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THE IMPACT OF HEALTH INSURANCE ON HEALTH CARE PROVISION IN DEVELOPING COUNTRIES

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ABSTRACT

Health insurance, in addition to being a technique for controlling and managing health risks, helps in placing the insured in a position for accessing health care delivery ahead of an illness. This instrument, which has been well utilized in developed economies, is what the National Health Insurance Scheme (NHIS) in Nigeria tries to replicate, albeit ineffectively. This study assesses the impact of the NHIS scheme in promoting access to health care. It identifies a need for all stakeholders to engage in the active promotion of awareness on health insurance as option of health care provisioning. It argues that health insurance can make health care more accessible to a wider segment of the population and help reduce the huge expenditure on health without reducing quality.

KEY DESCRIPTORS: Health Insurance, Health Maintenance Organization, National Health Insurance Scheme, Student t-tests, Low insurance awareness.

INTRODUCTION

Having access to health care can be a daunting problem in developing economies. Although there are both public and private health care providers, many people cannot afford the cost of medical care in the form of the consulting fees, medication costs and other service charges of private hospitals, because of the widespread prevalence of poverty. On the other hand, the situation in the public hospitals characterized by long queues and pharmacies without requisite medications or even professional present no better alternative. A third option, which is the company sponsored health care scheme, excludes majority of the populace simply because the developing economies are characterized by a large informal sector.

That poverty poses enormous problems for health care accessibility in developing countries has been elucidated by the Commission on Macroeconomics and Health of the World Health Organization (2001), which observed that the poor are much less likely to seek medical care even when it is urgently needed, either because of their greater distance from health providers, or their lack of out-of-pocket resources needed to cover health outlays, or their lack of knowledge of how best to respond to an episode of illness. High unemployment rate aggravates the general poverty situation and cuts down significantly the proportion of people from whom a distressed

individual can call for assistance in a bid to settle medical bills. In environments with conditions similar to the ones depicted above, there would likely be a number of ailments that could have been ameliorated if they had been attended to promptly but which deteriorate because of lack of money to seek medical care.

It remains to take a look at the situation in the formal sector; perhaps the intervening role of the employer impacts more positively on the capacity of employees to obtain access to health care. Here, there appears to be two main approaches that employers adopt in trying to make health care accessible to their employees. One is to engage some hospitals as retainers and to pay these hospitals for the bills incurred by the employees who attend them. The other method is for the employers to pay medical allowances to their employees who in turn settle their medical bills as incurred. The first approach has its detractions, the most worrisome being that some health workers collude with some employees to send fictitious bills to the employer. The problem with the second approach is that employees tend to treat the medical allowance as part of their salary with the result that when illness, actually, happens the money that was earmarked for medical treatment often had been expended on some other competing needs.

Thus no matter the mode of occupation of the employee universal access to essential health care remains elusive. This experience which is common among developing countries is similar to that witnessed in the advanced economies in the period of the Great Depression when the savings of many individuals disappeared, unemployment was severe, and insurance companies ceased writing health (disability) insurance contracts (Beam and McFadden, 1985). In India, for instance, Banerjee (2003) observed that the health care system is managed by a shallow structure of government health-care facilities that is unable to justify the desired health security.

In Nigeria, several alternative approaches for making health care accessible, affordable and universal were tried including medical expenses insurance schemes and private health insurance schemes. They all failed to bring health care closer to the people. In desperation some resorted to such 'providers' like spiritual homes, traditional health clinics and self-medication in spite of the inherent dangers in some of these approaches. To arrest the perceived difficulties in providing health care, the government, by decree No. 35 of 1999, established the National Health Insurance Scheme (NHIS) with the broad objectives of ensuring that every Nigerian has access to good health care service at affordable cost. It aims to improve and harness private sector participation in the provision of health care services and to serve as regulatory body to Health Maintenance Organizations (HMOs) and Health Care Providers (HCP) under the scheme. However, it has been found that policies in Nigeria as in many developing countries are vague and poorly understood by staff and often lead to low level of knowledge about standard procedures and regulations (Lewis, 2006). Consequently, since the scheme was launched, there seems to be little understanding about its role as a means of health care financing with the result that there appears to have been no significant departure from the past.

Concerns that have been raised are that the public may transfer its general distrust for pre-existing insurance schemes to the NHIS, that the method of determining the capitation charged by HMOs may be arbitrary or that some of the HMOs may recruit incompetent health care providers in order to maximize profit. Another area of apprehension is that of adverse selection where, for instance, HMOs would prefer to sign up employees in white-collar occupations instead of the artisans and other informal sector workers because the members of the first group are engaged in less hazardous jobs and are likely to be a healthier and more profitable population than the latter.

While these concerns persist, it poses a grave question whether the NHIS can achieve the desirable objectives for which it was set up. This paper examines some key issues that are critical to the successful implementation of the health insurance scheme. The first is the level of awareness of health insurance as a health care financing option and the level of satisfaction with the operations of HMOs. Next is to examine the effect of socio-cultural factors on the operation of health insurance and the general effect of health insurance on employment portability. Thirdly, the study compares the performance of HMOs with that of other health care providers. Finally, the study tries to establish if there is an element of anti-selection in the operation of the HMOs and considers the role of insurance companies in the new dispensation.

The rest of the paper is organized as follows: Section 2 provides a working definition of health insurance and reviews related studies. Section 3 discusses the methodology while the results are discussed in Section 4. Section 5 concludes.

CONCEPTUALIZING HEALTH INSURANCE

Studies have shown that insurance has a crucial role to play in both the economic and social life of nations and individuals (Irukwu, 1997; Olubusi, 1998). Health insurance as a mechanism that pools the risks and resources of large groups of people together offers benefits for the different constituencies that it serves. It gives the individual contributor the assurance she or he would have access to routine health care when the need arises and to plan for the unusual health care costs. It remains a key factor in assuring individual access to health care as each participant is protected from financially disruptive medical expenses that may result from an illness or accident. For health care providers, it serves as a reliable source of payment. Employers are not left out. With health insurance they can hope to attract workers and retain a satisfied and productive workforce.

Health is a sub-sector of the economy where the insurance concept can be usefully deployed for financing health care problems. As such, it would be helpful to have a clear understanding of what constitutes health insurance. Greene and Trieschmann (1984) distinguish Health Insurance as the type of insurance that provides indemnification for expenditures and loss of income resulting from loss of health while Atkin-

son and Dickson (2000) describe health insurance as a policy that provides cover for hospital and other health care related expenses.

Other definitions include that of Conn and Walford (1998) who describe health insurance as a way of paying for some or all of the costs of health care and that of Black and Skipper (2000) who group health insurance as any form of insurance whose payment is contingent on the insured incurring additional expenses or losing income because of incapacity or loss of good health. Health insurance, Conn and Walford (1998) advanced, could protect insured persons from paying high treatment costs in the event of sickness.

The Institute of Medicine (2001), a US establishment, conceives health insurance as one of the best known and most common means of obtaining access to health care and notes that increasing evidence points to harmful health and economic consequences related to being without health insurance. A little ponder about infectious diseases makes it easy to appreciate that the consequences may extend to the family and the society. All these tend to underscore the importance of health insurance. In Africa, however, the performance of the health systems has remained weak as demonstrated by its poor responsiveness to people's expectations, unsustainable financing mechanisms and the comparatively poor health status of the people (Who Regional Office for Africa, 2000). That is the more reason why it is useful to explore an alternative approach of getting around the problem posed by poverty in accessing health care. The pooling mechanism embedded in the insurance approach offers such an opportunity.

METHODOLOGY

The major thrust of the NHIS programme is the HMO's and the health providers. It is illustrative in the wave of the current reforms sweeping the public sector to examine the generally held belief that private sector schemes are more efficient than public sector schemes. In the study, the HMO driven health care provider represents private sector while public hospitals represent the public sector. However, because most of the HMO's are only in their infancy they have not built any data from which meaningful comparison can be carried out. In the circumstance, questionnaire and structured interview became the inevitable instruments of the research.

In order to have an inclusive opinion of all the stake-holders, two sets of questionnaires were designed and administered. The first, the Beneficiaries Data Scale (BDS), comprised of twenty-six questions, which sought to get data about the value of the NHIS programme from the point of view of the beneficiaries of the scheme, including the level of awareness of the respondent about health insurance, accessibility to medical care, the difference between HMO's and other private insurance arrangements, and the scope of services provided. A total of 600 questionnaires were

administered covering all the 20 Local Government Areas of Lagos State. However, only 486 of the 523 questionnaires that were returned were found usable.

The second set of questionnaires was directed at the HMOs themselves and was meant to obtain data about the operational structures already put in place. The HMO's included in the study were Hygeia Health Maintenance, Multi-shield, Managed Health Care, Medexia, and Total Health Trust Limited. The HMO questionnaire was directed at the management staff, because as decision makers, they were in a better position to give more reliable information. The questionnaire focused on methods for determining capitation fees and patient resistance.

The study concentrated on Lagos Metropolis because it hosts the highest number of insurance companies and health maintenance organizations in the country and because Lagos is also the base for many private and non-governmental organizations with very literate employees who are likely to give better responses than the less literate population in the rural locations. Other reasons for the choice of Lagos are that it is densely populated and would prima facie provide that critical mass on which the planning of a good health insurance scheme can be based. The analysis for Lagos can then easily be replicated for other urban areas in the country with lesser number of variables to consider.

Particularly for the second set of questionnaires, the appropriate analytical tool, given the small number of HMOs in operation, would be one that would not require an estimate of the variance nor rely on the central limit theorem. In such an instance, the sample mean cannot be assumed to be Normally-distributed. A more appropriate distribution in this case would be the Student t-test which is defined as the ratio of the Normal and the Chi-square distributions. That is, for two independent random variables, one being Z, distributed as the standard Normal distribution and the other having a Chi-square distribution with (n-1) degrees of freedom; the random variable: $(n-1)Z/\ \chi 2$ has a t-distribution with (n-1) degrees of freedom (Arsham 2003). This statistic serves as a means of comparing the significance of the difference between two means whether the numbers of the constituents (n) of the variables are equal or not. In particular, because the variances of the populations are almost never available, the t-statistic is used for all practical purposes to transform mean differences to standard scores (Frankfort-Nachmias and Nachmias, 1992)

The questionnaire was structured as a five point Likert Scale. The responses were tested for significance with a test value of (3) where 3 represented "undecided" or "indifferent" on the scale. Values less than 3 were considered as "favourable" since 1 stood for the highest degree, that is, "strongly agree" while values more than 3 were considered as "unfavourable." See Table 1 below.

Table 1: Results of the t-test carried out

		Test Value = 3			Mean Difference	Mean	Std. Error Mean
		T	Df	P_value Sig. (2-tailed)			
1	How often has your HMO satisfied your health needs?	-3.58	136	0.000*	-0.43	2.57	0.12
2	HMO has improved my access to health services	-4.043	130	0.000*	-0.36	2.64	0.089
3	Having HMO is ranked higher than huge salary in my choice of employment	0.726	132	0.469	0.07	3.07	0.093
4	If you use an HMO, how do your medical costs compare with that before joining an HMO?	17.458	120	0.000*	1.99	4.99	0.114
5	I prefer my own medical attendant than those in the network of my HMO	-3.65	139	0.000*	-0.39	2.61	0.108
6	Health insurance should be monetized	-4.592	141	0.000*	-0.47	2.53	0.103
7	Faith clinics and other spiritual homes are more effective than health insurance	2.838	153	0.005*	0.29	3.29	0.103
		*: test is significant at 0.05 level					

Source: Computed by authors from respondents' data.

Using a one-sample t-test, the results obtained from testing the responses at the 5 percent significance level are set out in Table 1. The p-value in Table 1 is less than 0.05 for most of the items in the Table. This suggests that most of the responses tend to be 'favourable.'

DISCUSSION OF RESULTS

The study revealed that only 10 percent of the respondents were aware of the relevance or economic importance of health insurance. Of the few who knew about Health Insurance, majority or 63.7 percent knew about it through insurance companies, 21.2 percent claimed awareness through HMOs while others only got to know through health journals or newspapers. Respondents who earned below N240,000 per annum seemed to have a better awareness about HMOs whereas those who earned more than N240,000 per annum appeared to be only faintly aware. Sixty-one (61) percent of the lower income group, who earned below N240,000 claimed awareness whereas only 39 percent of those who earned more than 240,000 claimed not to be aware. In particular those in the higher income group, that is, those who earned more than N500,000 per annum, seemed to be totally unaware of health insurance scheme. This may be because this group makes extensive use of private personal physicians.

Out of the total number of persons who consulted HMOs, 61 percent reported being satisfied with the services (see p-value for Item 1 of Table 1 which suggests a significant level of satisfaction). Forty-seven (47) percent report that HMOs have improved their individual access to health services. Users who were dissatisfied outright with the HMOs cited long waiting time as the main problem. Other user complaints were that facilities were not clean, that there were no trained professionals, that services were too expensive, or that no drugs were available. This tends to justify the concern that the HMOs may not employ the best professionals in their chain of providers.

Another issue was the extended family practice wherein an employee takes care of many dependants beside his or her immediate family. A related issue that culture permits a man to have more than one wife with the result that he has more children than usually allowable in schemes designed with a mass appeal in view. The study showed that 42 percent of the respondents claimed to have parents who are medically dependent on them while 53 percent do not. That the response is skewed towards those without parents is not surprising since life expectancy in Nigeria is currently put at 47.08 years (CIA World Fact Book, 2006) and many 18 year olds and above could have lost their parents. While the scheme specifies four children per policy-holder, 48 percent have more than the allowable number of children who are under 18 years, who are not working and who cannot apply for coverage on their own. This means that coverage in the NHIS scheme can be very restrictive except a unique developing-areas consideration which will, for instance, allow for more than the usual number of children is permitted.

It does appear that whether an organization subscribes to the service of an HMO is not a major determinant in deciding if an individual would work for that organization rather than one that has no HMO but offers a higher salary. The percentage of respondents that is undecided on this issue is as high as 39.1 percent. Because there does not appear to be a clear differential in the performance of the HMOs compared to other health care providers this is not likely to lead to the phenomenon of 'job lock' in which an employee sticks with one employer because of some factor in the compensation package.

As high as 43 percent of the respondents could not contrast the performance of the HMOs vis-à-vis the other health care providers. Again this will not be surprising since many are unaware of HMOs. Nonetheless, a considerable percentage (47 percent) of the respondents, agree that HMOs have improved their individual access to health services. The cost differential between those who participate in HMO and those who do not is not significant (see Item 3 in Table 1) but seems to favour those who participate in HMO. Those who reported that the cost was a little lower now were 38 percent while 62 percent either believed the cost was higher or there was no difference. Fifty-three (53) percent of the respondents also preferred their own medical attendants than those in the network of HMO. This possibly explains the high response rate recorded for those who prefer that their medical allowance be

monetized and perhaps also reconfirms some of the fears raised about the method for selecting doctors in the network of the HMOs.

More than 60 percent of the organizations in the study who engage the services of HMOs in their health insurance schemes reported that more than half of the HMOs do not include major medical coverage. Only 37 percent of the organizations reported having schemes that include major medical coverage. Another factor that was used to assess satisfaction was the method of determining capitation. Most of the HMOs stated that they determine the capitation chargeable by adding up the rates used in the provider chain and marking-up the average. This method is neither uniform nor supported by a statistical basis of what would be a fair pricing and can be a source of excessive charge which can discourage patronage. Fifty percent of respondents had access to other health care providers. Interestingly, about 75 percent of those companies that have a health insurance scheme other than HMO have major medical diseases covered in their schemes. However, only about 30 percent had made claims under these other health insurance schemes. In the NHIS scheme, the role of the insurance companies is limited to providing Fidelity Guarantee/Bond Insurance policy and to indemnify the scheme on behalf of all registered contributors against all financial claims, damages, and direct loss of money as a result of the operation of the scheme. The study revealed that this option is not fully utilized as the frequency of claims made on the NHIS is low, ranging from 5 percent to 30 percent. Finally, faith-based clinics and other spiritual homes are rejected as being more effective than health insurance as about half of the respondents prefer the established methods of NHIS and another 30 percent was undecided.

CONCLUSION AND RECOMMENDATIONS

This study found that there is a lot yet to be accomplished regarding the level of awareness of Nigerians on the National Health Insurance Scheme. The problems of implementation facing the NHIS include poor public image concerning HMOs, inadequate funding, and lack of an enabling environment. Majority of the respondents who reported that they patronize HMOs also work for the organized private sector thereby supporting the initial fear of anti-selection. Except mass participation is enforced, therefore, the incident of anti-selection would derive not only from providers but also from the fact that only individuals who know they would make frequent visits to health care providers are likely to register in the scheme. Many of the respondents also earn below N240,000 per annum and can ill-afford the cost of expensive medical bills. Those who do not have company schemes also do not arrange an individual health insurance policy. This makes their case critical in the event of major illnesses. Appreciating the usefulness of the scheme becomes even more difficult when it is realized that out of those who had a scheme only about 30 percent has ever lodged a claim.

The study has also shown that when organizations do not subscribe to an HMO or have an existing health insurance scheme their employees do not have an individual

health insurance policy of their own. This is a reflection of the general low insurance awareness in developing countries. There appears to be a general agreement that alternatives to health insurance coverage are rather ineffective and that health insurance remains the preferred option among the approaches for obtaining access to health recovery services. For this to be effective, however, there is need to create awareness among the populace about the advantages of the Health Insurance option. This is an agenda that government will have to promote vigorously. Since some of the concerns about the practice of the HMOs appear to be justified, government may have to strengthen its regulatory organ to monitor and control the activities of the various operators in the National Health Insurance programme. The mode of operation of the HMOs, for now, inevitably promotes anti-selection since they direct their marketing efforts mainly at employees in the formal sector. On the part of Health Maintenance Organizations and other health care providers there is need to sensitize the citizenry to the benefits of the health insurance through improved services and the provision of enlightenment programs. For successful implementation of the NHIS scheme, actuarial support is critical. The services of health actuaries should be engaged in computing capitation fees so as to have a scientific basis of assessment. Actuarial support is also required in carrying out the biennial reviews which will help determine the appropriate apportionment of the global capitation to HMOs, NHIS and Reserve Funds as stipulated in the Act establishing the scheme. Barring corruption which has been the bane of many similar government programmes, providing health care through NHIS and its crop of private providers may allow government to reduce the huge expenditure in this sector without reducing the quality of care.

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