

## Impact of NHIS on Quality Health Service Delivery in University of Ilorin Teaching Hospital (UITH), Kwara State, Nigeria

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### ABSTRACT

As part of government effort to address the lapses in the health sector, the National Health Insurance Scheme (NHIS) was initiated to solve the healthcare delivery problems in Nigeria. Thus, the pace of developing quality healthcare delivery in Nigeria is unsatisfactory. This study therefore examined the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. The study adopted cross-sectional survey approach. Questionnaire was used to solicit information from the respondents who are enrollees of University of Ilorin Teaching Hospital. Structural Equation Model (SmartPLS 2) was use as method of data analysis. The results revealed that, NHIS services has a positive and significant impact on quality healthcare delivery. The result also revealed that, NHIS benefit has a positive and significant impact on quality healthcare delivery. The study therefore concluded that, NHIS scheme is vital for quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. Recommendations were proffered in line with the findings.

**Keywords:** NHIS, Quality Health Service Delivery, Ilorin, Nigeria, UITH.

#### iSTEAMS Proceedings Reference Format

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### 1. INTRODUCTION

Improvement in *health care delivery* requires a deliberate focus on *quality of health* services, which involves provision of safe and effective people-centered care that is timely, equitable, integrated and efficient. Quality healthcare delivery should include care attributes such as treatment effectiveness, acceptability, efficiency, the appropriateness of health interventions as well as equity. The delivery of high quality health care is crucial to achieving enhanced health benefits, patient safety and a positive patient experience/patient satisfaction (Ephraim-Emmanuel, Adigwe, Oyeghe, Ogaji, 2018). Patient satisfaction is one of the major indices of quality health care services outcome and it is gaining importance globally as one of the main tools for the assessment of quality of healthcare delivery and as a means of measuring the effectiveness health services. Patient satisfaction is the patient's judgment on the quality and outcome of care. It is the extent to which patients feel that their needs and expectations are being met by the service provider. The rising cost of health care services as well as the inability of the government health facilities to cope with the people's demand necessitated the establishment of National Health Insurance Scheme (Akande, Salaudeen & Babatunde, 2011).

The Nigerian government instituted a social health insurance system in 2005 to bring relief to the plight of its citizens through the National Health Insurance Scheme (NHIS). Health insurance involves the application of insurance principles to cover cost of defined medical benefit packages. It involves risk sharing between those who will need the benefits and those who will not. It also involves spreading the burden of cost of healthcare services to the insured over time so that the insured can access services anytime without paying (Onyedibe, Goyit & Nnadi, 2012).

As part of government effort to address the lapses in the health sector, the National Health Insurance Scheme (NHIS) was initiated to solve the healthcare delivery problems in Nigeria (Eyong, Agada, Asukwo & Irene, 2016). In a bid to promote the use of quality health care systems, 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. 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. National Health Insurance Scheme is a form of formal sector social health insurance program. It is a social health security system in which the health care of an employee is paid for by both the employer and employee. This is achieved by monthly deductions of 5% of basic salary from an employee and another 10% of basic salary paid by the employee's employer which is then pooled together and used for all enrollees.

The increasing cost of health care in developed and developing economies has called for a change in the way health activities are implemented. Anyika (2014) stressed that, the health sector in any economy forms the backbone of its growth and development. The health care delivery system in Nigeria has since the 1980s, continued to deteriorate. It was reported that, Nigeria loses around \$1 to health tourism each year. A classic example is the recent case of the 'missing President Buhari' who is said to be on vacation in the United Kingdom to receive health care. The same President Buhari in June 2016 travelled to London to see an ear, nose and throat specialist after contracting an ear infection. The rationale behind these foreign medical attention is as a result of poor healthcare service delivery. Ephraim-Emmanuel *et al.*, (2018) established that, the pace of developing quality systems in health care delivery in Nigeria is unsatisfactory.

Several factors affecting the overall Nigerian health care system, such factors include; inadequate health facilities and structures, poor management of human resources, poor motivation and remuneration, inequitable and unsustainable health care financing, skewed economic and political relations, corruption, illiteracy, decreased government spending on health, high user fees, absence of integrated system for disease prevention, surveillance and treatment, inadequate access to health care, shortage of essential drugs and supplies and inadequate health care providers (Obansa & Orimisan, 2013). World Health Organization (WHO) rated Nigeria healthcare delivery very low. The global healthcare ranking which was based on a qualification of personnel, access and quality of healthcare delivery for 195 countries from 1990 to 2015 placed Nigeria at 140 position (Guardian, 2017).

Nigeria is faced with fundamental health care related challenges coupled with recent security issues. These challenges can be traced to ineffective use of past opportunities to develop a vibrant and sustainable health care delivery; so the future of health care seems uncertain. For instance, Bilateral and multilateral assistance, and government spending on health have not translated into enhanced health status of average Nigerians. Policy reversals and other inconsistencies over the years tend to undermine some health reforms of the past. Since the National Health Insurance Scheme (NHIS) was established in Nigeria, in 1999, not much study has been carried out to investigate whether access to quality health care has improved as a result of the introduction of the scheme.

Although, few studies have been conducted on the nexus between NHIS and quality healthcare services, such studies include the work of Eyong *et. al.*, (2016), Ibiwoye and Adeleke (2013), Onyedibe *et. al.*, (2012) but to the best researchers knowledge, no study have ever investigated the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. Thus, examine the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria, demand an investigation.

### 1.1 Objectives of the Study

The main objective of the paper is to examine the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. The specific objectives of the study are to:

- a) Determine the NHIS services on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria.
- b) Assess the benefit of NHIS on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria.

### 1.2 Hypotheses of the Study

The hypotheses of this study are:

- Ho<sub>1</sub>:** NHIS services has no significant impact on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria.
- Ho<sub>2</sub>:** NHIS has no significant benefit on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria.

## 2. LITERATURE REVIEW

### 2.1 Concept of NHIS

Onyedibe, Goyit and Nnadi (2012) defined NHIS as a social health security system in which the health care of an employee is paid for by both the employer and employee. According to Ibiwoye and Adeleke (2007), NHIS is defined as a mechanism that pools the risks and resources of a large group of people together in order to offer benefits for the different constituencies that it serves. Atkinson and Dickson (2000) describe National Health Insurance Scheme as a policy that provides cover for hospital and other health care related expenses.

### 2.2 Concept of Quality Health Service Delivery

Quality health services can be described as provision of health services in a way or manner that conforms to the pre-conceived wishes and expectations of patients and their family members (Ephraim-Emmanuel *et al.*, 2018). Uzochukwu, Ughasoro, Etiaba, Okwuosa, Envuladu and Onwujekwe (2015) in their own view, stated that, quality health services entails provision of efficiently health services delivery at the right avenue (healthcare centres) which assure the safety of the patient and should be provided at the right time without delays. Institute of Medicine (2006) defined quality healthcare as the degree of the consistency of healthcare services with the current professional knowledge, and its contribution to the achievement of desired health outcomes.

### 2.3 Review of Empirical Studies

Daramola, Adeniran and Akande (2018) examined patients' satisfaction with the quality of services accessed under the National Health Insurance Scheme at a Tertiary Health Facility in FCT Abuja, Nigeria. A cross-sectional study was conducted among NHIS patients attending the General Outpatient Department at the National Hospital FCT Abuja, Nigeria between April and September 2017.

Data was collected from 388 patients selected by systematic random sampling; using pretested, anonymous, self-administered, structured questionnaires, with each satisfaction area scored on a five-point Likert scale ordinal response. Evaluation was done from the typical complaints received from NHIS enrollees such as: hospital reception and patient registration process, waiting time, doctors' consultations, laboratory services, availability of prescribed drugs and hospital facilities. Data analysis was done using IBM SPSS Statistics 20.0. Results shows that, the overall average satisfaction score was 58.1%. The satisfaction score with various aspects of services were: doctors' consultation (69.9%), laboratory services (66.5%), hospital facilities (62.2%), hospital services (60.4%), reception/registration (59.8%), waiting time (59%) and prescribed drugs (54.2%).

Saka and Fajemirokun (2018) investigated the effects of NHIS on equity and quality of diabetes care (DC) in Nigeria. A prospective cross-sectional study was carried out among 110 patients consenting type 2-diabetics. Diabetic outpatients on oral hypoglycemic drugs, with at least 4 clinic visits prior to the time of the study were consecutively selected at two NHIS accredited public hospitals in Southwest, Nigeria. Patients' perceptions of equity and quality of DC were assessed using a validated 27 items questionnaire. The medical care and pharmaceutical care in diabetes were independently assessed using medical chart review and a direct observation of dispensing pharmacists' activities respectively. Chi-squared test was used to determine associations between variables. Majority (61.8%) of the study participants were uninsured. Females (50.9%) were more than the males (49.1%), 40.0% had post-secondary qualifications. The mean ages for the insured and uninsured were  $52.02 \pm 11.6$  and  $58.97 \pm 9.3$  years respectively. The insured and the uninsured differ in their perceptions of drug availability ( $p < 0.001$ ). The pharmacists' counselling time ( $p < 0.001$ ) differs between the groups. The quality of medical care provided to the diabetics was generally low. The NHIS did not influence the quality of DC, though it may have engendered inequity in pharmaceutical care in the facilities.

Eyong, Agada, Asukwo and Irene (2016) assessed awareness of NHIS and quality of health care among Cross River state civil servants. Simple and systematic random sampling technique was adopted in administering 561 questionnaires on civil servants. The generated data were statistically tested at the 0.05 level of significant using Pearson Product Moment Correlation analytical procedure. Results from the study showed that 92.3% of the respondents were aware of the existence of NHIS program while 65.8% registered with NHIS. 63.8% Civil Servants in Cross River State had the knowledge that NHIS is designed to protect their families from financial hardship arising from huge medical bills and also 71.5% respondents from the study were aware that NHIS will improve quality of health care in Nigeria. These are part of the objectives of the scheme to improve the quality of health care delivery. Civil servants in Cross River State have comprehensive knowledge of the National Health Insurance Scheme package as a desirable tool for satisfying their health needs. However, the analysis revealed civil servants' awareness of NHIS was significantly related to the quality of health care service render to them.

Onyedibe, Goyit and Nnadi (2012) evaluated the national health insurance scheme (NHIS) in Jos, a north-central Nigerian city. The main objective of the study was to determine the proportion of Nigerian adults enrolled in the scheme, their satisfaction with the quality and availability of services within the scheme and the factors responsible for the dismal health indices in the country despite the scheme. Questionnaires were administered randomly to 200 adult respondents in Jos metropolis. Chi Square tool was used as method of data analysis. The findings show that only 24% of adults were enrolled in the scheme. Notably, 82% of enrolled respondents were aware of NHIS and prefer it to the fee for service system. There was some level of dissatisfaction in the scheme (26% of enrollees). Sources of dissatisfaction included poor registration services, poor referral system, delays in receiving required services and unavailability or non-coverage of some required services. It was strongly recommended that, there is need for modification of existing policies to enable enrollment of the self-employed and unemployed as well as improved coverage and quality of services within the scheme.

Akande, Salaudeen and Babatunde (2011) examined the effects of national health insurance scheme on utilization of health services at Unilorin Teaching Hospital staff clinic, Ilorin, Nigeria. Descriptive cross-sectional study was carried out using records of patients seen at staff clinic, Unilorin Teaching Hospital, Ilorin two years before and after the commencement of National Health Insurance Scheme. Information obtained from the hospital records was entered into the Epi-Info software of the computer. There was a statistically significant difference ( $p=0.0003645$ ) in patients seen after the commencement of National Health Insurance Scheme as more staff compared to their dependants attended the staff clinic. The study Concluded that, National Health Insurance Scheme led to 144% increase in the utilization of health services at staff clinic of Unilorin Teaching Hospital.

### 3. METHODOLOGY

The paper employed cross-sectional survey design. The population of this study comprises of NHIS enrollees of University of Ilorin Teaching Hospital (UITH). It was difficult for the researcher to get the actual numbers of NHIS enrollees in the hospital due to reluctant of record officials to provide the information. The population was therefore considered as infinite population. The study used Rose, Spinks and Canhoto (2015) formula for infinite population to arrive at 400. However, Israel (2013) advised that 10% -30% should be added to the minimum sample size for attrition. 10% was added to the 400 to make it 440. 440 copies of the questionnaires were distributed to the respondents. Questionnaire was adapted from the studies of Eyong *et al* (2016) and Onyedibe, Goyit and Nnadi (2012). The study utilized Structural Equation Model (PLS-SEM) to analyse the data and test the hypotheses.

### 4. RESULTS AND DISCUSSION

#### Summary of Response

**Table 1: Summary of Response Rate**

Items	No of Copies	Percentage
No of Questionnaire Distributed	440	100
No of Return Questionnaires	407	92.5

Table 1 shows the summary of the number of questionnaires distributed and the number of returned questionnaires. A total number of 440 questionnaires were distributed to respondents and 407 questionnaires were returned, constituting 92.5% response rate, which were found to be valid and useful for the analysis. Therefore, the researcher did not fall below the minimum sample size of this study which is 400.

#### Assessing Model Fit

Structural equation model was used to examine the reliability and validity of the instruments. The Table 1 and Figure 1 presents the examined measurement of the model of the study.

**Table 1: PLS Quality Criteria Overview**

Constructs	AVE	Composite Reliability	R Square	Cronbachs Alpha
Quality Healthcare Delivery	0.543371	0.826318	0.578280	0.720004
NHIS Benefit	0.557806	0.834447		0.736930
NHIS Services	0.587835	0.850515		0.765364



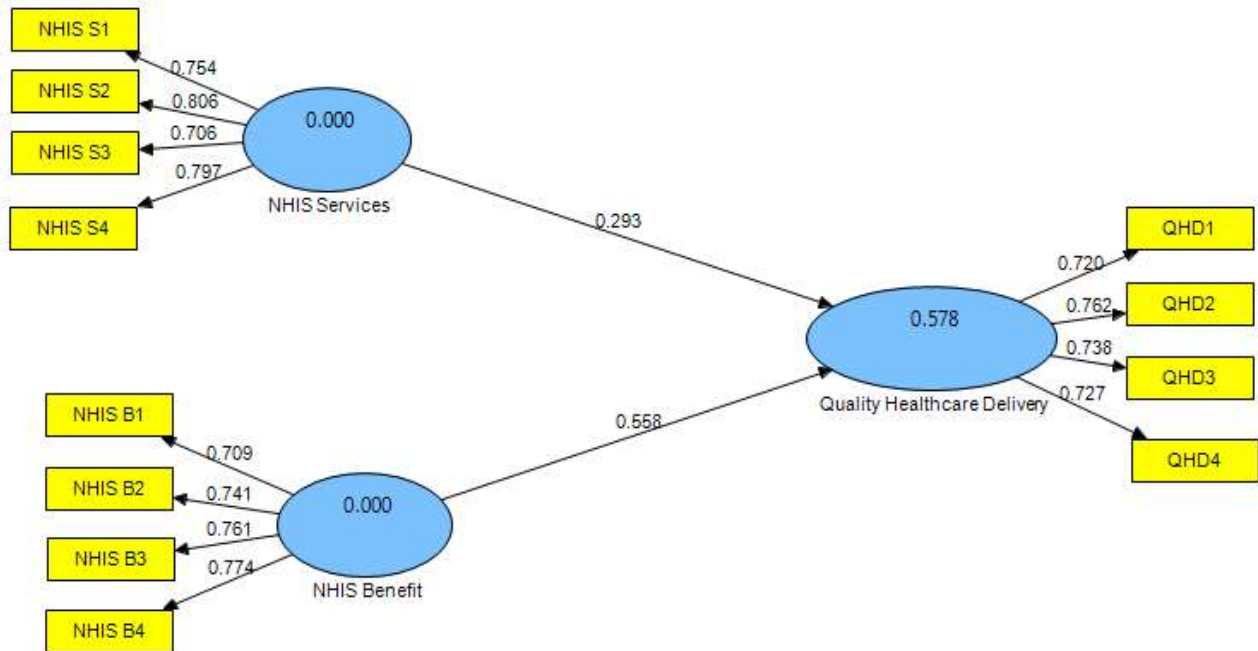


Figure 1: Measurement Model

Table 1 and Figure 1 shows well loaded constructs. All constructs met the minimum benchmark for both composite reliability and average variance expectation (AVE) which is 0.7 and 0.5 respectively. By the rule of thumb, loadings should not be below 0.7 for composite reliability and AVE should be greater than 0.5. (Hair, Black, Babin, & Anderson, 2014).

### Test of Hypotheses

Structural Equation Model (SEM) was used to test the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria

Table 2: Path Coefficients

Hypotheses	B Value	Standard Error	T Statistics	P Value	Decision
NHIS Services -> Quality Healthcare Delivery	0.293481	0.04016	7.306500	0.0003***	0.039204
NHIS Benefit -> Quality Healthcare Delivery	0.558172	0.039204	14.237499	0.0000***	0.04016

P value\*\*\* < 0.01

The SEM analysis in Table 2 shows that, NHIS services has a positive and significant impact on quality healthcare delivery with P value of .003 < .01%. This implies that, a unit increase in NHIS services will lead to a 29.3% increase in quality healthcare delivery. Thus, Ho1 which states that NHIS services has no significant impact on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria is hereby rejected.

The results also revealed that that NHIS benefit has a positive and significant impact on quality healthcare delivery with P value < .01%. This means that, a unit change in NHIS benefit will lead to 55.8% increase in quality healthcare delivery. Therefore, the null hypothesis which stated that NHIS has no significant benefit on quality healthcare delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria is also rejected.

Also, the coefficient of determination ( $R^2$ ) was also assessed. From the PLS Path model estimation (see Figure 1), the overall  $R^2$  of 57.8 is found to be moderate. Threshold value of 0.25, 0.5 and 0.7 are often used to describe a weak, moderate and strong coefficient of determination (Hair, Black, Babin, & Anderson, 2014). In this case, the two constructs of quality healthcare delivery (NHIS services and NHIS benefit) can jointly explain 57.8% of the variance of the endogenous construct of quality healthcare delivery.

## 5. CONCLUSION AND RECOMMENDATIONS

This research examined the impact of NHIS on quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. It was established that both NHIS services and NHIS benefit have positive impact on quality healthcare delivery. This implies that NHIS scheme is vital for quality health service delivery in University of Ilorin Teaching Hospital Kwara State, Nigeria. This findings is in support of previous studies (Awojobi, 2019; Apeloko, 2017; & Onyedibe *et al.*2012) on the literature concerning NHIS and quality healthcare delivery.

Based on the findings of this study, the paper consequently recommends that:

- i. The NHIS services should cover informal sectors, expand enrollees' ailments coverage and make the services to be more flexible and accessible.
- ii. Benefit package in the NHIS needs to be comprehensive and captured more than four dependents. Retirees and dependent above 18 years of age should be allow to continue benefitting from the scheme.

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