

ORIGINAL ARTICLES

CHALLENGES OF HEALTH CARE DELIVERY AT A MUNICIPAL HEALTH FACILITY UNDER GHANA'S NATIONAL HEALTH INSURANCE SCHEME

Yawson AE^{1,2}, Nimo KP¹, Biritwum RB¹

¹Department of Community Health, University of Ghana Medical School, College of Health Sciences, Korle-Bu, Accra, Ghana, ²Public Health Unit, Korle-Bu Teaching Hospital, Korle-Bu, Accra, Ghana.

Abstract

Introduction: Empirical evidence on challenges to health care delivery at district/municipal level under the National Health Insurance Scheme (NHIS) in Ghana is limited. This study determined challenges to optimal health care delivery at a municipal hospital under Ghana's NHIS.

Method: A cross-sectional study was undertaken between January-March 2010 at the Winneba Municipal Hospital (WHM) in Ghana to review out-patients (OPD) records from 2005- 2008. A structured questionnaire was used to collect data from 345 out-patients (170 insured and 175 uninsured), and from their folders. Eleven key informants from the WHM were interviewed.

Results: The NHIS was introduced at the WHM in 2006, resulting in an increased OPD attendance of 77.3% in 2007. Insured clients visited the OPD many times and at shorter intervals than uninsured clients. Disease patterns at the OPD were however similar before and after the introduction of NHIS at the Hospi-

tal. Key health providers at the WMH admitted to increasing OPD numbers and prolonged client waiting times. Over 40% of insured clients spent three hours or more to receive OPD services. Financial support from the Government to the WMH has reduced since the introduction of NHIS. In 2008, over 70% of total hospital revenue was from the NHIS; delays in payment by District/Municipal Mutual Health Insurance Schemes (DMHIS) significantly strained hospital finances and provision of drugs and supplies.

Conclusions: Increased OPD numbers, prolonged client waiting times, consumer moral hazard, limited Government financial support and delayed NHIS funds were critical challenges at the WMH. Innovative measures to limit moral hazard (i.e. reward mechanisms for non-frequent visits, and introduction of co-payments for multiple visits) are recommended. Means to improve the skills of hospital staff dealing with NHIS and staff of the DMHIS are policies worth pursuing.

Key Words: District health delivery, Social health insurance, Low income countries, consumer moral hazard.

Introduction

Financing health care, in most developing countries, is costly and complex^{1,2}. The most effective way of providing health services for the poor in these settings continues to be debated as resources for state health expenditure continue to decline³. Before independence, the Government of Ghana provided free health care for civil servants through general taxation. With the expansion of health services after independence, the then socialist (Nkrumah) Government, made health care almost free for all the citizenry⁴. After the overthrow of the Nkrumah Government, the Hospital

Fees Act of 1971⁵ was introduced, requiring payment of fees for some services. Successive Governments tried to increase fees gradually through the Hospital Fees Regulation Acts of 1983⁶ and 1985⁷.

Introduction of user fees for health care in Ghana (especially in 1985) resulted in a sharp and significant reduction in utilization of health care, prevented access for the poor, and imposed considerable financial difficulties on the population⁸. User fees in the health system of Ghana led to delays in seeking health care and reduced access to health care by the extremely poor^{9,10}.

An exemption policy was introduced to overcome the financial difficulties experienced by the elderly, women, children and the very poor in accessing vital health services. However, applying and enforcing such targeting for the most vulnerable in the population, was shown to be difficult in practice^{9,11,12}. Failure of the exemption policy then meant reduced access to vital health care by the most vulnerable in the population and subsequently led to a fall in clinic attendance^{4,11}.

Health insurance is seen as an important alternative financing mechanism for health care in developing

Author for Correspondence:
Dr. Alfred Edwin Yawson
Department of Community Health
University of Ghana Medical School
Korle Bu
E mail: ayawson@yahoo.com
Conflict of interest: None declared

countries, with the potential to increase utilization and better protect people against (catastrophic) health expenses^{13,14,15}.

Health insurance was chosen as the preferred option to user fees and in 2003, the Government of Ghana introduced the National Health Insurance Scheme (NHIS) as the main health financing system. This became operational nationally in 2005¹⁶. There are three types of health insurance schemes that operate in Ghana; District-wide Mutual Health Insurance, Private Mutual Health Insurance (Non-District) and Private Commercial Health Insurance. The Government, however, decided to support the establishment of the social-type District-wide Mutual Health Insurance (DMHI) Schemes in the country¹⁷. The objective of the law establishing the NHIS was to reduce the financial barriers to accessing health care so as to improve the health of the population and was designed to enrol all Ghanaians and persons legally resident in Ghana from all sectors of the economy^{12,16,18}. The main characteristics of the NHIS are that it is mutual, with ownership resting with the subscribers (not the Government) and emphasizes solidarity^{2,17}. The scheme in 2010 operated in over 145 of the more than 160 districts in Ghana and covered over 95% of the disease conditions that afflicted the population¹⁹.

Social health insurance schemes such as the NHIS pose peculiar challenges especially in developing countries^{2,13,20}. In these countries, ability to provide essential health coverage for all citizens and the financial capacity to sustain the insurance scheme pose major challenges^{13,21}. In addition, low national incomes, huge informal sectors with preponderant rural populations, decreased ability to mobilize resources from premiums and limited administrative capacity to organize the universal insurance scheme are major challenges^{15,22-26}.

Notwithstanding these challenges, Ghana has implemented a functional health insurance scheme^{16,18,19,27}. However, district/municipal health facilities providing health care under the NHIS are not without challenges. The goal of this study was to determine the challenges of health care provision at a municipal health facility operating the National Health Insurance Scheme in Ghana. It determined differences in age and sex characteristics of insured and uninsured clients, differences in the use of out-patient services and in waiting times by clients accessing health care at the Municipal Hospital. It also determined the financial challenges of the Hospital after the introduction of the NHIS and other challenges in health care provision from the perspectives of health service providers and health insurance staff at the municipal hospital.

Method

This was a cross-sectional study undertaken at a Municipal Hospital (WMH) over a five-week period (January 2010 – March 2010). The study employed both qualitative and quantitative methods by reviewing

hospital out-patient (OPD) records from 2005 to 2008, administering a structured questionnaire to 345 clients at the OPD and conducting interviews for 11 selected key informants.

Site of study

The study was conducted at the Winneba Municipal Hospital (WMH), in the Effutu Municipality of the Central Region of Ghana. The Municipality is one of 166 administrative districts in Ghana with Winneba, a town renowned for its higher educational institutions, as the capital. In 2009, the Municipality had a total population of 53,331. The WMH is the main referral centre within the Municipality and adjoining districts. It has a 130 bed-capacity, offers both in- and out-patient services, and operates a 24-hour service. As of 2009, the hospital had a total staff strength of 222 (which included 5 medical officers, 2 Medical Assistants, 38 professional Nurses, 19 Midwives, 10 Auxiliary Nurses, 100 Health Extension Workers and Health Aides, 75 Paramedics and Support staff and 34 Casual workers)²⁷. In addition to the WMH, the two other main public health facilities in the municipality are the Winneba Health Centre and the Gyangyenadze Health Centre²⁸. The WMH started implementing NHIS in November 2006. Clients who are registered with the scheme in the Municipality access health care at an accredited facility and the Effutu Municipal Mutual Health Insurance Authority then reimburses the health facility, usually on quarterly basis¹⁶. The WMH sees eighty (80) to a hundred and twenty (120) clients in a day, of which over 55% are insured with the NHIS²⁷.

Sampling Methods

The study compared two populations, insured and uninsured clients, who used the facility. Sample size was determined for study to have 95% power ($Z\beta=1.645$) and a two-sided type I error of 0.05% ($Z1-\alpha=1.96$). Adjusting for refusals and rejections due to poor data quality in client folder, 170 insured outpatient clients and 175 uninsured clients were interviewed for the study. A systematic sampling procedure was used to select insured and uninsured clients visiting the facility during the five-week study period. All clients attending the out-patient clinic were eligible for the study except those who required emergency care. Eleven key informants were purposively selected for in-depth interviews in the qualitative study. All the key informants interviewed had worked in the health system of Ghana before introduction of the NHIS.

Data collection and analysis

Hospital records on annual attendance and morbidity patterns at the OPD and percentage contribution of NHIS to hospital revenues were reviewed from 2005 to 2008. A structured questionnaire was administered to OPD clients and information extracted from their folders. The questionnaire obtained information on basic socio-demographic characteristics, outpatient attend-

ance patterns, and waiting times for health services in the facility. An interview guide was used to elicit information from the 11 key informants. These key informants included the Municipal Director of Medical Services (MDHS), two medical officers of the WHM, the Deputy Director of Nursing Services (DDNS), the Principal Nursing Officer in-charge of the OPD, the Hospital Pharmacist, the Head of the Laboratory unit, the Hospital Administrator, the Head of Biostatistics, the Head of Records at the OPD and the Officer in-charge of the NHIS office at the Hospital.

Outcome measures for the quantitative aspect of study included the number of out-patient visits and the average length of time (in months) between visits in the previous six months, the waiting times for registration at the OPD, seeing a doctor, at the pharmacy and the total waiting time for all services per the index visit. Assessment of waiting times was based on answers given by clients. Differences in these outcome measures were determined using chi-square for categorical and t-test for continuous variables at 95% confidence level. Data was entered using Microsoft Excel 2007 and imported into SPSS version 18 for analysis. The double entry technique was used to improve consistency in the data entry process.

Qualitative information obtained from the key informant interviews were pre-recorded and then transcribed verbatim. All interviews were conducted in English. Transcripts were manually analysed based on three main themes:

1. Workload (number of clients seen and client waiting time)
2. Frequency of supply of logistics and materials.
3. Perception of health workers of health delivery at the Municipal Hospital under the NHIS.

Triangulation was performed examining and comparing the analysis of the quantitative data to validate the findings.

Ethical issues

Clearance was obtained from the Municipal Health Authorities, the Winneba Municipal Hospital authorities and the University of Ghana Medical School. Written informed consent was obtained from each participating individual and key informant.

Limitations and assumptions

Whilst assessment of waiting times was based on answers given by clients, actual time assessment would have been more objective; however clients were made to assess times over short service provision periods to limit the recall bias. Including clients in the key informants' interviews would have provided a different dimension on the challenges of the Hospital; however the questionnaire collected enough data from clients and their folders on essential health delivery challenges. The main assumption made was that any changes in patterns of utilization was mainly due to introduction

of the NHIS, and ignored other factors that may have affected health care utilization.

Results

Out-patient Hospital attendance patterns

A review of hospital annual out-patient (OPD) attendance from 2005 (a year prior to introduction of the NHIS) to 2008 (two years after introduction of the NHIS) as demonstrated in Table 1, clearly shows dramatic changes in attendance. Compared to the attendance in 2005, the OPD attendance at the WMH increased by 19% in 2006 when the NHIS was introduced and by a massive 77.3% in 2007. The proportion of insured clients attending the WMH also increased each year after introduction of the NHIS, from 24.6% in 2006, to 38% in 2007 and to 55% in 2008.

Table 1: Out-patient attendance patterns (all ages) at the WMH, 2005-2008

Year	Total OPD attendance	Number of insured OPD attendance (%)	% change in attendance from year 2005
2005*	16841	----	----
2006	19228	4730 (24.6)	19.1
2007	29862	11348 (38.0)	77.3
2008	25204	13862 (55.0)	49.7

*NHIS became functional in the hospital in November, 2006

Table 2 indicates the age and sex characteristics of the 345 clients enrolled in the study. Of the 345 clients, 211 were females and 134 were males. Male to female ratio (M:F ratio) was 1:1.4 among insured and 1:1.8 among uninsured clients. The age characteristics in Table 2 shows that a significantly higher number of uninsured clients, 123 (70.3%), were in the age range 15-45 years compared to insured clients, where only 48 (44.0%) were in this age range. Relatively more insured clients were in the older age groups, i.e. 45-64 years and above 65 years. These age differences between the two groups were significant (p-value<0.001).

A total of 240 clients had used the WMH within the previous 6 months, among whom 145 (85.3%) were insured and 95 (54.3%) were uninsured. As shown in Table 3, the insured clients had visited the WMH many more times within the previous six months; as many as 66 (28%) had visited more than three times whilst 29 (20.0%) had visited four or more times within six months. The majority of the 95 uninsured clients had done so only once 78 (81.9%). Additionally, of the 145 insured clients, 84 (57.9%) had visited the WMH in the previous one to three months and 35 (24.1%) had visited in the previous one month. Unlike the insured, the majority of the uninsured clients (62, 65.3%) had not visited the hospital in the previous 4 months and only 9 (9.5%) had visited during the previous one month.

All eleven key informants agreed that the number of clients seen at the OPD had increased and that the

Table 2: Age and sex characteristics of 345 clients involved in the study

Age Group (years)	Uninsured			Insured		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
0-4	5 (6.8)	2 (2.0)	7 (4.0)	9 (14.8)	10 (9.2)	19 (11.2)
5-14	4 (5.5)	7 (6.9)	11 (6.3)	6 (9.8)	10 (9.2)	16 (9.4)
15-24	15 (20.5)	28 (27.5)	43 (24.6)	3 (4.9)	11 (10.1)	14 (8.2)
25-44	36 (49.3)	44 (43.1)	80 (45.7)	24 (39.3)	37 (33.9)	61 (35.9)
45-64	8 (11.1)	16 (15.7)	24 (13.7)	9 (14.8)	24 (22.0)	33 (19.4)
65+	5 (6.8)	5 (4.9)	10 (5.7)	10 (16.4)	17 (15.6)	27 (15.9)
Total	73 (100)	102 (100)	175 (100)	61 (100)	109 (100)	170 (100)

Table 3: Patterns of utilization of health care services by insured and uninsured clients over a six- month period at WMH, Ghana

Characteristics of health care utilization	Insurance Status (%)		Total (%)	χ^2 value	P-value
	Uninsured	Insured			
Number of times client visited the WMH in previous six months					
Once	78 (81.9)	26 (17.9)	104 (43.1)	10.3	0.001
Twice	17 (18.1)	53 (36.6)	70 (29.3)		
Three times	0 (0.0)	37 (25.5)	37 (15.5)		
Four times or more	0 (0.0)	29 (20.0)	29 (12.1)		
Total	95 (100)	145 (100)	240 (100)		
Minimum time interval between the current and last visits by clients					
Less than one month	9 (9.5)	35 (24.1)	44 (18.3)	55.4	0.001
One to three (1-3) months	24 (25.3)	84 (57.9)	108 (45.0)		
Four to six (4-6) months	62 (65.3)	26 (17.9)	88 (36.7)		
Total	95 (100)	145 (100)	240 (100)		

Table 4: Top 10 out-patient disease conditions (all ages) at the WMH, 2005-2008

Year	2005		2006		2007		2008	
	Disease	(%)	Disease	(%)	Disease	(%)	Disease	(%)
1	Malaria	51.6	Malaria	32.0	Malaria	36.0	Malaria	43.7
2	Pregnancy Related Complication	16.8	Upper Respiratory Infection	12.2	Hypertension/Heart Disease	6.4	Hypertension/Heart Disease	7.0
3	Upper Respiratory Infection	8.1	Pregnancy Related Complications	7.0	Urinary Tract infection	4.8	Upper Respiratory Infection	5.0
4	Hypertension / Heart Diseases	7.2	Hypertension/Heart Disease	5.6	Diseases of the Skin	2.6	Pregnancy Related Complication	3.9
5	Typhoid fever	3.2	Anaemia	3.7	Pregnancy Related Complication	2.3	Acute Eye Infection	3.0
6	Ear Infection	3.2	Gynaecological Disorders	3.2	Anaemia	1.9	Diseases of the Skin	2.7
7	Anaemia	3.2	Diseases of the Skin	2.2	Typhoid fever	1.3	Gynaecological Disorders	2.4
8	Gynaecological Disorders	3.0	Diarrhoea Diseases	1.4	Diarrhoea Diseases	1.2	Ear Infections	2.0
9	Diarrhoea Diseases	1.9	Typhoid fever	1.2	Diabetes Mellitus	1.0	Anaemia	1.9
10	Oral Cavity Diseases	1.8	Ear Infection	0.9	Gynaecological Disorders	0.8	Diarrhoea Diseases	1.1

workload concerning the required documentation for insured clients had also increased after the introduction of the NHIS. The Principal Nursing Officer in-charge of the OPD said: *'client load at the clinic has increased, people come with their families even when they are not really sick because of the insurance. The number of nursing staff has not increased, so we are always under pressure'*. The Hospital Biostatistician also stated: *'my workload has doubled as in preparing weekly, monthly and yearly returns, and one needs to properly process documents of insured clients all the time'*. The concerns of the Biostatistician was corroborated by the Head of the Records Unit at the OPD who said: *'due to the additional questions we need to ask the insured clients, especially information on the NHIS identification card, delays do occur and increase the number of clients waiting to be served in the queue'*. In addition, a Medical Officer who works at the OPD stated: *'I spend less time with the patients, about 3 to 5 minutes with each patient. The number of patients that I see has almost doubled and one cannot afford to spend too much time on one patient. I hardly sleep well these days'*.

Out-patient morbidity patterns and waiting times in the WMH

Review of the common diseases presented by clients at the OPD of the WMH from 2005 to 2008 (i.e. before and after introduction of NHIS in the Hospital) did not show major differences in the disease patterns. Malaria was the most common disease seen in each of the four years as displayed in Table 4. Apart from malaria, pregnancy-related complications, upper respiratory infections and hypertension/heart disease were always among the four commonest disease conditions seen in each of the four years. The top 10 diseases and their relative proportions are shown in Table 4.

For OPD services clients waited at three main points; for registration at the OPD, to see the doctors and for medication at the pharmacy. At the OPD, more uninsured clients got registered in relatively shorter time intervals than insured clients; in less than one hour, 124 (71%) of uninsured clients had been registered compared to 105 (62%) of insured clients. There was no difference in waiting times to see the doctors for both groups; most of them waited for at least one hour. All the three doctors and the two nurses who were interviewed agreed that clients spend long hours at the OPD due to delays in processing their cards and other documentation; this sometimes resulted in clients getting agitated and impatient. One doctor remarked: *'increased workload causes fatigue and stress in the staff, and increases waiting time for clients'* and the Biostatistician intimated that: *'delays at the OPD are because we have only one computer for all the entries on patients and this increases the time we take to get patients registered. This is worse on days when patients are many'*.

Significant differences in waiting times between insured and uninsured clients however occurred at the pharmacy; within one hour of getting to the pharmacy, 146 (83.4%) uninsured clients were served compared to only 54 (31.9%) of insured clients. Most insured clients 116 (68.1%) waited for more than an hour to get medications. This observation was corroborated by the Senior Pharmacist of the Hospital who explained that: *'patients get to the dispensary tired or frustrated, having joined queues right from the OPD through to the consulting rooms. They become impatient and vent their anger on dispensary staff. Also, due to the calculation and entries of the cost of medications and completion of the required forms for insured clients, they tend to wait a while longer than uninsured clients'*.

Overall waiting time by clients from registration at the OPD to the time of receipt of medications from the Pharmacy indicated that close to half of all insured clients (41.9%) spent more than 3 hours compared to only (24.0%) of uninsured clients. Most uninsured clients (63.4%) had relatively shorter waiting times (between 90 minutes and 3 hours).

Financial challenges of the WMH under the NHIS

A review of the Hospital records indicated that the main sources of revenue for the WMH prior to the introduction of the NHIS were Internally Generated Funds (IGF) from drugs and services, Government of Ghana Grants, and Donor Pooled Funds (DPF) i.e. funds from Development Partners channelled through the Government to support health activities at the municipal level. However, upon the introduction of NHIS, there was complete removal of DPF and a gradual withdrawal of Government of Ghana grants leaving reimbursements from the NHIS as the main source of funding. Table 5 indicates the percentage contribution of NHIS to hospital revenue from health services and drugs provided for clients which shows that percentage contribution of NHIS had generally increased from 68% in 2006 to 70% in 2008; in 2007 it was 42%. The WMH is therefore almost entirely dependent on NHIS as its main source of revenue and delays in reimbursement directly affect the activities of the hospital.

Table 5: Contribution of NHIS to the total revenue of the WMH, 2005-2008

Year	% contribution of NHIS to Hospital revenue		
	Service	Drugs	Total
2005*	---	---	---
2006	18	24	68
2007	24	61	42
2008	68	71	70

*NHIS became functional in the hospital in Nov. 2006

In 2008, revenue from services and drugs came mainly from the NHIS and the Hospital Administrator stated that: *'difficulties in providing essential equip-*

ment and logistics to the various units of the facility were due to delays in reimbursement of funds owed the facility by the NHIS'. At the Pharmacy, delays in releasing funds for restocking medications and the inadequate and irregular supply of reagents and consumables at the laboratory unit affected optimal service delivery. The Municipal Director of Health Services disclosed: *'inadequate funding for OPD and in-patient care in the long run may compromise quality of care and the whole municipal health system is likely to suffer if the delays in NHIS reimbursements continue this way'*. The Director of Nursing Services of the WMH added: *'funds for health programmes such as in-service training for staff are limited and we cannot also provide uniforms as incentives for staff because we do not generate much funds nowadays'*.

Additionally, all key informants (except the NHIS Officer) agreed that their units were working under difficult circumstances and believed they would not be able to cope in the long term if the current challenges persisted. Their views were summed up in this quote by the Hospital Administrator: *'the facility can cope so long as we can get credit from our suppliers, but if the facility loses its credit-worthiness then running the Hospital will become extremely difficult'*. However, the Officer in charge of the NHIS office at the Hospital declared that: *'delays in reimbursement to the Municipal Hospital were partly due to incorrect filling of insurance claim forms by Hospital personnel and that the Hospital Administration needs to engage our officer to train all persons who work on the Hospital's insurance claims'*. Her view was that the Hospital personnel who work on the insurance claim forms need to be trained to build their capacity to do a more thorough job.

Discussion

The way a health system is financed affects the performance of its functions and ultimately, the achievement of the health system goals of health improvement and maintenance²¹. This study determined the challenges of a municipal health facility in Ghana under the National Health Insurance Scheme (NHIS).

The Hospital's annual out-patient (OPD) attendance from 2005 (a year prior to introduction of the NHIS) to 2007 (a year after introduction of the NHIS) demonstrated dramatic changes in attendance, a percentage change of 77.3%. The proportion of insured clients (out of total clients) attending the WMH also increased each year after introduction of the NHIS, from 24.6% in 2006, to 38% in 2007 and to 55% in 2008. Age was the main demographic difference between insured and uninsured clients attending WMH.

More uninsured clients were in younger age groups (15-45 years) compared to insured clients who were in the older age groups (greater than 45 years). This finding is in accordance with a study in 2003, which defined the differences in emergency room usage patterns between patients with and those without medical insurance coverage, and found more uninsured clients to be

younger than insured clients²⁹. However, other studies have indicated race and occupation to be significant demographic differences between insured and uninsured clients^{30,31}.

This study demonstrated that a major challenge of the municipal health facility was the multiple usages of health services after introduction of the NHIS. Insured clients used out-patients services more often and at shorter time intervals than uninsured clients within a six-month period prior to the study (consumer moral hazard). However, the patterns of disease conditions at the OPD were similar for the periods before and after introduction of the NHIS. The increased number and frequency of OPD attendance increases the workload of staff; this imposes challenges to the optimal functioning of health delivery in the municipality in the long term¹.

Risk and uncertainty associated with contracting an illness and individual not knowing timing of health consumption or expenditure induces the individual who is risk averse to seek insurance; insurance thus restores certainty³². Once insurance is bought however, the consumer or agent has no financial inducement to constrain their consumption. This poses a challenge to the functioning of any universal social health insurance scheme and health care delivery³². Elsewhere in Africa (Kenya and Uganda), evidence supports the existence of consumer moral hazard exerting enormous strain on the health system³³. In Uganda when user fees were abolished, a marked increase in utilization occurred in all population groups and varied from 26% in public referral facilities in 2001, to 55% in 2002, (taking 2000 as the base year)³³. In addition, Government Health care services in South Africa have also faced a galloping moral hazard, a trend with huge challenges to the health system³⁴.

The increased out-patient visits directly increase the number of clients per health care provider per work time. This was clearly demonstrated through interviews with the key informants, all 11 overwhelmingly agreeing that their workload had increased following the introduction of the NHIS. The implication of this is the reduction in times spent by providers on individual clients and the potential to compromise quality of care. Studies have amply demonstrated that work overload and stress among health providers result in decreased effectiveness and work performance and potentiates negative attitudes and behaviours to clients and other members of the health team^{35,36}.

Another major challenge to quality health care delivery at the Municipal Hospital was increased waiting times resulting from increased client load. The study found significant differences in waiting times at the OPD and at the pharmacy between insured and uninsured clients; over 40% of insured clients spent three or more hours accessing health service from registration at OPD to receipt of medications at the pharmacy. This finding was amply corroborated by key informants (health providers) who agreed that waiting times have

indeed increased. This situation creates agitation, impatience and petty quarrels between clients and health workers. Core principles of social insurance are equity, solidarity and ability to provide basic health care packages for the citizenry^{1,21,26}. Clients are confident and believe in workability of an insurance scheme and are willing to pay premiums if they are able to receive basic health care packages promised by the scheme.

A study in Ogun State, Nigeria, revealed that, the higher the belief by rural households in workability of the insurance scheme to deliver health care, the more the households were willing to pay for the scheme³⁷. Furthermore, a recent study in Ghana, demonstrated that households that are uninsured had more negative views about the benefits and the cost of the NHIS than insured households³⁷.

In addition to the above challenges, the key informants mentioned other major challenges faced by the facility such as increased client numbers, (especially at the OPD), limited and irregular supplies of essential inputs for health care delivery, and limited funds for building health provider capacity. The fundamental issue underlying these challenges was the delay in reimbursement from the municipal health insurance authorities. Prior to introduction of NHIS, the main sources of revenue for the Municipal Hospital were internally generated funds (IGF) from drugs and services, Government of Ghana Grant, and Donor Pooled Fund (DPF) to support health activities at the municipal level. However, upon introduction of NHIS, there was complete removal of DPF and gradual withdrawal of Government of Ghana grants leaving reimbursement from the NHIS as the main source of funding. As much as 70% of all hospital revenue in 2008 was from the NHIS. Delays in payments from the Municipal NHIS to the WMH severely influenced optimal health care delivery at the municipal/district level. All key informants (except the NHIS officer) agreed that their units were working under difficult circumstances and believed they would not be able to cope in the long term if current challenges persisted. Their views were summed up by the Hospital Administrator who said: *'the facility can cope as long as we can get credit from our suppliers, but if the facility loses its credit-worthiness then running the hospital will become extremely difficult'*. All health provider key informants attributed delays in repayments to slow administrative processes at the Municipal NHIS and their limited capacity to manage a universal social insurance. However, the Officer in charge of the NHIS office at the Hospital argued that: *'delays in reimbursement to the Municipal Hospital were partly due to incorrect filling of insurance claim forms by hospital personnel and that the hospital administration needs to engage our officer to train all persons who work on the hospital insurance claims'*.

Despite these challenges, Ghana appears to be pursuing a universal healthcare coverage policy in a more coherent way¹⁸ through linkages of all the District-wide

Mutual Health Insurance (DMHI) Schemes to the National Health Insurance Authority. Re-insurance from the National Health Insurance Authority (NHIA) to the DMHI is fundamental to the quest for universal coverage. To improve municipal/district health care delivery, however, health systems must reduce their reliance on out-of-pocket payments, maximize the size of risk pools, and resource allocation mechanisms must be put in place to either equalize risks between individual insurance schemes or equitably allocate general tax (and donor) funds¹⁸. Ultimately, there needs to be greater integration of financing mechanisms to promote universal cover with strong income and risk cross-subsidies in the overall health system¹⁸.

Incentive measures need to be considered, i.e. reward mechanisms for non-frequent visits and the possible introduction of co-payments for minor illnesses and for multiple visits by clients. Scheme Managers should continue to build capacity of staff on basic insurance management practices¹ while Health Facility Managers need to diligently train and build the capacity of all staff who work on insurance claim forms in their facilities.

Conclusion

Optimal health care delivery at the district/municipal level (WMH) is experiencing major challenges under the NHIS. Financial support from Government has reduced with the complete cessation of the Government's donor pool fund and a gradual decline in Government grants to the facility since the introduction of the NHIS in the facility in November, 2006. Out-patient attendance to the facility has increased dramatically after the introduction of the NHIS as well as over-utilization of health services by insured clients (consumer moral hazard). Health providers in the facility admitted that increasing OPD numbers limit the time spent with individual clients and may compromise quality of care to them. Disease patterns seen at the OPD were similar before and after the introduction of the NHIS; malaria was the most common disease seen from 2005 to 2008.

In 2008, over 70% of the entire hospital revenue came from the NHIS and therefore delays in the reimbursement of costs incurred by facility on insured clients by the Municipal Insurance Scheme Managers posed a significant strain on their finances and essential inputs for health delivery. Essential drugs and reagents for the pharmacy and laboratory units were identified as critical challenges to health care delivery by health provider key informants. In addition, delays in repayments caused irregular supply of essential medications and other logistics which hampered the optimal functioning of the health facility.

Health provider key informants attributed the delays in reimbursement to the slow administrative processes at the Municipal NHIS and the limited capacity of local Scheme Managers to diligently manage a uni-

versal social insurance in the Municipality. However, the Officer in charge of the NHIS office at the Hospital attributed the delays partly to incorrect filling of insurance claim forms by the Hospital personnel who lacked the requisite training. Based on evidence of these challenges, this research team recommends the use of innovative measures to limit moral hazard i.e. reward mechanisms for non-frequent visits, and possible introduction of co-payments for minor illnesses and for multiple visits by clients. In addition, standardised formats and guidelines (preferably computerized) for completion of insurance claim forms by the Hospital staff with the requisite training warrants policy attention. Means to build the capacity of the staff of District/Municipal Mutual Health Insurance Schemes (DMHIS) are essential and that avenues for re- insurance from the NHIA to the DMHIS are fundamental in enhancing the capacity of DMHIS to function optimally.

Disclaimer

The views expressed in this paper are those of the authors. No official endorsement by Ghana Health Service/Effutu Municipal Health Directorate/ Authorities of Winneba Municipal Health Insurance Scheme is intended or should be inferred.

Acknowledgement

We are grateful to Dr G.K. Morrison (Effutu Municipal Director of Health Services) for granting us access to the Municipality, Authorities of Winneba Municipal Hospital for use of their facility for the study, especially staff of the biostatistics office and pharmacy.

References

- Gottret P, Schieber G. Health Financing Revisited. A Practitioner's Guide. The World Bank, Washington DC. 2006.
- Witter S, Garshong B. Something old or something new? Social health insurance in Ghana. *BMC Int Health Hum Rights*. 2009, 28: 20.
- Copenhagen Consensus. A United Nations Perspective on Health system financing, 2006.
- Biritwum RB. The cost of sustaining the Ghana's "cash and carry" system of health care financing at a rural health centre. *West Afr J Med*. 1994; 13:124-127.
- Hospitals Fees Act of 1971. Act 387 of the Parliament of the Republic of Ghana Published by the Ghana Assembly Press.
- Hospital fees Regulation Acts of 1983 of the Republic of Ghana. Published by the Ghana Assembly Press.
- Hospital fees Regulation Acts of 1985 of the Republic of Ghana. Published by the Ghana Assembly Press.
- Waddington C, Enyimayew K. A Price to Pay: The Impact of User Charges in Ashanti-Akim District, Ghana, *Int J Health Plann Manage*. 1989; 4: 1747-1752.
- Asenso-Okyere W, Anum A, Osei-Akoto I, Adukonu A. Cost recovery in Ghana: are there changes in health seeking behaviour? *Health Policy Plan*. 1998; 13: 181-188.
- Burnham G, Pariyo G, Galiwango E, Wabwire-Mangen F. Discontinuation of cost sharing in Uganda. *Bulletin of the World Health Organization*, 2004, 82, 187-195.
- Nyonator F, Kutzin J. Health for some? The effects of user fees in the Volta Region of Ghana. Health systems financing in low-income African and Asian countries, Clermont Ferrand, France, 30 Nov-1 Dec 2000.
- Ghana National Health Insurance Act 650 of the Republic of Ghana, August, 2003. Published by the Ghana Assembly Press.
- The Annual report of the National Health Insurance Scheme, 2009. Published by the National Health Insurance Authority, Ghana 2010.
- Carrin G. Social Health Insurance in Developing Countries: A Continuing Challenge. *International Social Security Review*, 2002; 55: 57-69
- Carrin G, James C. Determinants of Achieving Universal Coverage of Health Care: An Empirical Analysis. In Martine Audibert, Jacky Mathonnat, and Eric De Roodenbeke, Editors. *Le financement de la santé dans les pays d'Afrique et d'Asie à faible revenu*. Paris: Karthala. 2003
- McKee M, Delnoij D, Brand H. Prevention and Public Health in Social Health Insurance Systems. *Social Health Insurance Systems in Western Europe*. (2004) European Observatory on Health Systems and Policies. Berkshire, U.K.: Open University Press
- Ministry of Health, Ghana. Health Insurance in Ghana: Financial Access to Health Care. Published by the Director of Policy, Planning Monitoring & Evaluation, 2004.
- McIntyre D, Garshong B, Mtei G, Meheus F, Thiede M, Akazili J, et al. Beyond fragmentation and towards universal coverage: insights from Ghana, South Africa and the United Republic of Tanzania. *Bulletin of the World Health Organization*. 2008, 86, 817-908
- Ensor, T. Developing Health Insurance in Transitional Asia. *Soc Sci Med*. 1999, 48: 871-879.
- Carrin G, Mathauer I, Xu K, Evans DB. Universal coverage of health services: tailoring its implementation. *Bulletin of the World Health Organization*. 2008, 86:857-863.
- Kirigia JM, Preker A, Carrin G, Mwikisa C, Diarra-Nama AJ. An overview of health financing patterns and the way forward in the WHO African Region. *East Afr Med J*. 2006 ,83, S1-28
Carrin G. Social Health Insurance in Developing Countries: A Continuing Challenge. *International Social Security Review*, 2002; 55: 57-69

22. Ensor T. Developing Health Insurance in Transitional Asia. *Soc Sci Med.* 1999; 48: 871–879.
23. International Labour Office (ILO). Global Employment Trends. Geneva. 2005; 118 Health Financing Revisited.
24. Normand C, Weber C. Social Health Insurance: A Guidebook for Planning. Geneva: World Health Organization and International Labour Office. 1994
25. Carrin G, James C. Reaching universal coverage via social health insurance: key design features in the transition period [Discussion paper no. 2]. Geneva: WHO; 2004. p. 3.
26. Winneba Municipal Hospital: Health Report; Ghana Health Service, Ministry of Health, Ghana, 2008.
27. Effutu Municipal Health Profile: Report of the Effutu Municipal Health Directorate of the Ghana Health Service: Ministry of Health, Ghana, 2008.
28. Pisarek W, Auwera JC, Smet M, Damme PV, Stroobants J. Insured versus uninsured patients in the emergency room: is there a difference? *Eur J Emerg Med.* 2003, 10: 314-317.
29. Bourne PA. Impact of poverty, not seeking medical care, unemployment, inflation, self-reported illness, health insurance on mortality in Jamaica. *North Am J Med Sci.* 2009, 2: 99-109.
30. Haider AH, Chang DC, Efron DT, Haut ER, Crandall M, Cornwell EE 3rd. Race and insurance status as risk factors for trauma mortality. *Arch Surg.* 2008; 143:945-949.
31. Newhouse JP. Free for All? Lessons from the RAND Health Insurance Experiment. Cambridge MA: Harvard University Press, 1993.
32. Nabyonga J, Desmet M, Karamagi H, Kadama PY, Omaswa FG, Walker O. Abolition of cost-sharing is pro-poor: evidence from Uganda. *Health Policy Plan.* 2005; 20: 100–108.
33. Allison B. Sustainable Health Care Financing in Southern Africa. Economic and Development Institute, Washington DC. 1998
34. Ramirez AJ, Graham J, Richards MA, Cull A, Gregory WM. Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet.* 1996; 347: 724-728.
35. Taylor C, Graham J, Potts HW, Richards MA, Ramirez AJ. Changes in mental health of UK hospital consultants since the mid-1990s. *Lancet.* 2005, 366:742-744.
36. Oyekale AS, Eluwa CG. Utilization of Healthcare and Health Insurance among Rural Households in Irewole Local Government, Ogun State, Nigeria. *International Journal of Tropical Medicine.* 2009, 4: 70-75,
37. Jehu-Appiah C, Aryeetey G, Agyepong I, Spaan E, Baltussen R. Household perceptions and their implications for enrolment in the National Health Insurance Scheme in Ghana. *Health Policy Plan.* 2011. Published online, April, 2011.