Enrollees’ Knowledge and Satisfaction with National Health Insurance Scheme Service Delivery in a Tertiary Hospital, South West Nigeria

David Ayobami Adewole, Folashayo Ikenna Peter Adeniji, Susan Elemeyi Adegbrioye, Oluyinka Motunrayo Dania, Temitope Ilori

1Department of Health Policy and Management, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria, 2National Health Insurance Scheme, Agodi, Ibadan, Nigeria, 3Department of Community Medicine, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria

Abstract

Background: Social health insurance scheme provides a platform for mobilizing revenue for health and enhances universal health-care coverage. In addition, knowledge about patients’ satisfaction with health care under the scheme will help in identifying gaps and provides evidence toward strengthening the scheme. This study assessed enrollees’ knowledge about the National Health Insurance Scheme (NHIS) and satisfaction with health services provided under the scheme. Materials and Methods: The study was a descriptive cross-sectional survey conducted among the NHIS enrollees accessing health-care services in the University College Hospital, Ibadan. A total of 373 individuals were consecutively recruited for the study, and a semi-structured, pretested interviewer-administered questionnaire was used to obtain information from respondents. Descriptive statistics was used to present results, and Chi-square test was used to test for the association between categorical variables. The level of significance was set at $P < 0.05$. Results: The mean age was 42.5 ± 10.0 years. Of the respondents, 209 (56.0%) were male and 359 (96.2%) were married. About two-thirds, 227 (60.9%), had good knowledge about the NHIS. Majority of the respondents 303 (81.2%) reported paying for some of the costs of service (drugs, laboratory tests, consultation fees, and X-ray) through out-of-pocket and of these, 218 (71.9%) reported that such payments were occasional. Overall, slightly more than half, 197 (52.8%), of the respondents were satisfied with service delivery under the scheme. Female respondents were significantly more satisfied with health-care services ($\chi^2 = 3.894, P = 0.048$). Conclusion: There was good knowledge of NHIS, but the level of satisfaction with service delivery was not outstandingly appreciable. There is an urgent need to improve on all areas of quality of service to improve satisfaction with care among enrollees in the scheme.

Keywords: Health insurance scheme, Nigeria, out-of-pocket payments, patients’ experiences, patients’ satisfaction, universal health coverage

Introduction

Globally, policymakers are continually making efforts to reform the health system with a special focus on improving access to affordable quality health care.1 In achieving this, social health insurance (SHI) has been prominent among the various health-care financing methods adopted around the world. The SHI provides a platform for mobilizing revenue to provide health-care services for the population and minimize poverty that could be associated with the cost of care and therefore enhance universal health coverage (UHC).2 The National Health Insurance Scheme (NHIS) of Nigeria was established over a decade ago as a public–private tripartite arrangement with a sole objective of making quality and affordable health-care accessible for all.3

Literature has shown that where there is access to affordable health-care services, patients’ satisfaction with health service provision play enormous role in determining treatment outcomes.4 Even so, patients’ experience and satisfaction is often determined by waiting time, availability of essential medical equipment, attitude of facility health-care
workers, physical environment of the facility, and other health-care consumables. Consequently, measures to improve treatment outcomes must take into consideration the important determinants of patients’ satisfaction.

In Nigeria, efforts are being made to realize UHC, and it is equally germane to ensure that enrollees are satisfied with health service delivery under the NHIS so as to ensure the success of the program. Similarly, knowledge about patients’ satisfaction with health care under the scheme will help in identifying gaps and provides evidence toward strengthening the scheme. Therefore, this study assessed enrollees’ knowledge about the NHIS and satisfaction with health services provided under the scheme.

**Materials and Methods**

The study was a descriptive cross-sectional survey conducted among NHIS enrollees accessing health-care services in the University College Hospital (UCH), Ibadan. Currently, the hospital has 850-bed spaces and 163 examination couches, while bed occupancy rates range from 55% to 60%. There are about 20,000 enrollees registered under the NHIS in the health facility. The study population included all enrollees receiving care under the NHIS in the UCH. The study, however, excluded NHIS enrollees on admission as well as dependents of the NHIS principal beneficiaries.

The sample size was determined using the Leslie Kish formula \( n = \frac{z^2 p (1 - p)}{d^2} \) where \( P = 0.57 \), is the proportion of people accessing health care through health insurance scheme in a previous study. A total of 373 individuals were consecutively recruited for the study. Ethical approval was obtained from the Oyo State Research Ethical Review Committee. Permission to conduct the study was granted by the UCH management. Written informed consent was obtained from individual participants before the questionnaire administration. Participation was voluntary, and confidentiality was maintained.

The study was conducted using a quantitative method of data collection. A semi-structured pretested interviewer-administered questionnaire was used. The questionnaire was divided into four sections. Section A: Sociodemographic characteristics of respondents; Section B: Assessment of the knowledge of the respondents; Section C: The assessment of the satisfaction of enrollees about the scheme; and Section D: The assessment of the opinions of respondents about NHIS and the received services.

Data were collected over a period of 4 weeks, with an average of 20 respondents recruited per day. Data cleaning was done to minimize error and missing data. Descriptive statistics was used to present results, and Chi-square test was used to test for the association between categorical variables at \( P < 0.05 \) level of statistical significance.

### Results

#### Sociodemographic profile of respondents accessing health-care services in University College Hospital, Ibadan under the National Health Insurance Scheme

Table 1 shows the sociodemographic profile of respondents. The mean age was 42.5 ± 10.0 years, and more than half of the respondents 209 (56.0%) were male, majority 359 (96.2%) were married, and had acquired tertiary education 322 (86.3%).

#### Knowledge of the National Health Insurance Scheme by enrollees

Table 2 shows the knowledge of enrollees about NHIS. Those who reported having been on the scheme for <5 years were higher in number compared to those who had spent more number of years (54.2% vs. 35.9%). Majority of the respondents knew the full meaning of NHIS, 309 (82.8%). In addition, 273 respondents (73.2%) knew the meaning of Health Maintenance Organisation (HMO). An appreciable number of participants, 260 (69.7%) were able to identify the HMO responsible for the purchase of health-care services for them. Overall, 227 (60.9%) had good knowledge about the objectives of NHIS. Majority of the respondents, 344 (92.2%), had never complained to their HMO. However, among those who had ever complained, the most common complaints, 12 (41.4%), was long waiting time in the process of accessing health-care services.

| Table 1: Sociodemographic characteristics of participants |
|----------------------------------------------------------|
| Sociodemographic characteristics \( (n=373) \) | Frequency (%) | Cum total |
| Age |  |
| <30 | 27 (7.2) | 27 |
| 30-39 | 127 (34.0) | 154 |
| 40-49 | 128 (34.3) | 282 |
| ≥50 | 91 (24.5) | 373 |
| Mean age±SD | 42.5±10.0 |  |
| Sex |  |
| Male | 209 (56.0) | 209 |
| Female | 164 (44.0) | 373 |
| Marital status |  |
| Single | 14 (3.8) | 14 |
| Married | 359 (96.2) | 373 |
| Educational status |  |
| No formal education | 6 (1.6) | 6 |
| Primary | 4 (1.1) | 10 |
| Secondary | 41 (11.0) | 51 |
| Postsecondary (tertiary, others) | 322 (86.3) | 373 |
| Religion |  |
| Christianity | 339 (90.9) | 339 |
| Islam | 34 (9.1) | 373 |
| Ethnicity |  |
| Hausa | 4 (1.1) | 4 |
| Ibo | 23 (6.2) | 27 |
| Yoruba | 305 (81.8) | 332 |
| Others | 41 (11.0) | 373 |

SD – Standard deviation
Experiences with payment for health-care services among National Health Insurance Scheme enrollees at University College Hospital, Ibadan

Table 3 shows the pattern of payment during a visit to health facility. Majority of the respondents 303 (81.2%) claimed paying for some of the costs of services (including the costs of drugs, laboratory tests, consultation fees, and X-ray) through out-of-pocket; however, majority 218 (71.9%) reported it was occasional. Only a small number, 107 (35.3%) reported paying part of the cost of care in the current hospital visit, and a smaller number, 12 (4.0%), reported ever been denied access to care for an inability to pay for care under the scheme.

Patients’ satisfaction with health-care services under the National Health Insurance Scheme

NHIS enrollees’ satisfaction with the services received was shown in Table 4. Majority of the respondents 344 (92.2%) reported they had never had any reason to complain to their HMOs about services received in health facilities. Of those who reported a complaint, long waiting time, problems with referrals, drugs and/or services not covered under the scheme were the most cited complaints in 12 (41.4%), 5 (17.2%), and 5 (17.2%), respectively, among others. However, a large number of the respondents 255 (68.4%) were of the opinion that service delivery was better than what it was before the establishment of the NHIS, while general satisfaction with care under the scheme was only in 197 (52.8%) of the study participants.

Sociodemographic correlates of patients’ satisfaction with services provided under the National Health Insurance Scheme

Table 5 shows the association between socio-demographic factors and patients’ satisfaction with the NHIS services accessed at UCH, Ibadan. Results showed that only gender was significantly associated with satisfaction of NHIS services; female respondents were more satisfied with NHIS services ($\chi^2 = 3.894, P = 0.048$).

Discussion

The majority of the participants in this study were in the productive age group which reflected the workforce demographic profile of Nigeria, and as well as membership of the NHIS. This also reiterates the disproportionate distribution of coverage of the NHIS in favor of the working population, especially those in the formal sector. This does not bode well for the health and welfare of individuals in that are either retired or working in the informal sector. Knowledge of the NHIS among participants was similar to findings in a previous similar study, but higher than it was in some previous studies conducted in this environment. The observed differences may be due to the difference in the timing of conducting the studies. There is the possibility that knowledge of the general population and more especially the scheme enrollees about the program increases with time as a result of better exposure to information with regards to the scheme. Poor knowledge of health insurance has been identified as a factor that contributes
Adewole, et al.: Health care financing

Nigerian Medical Journal ¦ Volume 61 ¦ Issue 1 ¦ January-February 2020

Table 4: Enrollees expressed satisfaction with care under the scheme

| Variable | Frequency (%) | Cum total |
|----------|---------------|-----------|
| Ever made complaints to HMO, frequency (%) | | |
| Yes | 29 (7.8) | 29 |
| No | 344 (92.2) | 373 |
| Types/categories of complaints (n=29), frequency (%) | | |
| Delay/waiting time too long | 12 (41.4) | 12 |
| Change of hospital/referral issue | 5 (17.2) | 17 |
| Drugs/test not covered | 5 (17.2) | 22 |
| Others | 7 (24.2) | 29 |
| Respondents opinion about the NHIS (n=373) | | |
| Opinion, frequency (%) | | |
| Better than before the scheme | 255 (68.4) | 255 |
| Same as before the scheme | 111 (29.8) | 366 |
| Poorer than before the scheme | 1 (0.3) | 367 |
| I do not know | 6 (1.6) | 373 |
| Ever been denied access to care in this facility, n (%) | | |
| Yes | 11 (2.9) | 11 |
| No | 362 (97.1) | 373 |
| Reasons for denial of health care service (n=11), n (%) | | |
| Services not available | 1 (0.3) | 1 |
| Inadequate personnel | 2 (0.5) | 3 |
| Problem with required equipment | 2 (0.5) | 5 |
| Name not found on the hospital enrollees list | 0 | 5 |
| Authorization code not available | 1 (0.3) | 6 |
| Others | 5 (31.0) | 6 |
| Overall satisfaction, frequency (%) | | |
| Generally not satisfied | 169 (45.3) | 180 |
| Generally satisfied | 197 (52.8) | 366 |

NHIS – National Health Insurance Scheme, HMO – Health Maintenance Organisation

Table 5: Association between sociodemographic factors and patients’ satisfaction of the Scheme (n=373)

| Variable | Dissatisfied, n (%) | Satisfied, n (%) | Total, n (%) | χ² | P |
|----------|---------------------|-----------------|--------------|-----|---|
| Age <30  | 10 (37.0)           | 17 (63.0)       | 27           | 3.744 | 0.290 |
| 30-39    | 53 (42.7)           | 71 (57.3)       | 124          |       |    |
| 40-49    | 64 (52.9)           | 57 (47.1)       | 121          |       |    |
| >50      | 40 (44.9)           | 49 (55.1)       | 89           |       |    |
| Sex Male | 104 (50.7)          | 101 (49.3)      | 205          | 3.894 | 0.048 |
| Female   | 65 (40.4)           | 96 (59.6)       | 161          |       |    |
| Marital status | 5 (46.5) | 8 (61.5) | 13 | 0.323 | 0.570 |
| Single | 164 (46.5) | 189 (53.5) | 353 |       |    |
| Married | 0 | 4 (100) | 4 | 3.806 | 0.283 |
| Educational status | 17 (42.5) | 23 (57.5) | 40 |       |    |
| No formal/primary | 0 | 4 (100) | 4 |       |    |
| Secondary | 149 (47.2) | 167 (52.8) | 316 |       |    |
| Postsecondary | 0 | 4 (100) | 4 |       |    |
| Length of stay on NHIS | | | | | |
| 0-<5 | 86 (43.2) | 113 (56.8) | 199 | 1.477 | 0.224 |
| 5-10 | 78 (49.7) | 79 (50.3) | 157 |       |    |

NHIS – National Health Insurance Scheme
than male enrollees reported that they were satisfied with health service delivery, ($\chi^2 = 3.894, P = 0.048$). This finding is supported by a similar study conducted by Oladapo and Osiberu in 2009. Other sociodemographic variables such as age, marital status, educational status, and number of years enrolled in NHIS were not significantly associated with reported satisfaction with health service delivery. However, findings in similar studies showed that age and marital status are important factors associated with patients’ satisfaction with health-care services.

**Conclusion and Recommendation**

This study assessed patients’ knowledge and satisfaction with health services provided under the NHIS. The study revealed that patients’ knowledge about the NHIS was good. This was reflected in the number of enrollees who knew the full meaning of NHIS and the HMO that acts as agents through which the NHIS offset their medical bills. Even so, more than half of the respondents, 227 (60.9%), had good knowledge about the objectives of NHIS. However, overall satisfaction with health care provided under the scheme was expressed by only 52.0% of the respondents. This shows that a lot still needs to be done to ensure that adequate and quality health-care services are received by NHIS enrollees. Expectedly, this will have a positive impact on patients’ satisfaction with care, improve treatment outcomes, and ensure the general the realization of the underlying goals of the NHIS program.

Similarly, this study showed that satisfaction with health service delivery was associated with gender as more females reported that they were satisfied with services compared with male respondents. Overall, while efforts are being made to achieve UHC, it is also important to ensure that patients are satisfied with service delivery. This can be achieved by sensitizing health-care providers as well as HMOs regarding the role of quality service delivery and patients’ satisfaction in realizing the objectives of access to affordable health-care services.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

**References**

1. World Health Organization. Designing Health Financing Systems to Reduce Catastrophic Health Expenditure. World Health Organization; 2005.
2. Hsiao W, Shaw RP, editors. Social health insurance for developing nations. The World Bank; 2007.
3. Ogunbekun I, Ogunbekun A, Orobaton N. Private health care in Nigeria: Walking the tightrope. Health Policy Plan 1999;14:174-81.
4. Bleich SN, Ozaltin E, Murray CK. How does satisfaction with the health-care system relate to patient experience? Bull World Health Organ 2009;87:271-8.
5. Jackson JL, Chamberlin J, Kroenke K. Predictors of patient satisfaction. Soc Sci Med 2001;52:609-20.
6. Plan S. Nigerian Urban Reproductive Health Initiative; 2013.
7. Ujunwa FA, Onwujekwe O, Chinawa JM. Health services utilization and costs of the insured and uninsured under the formal sector social health insurance scheme in Enugu metropolis South East Nigeria. NIGER J CLIN PRACT 2014;17:331-5.
8. Allen H, Wright BJ, Baicker K. New medicaid enrollees in Oregon report health care successes and challenges. Health Aff (Millwood) 2014;33:292-9.
9. Adeniyi AA, Onajole AT. The national health insurance scheme (NHIS): A survey of knowledge and opinions of Nigerian dentists' in Lagos. Afr J Med Med Sci 2010;39:29-35.
10. Adewole DA, Adebayo AM, Osungbade KO. A qualitative survey of pre-payment scheme for healthcare services in a rural Nigerian community. Afr J Biomed Res 2017;20:17-24.
11. Gazmararian JA, Schwarz KS, Amacker LB, Powell CL. Barriers to prenatal care among medicaid managed care enrollees: Patient and provider perceptions. HMO Pract 1997;11:18-24.
12. Mendoza Aldana J, Piechulek H, al-Sabir A. Client satisfaction and quality of health care in rural Bangladesh. Bull World Health Organ 2001;79:512-7.
13. Mossialos E, Dixon A. Funding health care in Europe: Weighing up the options. Funding health care: Options for Europe 2002:272-300.
14. Mohammed S, Bermejo JL, Sounes A, Sauerborn R, Dong H. Assessing responsiveness of health care services within a health insurance scheme in Nigeria: Users’ perspectives. BMC Health Serv Res 2013;13:502.
15. Oladapo OT, Osiberu MO. Do sociodemographic characteristics of pregnant women determine their perception of antenatal care quality? Matern Child Health J 2009;13:505-11.
16. Boothroyd RA, Della Rocca T, Chen HJ. Predictors of enrollees’ satisfaction with a county-sponsored indigent health care plan. Eval Health Prof 2008;31:81-103.