An Assessment of Awareness Level of National Health Insurance Scheme (NHIS) Among Health Care Consumers in Oyo State, Nigeria

[1]R.A. Sanusi and [2]A.T. Awe
[1]Department of Farming System Research and Extension,
Cocoa Research Institute of Nigeria (CRIN), Ibadan, Nigeria
[2]Department of Economics, University of Ibadan, Ibadan, Nigeria

Abstract: For equitable access to health care in Nigeria, the government introduced the National Health Insurance Scheme (NHIS) as an alternative source of funding for a rapidly extending and increasingly costly health care system. This study assessed the level of awareness of NHIS by health care consumers in Oyo state, Nigeria. A random sampling technique was adopted in administering one hundred questionnaires on health care consumers in the state. Information sourced with questionnaire include age, gender, family size, marital status, employment status, educational status, income and registration levels. Analytical techniques used were chi-square (χ^2) and descriptive statistics. Results from the study showed that 87% of the respondents were aware of the (NHIS) programme and about 83% of the respondents were registered with the programme. Furthermore, employment level is a significant factor ($p<0.01$) affecting the level of awareness of the programme by respondents while gender, income level, family size, marital status and educational status were not significant factors influencing the awareness of respondents about the programme. Though the scheme is still at infancy, notwithstanding, majority of the respondent were aware of and registered for the programme. Hence, there is the need for the government to consolidate the gains so far of NHIS in order to improve the performance of the scheme.

Key words: NHIS, health care, consumers, chi-square (χ^2), awareness

INTRODUCTION

The demand for medical care is irregular. It is determined by illness and risk of death or impairment (Arrow, 1963). According to Arrow (1963), resources allocation problem for medical care is basically the issue of uncertainty in the incidence of disease and efficacy of treatment. Consumers of medical care prefer to shift risk of illness to others at appropriate prices because of uncertainty of becoming ill and the risk of death. Medical care is the curative aspect of healthcare. For the purpose of increasing societal welfare, it has been suggested that everyone should have equal access to basic medical care and that medical needs rather than economic status should be the criterion for the distribution of basic medical care. Pricing of medical care reduces usage and the direct negative effect is to reduce demand for medical care; thereby reducing health status and causing loss to the society. Demand for healthcare can be defined as the amount of health services that the people are willing to obtain as a function of the service prices, given people's socio-economic and demographic characteristics, their perception of the quality of services, the people's geographical location relative to health providers and the environment (Collins *et al.*, 2006).

Grossman (1972) is of the opinion that consumer demand health care for two reasons. Firstly, health care makes the consumer better so that it is considered as a consumption commodity. Secondly, health care determined the number of hours or days available to the consumer for work and leisure, which also affect the time available for productive activity. Hence, it is an investment commodity. Demand for health care comes from the desire for good health and preventive services are consumed with the expectation that the cost of prevention is less than the cost of illness. Preventive health services may also improve personal hygiene or immunological resistance, which affects health. The demand for curative health is linked to symptoms of possible illness and desire for diagnosis, treatment or pain alleviation, which is influenced both by an individual's state of health (the frequency of illness) and economic

Corresponding Author: R.A. Sanusi, Department of Farming System Research and Extension,
Cocoa Research Institute of Nigeria (CRIN), Ibadan, Nigeria

143

factors. These 2 perspectives of health care by Grossman (1972) provide the starting point in evaluation of the determinants of demand for medical care.

The determinants for medical services include the incidence of illness, economic factors and cultural-demographic factors. The cultural-demographic factors have been identified to include, age, marital status and education among others (Collins *et al.*, 2006). Economic factors tend to attribute more significantly to variations in medical care and such factors include income, price and time cost of receiving treatment. Generally, the factors affecting the demand for medical care include the prices charged for medical services, the consumer income, the quality of medical care, the distance that the consumer travel to obtain medical services, waiting time and service time (Akin *et al.*, 1995; Collins *et al.*, 2006). Heller (1982) noted that demand for healthcare, whether preventive, curative, rehabilitative and promotive derives from a more fundamental demand for good health.

From the foregoing, it means that healthcare demand by individuals and households is influenced both by their perceived state of health-the frequency of illness (morbidity) and by economic factor such as income and prices. Economic theory has it that whatever is purchased depends on income available and the relative prices of commodities. When income is low and prices are high, quantity demanded of any commodity will certainly below. Healthcare demand is not exempted from this theory. This is why individuals income and prices of health services must be taken into serious consideration when drawing up policies that will aim at encouraging high demand for health goods and services. Findings have shown that as in other commodities, medical spending goes up as income increases but less than proportionally. This means that the income elasticity of healthcare demand is between 0 and 1. Given these small elasticities, the implication is that higher healthcare prices will cause people to reduce their demand for health goods and services, a situation, which will further increase the cost of healthcare. This is very true of the Nigerian situation, where prices of healthcare are very high even though demand for it is relatively low.

Since, the cost of quality healthcare is very high in Nigeria (Akin *et al.*, 1995) and with an increasing deteriorating living and livelihood conditions of a large proportion of the population (Madu, 2007), <50% of the entire population in Nigeria could be said to have access to quality healthcare, simply because they cannot afford such services even if they should demand for them. A substantial amount of literature (Omokhodion and Omokhodion, 2004; Oluwatayo, 2008) documents the vast difference in health status of the relatively high and low income groups within the (Nigerian) society.

Having established that healthcare demand is a function of income and prices of health services, it means certain sources of financing healthcare may proof inadequate. In order to ensure that there is effective demand of healthcare in Nigeria, the method of healthcare financing must have the ability to generate revenue for the health sector, ensure equity in the distribution of quality health packages, pool health risks together for the entire nation to remove the problem of income inequality, ensure efficiency in funding and managing the health sector (possibly through the inclusion of the private sector) and finally ensuring sustainability in healthcare funding.

In Nigeria, it is obvious that the quality of health services facilities is very poor. At all levels, health services facilities are dilapidated or non-functional. The health referral system is simply non-operational. Thereby translating to inefficient and unequal health services delivery. Fake and substandard drugs are widely proliferated in the Nigerian Markets. Since, medical care is regarded as a merit good. Collins *et al.* (2006) believed that public financing of medical care is necessary and justified so that increased consumption of medical services can lead to improved health status and positive externalities. In line with this school of taught, the Nigerian government (formally) instituted the National Health Insurance Scheme (NHIS) in June 2005. The scheme is designed to provide comprehensive health care delivery at affordable costs, covering employees of the formal sector, self-employed, as well as rural communities, the poor and the vulnerable groups.

Evidences from countries that have institutionalised national health (insurance) programmes indicate positive impact on health care system and productivity of labour (Adamache and Sloan, 1983; Stephen, 1984; Akin *et al.*, 1986; Collins *et al.*, 2007; KaFaFoHeRET, 2007). In terms of benefits, health insurance was discovered to have 2 sides to its coin. Empirical studies suggested that workers in jobs with health insurance coverage had higher productivity and lower job turnover than workers without health insurance benefits (Karoly and Rogowski, 1994; Buchmeller and Valletta, 1996; O'Brien, 2003; Collins *et al.*, 2006). On the other hand, other studies suggest that offering health insurance has very little or no effect on job turnover (Getler *et al.*, 1987; Mwabu and Wang'ombe, 1997; Collins *et al.*, 2007). However, it is generally believed that people without health insurance are more likely to be in worse health condition and have higher death rates than are people with insurance coverage because they are less likely to seek medical care. Conventional theory holds that people purchase health

insurance because they prefer the certainty of paying a small premium to the risk of getting sick and paying a large medical bill (O'Brien, 2003; Collins *et al.*, 2006). In other words, people will be more likely to purchase a health insurance when the premium is low compared to the value of the coverage to the consumer.

Given the foregoing, the key issues this study addressed are: What categories of people does NHIS cover? What is the extent of coverage? What is the awareness level of the progamme?

The objective is to assess, the NHIS programme in Oyo state, Nigeria vis-à-vis:

- Describing, the socio-economic characteristic of health service consumers
- Evaluating, the level of awareness of NHIS among (health care) consumers

MATERIALS AND METHODS

The study area of this research is Ibadan, the largest city in West Africa and the capital city of Oyo state of Nigeria. It is located approximately on longitude 3°54'E of the Greenwich meridian and latitude 7°23'N of the equator. It is some 145 km North eastwards from Lagos and is directly connected to many towns in Nigeria via its rural hinterland by a system of roads, railways and air route. Ibadan has one of the highest population densities in Nigeria. The total population of Ibadan was 2,258,625 inhabitants according to the 2006, census made up of 1,125,843 urban and 1,132,782 rural population sizes (Omonijo *et al.*, 2007). The choice of Ibadan is as a result of the presence of government institutions and these (institutions) are the starting point of the implementation of the NHIS programme.

Primary data used for this study were sourced through the administration of a well-structured questionnaire. The (primary) data sourced include level of awareness about the (NHIS) programme by health service consumers, number of people registered under the NHIS as well as efficiency in health care delivery under NHIS programme.

Respondent (health care) consumers were sampled (at random) from the list of organisations provided by Oyo state ministries of information and commerce. One hundred (well-structured) questionnaires were administered on the respondents (from which, 95 questionnaires were found useful) and the data generated were analysed with the use of descriptive and chi-square (χ^2) statistical techniques. The descriptive statistics are essentially mean, frequency and percentages, while the chi-square (χ^2) statistics used can be expressed as:

$$\chi^2 = \Sigma \ [(O_i - E_i)^2] \bullet (E_i)^{-1} \qquad (1)$$

Where:

O_i = Observed frequencies of ith variable (e.g. age, family size, awareness level, etc.)

E_i = Expected frequencies of ith variable given as

$$[(C_i) \bullet (R_i)] \bullet (G)^{-1} \qquad (2)$$

Where:

C_i = Column total for O_i

R_i = Row total for O_i

G = Grand total

RESULTS AND DISCUSSION

Table 1 revealed that 84.2% of the respondents fell within the age bracket of 25-55 years. This implies that majority of the respondents were within the (active) working class of the population while 15.8% were dependants. About 52% of respondents were males, while 48% were females (Table 1). This implies that more males than females were covered by the study (or probably the scheme covers more male than females or employment is gender skewed).

Table 1 also showed that 87% of respondents were married. This means that the NHIS programme would be well populated because a married individual is expected to register along with his or her family members (nuclear family only). Furthermore, Table 1 indicates that about 63% of respondents had a fairly large family size (of 5 persons). This is another indication that NHIS programme would be well participated in by (health care) consumers. About 83% of the respondents were educated up to tertiary level (Table 1). This implies that a significant proportion of the respondents will appreciate the programme.

Table 2 shows that the civil service was the largest employer of labour, with about 19, 33 and 35% of the respondents being employees of the federal, state and local government, respectively. Since NHIS started with government workers (particularly federal), who made up to 86% of respondents, this gives better opportunity to register and enjoy health services under the programme. By implication, if NHIS programme could cover all government employees, a good proportion of the working population in Nigeria will have access to qualitative and quantitative health care services, since, it is said that government is the largest employer of labour in Nigeria. Furthermore, about 51% of respondents earned monthly income in the range of ₦21,000-₦40,000, while only 1% earned less than ₦10,000 (Table 2). This means a substantial number of people will be able to contribute financially to the programme.

Table 1: Distribution of respondent consumers by socio-economic variables

Variable	Frequency	(%)
Age (years)		
<25	8	8.4
25-55	80	84.2
>55	7	7.4
Total	95	100.0
Gender		
Male	49	51.6
Female	46	48.4
Total	95	100.0
Marital status		
Single	6	6.3
Married	83	87.4
Divorced	6	6.3
Total	95	100.0
Household size		
3	5	5.3
4	18	18.9
5	60	63.2
6	11	11.6
8	1	1.1
Total	95	100.0
Educational status		
Secondary education	16	16.8
Tertiary education	79	83.2
Total	95	100.0

Table 2: Distribution of respondent consumers by employment status

Variable	Frequency	(%)
Establishment		
Federal Govt.	18	18.9
State Govt.	31	32.6
Local Govt.	33	34.7
Private sector	12	12.6
Self employed	1	1.1
Total	95	100.0
Income class		
<10,000	1	1.1
10,000-20,000	26	27.4
21,000-40,000	48	50.5
41,000-80,000	20	21.1
Total	95	100.0

Table 3: Distribution of respondents consumers by participation in NHIS

Variable	Frequency	(%)
Awareness		
Unaware	12	12.6
Aware	83	87.4
Total	95	100.0
Registration		
Unregistered	16	16.8
Registered	79	83.2
Total	95	100.0
Dependant unregistered	18	18.9
Dependants registered	77	81.1
Total	95	100.0
Contribution		
Non-contributor	24	25.3
Contributor	71	74.7
Total	95	100.0

Source: Field survey (2006)

Although, NHIS is still new in Nigeria, yet 87.4% of the respondents were aware of the programme as indicated in Table 3. Implying that with this level of awareness, the prospect of successful administration of

Table 4: Distribution of respondents by NHIS service delivery

NHIS Features	Frequency	(%)
Services		
Not enjoyed	39	41.1
Enjoyed	56	58.9
Total	95	100.0
Health history		
Healthy	3	3.2
Fell sick	92	96.8
Total	95	100.0
Dependant healthy	27	28.4
Dependant fell sick	68	71.6
Total	95	100.0
Treatment		
Untreated	23	24.2
Treated	71	74.7
Total	95	100.0

Source: Field Survey (2006)

Table 5: Contingency for awareness level value by socio-economic variables

Variable	χ^2-statistic
Age (years)	0.02
Gender	1.25
Marital status	0.99
Family size (people)	4.51
Educational status	0.65
Income level (₦)	1.94
Employment status	26.99***

*Significant at 10%; **Significant at 5%; ***Significant at 1%

the programme in Nigeria is high. About 83% of the respondents were registered with the programme, while about 17% were not (Table 3).

Also, about 81% of the respondents registered their dependants with the programme while about 19% had not (Table 3). About 75% of respondents were contributors to the (NHIS) programme, while about 25% of the respondents were non-contributors (Table 3).

If registration is not compulsory not everybody that is aware of the programme will register. The reluctance of (health service) consumers to register with NHIS may be attributed to the lack of confidence in the programme like previous government programmes or lack of social insurance model that will ensure universal coverage. In the eyes of the uninsured, insurance is meant to help equalise financial risk between the healthy and the sick, hence the healthy will not be willing to register.

In Table 4, it is shown that 58.9% of the respondents have started enjoying services under the NHIS programme (since about 1 year of registration). Table 4 equally shows that about 97% of the respondents have fallen sick, while about 72% had their dependants falling sick at one time or another after registration with the programme. About 75% of the respondents have received treatment from the registered health care providers under the NHIS programme (Table 4).

This indicates slowness in the progress of the programme, in spite of the level of respondents registration with, awareness of and contribution to the programme.

From Table 5, it can be observed that employment status was a significant factor (p<0.01) affecting the level of awareness of the programme by respondents. However, age, gender, marital status, family size, educational status and income level were not significant factors influencing the level of awareness of the programme. This shows that the programme is yet to be embraced totally by the larger society.

CONCLUSION

The importance of equity in the provision of health care cannot be over emphasised. The poor lack access to basic health services and receives low quality medical care due to inability to pay for quality care. This (among other reasons) prompted the establishment of the National Health Insurance Scheme (NHIS). Hence, the evaluation of NHIS is best undertaken in terms of the original goals of the Scheme. The first major goal of NHIS is to ensure that everyone has access to quality health care. Therefore, the level of awareness about the scheme was examined. One hundred well-structured questionnaires were administered on randomly selected health care consumers in Oyo state, Nigeria. Descriptive and chi-square (χ^2) statistical techniques were used for data analysis.

Findings of the study, showed that NHIS coverage in Nigeria was restricted so far; because not all registered persons have started enjoying services from the programme. Infact, 87.4% of the people were aware of the programme and 83.2% were registered under the programme, however, the number of people enjoying the programme just 58.9%. This study revealed that majority of the respondents were aware of the scheme and the implication is that over time (with full implementation of the scheme), accruable benefits from it will be fully tapped by the populace.

RECOMMENDATION

Therefore, there is need on the part of the government to consolidate the gains so far in order to improve the performance of the scheme. To be able to achieve this:

- Awareness campaigns should be intensified so that majority of Nigerians will become aware of the possible benefits of the scheme
- Government should as a matter of urgency enforce compulsory registration of all and sundry to ensure that everybody fully benefit from the scheme

REFERENCES

Adamache, K. and F. Sloan, 1983. Competition between non-profit and for-profit health insurers. J. Health Econ., 2 (3): 225-243. DOI: 10.1016/S0167-6296(83) 80003-4. http://www.sciencedirect.com/science/ article/B6V8K-45N4YSK-/2/b1c4a9d170ef1e8711ed5e 657992ec34.

Akin, J.S., C.C. Griffin, D.K. Guilkey and B.M. Popkin, 1986. The demand for primary health care services in the Bicol region of Philippines. Econ. Dev. Cultural Change, 34 (4): 755-782. DOI: 10.1086/451558. www. emeraldinsight.com/Insight/html/Output/Published/ EmeraldFullTextArticle/Pdf/0060240118_ref.html.

Akin, J.S., D.K. Guilkey and E.H. Denton, 1995. Quality of services and demand for health care in Nigeria: A multinomial probit estimation. Soc. Sci. Med., 40 (11): 1527-1537. DOI: 10.1016/0277-9536(94)00274-W. www.ingentaconnect.com/content/ els/02779536/1995/00000040/00000011/art00274.

Arrow, K.J., 1963. Uncertainty and welfare economics of medical care. Am. Econ. Rev., 53 (5): 941-973.

Buchmeller, T.C. and R.G. Valletta, 1996. The effect of employer-provided health insurance on worker mobility. Indust. Labour Relat. Rev., 49 (3): 435-455. ISBN: 607-255-3295.

Collins, S.R., K. Davis, M.M. Doty, J.L. Kriss and A.L. Holmgren, 2006. Gaps in health insurance: An all-American problem. The Commonwealth Fund Publication Number 920. www.commonwealthfund. org. http://www.commonwealthfund.org/usr_doc/ Collins_gapshltins_920.pdf?section=4039.

Collins, S.R., C. White and J.L. Kriss, 2007. Whither employer-based health insurance? The current and future role of U.S. Companies in the provision and financing of health insurance. The Commonwealth Fund Publication Number 1059. www.common wealthfund.org. http://www.commonwealthfund.org/ usr_doc/Collins_whitheremployer-basedhltins_1059. pdf?section=4039.

Getler, P., L. Locay and W. Sanderson, 1987. Are user fees regressive? The welfare implications of health care financing Proposals in Peru. J. Econometrics, 36 (1-2): 67-88. http://www.sciencedirect. comscience /article/B6VC0-45828SB-M/2/b0b28542164381442c49 ceb956925241.

Grossman, M., 1972. Concept of health capital and demand for health. J. Political Econ., 80 (2): 223. http://links.jstor.org/sici?sici=0022-3808%28197203% 2F197204%2980%3A2%3C223%3AOTCOHC%3E2. 0.CO%3B2-4&origin=repec.

Heller, P.S., 1982. A model of the demand for medical and health services in Peninsula, Malaysia. Soc. Sc. Med., 16: 267-284. DOI: 10.1016/S0277-9536(02)00117-X.

KaFaFoHeRET (Kaiser Family Foundation and Health Research and Educational Trust), 2007. Employer Health Benefits. Annual Survey. www.kff.org. www.kff.org/insurance/7672/upload/EHBS-2007-Full-Report-PDF.pdf.

Karoly, L.A. and J.A. Rogowski, 1994. Effect of access to post-retirement health insurance on the decision to retire early. Ind. Labour Relat. Rev., 48 (1): 103-123.

Madu, I.A., 2007. The environmental impacts of regional disparity in population and wealth distribution in Nigeria. J. Environ. Dev. Sustain. DOI: 10.1007/s10668-007-9109-0. http://www.springerlink.com/content/kjh0136805tl6415/fulltext.pdf.

Mwabu, G. and J. Wang'ombe, 1997. Health Service Pricing Reforms in Kenya. Int. J. Soc. Econ., 24 (1-3): 282-293. DOI: 10.1108/03068299710161278. http://www.emeraldinsight.com/10.1108/0306829971 0161278.

O'Brien, E., 2003. Employers Benefits from Workers Health Insurance. The Mil. Quart.: A J. Pub. Health Health Care Pol., 81 (1). http://www.milbank.org/quarterly/8101feat.html.

Oluwatyo, I.B., 2008. Explaining inequality and welfare status of households in rural Nigeria: Evidence from Ekiti state. Humanity Soc. Sci. J., 3 (1): 70-80. http://www.idosi.org/hssj/hssj3(1)08/9.pdf.

Omokhodion, F.O. and S.I. Omokhodion, 2004. Health status of working and non-working school children in Ibadan, Nigeria. Ann. Tropical Paed.: Int. Child Health, 24 (2): 175-178. DOI: 10.1179/027249304225013457. www.ingentaconnect.com/content/maney/atp/2004/00000024/00000002/art00009.

Omonijo, B., R. Ajayi and B. Agande, 2007. Census: Kano Beats Lagos. The Vanguard Newspaper, Wed. Jan. 10th 2007. Vanguard Media Ltd., Lagos, Nigeria. www.vanguardngr.com.

Stephen, T.M., 1984. Effects of competition on medicare administrative costs. J. Health Econ., 3 (2): 137-154. DOI: 10.1016/S0167-6296(83)80003-4. http://www.sciencedirect.com/science/article/B6V8K-45DMP51-1K/2/89fcddc83f820345fe207cf28793de2b.