Assessment of Benefits and Drawbacks of the National Health Insurance Scheme among Enrollees in Metropolitan Jos, Plateau State, Nigeria: Implications for Universal Health Coverage

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Abstract

Background
Access to healthcare services in Nigeria is a huge public health challenge partly because healthcare expenditures are largely out-of-pocket. The National Health Insurance Scheme was established to bridge this gap. The aim of the study was to determine the benefits of the scheme to enrollees and their perception of the quality of services received through the scheme.

Methods: This was a cross sectional study of the Scheme enrollees in secondary healthcare facilities in Jos metropolis. Ten healthcare facilities were selected from the list of accredited facilities by balloting. A total of 224 respondents participated in the study. Data was collected using a validated but adapted structured interviewer-administered questionnaire. This was analyzed using IBM Statistical Product and Service Solutions version 23.0 and presented in tables of frequencies and proportions.
Results: Mean age of respondents was 39 ± 9 years, 147[65.0%] of whom were females. About 80.4% of respondents had tertiary education and most worked in public health facilities. One hundred and thirty enrollees [58.0%] experienced shorter waiting time, 190[84.8%] paid reduced hospital bills and 152[67.9%] said it improved financial access to health care. Challenges encountered were frequent out-of-stock drugs (140 [62.5%]), limited drug list (140 [62.5%]) and service not covering relatives (154 [68.8%]) and some chronic diseases (159 [71.0%]). Quality of service was rated as good.

Conclusion: The NHIS has great benefit for enrollees as it reduces out-of-pocket payments and prevents catastrophic health expenditure. However, services need to be expanded and improved to facilitate the attainment of universal health coverage.

Keywords: National Health Insurance Scheme, enrollees, benefits, drawbacks, Jos, Nigeria.

Introduction

The National Health Insurance Scheme (NHIS) was established by CAP 35 of the 1999 constitution which has recently been changed by an act of the National Assembly to the National Health Insurance Authority (NHIA) under NHIA Act 2022 by the Federal Government of Nigeria to provide easy access to quality and affordable health services for all Nigerians. Implementation of the scheme commenced in 2005 with the Formal Sector Social Health Insurance Programme (FSSHIP). Other programmes of the scheme include The Informal Sector Social Health Insurance Programme and the Vulnerable Group Social Health Insurance Programme which are at various levels of implementation.[1,2]

The FSSHIP covers employees in the formal employment and provides the platform for coverage in organizations with less than ten employees, as well as groups, individuals and families who wish to join the programme. Enrolment is compulsory for federal civil servants but voluntary for others.[3,4] Provision of health services to enrollees has been ongoing since 2005 and the scheme has since then received varying commendations in different parts of the country. In the south south geopolitical zone, 91% of enrollees in Federal Medical Centre Asaba were satisfied with the scheme, while in the south east overall satisfaction was 66.8%.[5,6] In the South- West, Osungbade et al reported satisfaction levels in the various domains ranging from 51.7 % for staff attitude to 77.8% for waiting time, while in the north west the overall level of satisfaction in Barau Dikko specialist Hospital Kaduna was found to be 41%.[7,8]

These studies provide valuable information about the level of satisfaction of enrollees with services obtained through the scheme. However, no such assessment has been made (to the best of the knowledge of researchers) in the north central region of Nigeria as at the time of the study. Understanding the benefits and in particular, the draw backs of the scheme from enrollees' perspective will help guide the improvement efforts of managers of the scheme as they expand and implement the other programmes of the scheme. For instance, the State Social Health Insurance Programme, the Vulnerable Groups Social Health Insurance Programmes, and the Informal Sector Social Health Insurance Programmes could benefit from such understanding.[3] This has the potential of increasing enrolment by citizens whose participation in the scheme is not compulsory since satisfied enrollees will tell their friends and families to also enroll and as such facilitate sustainability of the scheme and quality services. The aim of the study, therefore, was to determine the benefits of the scheme to enrollees and their perception of the quality of services received through the scheme.

Methodology

Study area: This study was carried out in Jos metropolis of Plateau State which is located in the north central region of Nigeria. Plateau State has an estimated population of 3,206,531 (1,598.998 males and 1,607,533 females). Jos metropolis consists of Jos South and Jos North Local Government Areas (LGAs). Jos South LGA has 49 Primary Health Care (PHC) facilities and 5 secondary health facilities located in different wards of the LGA. Jos North LGA has 56 PHC's (21 private, 35 public), 3 secondary health facilities (3 private) and 3 tertiary health facilities (1 private and 2 public).

Study design: This is a cross-sectional assessment of NHIS services.

Study population: This included all adults aged 18 years and above enrolled in the NHIS. The eligibility criteria were: having been enrolled in NHIS for at least

one year preceding the study, having accessed service in a NHIS designated facility at least once in the six months preceding the study and possession of an enrolment card which was verified by sighting.

The minimum sample size was determined using the Cochrane formula.[9]

$$n = \frac{(Z_\alpha)^2 pq}{d^2}$$

where Z_α = standard normal deviate usually taken as 1.96 at 95% confidence interval, p is the proportion of study participants that were satisfied with the NHIS service in a previous study in the south western region of Nigeria= 83.6%.[7], q is the alternate outcome (1 – p) = 16.4% and d^2 is the error margin= 0.05. Therefore, a minimum sample size of 221 was arrived at after taking into consideration a 5% non-response rate.

Sampling technique: A multi-stage sampling method was used for this study. A list of all the health facilities registered as NHIS service providers in Jos were obtained from the Plateau State NHIA office and was used as a sampling frame from which ten health facilities were selected. The health facilities were first stratified into public and private facilities from which five public and five private health facilities were selected by simple random sampling using balloting. The number of NHIS enrollees from each facility was subsequently obtained and the number of study participants to be selected from each facility was determined by proportion-to-size approach. The NHIS-registered clients in each healthcare facility were approached for consent to participate in the study until sample size was attained at both private and public facilities.

Data management: Data was collected using a semi-structured interviewer administered questionnaire adapted from the Service Quality Questionnaire (SERVQUAL).[10] Completed questionnaires were appropriately coded, entered into a spreadsheet and exported to IBM Statistical Product and Service Solutions (SPSS) version 23.0 (Armonk, New York, USA) for analysis. Socio-demographic characteristics, benefits and challenges of NHIS were presented as frequency and proportions using tables.

Ethical consideration: Permission to carry out the study was obtained from the Local Government councils and ethical approval from the Plateau state Ministry of Health Research Ethics Committee (MOH/MIS/202/VOL.T/X). Advocacy visits were made and permissions to conduct the study were obtained from facility heads before the commencement of our study. Written informed consent was obtained from every study participant before the commencement of the study after a detailed explanation of the nature of the study. Study participants were free to decline participation, or even withdraw totally from the study at any point in time, without any fear of service-related retribution. Anonymity was ensured by the use of initials and serial numbering for data management purposes and confidentiality of collected information ensured.

Results

A total of 224 respondents participated in the study. The mean age of respondents was 39.0(±9.0) years and 49.6% of respondents were between the ages of 31-40 years while 15.6% were between the ages of 18-30 years. One hundred and forty-seven (65.6%) were females and 180 (80.4%) had attained tertiary education. One hundred and sixty-two (72.3%) worked in the public sector while only 30 (13.4%) were self-employed. (*Table 1*)

One hundred and thirty (58.0%) of

respondents were of the view that enrolment in the NHIS gave them the benefit of a shorter waiting time in health facilities while 190 (84.8%) agreed that there was a reduction in the money they paid as hospital bills. One hundred and fifty-two (67.9%) affirmed that enrolment in NHIS catered for the enrollee and 165 (73.7%) agreed that respondents will have money to pay for other needs. (*Table 2*)

One hundred and forty(62.5%) of respondents were of the opinion that the list of drugs was too limited and so they were not able to access all the drugs they needed, with 140 (62.5%) saying drugs were out of stock most of the time, and 159 (71.0%) lamenting that the health insurance does not cover cancer chemotherapy. In addition, 154 (68.7%) were concerned that the scheme does not cover all dependent relatives while 117 (52.2%) reported that they often experienced delays in retrieving their NHIS case notes from the record officers. (*Table 3*)

Table 1: Socio-demographic characteristics of NHIS enrollees in Jos metropolis

Variable		Frequency (n=224)	Percentage
Age range	18-30	35	15.6
	31-40	111	49.6
	41-50	42	18.7
	= 51	36	16.1
Sex	Female	147	65.6
	Males	77	34.4
Level of education	No formal education	1	0.4
	Primary	6	2.7
	Secondary	36	16.5
	Tertiary	180	80.4
Place of work	Public	162	72.3
	Private	32	14.3
	Self-employed	30	13.4

Table 2: Benefits of NHIS to enrollees in Jos metropolis

Benefits	Frequency (N=224)	Percentage
Cater for health needs of enrollees	152	67.9
Shorter waiting time	130	58.0
Reduced hospital bills	190	84.8
Have money to pay for other things	165	73.7

Table 3: Challenges of the NHIS services among enrollees in Jos metropolis

Challenges	Frequency (n=24)	Percentages
Very limited drug list	140	62.5
Drugs out of stock most times	140	62.5
Does not cover cancer chemotherapy	159	71.0
Does not cover all dependents	154	68.7
Delay in collecting NHIS card	117	52.2

Discussion

The National Health Insurance Scheme was established to provide access to quality health care services to all Nigerians while protecting them from financial hardships that result from catastrophic health expenditure. This noble goal can only be attained if most Nigerians enroll for the scheme and use its services. Attainment of the required level of enrolment in a scheme that is voluntary for most citizens however requires that enrollees find it beneficial and are satisfied with the services received through it. This is because dissatisfied enrollees are not only less likely to renew their enrolment at the expiration of the existing one, but may discourage their friends and acquaintances from doing so which will adversely affect sustainability and the quality of services.

In this study, females account for two-thirds of enrollees. This is similar to similar findings in Benin City, south south Nigeria, Nnewi southeast Nigeria and Ibadan in the southwest Nigeria.[11,12] This may be because women assume the traditional responsibility of home makers, thereby ensuring that their family's healthcare, especially those of their children are covered. Women also have higher healthcare needs and corresponding utilization than men which might account for the higher proportion of women sampled in the study.[13] When men were shown to have higher odds of enrollment;14 women and their children are often registered as beneficiaries under their husbands and are also observed to have higher-level utilization of the insurance purchased compared to their husbands in partnered relationships.[1]

This study also showed that majority of enrollees had tertiary level of education. Similar proportions of tertiary level educated enrollees have been reported among similar population in Benin, south-south Nigeria and Ibadan in the southwest Nigeria.[11,15] In sub-Saharan Africa and Nigeria in particular, education significantly increases the odds of enrolment with tertiary level of education having the highest odds of enrolment in the health insurance.[14,16] This might be due to higher level of exposure to health information and the knowledge of the advantages of health insurance which often reduces misconceptions and promote informed choice about health insurance package purchase for self and family.

Furthermore, majority of the enrollees work in the public sector. A similar proportion has also been reported in southwest in Nigeria.[11,15] This is because most enrollees of NHIS in Nigeria are members of the formal sector.[1] This leaves behind a large informal sector with its huge economic diversity which may make equitable premium determination difficult. This can make exempting certain groups difficult and implementation approaches complex without constraining healthcare assess. Thus, being a formal worker is a significant predictor of NHIS enrolment in Nigeria compared to those who are not.[14]

In this study, majority of the respondents found the scheme beneficial in one way or

the other. This is similar to the findings of a study in southeast Nigeria where most of the respondents agreed that they had benefitted from the scheme.[12] Despite the growing consensus of the benefit of the health insurance scheme, less than five per cent are currently enrolled after almost two decades of operation which might be due to low level of awareness and poor perception of the quality of the health systems by the Nigerian population.[1] Majority of the study respondents believed that the scheme helps to reduce out-of-pocket hospital bills. This is similar to findings from another study in Nnewi, southeastern Nigeria where most of the respondents agreed that NHIS reduces hospital bill burden.[12] This is in fulfillment of some of the objectives of the NHIS which is to prevent families from financial hardship as a result of huge medical bills and ensure access to good healthcare services among the Nigerian population.[1]

Also, majority were of the opinion that the scheme frees up money to pay for other needs. This is similar to the economic benefits associated with the Affordable Care Act (ACA) from which there was documented evidence of the scheme putting more monies in the pocket of individuals and families; thereby boosting demand for other essential goods and services and bringing down unemployment. In the long-term ACA has been forecasted to improve individual and national savings, reduce national foreign debts and increase workers' productivity, income and standard of living over time.[17] Thus, when catastrophic expenditures have been avoided, other subsistence needs will be met satisfactorily and better quality of life can be assured.

Although majority of the respondents were of the view that enrolment in the scheme was beneficial, several drawbacks were highlighted. For instance, majority of the study respondents were dissatisfied with the very limited drug list and the frequent out-of-stock syndromes in the NHIS pharmacies in the facilities. A similar report was also given in the southeastern region of Nigeria where almost similar proportion were disappointed that the drug list was limited. Most were of the opinion that availability of drugs should improve at the NHIS pharmacies in the tertiary health facility.[12] This could be very disappointing to enrollees because they expect to receive medicines prescribed for them when they attend their healthcare provider facilities as stipulated in the NHIS documents. Asking them to go and procure prescribed medicines outside the facility would lead to loss of confidence in the scheme. Moreover, some individuals may not have the resources to pay for the out-of-stock drugs leading to prolonged illness or even loss of life. This might defeat the aim of enrolment in the scheme and has the potential to negatively affect the sustainability of the scheme. This is because disappointed enrollees are unlikely to continue payment of their premiums and may even discourage intending enrollees from doing so. For a scheme with no risk equalization measures as the NHIS such developments would increase financial risks with attendant decrease in the quality of services.[18] It might also corruptly divert much-needed revenue from the finance-constrained public sector to the already-flourishing private sector; and thus make the scheme not to fulfill its mandate.

Another major drawback of the scheme identified by our respondents is the restriction on the number of family members of an enrollee that are covered to a spouse and 4 children. This is similar to another study among a similar population in Nnewi, Anambra State-Nigeria where

similar proportion decried the limited coverage of all dependents.[12] Many Nigerians are polygamists with some having as many as 4 wives, dozens of children and relatives. Restricting the number of family members that are covered creates a family and social problem for some enrollees who may have to choose one wife out of four and four children out of several. Those left out are likely to feel less loved and/or valued thus creating or worsening disharmony in the family. Although the scheme, in theory, allows for additional contributions to be made for the coverage of additional family members it does not stipulate how much additional contribution will be required and how it will be paid. It will be more helpful for the scheme to provide clear guidelines about this. One way could be the provision of a tiered system where an enrollee with one spouse and four children contributes 5% of his basic salary, one with 2 wives and 5-8 children contributes 10% in that order to a maximum of 4 wives and 16 children or whatever number the scheme considers socially, culturally and legally appropriate. These drawbacks, if not addressed in some way, may hamper the expansion of the scheme thereby limiting its potential to facilitate the attainment of millennium development goal of universal health coverage.

Another drawback reported in this study is the non-coverage of cancer chemotherapy. This is similar to another study from Ile-Ife, southwest Nigeria where majority of cancer patients still pay out-of-pocket because cancer treatment is not covered under the NHIS (at least as at the time of the study) except for the partial coverage for radio-diagnostics.[1,19,20] Enrollees in the southeastern Nigeria also decried the limited coverage of all aspects of medicine.12 This is, however, different from that which was reported in Ghana and Kenya where there is a health insurance coverage for some (Ghana) or all (Kenya) of cancer care. This leads to reduced out-of-pocket payments among cancer patients.[19] This might have accounted, though partially, for the high proportion of late or delayed presentation of cancer patients for prompt diagnosis and early treatment, use of traditional healers, low utilization of screening services which might have led to the increasing burden of cancer in sub-Saharan Africa. Access to insurance coverage has been said to be a strong predictor of the use of screening services to reduce the prevalence of breast cancer in sub-Saharan Africa.[21]

The study is a cross-sectional study and as such cannot establish cause and effect among study population. However, it has added to the body of knowledge about the challenges and benefits of social insurance schemes globally. Data was collected by interviewer-administered questionnaire and this may have influenced the kind of responses given by the respondents who may have tried to adjust their answers to what they thought was expected by the interviewer. This study was conducted in the Jos metropolis. Although this is a melting pot of all ethnicities in Plateau State and beyond, the findings may only be generalizable to urban areas of Plateau State and north central Nigeria.

Conclusion

This study revealed that the vast majority of respondents got benefits from being enrolled in the NHIS. There were however concerns about the limited number of drugs available at the point of service, the few number of family members of an enrollee that are covered and the non-coverage of cancer treatments. Managers of the scheme should consider increasing the number of family members covered per enrollee and the list of available drugs in

line with the essential drug list. Out-of-stock syndrome should be addressed with the use of stock monitoring approaches, accountability and strict penalty for any reported out-of-stock situation due to unethical practices among healthcare providers.[22] The NHIS should work towards total inclusion of treatments for most commonly reported cancers in Nigeria as a starting point which can subsequently be upwardly reviewed to include all cancer treatments as risk pooling and coverage improves.

Conflict of Interest: The authors have no conflict of interest to declare.

Authorship declaration

Concept, design of study, data acquisition, analysis and interpretation of data: TJA, PAO, KIB, ELI, UA, PAA

Manuscript drafting and critical review: TJA, PAO, KIB, ELI, UA, PAA

All authors approved the final version to be published.

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