to do so for fear of losing their political seats. This was mostly because the Ashanti region was the stronghold of the opposition political party. The key lesson learned here is that education of subscribers, providers, the media, and all parties that participate in the implementation of the reform is necessary for successful implementation of the reform. Depoliticization of the pilot area could enhance the education.

Another important contribution of the problem was providers' mistrust of the NHIA (MoH, 2013). The reform was seen as NHIA's agenda being pushed onto providers, leading to resistance from providers (MoH, 2013). Such mistrust could have been reduced had the Ministry of Health taken the lead role in bringing the two parties together (Ibid). An important lesson here is that it is important for the relationship between the implementer and the providers to be built on trust.

Conclusion

This study has shown that whilst in theory capitation, as a method of provider payment, may be effective in containing costs, in practice many factors have to be taken into account to ensure the achievement of the efficiency gains it contains. The National Health Insurance Scheme (NHIS) was introduced in Ghana in 2003 to provide UHC while providing financial protection. This, however, is underlined by the need to ensure financial sustainability of the Scheme. In 2012, the NHIS piloted capitation payment method in the Ashanti region after about seven years of failed attempts to contain the cost of care using FFS followed by the G-DRG methods of payment. The reform however was suspended in 2017. This study sought to document the journey through the piloting of the capitation payment system and assess the

political, social, health system, and economic factors that supported or hindered its planning and implementation in Ghana. This was done by reviewing relevant documents to the piloting of the reform, key literature and engaging in key informant interviews.

While the design of the scheme seemed well thought through, the implementation faced several challenges. Previous studies have shown marginal positive effects of the reform on utilization and cost containment. There is no study yet on its impact on quality of care. There is therefore the need for further studies on impact on quality of healthcare services and how any reduction in cost to the NHIS could have been transferred to patients through balance billing.

The study has also shown that the success of the reform was impeded by political factors in the pilot area, as well as the strong bargaining power of providers, who fought for their own interest in a way that weakened the cost sharing element in the reform. By pushing for rates close to the per encounter rate the providers were able to push their cost sharing role onto the NHIA. Another explanation why providers were not supportive of the pilot was that they feared delays in receiving the capitation tariffs as has been the case in the other payment methods. Insufficient funding also presented a challenge in the planning and implementation of the scheme which required substantial funding, for example in mapping health facilities. While the mapping of health facilities showed the existence of high variation in their capacity to offer the services proposed under the capitation payment, they were all accredited to provide health care. This presented a big drawback for one of the objectives of the pilot which was to introduce managed competition in the provision of health care. Finally, inadequate education, of both providers and the general populace, is alleged to be one of the factors that hindered the implementation of the scheme.

Overall, it is not clear if the implantation of capitation in Ghana led to cost containment or improved the quality of care. Further studies are needed in the area including a comprehensive cost-effectiveness analysis of the implementation of the reform. Below are some important lessons that can be learned from the current study.

Key lessons learned

While the historical paths to the NHIS are important, the lessons from the scheme must be considered when designing future schemes that seek to improve the efficiency of service provision and hence improve health outcomes. Indeed, this requires that the principles of strategic purchasing and provider payment systems are followed. A good provider payment method has to address and be implemented within strong support systems. The following lessons are worthy of note:

- Good knowledge of the capacities of existing healthcare facilities is required to identify their ability to operate as stand-alone PPPs or group PPPs. Where group practice is

geographically impossible to operate, equipping low-capacity health facilities to operate as stand-alone PPPs may be a better alternative.

- Only PPPs who qualify to provide the packaged services are to be allowed to participate in the implementation of the reform. Where facilities do not qualify and group PPPs cannot be formed, such facilities may have to be equipped to qualify for participation.
- The inclusion of medicines in the capitation package requires the health system's ability to separate the services of prescribers from those of dispensers, as well as improvement in the medicine management to ensure a constant supply of essential medicines.
- The payment of the capitation fee to providers on time improves trust in the payment method and discourages illegal charging of co-payments.
- Providers are a very important stakeholder and should be involved in the planning from the very beginning to enhance their understanding of the concept of capitation.
- The choice of a pilot area should be politically neutral.
- For successful implementation of the reform, it is important that the three main actors: the insurer, the provider, and the government, learn to work together to seek the common good for society rather than stakeholder interest.
- A good monitoring and evaluation system is essential to measure trends in quality of care, utilization of care, equity, and efficiency.
- Capitation does not induce competition in remote areas due to a lack of providers.
- The implementation of capitation requires a substantial budget especially in developing economies where a lot of information on providers needs to be collected and regularly updated, and capacity of the health system needs to be built for adequate implementation. A clear budget for the planning and the implementation of the reform is essential.
- There is a need for proper education of all parties involved in the implementation of the capitation system. This will ensure that people understand the system and the need to implement such a system. This may also include traditional leaders and opinion leaders who are either educated to understand the system, or have a good knowledge of how the capitation system works, to be involved in the education of the general public.
- Cordial relationships between the implementer of the reform and providers are needed to build enough trust for smooth implementation of the reform. Where such trust does not exist, a third party, such as the MoH, could coordinate interaction between the two groups.

Appendix

Interview Guide to assess the political economy of changing provider payment to capitation in PHC in Ghana.

Dear Sir, we are researchers from the Department of Economics, in the Kwame Nkrumah University of Science and Technology seeking to explore the political economy or factors that led to the changes in the capitation payment system from the FFS to the capitation that was applied in the Ashanti region of Ghana. We assure you of utmost secrecy and guiding of information provided. Information provided will be handled anonymously and will only be used in the conduct of this research. Thank you.

Interview Guide

1. In your view, what were the benefits and disadvantages of the FFS payment system in Ghana's NHIS?
2. What were the perceived benefits to the providers of the capitation payment system?
3. What were the key benefits to the policy holders of the capitation payment system?
4. Can you discuss with us some of the reasons for choosing Ashanti region for the capitation? Is there any documentary evidence that we could review in line with this decision?
5. In the introduction of the capitation, it was realized that maternal health care was taken out of the package, what were the reasons accounting for this?
6. In your view, what are the health system factors that accounted for the success of the capitation system in the Ashanti region of Ghana?
7. In your view, what are the health system factors that hindered the implementation of the capitation system in Ghana?
8. Can you help us identify the various stakeholders and their roles in the implementation of the capitation reform?
9. Were there economic reasons for the implementation of the capitation system?
10. What are some of the economic factors that enhanced the implementation of the capitation in the Ashanti region?
11. What are some of the political factors that went into the implementation of the reform?

For NHIS Technician or staff only

1. Detailed description of the inclusion/ exclusion criteria
2. facilities included and percentage covered,
3. rates of payments,
4. calculation / formula used, and
5. Differences between providers e.g., Public and private/religious facilities

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