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Original Research Article

Controlling Health Care Costs in Ghana: Any Hope with the Ghana Diagnostics Related Groupings Mechanism?

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ABSTRACT

Purpose - The aim of this paper is to assess whether the Ghana Diagnostic Related Grouping mechanism has reduced the cost of health care within the National Health Insurance Scheme of Ghana. The paper also assesses the challenges plaguing the use of the G-DRG as a payment mechanism in the health insurance system of Ghana.
Design/methodology/approach - The study adopts a mixed approach. Data collection involved in-depth interviews with officials of the National Health Insurance Authority (NHIA) and service providers. Quantitative secondary data were sourced from the National Health Insurance Authority.
Findings - The study's findings show that the introduction of the Ghana Diagnostics Related Groupings mechanism has rather escalated the cost of health care even though increased enrolment on the scheme is partly a contributory factor. The study reveals that the main challenges which have contributed to the escalated cost with the introduction of the Diagnostics Related Grouping mechanism includes poor understanding of the mechanism by key stakeholders, poor record keeping and most importantly, up-coding among other challenges.
Conclusion - The challenges associated with the implementation of the Ghana Diagnostics Related groupings means that the possibility of introducing a new or a blend of payment systems must be studied.

Keywords: Ghana; Diagnostics Related Groupings; Health Insurance; Challenges; Cost Containment

INTRODUCTION

Social health insurance has become a key health financing option in many countries. The skyrocketing health expenditure in countries calls for the introduction of mechanisms to control cost of health care. In a typical health insurance system, one area where cost reduction efforts could be directed is the payment mechanism, which details how providers of health services are reimbursed by the insurance scheme. [1]

The Diagnostics Related Grouping (DRG) provider payment mechanism is seen as an ideal way of containing cost and utilizing resources more efficiently. [2] The DRG mechanism which is a classification scheme for patients based on diagnosis and cost of consumed resources for patient care, and which classifies case mix into clinically

meaningful patient conditions which require similar levels of hospital resources for their treatment is being used to reimburse providers in several countries. [3,4] The mechanism is used being used in such countries as Ireland, [5] Finland, [6,7] England, [8] France and Germany. [9] In the US, Congress adopted the DRG system for paying hospitals in 1983. [10] In these instances, DRGs have been found to reduce waiting lists, [8] facilitate patient choice, [11] encourage competition between providers, [12] create a level playing field for payments to public and private hospitals, [13] and establish a link between activity and funding. [7] The mechanism has also been found to ensure a fair allocation of resources across geographical areas and improve documentation of internal processes. [9]

In Ghana, the DRG payment mechanism, referred to as Ghana-Diagnostics Related Groupings (G-DRGs) mechanism was introduced by the National Health Insurance Authority (NHIA) in 2008 as a provider payment method to control cost by sharing risk among schemes, providers and subscribers, and improve efficiency through more rational use of health resources [14] (NHIA, 2010). The introduction of the G-DRGs mechanism was the result of the failure of the existing payment mechanism, namely the itemized fee-for-service system, to contain cost. However, following the introduction of the G-DRG mechanism, not much study has been carried out to comprehensively assess its effect especially regarding the challenges associated with using the mechanism and whether the NHIA has achieved its objective of cost containment following the introduction of the G-DRGs. This study therefore seeks to assess the challenges of Ghana's application of the DRG mechanism and whether the mechanism has helped reduced the cost of health care in Ghana.

MATERIALS AND METHODS

The study adopts a mixed approach using in-depth interviews of key informants with the NHIA, Scheme officials in the outlets of the NHIA, and National Health Insurance Scheme (NHIS) accredited service providers in Ghana. In-depth interviews were issue-driven and the phenomenon under consideration - cost containment under the GDRG system- informed the choice of study respondents. Thus, purposive sampling technique was used to select study participants which the researchers deemed to be particularly informative. [15] However, the selection criteria were also based on the researchers' judgement and the objectives of the study. In all, nine respondents were interviewed at the NHIA headquarters and included directors of Research and Development, Clinical Audit, Claims, as well as Claims Managers and Supervisors. These respondents were selected based on a preliminary interaction with the NHIA which revealed that they are in a better position to provide the necessary data given the issue of cost containment and challenges of implementing the GDRG mechanism. Out of the ten NHIA outlets in the Greater Accra Region, the scheme managers of five outlets were selected for in -depth interviewing. Another major stakeholder is the healthcare providers. As a result, the researchers interviewed nine NHIS accredited healthcare providers, both public and private to assess the challenges they face in the applicability of this payment method. Respondents included healthcare administrators, medical administrators, and directors of finance and heads of NHIS claims departments within the health facilities. The providers included 3 leading hospitals, a clinic, a polyclinic, diagnostic centre, an accredited pharmacy, optical and dental clinic that were selected after an interaction with the NHIA on key providers in the Greater Accra Region. Thus, different

stakeholder groups were involved in the study in order to reduce biases in terms of study participants and also to ensure that varied stakeholder viewpoints were brought to the fore regarding the G-DRG system and its challenges. The sample size of various respondent groups was influenced by when responses in each category reached saturation, and similar patterns of responses were being noticed.

The main data collection tool was interview guide designed to collect data from different respondent groups. Themes covered in interviews included the cost issues under the previous itemized-fee-for-service mechanism, G-DRG and cost containment, the general cost situation after the implementation of G-DRG and the challenges associated with the G-DRG mechanism.

Apart from in-depth interviews, quantitative secondary data on cost trends following the implementation of GDRG were sourced from the NHIA. After transcribing interview data into word processor files, the researchers reviewed the data for common themes. Themes were put together under broad headings with emphasis on major ideas brought out by each sentence. Major ideas which were coded formed the key categories, which also formed the basis for related sub-categories, which run through interview responses, and which were re-examined together with the main categories. The final phase of interview data analysis involved the generation of categories that were analyzed in tandem with study objectives and which formed the basis of the final research report. Where necessary, responses from respondents are quoted verbatim to support key themes. Secondary quantitative data were analyzed using simple statistical tools.

RESULTS

The first objective of the study was to assess whether the G-DRG mechanism has brought cost gains to the NHIA. To address this question, respondents at the NHIA were interviewed on several key issues including the general cost situation of the NHIA, the cost issues under the previous itemized-fee-for-service mechanism, the specific measures instituted under the G-DRG mechanism that make it a cost containment measure and the general cost situation after the mechanism was implemented.

Findings from the study show that certain measures have been instituted to fight against cost escalation under the new payment mechanism. Under the new G-DRG system, some health conditions that were reimbursed previously at all levels of care have now been reviewed. The level of care is a determinant of the type of service provided under the NHIS and the tariffs applicable under the G-DRG taking into consideration the availability of diagnostic and other services provided at that level. Consequently, providers are reimbursed only for the services they are permitted to perform at their level of care. A further probe of respondents revealed that this mechanism was to ensure that the NHIS pays for genuine diagnosis. Since primary care facilities cannot make certain diagnosis, the NHIA will not reimburse diagnosis not applicable to such facilities. Respondents however added that in certain instances, primary care facilities are able to manage some complex conditions due to local expertise; hence, lower level G-DRGs have been formulated. As a key cost management issue, health care providers performing procedures that attract higher G-DRGs are expected to seek preauthorization from the NHIA. This directive flows from the fact that different G-DRG tariffs are applicable to different levels of care under the G-DRG mechanism.

The study reveals that one area of concern prior to the introduction of the G-DRG system was emergency services. This was an area where cost used to be very high. The G-DRG principle is that the NHIA restricts reimbursement on emergency readmission especially if the health care provider is deemed not to have provided the level of care acquiescent to expected quality standards or where the patient was not given adequate preparation for discharge. Under the G-DRG mechanism, the NHIA does not reimburse emergency readmission especially if the readmission is to the same service provider or if the readmission is within a two-week period. According to a respondent at the NHIA, this stipulation is meant to curb unnecessary and fraudulent claims regarding emergency services. The NHIA has also established a central claims processing centre, vetting and auditing units at various levels and monitoring and evaluation teams to help scrutinize claims and ensure that only credible claims are reimbursed. However, the study reveals that despite these measures, the NHIA is still grappling with ever increasing cost and is not able to reimburse providers for several months. Figure 1 below shows the cost incurred by the NHIA following the use of the itemized fee-for-service system. A total cost of 7.6 million Ghana cedis was incurred in 2005; a figure which increased to 35.48 million and 79.26 million in 2006 and 2007 respectively. This upward trend caused the NHIA to introduce the G-DRG mechanism as a cost containment measure.

Data from the NHIA (see figure 2 below) shows that the cost of health care rather escalated following the introduction of the G-DRG system. The cost of health care increased from 79.96 million cedis in 2007 to 183.01million cedis in 2008; 362.64 million in 2009; 380.93 million cedis in 2010; and in 2011, it was 549.77 million cedis. This shows an ever increasing cost as depicted by an upward trend in figure 2.

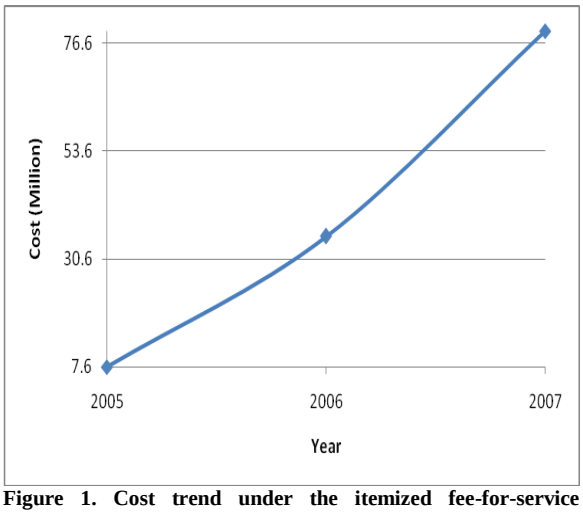

Figure 1. Cost trend under the itemized fee-for-service mechanism
Source: NHIA

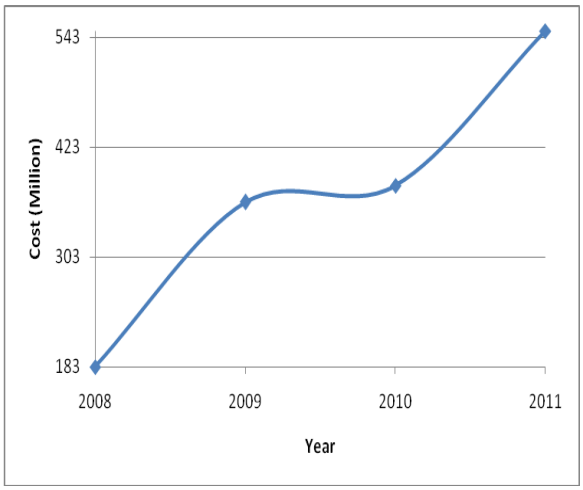

Figure 2. Cost trend under the G-DRG mechanism
Source: NHIA

It must however be stated that the increasing cost in health care if attributed to the G-DRG mechanism alone could be misleading. This is because the Ghana insurance system is a very young industry, hence, the number of people on the scheme keep increasing every year. Consequently, the increase in the membership of the scheme could be said to have a major impact on the total cost or quantum of claims paid by the NHIA. Figure 3 (see below) details

the cumulative registered members of the NHIS by year (even though the NHIA is introducing a new method for tracking enrolment levels). In 2005 when the NHIS officially took off, only 1,348,160 people registered. This increased to 3,867,862 in 2006 and 21, 392,402 in 2011. However, not all the members that registered are active members.

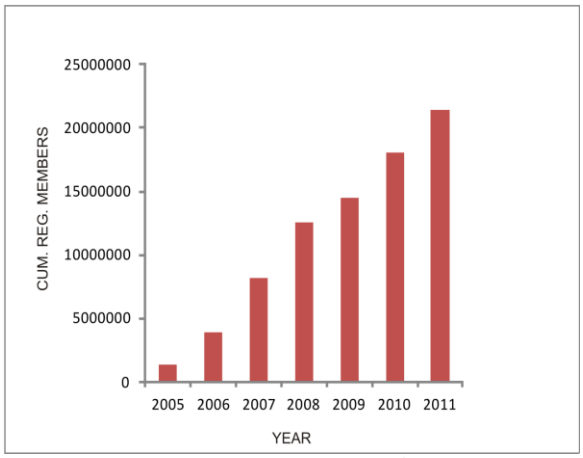

Figure 3. Cumulative registered members of the NHIS by year
Source: NHIA

Figure 4 gives details of active members. Figure 4 shows that from 1,348,160 subscribers in 2005, active members increased to 2,521,372 in 2006 and 6,643,371 in 2007. Active members as at 2011 stood at 17,518,744.

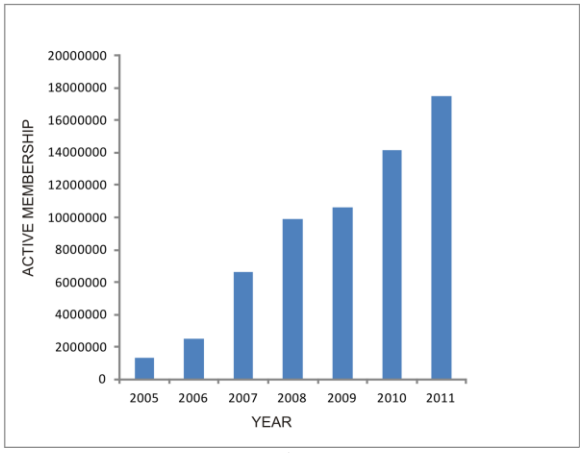

Figure 4. Active membership of the NHIS by year
Source: NHIA

Thus, the ever increasing membership will no doubt impact on the total cost of the NHIA. However, respondents from the NHIA believe that even though increased enrolment means more claims payment, it also means more revenue in the form of premiums received. Key informants consequently believe that the increasing cost is also attributable to certain challenges brought about by the G-DRG system.

The study also sought to identify the challenges being faced by providers and the NHIA on the application of the G-DRG mechanism. To address this question, respondents from the NHIA headquarters and outlets and health service providers were interviewed on the main factors hindering the effective application of the G-DRG mechanism.

Views of respondents from NHIA headquarters and outlets

The findings show that a key challenge facing the NHIA is inadequate understanding of the G-DRG concept by providers. The study reveals that both scheme officials of the outlets and service providers lack in-depth understanding of the concept of G-DRG as a payment mechanism which makes them misapply tariffs. A further probe on the reasons for this revealed that ineffective training, technicality of the payment mechanism, inadequate supply of G-DRG documents, and inadequate reading are some of the reasons behind this phenomenon. A Claims Manager in one outlet opined that:

"When the G-DRG was developed, there wasn't adequate and effective training programme conducted for both NHIS officials and Health Providers on the G-DRG concept".

What was a bit surprising about this finding was that before the adoption of the mechanism, a team of experts were sent to the Netherlands for training on the

application of the DRG mechanism. However, further probe reveals that these highly trained professionals failed to adequately transfer the knowledge they acquired to the various stakeholders due to inadequate funds and logistics.

In addition, the NHIA has a serious challenge with up-coding by service providers. Providers report simple and uncomplicated services rendered as severe or complicated cases to get higher tariffs which affect the NHIA and cost containment objectives. A respondent at the Claims Department of the NHIA explained that:

"Service providers who treat cases in lower tier per the tariff or localised infections manipulate claims reports and submit them as higher tier services or severe infections to get higher tariffs".

In other instances, service providers report procedures that clients did not receive in the facility as though such procedures were actually performed in order to attract tariffs for such procedures. Sometimes, clients on detention and observation are charged as in-patients. According to a scheme manager in one of the outlets;

"It is common to see cases of mild malaria recorded as complicated malaria for higher tariff.... and this is just one of the several instances we come across daily"

The study reveals that poor record keeping by health providers is a major challenge for the NHIA under the G-DRG system. The G-DRG mechanism is based on proper management of records which enables scheme officials to trace and crosscheck client folders to ascertain the veracity of claims submitted by providers. The study reveals that in several instances, poor record keeping makes vetting and subsequent application of G-DRG rates difficult and usually results in conflicts between providers and scheme officials.

Human resource challenges continue to plague efforts to implement the G-DRG mechanism in Ghana. The study reveals that the nascent insurance industry in Ghana is yet to produce professionals to implement a complex mechanism as the G-DRG. Scheme outlets of the NHIA include national service personnel who are not permanent workers and who deal with records and claims without any formal training. Those who work on claims in health facilities equally have limited understanding of the mechanism and how it works leading to wrongful claim submission.

Health providers' viewpoints

The system is infested with conflicts between service providers and scheme officials because of the frequent deductions made on submitted claims due to inexperienced or unqualified personnel in the scheme's offices. Providers believe scheme officials are unable to vet claims accurately using prescribed procedures in the payment mechanism and therefore deduct bills otherwise accurately submitted. The Director of finance at a Polyclinic explained that:

"*Sometimes when bills are genuinely done by service providers and are submitted to be vetted, inexperienced vetting officers of the scheme wrongly misapply G-DRG concepts in calculating bills which make them see submitted claims to be wrong and deduct or adjust the bills".*

Due to frequent deductions of submitted bills, service providers run at a loss and therefore find ways and means to extort the difference from either the scheme or clients through up-coding, collusion, and co-payments.

Late payment of claims is a major challenge under this system. The findings show that service providers rely mostly on claims paid to them by the NHIS as their main source of funds aside monies received from out-of-pocket uninsured patients and funds from maternal health exemptions.

However, it was revealed that claims take an awful lot of time before reimbursement. All providers interviewed confirmed that the NHIA takes over six months or more to reimburse health providers after submission of claims. Consequently, providers are almost always indebted to their suppliers and hence embark on unscrupulous practices to dupe the system. A crosscheck from the NHIA revealed that the delay in claims payment is the result of poor filling of claim forms as well as fraudulent additions which makes vetting very cumbersome for the scheme outlets and the NHIA.

The study indicates that, the tariff rates assigned to services and procedures in case groupings per the G-DRG payment mechanism are very low. Since tariffs are not updated yearly as stipulated, it becomes very difficult for service providers to work with such tariffs especially under a very unstable economy. As opined by a respondent of an eye centre:

"*Since the G-DRG payment mechanism allows service providers to treat multiple attendances on same cases reported by clients for a single tariff bill, the prices allocated for procedures per the payment mechanism are too low"*

A small investigation by the researchers revealed that since the introduction of the G-DRG system, the tariffs have only been reviewed once and that was in 2012. Providers however complained that in an unstable economy with skyrocketing inflation, these tariffs are very low; a situation which encourages up-coding. Apart from these key challenges, providers also spoke of the complexity of the G-DRG system, comparing it to the fee for service mechanism where they were simply expected to list all expenses incurred in treating a patient for reimbursement as well as human resource constraints.

DISCUSSION

First, our findings show an escalating health care cost following the implementation of the G-DRG system. The findings of the study correspond with the findings of an earlier study [16] where an overall increase in health expenditure following the introduction of the DRG mechanism in Ireland was noticed. Thus, DRGs by itself does not ensure cost benefits unless it is well implemented. It is fair to say that there are several operational and managerial bottlenecks which make the realization of cost containment difficult in Ghana. Consequently, the design and management of the DRG system is very important to ensure cost benefits. [17]

Second, it is a fact that the successful application of any system or programme depends to a significant extent on the understanding of such a system or programme by all stakeholders who will one way or the other be involved in its implementation. In the case of the G-DRG mechanism, experts who were sent to Holland to train on the implementation of the mechanism failed to successfully transfer their knowledge to other important stakeholders including health facility insurance staff and scheme outlets of the NHIA itself. This is aggravated by the erratic nature of training programs offered by the NHIA. The result of this is that stakeholders are finding it difficult to play their rightful roles in the implementation of the mechanism. The DRG mechanism however thrives on a better conception and understanding of the mechanism by all stakeholders in order to realise its full benefits since it is a complicated system. [18]

Third, effective monitoring is key in cost containment efforts. The failure of auditors to scrutinize effectively the claims submitted by providers implies that fraudulent claims may be paid as a result of up-coding by providers; reflected by service

providers recording higher values or codes for lower tier services. The most pronounced challenge facing the NHIA in its cost containment effort is up-coding, a challenge usually associated with this mechanism and found in other studies. [2,17,16]

Finally, the role of information technology cannot be ignored. The DRG mechanism thrives on effective documentation and record keeping. The NHIA is however yet to implement an electronic system of claim verification; a move which has remained in the pipeline since the introduction of the NHIS itself. Some experts [17] believe that appropriate information technology infrastructure is needed in monitoring and reviewing claims, as well as in data collection and analysis.

CONCLUSION

Our study on G-DRG and cost containment in the Ghana health system reveals an upward trajectory of cost, a trend attributed to challenges such as up-coding which allows some stakeholders to game the system, inadequate understanding of the G-DRG mechanism by key stakeholders and poor record keeping among others. The upward trend in health care cost resulting from these challenges call for further studies on the possibility of introducing a new or a blend of payment mechanisms taking into consideration the peculiar context of Ghana since the effectiveness of any payment mechanism partly depends on the context and systems within which it is implemented.

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