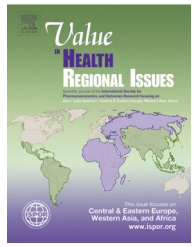
VALUE IN HEALTH REGIONAL ISSUES 2 (2013) 300–305

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/vhri



Performance Assessment of Ga District Mutual Health Insurance Scheme, Greater Accra Region, Ghana

Eric Nsiah-Boateng, MPH[1,*], *Moses Aikins, PhD*[2]

[1]*Claims Department, National Health Insurance Scheme, Ashiedu Keteke Submetro Office, Accra, Ghana;* [2]*Health Policy, Planning and Management Department, School of Public Health, University of Ghana, Accra, Ghana*

ABSTRACT

Objective: This study assessed performance of the Ga District Mutual Health Insurance Scheme over the period 2007-2009. **Methods:** The desk review method was used to collect secondary data on membership coverage, revenue, expenditure, and claims settlement patterns of the scheme. A household survey was also conducted in the Madina Township by using a self-administered semi-structured questionnaire to determine community coverage of the scheme. **Results:** The study showed membership coverage of 21.8% and community coverage of 22.2%. The main reasons why respondents had not registered with the scheme are that contributions are high and it does not offer the services needed. Financially, the scheme depended largely on subsidies and reinsurance from the National Health Insurance Authority for 89.8% of its revenue. Approximately 92% of the total revenue was spent on medical claims, and 99% of provider claims were settled beyond the stipulated 4-week period. **Conclusions:** There is an increasing trend in medical claims expenditure and lengthy delay in claims settlements, with most of them being paid beyond the mandatory 4-week period. Introduction of cost-containment measures including co-payment and capitation payment mechanism would be necessary to reduce the escalating cost of medical claims. Adherence to the 4-week stipulated period for payment of medical claims would be important to ensure that health care providers are financially resourced to deliver continuous health services to insured members. Furthermore, resourcing the scheme would be useful for speedy vetting of claims and also, community education on the National Health Insurance Scheme to improve membership coverage and revenue from the informal sector.

Keywords: claims settlements, Ghana, membership coverage, National Health Insurance Scheme..

Introduction

Many low- and middle-income countries are challenged with how to finance their health care systems to achieve universal coverage of health services. In 2005, the member states of the World Health Organization adopted a resolution encouraging countries to develop health financing systems aimed at providing universal coverage [1]. This was defined as securing access for all to appropriate promotive, preventive, curative, and rehabilitative services at an affordable cost.

In the 1990s, a number of mutual health organizations were established in Ghana, with funding and technical support from external partners. Most of these mutual health organizations, however, primarily focused on providing financial protection against the potentially catastrophic costs of a limited range of inpatient services for the disadvantaged people in society [2]. The National Health Insurance Scheme (NHIS) was introduced in 2004 to build on these organizations and provide comprehensive health services to all citizens in Ghana [3].

The National Health Insurance Act, Act 650, was passed into law in Ghana in 2003 through the Legislative Instrument (LI 1809), though implementation in terms of access to benefits began in November 2005 [3–5]. Its policy objective is that "within the next five years, every resident of Ghana shall belong to a health insurance scheme that adequately covers him or her against the need to pay out-of-pocket at point of service use in order to obtain access to a defined package of acceptable quality health services" [6]. The NHIS was designed as a mandatory health insurance system, with risk pooling across district schemes, funded from members' contributions and a levy on the value-added tax charged on selected goods and services [3–6].

As a key social sector initiative to support the Ghana Poverty Reduction Strategy II policy objective of ensuring sustainable financial arrangements that protect the poor, the NHIS's performance and long-term sustainability are significant. The performance assessment of the scheme is also key to Ghana's attainment of the Millennium Development Goals 1, 3, 4, and 5.

Since its full implementation in 2005, the NHIS has been facing major structural and administrative challenges, including significant delays in issuing membership cards; lack of a uniform contribution system across schemes, which has implications for portability and equity within the national scheme; and

Conflicts of interest: The authors have indicated that they have no conflicts of interest with regard to the content of this article.

* *Address correspondence to:* Eric Nsiah-Boateng, MPH, Claims Department, National Health Insurance Scheme, Ashiedu Keteke Submetro Office, Derby Avenue, Accra, Ghana.

E-mail: nsiahboateng@gmail.com.

2212-1099/$36.00 – see front matter Copyright © 2013, International Society for Pharmacoeconomics and Outcomes Research (ISPOR). Published by Elsevier Inc.

http://dx.doi.org/10.1016/j.vhri.2013.06.005

considerable delays in provider claims reimbursement [3,7,8]. An independent health sector review report shows that at the end of 2008, the health facilities had outstanding claims worth GH¢49 million [7]. A number of initiatives and activities by researchers and development partners aimed at tackling performance challenges facing the District Mutual Health Insurance Schemes (DMHISs) have taken place. Most of these research and initiatives, however, focused on inventories of DMHISs and access, utilization, and quality of care and were largely uncoordinated. Moreover, key findings and associated recommendations were left unimplemented [9]. Therefore, little is known about performance elements of membership coverage, revenue mobilization, expenditure, and medical claims settlements of the DMHISs. The study aimed at filling this gap by providing performance assessment of Ga DMHIS.

According to the 2010 NHIS Annual Report, there are 145 DMHISs nationwide, with 10 in the Greater Accra region [10]. The Ga DMHIS is the biggest DMHIS in the Greater Accra region in terms of catchment area. The Ga district has a large number of suburban and rural communities, making it suitable for this study. Madina is the largest cosmopolitan settlement in the district, which also made it appropriate for the household survey. This article reports performance assessment of the scheme for the 2007-2009 period and recommendations for improving its operations.

Conceptual Framework

The conceptual framework for the study was adopted from the World Health Organization proposed framework for health systems performance assessment and modified to reflect the International Labour Organization's core performance indicators for assessing social health insurance schemes [11,12]. According to the framework, high membership coverage, high revenue base, low expenditure, and prompt settlement of provider claims enhance performance ratios such as coverage rate, renewal rate, expense ratio, and claims ratio, which, in turn, results in high performance and an improved health status of the target population (Fig. 1).

Methods

Study Area

The study was conducted at Ga DMHIS and Madina Township, all in the Ga district of the Greater Accra region. The Ga DMHIS has a staff strength of nine and 74 contracted health care providers. The Ga district lies in the northern part of the Greater Accra region and is bounded in the north by Akuapim South district, in the east by Tema Municipal, and in the south by Accra Metropolis. It has three subdistricts, namely, Ga South, Ga East, and Ga West, with 594 communities comprising mixed settlements: urban, periurban, and rural areas. The district has an estimated population of 891,609 and a growth rate of 4.4%. There are 58 health facilities in the district comprising public, private, and Christian Health Association of Ghana facilities. The main economic activities in the district are public service, trading, farming, and craftsmanship.

Study Design

The study was a cross-sectional survey of households and a retrospective analysis of membership, revenue, and expenditure records of the Ga DMHIS for the period 2007-2009. The study population consisted of membership data of Ga DMHIS and selected heads of surveyed households in the Madina Township.

Data Collection Method

Desk review

Documents on membership, operational reports, audited reports, financial statements, and claims payment books of the scheme were reviewed. The registration files were reviewed in terms of the number of people registered, number of membership cards issued, and number of renewals for each year under review. The audited accounts for 2007-2008 and unaudited accounts for 2009 were examined for total contribution collected, subsidies received from the National Health Insurance Authority (NHIA), donor support, and other internally generated funds. Information on administrative expenditure and medical bills was also collected. The claims submission registers and claims payments for 2009 were reviewed to determine the number of days between submission of claims and reimbursement.

Face-to-face interview

A community household survey was conducted in the Madina Township to determine the community coverage rate. A multistage sampling method was used to select the study subjects. In all, 376 household heads were sampled on the basis of an estimated prevalence rate of 43% membership coverage, a confidence level of 95%, and 5% margin of error. The questionnaire covered background characteristics and membership in the NHIS. The household membership section looked at knowledge on the NHIS, membership status, and reasons for not enrolling into the scheme.

Data Analysis

The performance indicators for the study were analyzed as follows.

Coverage rate

Membership files for the period 2007-2009 were reviewed to determine the total number of valid card-bearing members in each year. The coverage rate was determined by dividing the total number of valid card-bearing members in each year by the estimated district population in the same year.

Community coverage rate

This was estimated by dividing the total number of participants with valid membership cards as of March 2010 by the total number of participants interviewed.

Annual revenue

This was estimated by adding the total amount of money collected from contributors, received from the NHIA and other donor agencies, and investment returns in each year of the period under review (2007–2009).

Annual expenditure

This was estimated by adding administrative expenses and medical claims expenses in each year of the period 2007-2009. The administrative expenses comprised salaries, membership cards' processing cost, and other operational costs, while the medical claims expenses constituted payment of outpatient, inpatient, specialized medical services and essential medicines in the NHIS minimum benefit package.

Expense ratio

This was estimated by dividing the total administrative expenses incurred in each year by the total amount of contributions collected in the same year for the period 2007-2009.

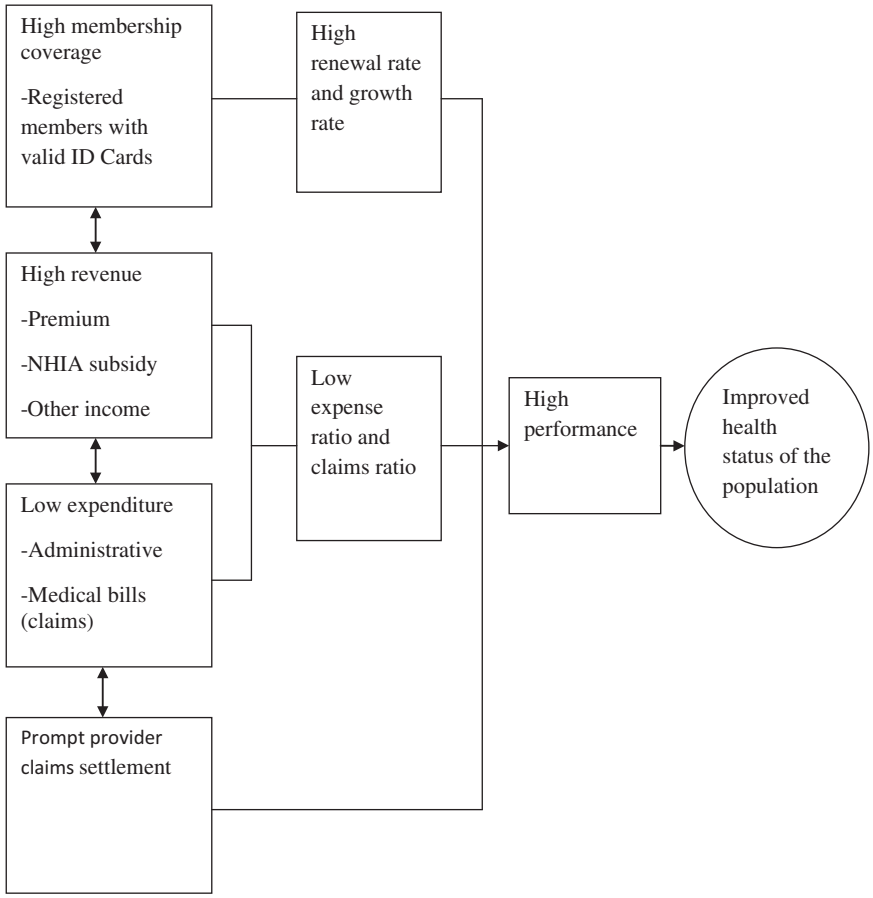


Fig. 1 – Conceptual framework for assessment of Ga DMHIS. DMHIS, District Mutual Health Insurance Scheme; NHIA, National Health Insurance Authority.

Claims ratio

This was estimated by dividing the total medical claims expenses incurred in each year by the total amount of contributions collected in the same year for the period 2007-2009.

Combined ratio

This was calculated by adding the expense ratio and the claims ratio.

Promptness of claims settlements

All provider claims submitted within the October-December 2009 period were reviewed to determine the number of days it took to settle them. The settlements days for each provider claim were grouped according to a defined schedule of 0 to 28 days, and more than 28 days. Based on the stipulated period of 4 weeks for claims settlements, all claims paid within 0 to 28 days were considered as prompt payment and those paid beyond 28 days as delayed payment.

Ethical consideration

Ethical clearance for the study was obtained from Ghana Health Service Ethical Review Committee on Research Involving Human Subjects. Approval was sought from the Ga DMHIS to use its data, and permission was sought from the Municipal Health Services to conduct the household survey in the Madina Township.

Participants were informed of the objective of the study and that they were free to participate and to leave at any point. A total of 365 household heads out of the 376 sampled voluntarily provided signed informed consent and were interviewed.

Table 1 – Membership by category (2007–2009).

Year	District population	Formal sector	Informal sector (18–69 y)	SSNIT pensioners	Aged (≥70 y)	Younger than 18 y	Indigent	Pregnant women	Total coverage (%)
2007	749,022	4,957	19,035	237	1,990	25,598	831	NA	7.0
2008	782,715	9,794	42,318	1,171	4,027	47,240	2,920	11,997	15.3
2009	817,924	15,943	55,561	3,484	7,909	63,512	2,920	28,594	21.8

NA, not applicable (the free maternal care policy was introduced in 2008); SSNIT, Social Security and National Insurance Trust.

Table 2 – Reasons for not registering with the Ga DMHIS.

Reason (n = 284)	%
Contribution is expensive	35.3
Not sick now	10.5
Hospital is too far	1.0
Treat elsewhere	9.5
Does not offer services needed	33.2
Belong to other district scheme (NHIS)	10.5
Total	100

DMHIS, District Mutual Health Insurance Scheme; NHIS, National Health Insurance Scheme.

Limitations of the study

First, there were no separate data for active and nonactive members between the 2007 and 2008 period, making it difficult to determine the true membership coverage of card-bearing members in that period. Second, the financial audit report for 2009 was not available; hence, revenue and expenditure data were retrieved from account ledger books and financial statements, which might not give the true picture of financial flows in 2009.

Results

Coverage Rate

In general, the membership coverage of the scheme increased from 7% in 2007 to 21.8% in 2009 (Table 1). The number of registered members, however, dropped from 8.3 percentage points in the first year (2007–2008) to 6.5 in the second year (2008–2009). In all, the informal sector constituted one-third of the registered members; there were no registrations of pregnant women in 2007 and indigent in 2009.

Community coverage rate

Out of the total number of 365 household heads who participated in the survey, 81 (22.2%) were registered members with valid ID cards. The main reasons why some of the respondents had not registered with the scheme were "contribution is expensive" and "does not offer services needed" (Table 2).

Revenue and expenditure

In all, the expenditure of the scheme for the period under study exceeded the revenue. This occurred in 2007 and 2008 but was reversed in 2009 by a significant increase in NHIA support (Fig. 2). In 2009, the scheme generated 60.9% of the total revenue and expended 41.8%. The total revenue generated and the expenditure incurred for the period under study were GH¢12.8 million and GH¢13.7 million, respectively.

Annual revenue

While proportions of NHIA support in the form of subsidy for the exempt group and reinsurance for claims payment increased significantly from 82.9% in 2008 to 93.9% in 2009, contributions collected and other income generated showed a decreasing trend (Fig. 3).

Annual expenditure

The main expenditure areas of the scheme were administrative and medical claims. The total expenditure for the period under review doubled from GH¢2.2 million in 2007 to GH¢5.8 million in 2008, and dropped slightly in 2009 (i.e., GH¢5.7 million) (Table 3). The proportion of administrative expenses showed a downward trend from 18.2% in 2007 to 3.6% in 2009, while that of medical claims expenses went up from 81.8% in 2007 to 96.4% in 2009.

Claims settlements

About 99% of 38,737 medical claims reviewed for the period October-December 2009 were paid beyond the stipulated period of 28 days for claims settlements.

Expense, claims, and combined ratios

The expense ratio showed a downward trend from 2.7 in 2007 to 0.7 in 2009, while the claims ratio increased from 12.2 in 2007 to 18.1 in 2009 (Table 4). The combined ratio, which is the sum of the expense ratio and the claims ratio, increased from 15.0 in 2007 to 18.8 in 2009.

Discussion

The membership of the scheme is categorized into formal sector workers, informal sector workers, pensioners, the aged (70 years and older), children younger than 18 years, indigent, and pregnant women. The membership coverage increased over the period under study, driven mainly by the exempt groups: children younger than 18 years, the aged, indigent, and pregnant women; only one-third of the informal sector group who pays contributions is registered. The increasing trend in annual membership

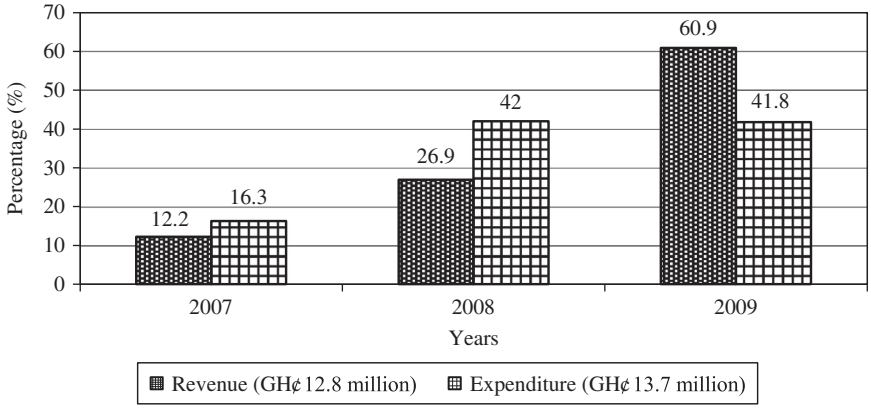


Fig. 2 – Revenue and expenditure status (2007–2009).

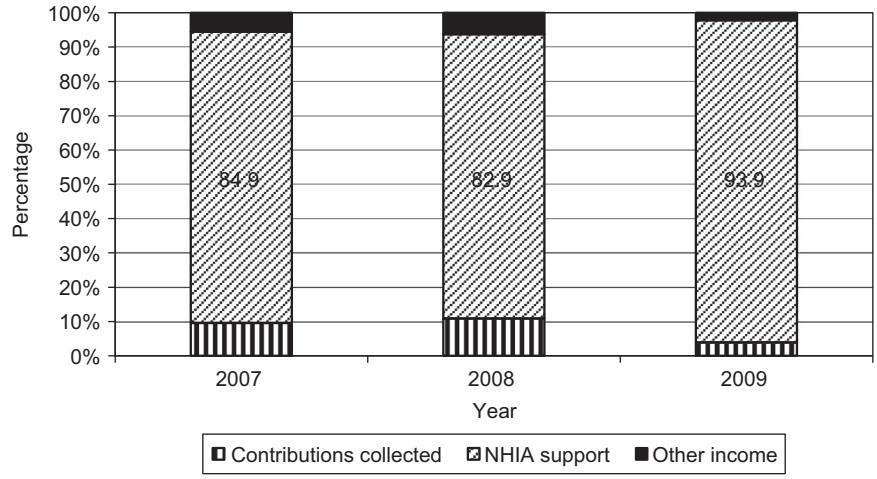


Fig. 3 – Revenue distribution of the scheme (2007–2009). NHIA, National Health Insurance Authority.

coverage is good for membership growth and development of the scheme as shown in previous studies [11,13,14]. It indicates that registered members have accepted the NHIS program and are ready to pool their resources to seek a measure of protection from the risks that they face [13]. The small proportion of registered informal group who pays contributions, however, could affect the revenue base and presents long-term sustainability problems [3]. In spite of the increasing trend in annual membership coverage, the number of registered members declined from 8.3 percentage points in the first year (2007–2008) to 6.5 in the second year (2008–2009), a trend found in other studies [3,8,15]. The cause of this decline in membership registration could be attributed to reasons found in the household survey.

The household survey shows a membership coverage of 22%, which gives credence to that obtained from the desk review at the scheme office. Most of the respondents considered the annual contribution of the scheme, which ranges from GH¢ 10.00 to GH¢24.00, as expensive, and hence they did not register for the scheme. Others believe that the scheme does not offer the services that they need or are simply not sick; hence, they do not see the need to register. These reasons show that respondents do not understand the importance of the NHIS; therefore, continuous community education would be useful to sensitize people on the role that health insurance plays in stabilizing their situation.

In relation to revenue, the main sources are support from the NHIA in the form of subsidy and reinsurance, contributions from the informal sector, and internally generated funds such as membership cards' processing fees and interest on investments. The total revenue of the scheme increased significantly over the study period, which is good for growth and long-term sustainability as evidenced in a study by Guy [4]. In spite of the annual increase in revenue, NHIA support was the predominant contributing factor, which constitutes about 90% of total revenue of the scheme. In absolute terms, the contributions collected and other income generated increased in the first year (2007–2008) and declined in the second year (2008–2009), which might be due to a similar trend observed in the membership registration, particularly informal sector registration. The decline in contributions from the informal sector, if it continues in subsequent years, would reduce the revenue base and cause further days in the payment of provider claims. In the long term, it could threaten the financial viability of the scheme if support from the NHIA goes down. These trends in revenue were also found in the study by Witter and Garshong [3].

Table 3 – Expenditure status of the scheme (2007–2009).

Year	Administrative expense (%)	Medical claims expense (%)	Total expenditure (GH¢)
2007	18.2	81.8	2,232,163.34
2008	8.9	91.1	5,757,550.21
2009	3.6	96.4	5,732,104.33

The main expenditure areas of the scheme are administrative expenses and medical claims expenses. The annual expenditure went up in the first year of the study period and dropped slightly in the second year. The total expenditure, however, exceeded revenue, with medical claims expenses as the major contributing factor. This trend in the scheme's expenditure was also seen in the estimation of the expense and medical claims ratios. The combined ratio increased consistently over the study period, with medical claims ratio as the driving force. The increasing trend in medical expenses could pose a serious financial challenge to the scheme. In the long term, it may result in diminished social protection and value to the insured members. The change in claims payment mechanism from fee-for-service to Diagnostic Related Groupings and an upward review of the medicine price list in 2008 might partly account for the high medical claims expenditure observed in 2008 [3]. According to the 2010 independent health sector review, claims for medicines totaled 60% of all claims in 2009 [7]. These factors contributed to a growth in distressed schemes and failure to pay outstanding provider claims in 2008 [3]. As emphasized earlier, it would be important for the scheme to attract more members and to retain them over long periods during which they consume no or few services [16]. The increasing rate of medical bills expenditure as explained by the management is due to 1) comprehensive benefit package with no co-payment mechanism to control cost; 2) ineffective gatekeeper system, which contributes to increase in health care utilization and cost at secondary and tertiary facilities; and 3) client and health care provider abuse.

The claims settlements pattern of the scheme shows lengthy delays in the payment of provider claims. According to the NHIS Legislative Instrument (LI 1809), the stipulated period for vetting and payment of claims is 4 weeks after receipt of the claims from a health care provider [5]. About 99% of sampled claims submitted within October-December 2009, however, were settled beyond the mandatory period. Because the main source of income for health

Table 4 – Expense, claims, and combined ratios (2007–2009).

Year	Expense ratio	Claims ratio	Combined ratio
2007	2.7	12.2	14.9
2008	1.4	14.0	15.4
2009	0.7	18.1	18.8

care providers is the internally generated fund that comes from claims reimbursed by the NHIA, this situation would affect their revenue base and may result in poor delivery of health service to insured members [7]. Delays in claims settlements remains a problem in most of the DMHISs, and this has raised acute problems of bankruptcy of certain providers and lack of trust by suppliers [7]. It has been found that paying claims promptly is an important aspect of service and good value [17]. It is also an essential element of the financial incentives of health care providers and as a result, a key factor affecting provider behavior [18]. Early settlement of provider claims will enable health care providers to render continuous service to insured members. More often, health care providers require funds immediately after the provision of service; hence, significant delays in claims settlements may force them to take other measures that defeat the purpose of the scheme [17]. For instance, they may indulge in unhealthy practices including extortion of money from insured members and refusing health care services to insured members. These provider-abuse practices may affect the renewal rate because dissatisfied insured members see no value in the scheme and as such are less likely to renew their memberships [13].

Since its introduction in 2004, the NHIS has partly accounted for reduction in availability of Government of Ghana resources for operations and public health activities of health care providers because service claims reimbursed by the NHIS cover some of the facility-based operational costs [7]. The scheme has also been a contributory factor to delays in the release of funds from the central government, which affects the implementation of planned activities of health care providers. According to the Ministry of Health, by December 2009, the ministry received only 20% of expected transfers from the National Health Insurance Fund, mainly because of delays in inflows in the National Health Insurance Fund [7]. As a result, health care providers largely depend on claims reimbursement funds to cope with the significant increase in health cost and workload. Further delays in claims payment by the DMHISs will therefore cause cash problems for health care providers. The factors contributing to delays in claims settlements as explained by the management of the scheme were delays in the transfer of subsidies and reinsurance from the NHIA, large volumes of medical claims, inadequate number of personnel, and ineffective claims processing software. The review of the medical claims showed that the scheme receives an average volume of 30,000 claims per month, which makes it practically challenging to vet and settle payments within the mandatory 28 days. These factors were also found to be contributing to delays associated with provider claims settlements in 2009 [7].

Conclusions

There are increasing trends in membership coverage and revenue that are largely driven by the exempt groups and subsidies from the NHIA, respectively. The medical claims expenditure is increasing with significant delays in settlement. Introduction of cost-containment measures including co-payments and capitation payment mechanism would be necessary to reduce the escalating cost of medical claims. Adherence to the stipulated 4-week period for claims payment would also be important to ensure that health care providers are financially resourced to deliver continuous health services to insured members. Furthermore, the scheme should be adequately resourced to ensure speedy vetting of medical claims and also to facilitate community education in the district to improve membership coverage and revenue from the informal sector.

Acknowledgments

We acknowledge contributions of the management and staff of Ga DMHIS, field workers, and field supervisors. We thank the Ga East District Director of Health Services for permitting us to conduct the household survey in the Madina Township and the staff of Madina Polyclinic for their support in the recruitment and training of field workers.

Source of financial support: This study was self-financed by the authors. The views expressed in this article are those of the authors.

REFERENCES

[1] World Health Organization. Sustainable Health Financing, Universal Coverage and Social Health Insurance [A58/33]. Geneva, Switzerland: World Health Organization, 2005.
[2] Atim C, Grey S, Apoya P, et al. A Survey of Health Financing Schemes in Ghana. Bethesda, MD: Partners for Health Reformplus Project, Abt Associates, Inc., 2001.
[3] Witter S, Garshong B. Something old or something new? Social health insurance in Ghana (Article). BMC Int Health Hum Rights 2009;9:20.
[4] Republic of Ghana. National Health Insurance Scheme Act, Act 650. Accra, Ghana: Ghana Publishing Corporation, 2003.
[5] Republic of Ghana. National Health Insurance Scheme, Legislative Instrument, LI 1809. Accra, Ghana: Ghana Publishing Corporation, 2004.
[6] Ministry of Health. National Health Insurance Policy Framework for Ghana, Revised Version. Accra, Ghana: Ministry of Health, 2004.
[7] Ministry of Health. Independent Review: Health Sector Programme of Work 2009, Ghana. Accra, Ghana: Ministry of Health, April 2010:8–19.
[8] Ministry of Health. Independent Review: Health Sector Programme of Work 2007, Ghana. Report. Accra, Ghana: Ministry of Health, April 2008:54–8.
[9] National Health Insurance Authority (NHIA) and Development Partners (DP). Ghana National Insurance Scheme: joint development mission. Aide Memoire 2007. Available at: http://www.snvworld.org/sites/www.snvworld.org/files/publications/5.ghana_national_health_insurance_scheme_joint_dp_mission_aide_memoire.pdf. [Accessed August 30, 2013].
[10] National Health Insurance Scheme. Annual Report 2010. Accra, Ghana: National Health Insurance Authority, 2011.
[11] Wealth Health Organization. World Health Report 2000. Health Systems: Improving Performance. Health Financing Policy Issue Paper. Geneva, Switzerland: Wealth Health Organization, 2000.
[12] International Labour Organization. Performance Indicators of Statutory Social Insurance Schemes: Global Extension of Social Security. Working Paper 2009.
[13] Wipf J, Garand D. Performance Indicators for Microinsurance: A Handbook for Microinsurance Practitioners. Luxembourg: ADA asbl, 2008.
[14] Guy C. Social health insurance in developing countries: a continuing challenge. Int Soc Secur Rev 2002;55:2.
[15] Yevutsey SK, Akins M. Financial viability of District Mutual Health Insurance Schemes of Lawra and Sissala East Districts, Upper West Region, Ghana. Ghana Med J 2010;44(4):130–7.
[16] Dror D. Health insurance for the poor through community schemes—is it viable? Defining an agenda for poverty reduction. Proc First Asia Pacific Forum Poverty 2007;2:193–208.
[17] CGAP Working Group on Microinsurance. Performance Indicators for Microinsurance Practitioners. Luxembourg: ADA asbl, 2006; Workshop report. October 16–17, 2006.
[18] Kwon S. Thirty years of national health insurance in South Korea: lessons for achieving universal health care coverage. Health Policy Planning 2009;24:63–71.