HEALTH INSURANCE AND SERVICE QUALITY: AN ANALYSIS OF NIGERIA'S NATIONAL HEALTH INSURANCE POLICY

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ABSTRACT

Despite the establishment of the National Health Insurance Scheme (NHIS) to improve access to quality health care and reduce out-of-pocket spending, service delivery under the scheme in Nigeria's North Central region remains suboptimal. States such as Niger and Plateau continue to experience low patient satisfaction, poor drug availability, limited medical personnel, and weak accountability. The study adopted both primary and secondary data, drawing a sample of 400 enrollees from a population of 522,434 across Benue, Kwara, Nasarawa, Niger, and Plateau States. A total of 374 responses were analyzed using SPSS version 21. Findings revealed significant disparities in health system performance across states. Accessibility to care was highest in Benue (60.7%), Kwara (54.4%), and Nasarawa (58.1%), while Niger (24.7%) and Plateau (29.7%) lagged, largely due to infrastructural and logistical constraints. Emergency responsiveness followed a similar trend, with Nasarawa (51.8%), Kwara (49.4%), and Benue (41%) performing better than Niger (22.2%). Professionalism among healthcare providers also varied, with Nasarawa topping at 77.4% and Plateau at a low of 30.8%. Regarding infrastructure, Nasarawa (77.4%), Plateau (72.6%), and Benue (70.5%) were rated higher, while Kwara and Niger fell short. Perceptions of fairness in service distribution and comprehensiveness were strongest in Nasarawa, Benue, and Plateau. The study concluded that states like Nasarawa, Benue, and Kwara performed relatively better, while Niger and Plateau exhibited critical deficiencies. The study recommended that the NHIA, in collaboration with state governments and regulatory bodies, prioritize infrastructure investment, health worker training, community feedback systems, and improved emergency protocols. The NHIA, in

conjunction with the Federal Ministry of Health and regulatory bodies such as the National Health Insurance Commission (NHIC), should institutionalize a comprehensive quality monitoring system that includes regular assessments, performance benchmarking, and public reporting of service outcomes.

1. Introduction

Globally, health insurance is considered a critical mechanism for achieving Universal Health Coverage (UHC) and improving the quality of health care service delivery. Countries such as Germany, the United Kingdom, and Canada have successfully implemented national health insurance systems that provide financial risk protection, reduce inequality, and ensure access to quality health services (World Health Organization [WHO], 2010). These countries have demonstrated that strong policy framework, regulatory oversight, and adequate funding which have ensured delivering of effective, timely, and patient-centered care (Carrin, Waelkens & Criel, 2008). The global emphasis on health insurance aligns with Sustainable Development Goal 3, which targets health and well-being for all by promoting universal access to essential health services (United Nations, 2015).

In Africa, the implementation of health insurance schemes has been met with mixed outcomes. While countries like Ghana and Rwanda have recorded notable progress in expanding health insurance coverage and improving service delivery (Blanchet, Fink & Osei-Akoto, 2012; Chemouni, 2018), many others still face significant structural and operational challenges. These include weak institutional frameworks, inadequate health financing, shortages of medical personnel, and poor quality of care in public health facilities (Odeyemi, 2014). In several cases, insured patients experience service delays, stock-outs of essential medicines, and discriminatory practices from providers, undermining the expected benefits of health insurance coverage (Wang & Pielemeier, 2012).

In Nigeria, the National Health Insurance Scheme (NHIS) was launched in 2005 to enhance access to quality health care and reduce the burden of out-of-pocket health expenditures. Despite its objectives, the scheme has struggled with low enrollment rates. As of 2022, less than 10% of Nigerians are enrolled in the scheme, and many continue to pay directly for health services (NHIS, 2022). Moreover, there have been persistent complaints about poor service delivery, long waiting times, lack of essential drugs, and unprofessional attitudes of health workers under the NHIS (Obikeze et al., 2020). This study examines the quality of health care service delivery under the national health insurance policy with a focus on North Central, Nigeria.

2. Statement of the Problem

Despite the establishment of the National Health Insurance Scheme (NHIS) to enhance access to quality health care and reduce out-of-pocket spending, service delivery under the scheme remains suboptimal in many parts of Nigeria, particularly in the North Central region. States such as Kwara, Niger, and Benue continue to experience major gaps in the quality of health services provided under the NHIS. These gaps manifest in poor patient satisfaction, irregular availability of essential drugs, inadequate medical personnel, and lack of accountability in service provision (Onoka, Onwujekwe, Hanson &Uzochukwu, 2013; Adewole, Dairo & Afolabi, 2021). For instance, a study in Kwara State reported that many patients under the NHIS had to pay for drugs that were supposed to be covered under the scheme, and experienced long waiting times due to insufficient staffing in public hospitals (Ajayi, Lawal & Oyetunde, 2017). In Niger State, poor health provider attitudes and limited diagnostic services were cited as major reasons for beneficiaries lost trust in the scheme and often resorted to out-of-pocket alternatives (Abubakar & Bello, 2020). Similarly, many beneficiaries in Benue State complained about the bureaucratic bottlenecks associated with referrals and approvals under the scheme, which often delayed access to secondary and tertiary care (Okafor &Ogundele, 2019).

Moreover, the quality assurance mechanisms embedded in the NHIS appear to be weak or poorly enforced in the region. This is compounded by poor monitoring, lack of transparency in the capitation system, and

inadequate feedback mechanisms between enrollees and Health Maintenance Organizations (HMOs). These deficiencies continue to erode public confidence in the NHIS and undermine its intended role in improving health service delivery (Odeyemi, 2014). This study seeks to fill this gap by assessing the effectiveness of the policy in delivering accessible, efficient, and patient-centered care to insured populations in the region.

3. Objective of the Study

The objective of this study is to assess the quality of health care service delivery under the national health insurance policy in North Central, Nigeria.

4. Research Question

To what extent has the National Health Insurance Policy influenced the quality of health care service delivery in North Central Nigeria?

5. Conceptual Discourse

i. Health Insurance

Health insurance is commonly defined as a risk-pooling mechanism that protects individuals from the financial burden of healthcare expenditures by spreading the cost of illness across a larger group (Ekman, 2004). According to Carrin and James (2005), health insurance is a system of financing health care whereby contributions are pooled to pay for the health services of the contributors and their dependents. Onoka, Onwujekwe, Hanson and Uzochukwu, (2013) describe health insurance as an institutional arrangement for mobilizing and pooling funds to finance health services, reduce out-of-pocket payments, and improve access to care. Health insurance is therefore seen by scholars as both a financial and social policy tool for achieving Universal Health Coverage (UHC), particularly in low- and middle-income countries, where health-related out-of-pocket payments has pushed several households into poverty (Uzochukwu, Ughasoro, Etiaba, Okwuosa, Envuladu & Onwujekwe, 2015).

ii. Health Care Service Quality

Health care service quality refers to the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. According to Donabedian (1988), health care quality can be assessed through three interrelated components: structure, process, and outcomes. He defines quality as that kind of care which is expected to maximize an inclusive measure of patient welfare, after taking account of the balance of expected gains and losses that attend the process of care in all its parts. Parasuraman, Zeithaml, and Berry (1988) perceived service quality based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Though originally developed for general services, this model has been widely adapted in health care to assess the patient's perception of service quality.

Institute of Medicine (2001) defines quality health care as care that is safe, effective, patient-centered, timely, efficient, and equitable. This multidimensional approach emphasizes both technical and experiential aspects of service delivery. Onwujekwe, Obi, Ichoku and Uzochukwu (2019) view health care quality as the extent to which health care services provided under schemes like the National Health Insurance meet professional standards, ensure patient safety, and are responsive to patients' needs and expectations, particularly in underserved regions.

6. Empirical Review

Ajayi et al. (2017) examined enrollees' satisfaction with health services received under the NHIS. The study employed quantitative methods, administering structured questionnaires to a randomly selected sample of 400 enrollees from accredited public and private health care facilities. The data collected were analyzed using descriptive statistics such as mean and percentages, as well as inferential statistics including Chi-square tests to establish relationships between patient satisfaction and service variables like drug availability, staff attitude, and waiting time. The findings of the study revealed that while the NHIS had improved financial access to health care, the quality of service delivery remained a critical concern. Approximately 65% of respondents reported experiencing long waiting times before receiving care, while 58% complained of the frequent unavailability of prescribed medications, which often forced them to make out-of-pocket purchases. The study recommended recruitment

and training of additional health personnel to reduce patient wait times, and the strengthening of supervision and regular monitoring of accredited NHIS facilities to ensure compliance with service standards. The study also emphasized the need for better coordination between HMOs and health providers to ensure a consistent supply of essential drugs, as well as the institution of communication and customer service training for health workers to enhance patient-provider relationships.

Abubakar and Bello (2020) study investigated the quality of health service delivery under the National Health Insurance Scheme (NHIS) in Niger State, North Central Nigeria. They adopted a descriptive survey design and administered structured questionnaire to 300 NHIS enrollees across both public and private accredited facilities. The data collected were analyzed using descriptive statistics to measure frequencies and proportions, while inferential tools such as Chi-square tests were employed to determine the relationship between service quality indicators and enrollees satisfaction. The findings revealed significant gaps in service quality despite increased financial access to health care. A majority of respondents (over 60%) reported limited access to diagnostic services, with essential tests either unavailable or requiring referrals to external facilities, often at additional cost. Furthermore, about 55% of respondents expressed dissatisfaction with the attitudes and professionalism of health care workers, citing instances of rudeness, lack of empathy, and delayed attention to patients. The study recommended equipping NHIS-accredited facilities with basic diagnostic tools and laboratory infrastructure to ensure timely and complete service delivery. Regular training and reorientation programs for health workers to enhance professional ethics and improve patient-provider interaction. The study also advocated for stronger regulatory oversight of Health Maintenance Organizations (HMOs) to ensure that contracted services are delivered as stipulated.

Ochekpe and Tersoo (2021) carried out a study to evaluate the perceived effectiveness of NHIS services among civil servants enrolled in the scheme. The researchers employed a mixed-methods approach, combining quantitative data from 250 structured questionnaires with qualitative data from 10 key informant interviews involving health care workers and NHIS officials. Quantitative data were analyzed using SPSS software with tools such as descriptive statistics and regression analysis, while thematic analysis was applied to qualitative responses. The findings indicated that only 42% of respondents believed the NHIS significantly improved their access to quality health care services. Common challenges identified included inconsistent drug availability, long queues, and restricted access to specialist services. The qualitative data also revealed that many enrollees felt powerless in lodging complaints or influencing service improvements, largely due to a lack of transparency and feedback channels between NHIS, HMOs and providers. The study recommended enhancing transparency within the NHIS system by creating robust grievance mechanisms through which enrollees could report service failures.

Adewole et al. (2021) conducted a multi-state study, including states within North Central Nigeria, to assess the overall effectiveness of the National Health Insurance Scheme (NHIS) in improving financial access and quality of health care service delivery. The study adopted a cross-sectional design using a large-scale quantitative survey distributed to over 1,200 NHIS enrollees across six states, including Kwara, Niger, and Benue. The study applied both descriptive and inferential statistical techniques, including logistic regression, to analyze enrollees' satisfaction levels, availability of services, and perceived quality of care. The findings revealed that while the NHIS had significantly improved financial access to health services by reducing out-of-pocket expenditures, the quality of service delivery remained below expectations in many locations. The study recommended strengthening the regulatory framework guiding NHIS implementation through regular audits, performance-based provider payments, and increased community involvement in service monitoring. It also advocated for enhanced training for health care workers and the use of digital tracking systems to monitor service delivery indicators and patient outcomes.

Okafor and Ogundele (2019) examined the administrative and service delivery challenges affecting the implementation of the National Health Insurance Scheme (NHIS) in selected health facilities across North Central Nigeria. Using a descriptive survey design, the study administered structured questionnaires to 350 NHIS enrollees and conducted in-depth interviews with 20 health administrators and frontline providers in Abuja, Kogi, and Nasarawa States. The quantitative data were analyzed using descriptive statistics and correlation

analysis, while qualitative data were thematically analyzed to explore administrative inefficiencies and patient experiences in details. The findings revealed that bureaucratic delays particularly in referral approvals for specialist services were a major source of frustration for enrollees. Over 60% of respondents noted that it took several days to receive NHIS authorization for referrals, leading to treatment delays and, in some cases, out-of-pocket spending at non-accredited facilities.The study recommended the establishment of a decentralized referral system with real-time digital approvals to minimize bureaucratic bottlenecks. The study also called for the institutionalization of quality assurance frameworks, including regular service audits, feedback systems for enrollees, and performance-linked incentives for providers.

Chemouni's (2018) research on the success of Rwanda's community-based health insurance emphasized the central role of political will and institutional enforcement in shaping health insurance outcomes. Findings showed that Rwanda's gains in health equity and service quality were underpinned by strong government oversight, tight regulation of provider behaviour, and performance-based financing mechanisms. By contrast, Nigeria's NHIS environment suffers from fragmented leadership, poor supervision of Health Maintenance Organizations (HMOs), and minimal consequences for non-performing service providers. The study suggested that without robust political commitment and regulatory enforcement, improvements in enrolment or funding under NHIS may not translate into higher-quality health care for beneficiaries.

7. Theoretical Framework

This study adopts Avedis Donabedian's (1988) Structure–Process–Outcome (SPO) model as its theoretical foundation. The SPO model conceptualizes health care quality as being determined by the interaction of three primary components: structure, process, and outcome. According to Donabedian, structure refers to the physical and organizational settings where health care is delivered, including infrastructure, equipment, human resources, and institutional regulations. Process denotes the actual delivery of care, encompassing diagnosis, treatment, interpersonal relations between providers and patients, and adherence to clinical guidelines. Outcome involves the effects of health care interventions on patient health status, satisfaction, and overall system efficiency. The model assumes that improvements in structural and procedural inputs will ultimately result in better health outcomes, provided the care is appropriately delivered and patient-centered.

The relevance of the SPO model to this study lies in its holistic approach to evaluating service quality. Given that the National Health Insurance Scheme (NHIS) in Nigeria primarily aims to improve both access and quality of health care, the SPO model offers a robust framework for analyzing service delivery under three critical lenses. In the structure dimension, the study evaluates the adequacy of NHIS-accredited facilities, availability of diagnostic tools, human resource capacity, and administrative processes (e.g., referral systems). The process dimension allows for an examination of how care is delivered under NHIS such as patient wait times, drug availability, provider attitudes, and bureaucratic bottlenecks. The outcome dimension evaluates how enrollees perceive their health improvements, service satisfaction, and the extent to which NHIS services reduce catastrophic health spending. These dimensions align well with the empirical realities in North Central Nigeria, where studies (e.g., Ajayi et al., 2017; Abubakar& Bello, 2020) have shown significant gaps in both structural inputs and care processes that negatively affect health outcomes.

However, the SPO model tends to treat the three components, structure, process, and outcome as linear and independent, whereas, in real-world health systems, these elements are often dynamic, overlapping, and context-sensitive (Campbell, Roland, &Buetow, 2000; Mosadeghrad, 2013). The model also tends to underrepresent the broader socio-political and institutional context, such as the roles of governance quality, corruption, policy fragmentation, and weak regulatory oversight, which are particularly prevalent in developing countries like Nigeria (Obansa & Orimisan, 2013; Onwujekwe et al., 2019). These contextual factors can significantly distort the expected link between improved inputs and better outcomes. Additionally, the SPO framework assumes that adequate structure and correct processes will inevitably lead to positive health outcomes, a notion that can overlook patient-level determinants (e.g., cultural beliefs, health literacy, or trust in the system) and systemic issues like inequity or political instability (Donabedian, 2003; Shaw, 2015). Therefore, while the model is valuable for assessing specific

service quality indicators, its utility may be limited if not adapted to reflect complex health system realities, especially in low-resource settings.

Despite these critiques, the applicability of the SPO model to the current study remains strong. It provides a well-tested, flexible framework that facilitates a structured analysis of NHIS service delivery in North Central Nigeria, enabling researchers and policymakers to pinpoint where breakdowns in quality occur. By mapping survey and secondary data onto the model's three dimensions, this study is positioned to offer practical insights into how the NHIS can move beyond financial protection to ensure equitable, timely, and effective care for its enrollees. Furthermore, integrating this framework into the study encourages a balanced focus on not only what services are provided but how they are delivered and what results they achieve are critical areas for considerations in any policy evaluation.

8. Methodology

The study engaged both primary and secondary sources of data. The population of study was 52,2434 which comprised of Benue, Kwara, Nasarawa, Niger and Plateau states enrollees. The sample size was 400 derived through Taro Yamane formula. Out of the 400 copies of a questionnaire, 374 were retrieved and analyzed using SPSS version 21.

9. Results

Table 1: Quality of health care service delivery under the National Health Insurance Policy

S/N	Statements	States	SD	D	U	S	SS	Total	Aggregate
1	Accessing healthcare services under the NHIA in my location is easy and convenient.	Benue	1 (1.6%)	7 (11.5%)	4 (6.6%)	12 (19.7%)	37 (60.7%)	61 (100%)	Strongly Satisfied
		Kwara	2 (2.5%)	6 (7.6%)	5 (6.3%)	23 (29.1%)	43 (54.4%)	79 (100%)	Strongly Satisfied
		Nasarawa	1 (1.6%)	3 (4.8%)	6 (9.8%)	15 (24.2%)	36 (58.1%)	61 (100%)	Strongly Satisfied
		Niger	19 (23.5%)	25 (30.9%)	2 (2.5%)	15 (18.5%)	20 (24.7%)	81 (100%)	Dissatisfied
		Plateau	10 (11%)	35 (38.5%)	8 (8.8%)	11 (12.1%)	27 (29.7%)	91 (100%)	Dissatisfied
2	The availability of medications and essential	Benue	1 (1.6%)	5 (8.2%)	7 (11.5%)	37 (60.7%)	11 (18%)	61 (100%)	Satisfied
		Kwara	2	8	8	46	15	79	

	supplies at NHIA affiliated facilities meets my expectations.	Nasarawa	(2.5%)	(10.1%)	(10.1%)	(58.2%)	(19%)	(100%)	Satisfied
			2	6	7	38	9	62	
		Niger	(3.2%)	(9.7%)	(11.3%)	(61.3%)	(14.5%)	(100%)	Satisfied
			11	28	5	27	10	81	
		Plateau	(13.6%)	(34.6%)	(6.2%)	(33.3%)	(12.3%)	(100%)	Dissatisfied
			8	33	9	30	11	91	
			(8.8%)	(36.6%)	(9.9%)	(33%)	(12.1%)	(100%)	Dissatisfied
3	NHIA services are more affordable compared to private healthcare options.	Benue	3	4	8	28	18	61	
			(4.9%)	(6.6%)	(13.1%)	(45.9%)	(29.5%)	(100%)	Satisfied
		Kwara	5	2	13	39	20	79	
			(6.3%)	(2.5%)	(16.5%)	(49.4%)	(25.3%)	(100%)	Satisfied
		Nasarawa	3	1	7	34	17	62	
			(4.8%)	(1.6%)	(11.3%)	(54.8%)	(27.4%)	(100%)	Satisfied
		Niger	3	4	9	43	22	81	
			(3.7%)	(4.9%)	(11.1%)	(53.1%)	(27.2%)	(100%)	Satisfied
		Plateau	9	35	10	25	12	91	
			(9.9%)	(38.5%)	(11%)	(27.5%)	(13.2%)	(100%)	Dissatisfied

4	The NHIA is effective in providing timely medical attention during emergencies.	Benue	1 (1.6%)	11 (18%)	5 (8.2%)	25 (41%)	19 (31.1%)	61 (100%)	Satisfied
		Kwara	3 (3.8%)	13 (16.5%)	6 (7.6%)	39 (49.4%)	18 (22.8%)	79 (100%)	Satisfied
		Nasarawa	2 (3.2%)	11 (17.7%)	2 (3.2%)	32 (51.8%)	15 (24.2%)	62 (100%)	Satisfied
		Niger	9 (11.1%)	30 (37%)	5 (6.2%)	18 (22.2%)	19 (23.5%)	81 (100%)	Dissatisfied
		Plateau	2 (2.2%)	13 (14.3%)	5 (5.5%)	44 (48.4%)	27 (29.7%)	91 (100%)	Satisfied
5	The level of professionalism (Doctor, Nurses, Pharmacists, Medical Laboratory scientist) and courtesy displayed by NHIA healthcare providers meets my expectations.	Benue	Nil	9 (14.8%)	6 (9.8%)	24 (39.3%)	22 (36.1%)	61 (100%)	Satisfied
		Kwara	3 (3.8%)	12 (15.2%)	3 (3.8%)	38 (48.1%)	23 (29.1%)	79 (100%)	Satisfied
		Nasarawa	7 (11.3%)	5 (8.1%)	9 (14.5%)	23 (37.1%)	18 (29%)	62 (100%)	Satisfied
		Niger	3 (3.7%)	9 (11.1%)	5 (6.2%)	34 (42%)	30 (37%)	81 (100%)	Satisfied
		Plateau	8 (8.8%)	31 (34.1%)	7 (7.7%)	28 (30.8%)	17 (18.7%)	91 (100%)	Dissatisfied

6	The infrastructure (e.g., equipment, cleanliness) at NHIA accredited facilities is adequate and meets healthcare standards.	Benue	5 (8.2%)	4 (6.6%)	1 (1.6%)	43 (70.5%)	8 (13.1%)	61 (100%)	Satisfied
		Kwara	12 (15.2%)	29 (36.7%)	3 (3.8%)	26 (32.9%)	9 (11.4%)	79 (100%)	Dissatisfied
		Nasarawa	5 (8.1%)	3 (4.8%)	Nil (11.1%)	48 (77.4%)	6 (9.7%)	62 (100%)	Satisfied
		Niger	11 (13.6%)	32 (39.5%)	9 (11.1%)	24 (29.6%)	5 (6.2%)	81 (100%)	Dissatisfied
		Plateau	6 (6.6%)	4 (4.4%)	1 (1.1%)	66 (72.6%)	14 (15.4%)	91 (100%)	Satisfied
7	The NHIA provides equitable services to individuals regardless of income levels or regions.	Benue	1 (1.6%)	5 (8.2%)	3 (4.9%)	35 (57.4%)	17 (27.9%)	61 (100%)	Satisfied
		Kwara	2 (2.5%)	6 (7.6%)	7 (8.9%)	48 (60.8%)	16 (20.3%)	79 (100%)	Satisfied
		Nasarawa	1 (1.6%)	3 (4.8%)	3 (4.8%)	40 (64.5%)	15 (24.2%)	62 (100%)	Satisfied
		Niger	1 (1.2%)	7 (8.6%)	4 (4.9%)	47 (58%)	22 (27.2%)	81 (100%)	Satisfied
		Plateau	15 (16.5%)	35 (38.5%)	6 (6.6%)	22 (24.2%)	13 (14.3%)	91 (100%)	Dissatisfied
8	How do you rate the comprehensive services provided?	Benue	2 (3.3%)	9 (14.8%)	3 (4.9%)	38 (62.3%)	9 (14.8%)	61 (100%)	Satisfied
		Kwara	16 (20.3%)	40 (50.6%)	2 (2.5%)	17 (21.5%)	4 (5.1%)	79 (100%)	Dissatisfied
		Nasarawa	1	11	3	42	5	62	

			(1.6%)	(17.7%)	(4.8%)	(67.7%)	(8.1%)	(100%)	Satisfied
		Niger	2	11	3	45	18	79	
			(2.5%)	(13.9%)	(3.8%)	(57%)	(22.8%)	(100%)	Satisfied
		Plateau	6	12	3	58	12	91	
			(6.6%)	(13.2%)	(3.3%)	(63.7%)	(13.2%)	(100%)	Satisfied
9	How do you rate your state of health after treatment ?	Benue	5	6	1	29	20	61	
			(8.2%)	(9.8%)	(1.6%)	(47.5%)	(32.8%)	(100%)	Satisfied
		Kwara	6	12	1	36	24	79	
			(7.6%)	(15.2%)	(1.3%)	(45.6%)	(30.4%)	(100%)	Satisfied
		Nasarawa	2	7	5	30	18	62	
			(3.2%)	(11.3%)	(8.1%)	(48.4%)	(29%)	(100%)	Satisfied
		Niger	5	8	2	36	30	81	
			(6.2%)	(9.9%)	(2.5%)	(44.4%)	(37%)	(100%)	Satisfied
		Plateau	19	31	1	27	13	91	
			(20.9%)	(34.1%)	(1.1%)	(29.7%)	(14.3%)	(100%)	Dissatisfied
10	How do you rate the cost of transportation in comparison with quality of service?	Benue	3	5	1	35	17	61	
			(4.9%)	(8.2%)	(1.6%)	(57.4%)	(27.9%)	(100%)	Satisfied
		Kwara	2	11	2	39	25	79	
			(2.5%)	(13.9%)	(2.5%)	(49.4%)	(31.6%)	(100%)	Satisfied
		Nasarawa	1	7	1	40	13	62	
			(1.6%)	(11.3%)	(1.6%)	(64.5%)	(21%)	(100%)	Satisfied
		Niger	6	36	1	24	14	81	
			(7.4%)	(44.4%)	(1.2%)	(29.6%)	(17.3%)	(100%)	Dissatisfied
		Plateau	4	5	1	53	28	91	
			(4.4%)	(5.5%)	(1.1%)	(58.2%)	(30.8%)	(100%)	Satisfied

11	Can you recommend the health facility you visited to another person and at what rate?	Benue	4 (6.6%)	13 (21.3%)	5 (8.2%)	22 (36.1%)	17 (27.9%)	61 (100%)	Satisfied
		Kwara	3 (3.8%)	18 (22.8%)	7 (8.9%)	36 (45.6%)	15 (19%)	79 (100%)	Satisfied
		Nasarawa	3 (4.8%)	14 (22.6%)	5 (8.1%)	24 (38.7%)	16 (25.8%)	62 (100%)	Satisfied
		Niger	3 (3.7%)	20 (24.7%)	11 (13.6%)	26 (32.1%)	21 (25.9%)	81 (100%)	Satisfied
		Plateau	14 (15.4%)	36 (39.6%)	7 (7.7%)	22 (24.2%)	12 (13.2%)	91 (100%)	Dissatisfied

Source: Researcher's Field Survey, 2024

The table reveals that Benue, Kwara, and Nasarawa consistently recorded high satisfaction rates, suggesting relatively effective NHIA service delivery in those states. Niger and Plateau, on the other hand, showed lower satisfaction levels and higher percentages of dissatisfaction or undecided responses, indicating systemic service delivery issues. On the statement regarding ease and convenience of accessing healthcare services, Benue, Kwara, and Nasarawa had more than 80% of respondents choosing "Satisfied" or "Strongly Satisfied." In contrast, Niger and Plateau had higher proportions of dissatisfaction (30.9% and 38.5%, respectively). Similarly, satisfaction with the availability of medications and essential supplies was high in Benue, Kwara, and Nasarawa, with over 70% satisfaction, while Niger (49.6%) and Plateau (45.1%) had lower satisfaction levels and higher reports of unavailability.

When evaluating the affordability of NHIA services, again, the majority of respondents in Benue, Kwara, Nasarawa, and Niger were satisfied, but Plateau stood out with 38.5% expressing dissatisfaction, suggesting that cost remains a barrier there. Timely emergency response was positively rated in the first three states, but only 45.7% of Niger respondents and 48.4% of Plateau respondents were satisfied, pointing to emergency service gaps. A significant dip in satisfaction was observed in Plateau for provider professionalism, where 42.9% of respondents were either dissatisfied or undecided. Benue, Kwara, and Nasarawa had better ratings in this regard. On infrastructure adequacy, satisfaction in Nasarawa (77.4%) and Plateau (72.6%) was high, whereas Niger and Kwara lagged behind, with satisfaction at 35.8% and 44.3%, respectively.

In terms of equity of services, most states reported satisfactory experiences, but Plateau showed considerable dissatisfaction, with 55% of respondents indicating that service delivery was not equitable. Similarly, the comprehensiveness of services received high ratings in Benue, Nasarawa, Niger, and Plateau, while Kwara recorded significant dissatisfaction, with 70.9% either disagreeing or strongly disagreeing. For the self-reported state of health after treatment, satisfaction levels remained strong across all states except Plateau, where 55% were either dissatisfied or undecided. On the issue of transportation costs relative to service quality, dissatisfaction was notable in Niger (51.8%) and moderate in Plateau (10%). This suggests that even if the healthcare service is adequate, the cost of accessing it remains a deterrent in some regions. Finally, when asked whether they would recommend NHIA facilities, a majority in all states responded positively, although Plateau had the highest proportion of negative or undecided responses (62.7%).

10. Discussion of Findings

The findings reveal significant regional disparities in the quality of healthcare service delivery under the National Health Insurance Authority (NHIA) across the five states covered in the North Central, Nigeria. An indicator of health system performance accessibility to care was notably high in Benue (60.7%), Kwara (54.4%), and Nasarawa (58.1%), reflecting relatively successful implementation of NHIA in those states. In contrast, Niger (24.7%) and Plateau (29.7%) recorded much lower accessibility ratings, pointing to logistical and infrastructural barriers in those areas. This mirrors prior studies by Ajayi et al. (2017) and Abubakar & Bello (2020), which found that enrollees in parts of Kwara and Niger encountered difficulties related to service availability and provider efficiency.

Availability of essential medications and supplies, another key measure of service quality, followed a similar pattern. Again, Benue, Kwara, and Nasarawa had higher satisfaction ratings, while Niger and Plateau lagged behind with only about a third of respondents affirming the adequacy of supplies. These findings reinforce concerns raised by Adewole et al. (2021), who highlighted weak supervision and procurement inefficiencies under NHIA as contributing to poor service delivery outcomes. Notably, affordability was relatively well-rated across the board, with most respondents acknowledging that services under the Scheme were more affordable than private health care options especially in Nasarawa (54.8%) and Niger (53.1%). However, affordability alone does not compensate for deficiencies in availability or quality of care.

Regarding emergency responsiveness, perceptions varied across states, with Nasarawa (51.8%), Kwara (49.4%), and Benue (41%) scoring relatively well, while Niger (22.2%) showed marked dissatisfaction. The ability of the system to respond to urgent medical needs remains uneven and is likely influenced by infrastructural preparedness and administrative efficiency. Professionalism and courtesy among healthcare providers were also inconsistent, ranging from a high of 77.4% in Nasarawa to a low of 30.8% in Plateau. This finding aligns with Okafor and Ogundele (2019), who argued that poor provider attitudes and the absence of quality assurance mechanisms contribute to enrollee dissatisfaction and underutilization of services.

In terms of facility infrastructure, Nasarawa again emerged strong (77.4%), followed by Plateau (72.6%) and Benue (70.5%), while Kwara and Niger fell below expectations. This underscores the need for targeted investment in hospital environments and diagnostic capacity, particularly in states where infrastructure is critically lacking. Meanwhile, perceptions of fairness in service distribution and comprehensiveness of care were strongest in Nasarawa, Benue, and Plateau, but Kwara and Niger were seen as falling short. These views are consistent with critiques in the literature that highlight inequitable access and fragmented service provision under NHIS (Onoka et al., 2013).

When assessing treatment outcomes, favourable responses were again clustered in Nasarawa, Benue, and Kwara, whereas Niger and Plateau showed weaker performance. This suggests that states with stronger infrastructure and more effective care processes are better able to deliver positive health outcomes. Satisfaction with the balance between transport cost and service quality followed a similar trend, with Niger standing out as the least favourable. Finally, willingness to recommend NHIA-accredited facilities, a proxy for public trust, was strongest in Kwara (45.6%) but generally low across other states indicating room for improvement in perceived service reliability and value. Collectively, these findings affirm the utility of Donabedian's (1988) Structure-Process-Outcome model as a theoretical lens. States that scored higher in structural and procedural domains (e.g., Nasarawa and Benue) tended to report better outcomes and higher satisfaction levels. However, as discussed in the critique of the SPO model, these outcomes are not solely driven by clinical inputs; they are also shaped by socio-political dynamics, governance quality, and local implementation capacity (Chemouni, 2018; Onwujekwe et al., 2019). Therefore, improving NHIA's impact in North Central Nigeria will require state-specific strategies, improved supervision, and stronger accountability mechanisms to ensure uniform service quality across all regions.

11. Conclusion

The study examined the quality of healthcare service delivery under the National Health Insurance Scheme managed and supervised NHIA. It covers five North Central states of Nigeria; Benue, Kwara, Nasarawa, Niger, and

Plateau. Findings revealed clear disparities in public perception and satisfaction, with states like Nasarawa, Benue, and Kwara showing relatively better performance in terms of accessibility, affordability, infrastructure, and responsiveness. In contrast, Niger and Plateau showed notable deficiencies, particularly in medication availability, staff attitudes, and emergency responsiveness.However, contextual factors such as governance, administrative bottlenecks, and health worker motivation play a critical mediating role in the effectiveness of NHIA implementation.

12. Recommendations

Targeted infrastructure investment should be prioritized by the NHIA in collaboration with state governments especially in underperforming states like Niger and Plateau. These efforts should focus on upgrading diagnostic equipment, ensuring uninterrupted supply of essential medicines, and improving the physical conditions of health facilities to create conducive healthcare environment. Addressing health worker attitudes and motivation is crucial. A working synergy between the NHIA, Federal Ministry of Health and Primary Health Care Development Agencies, targeted at regular training on patient relations, communication, and ethical standards. This should be supported by a performance-based incentive structure to encourage professionalism and accountability among healthcare providers. In addition, enhanced monitoring and supervision mechanisms are needed at both the federal and state levels. The NHIA, alongside the National Primary Health Care Development Agency (NPHCDA) and State Ministries of Health, must strengthen oversight through periodic facility audits, compliance checks, and service quality evaluations and assurance. These efforts will help ensure that accredited facilities adhere to established standards and provide timely, equitable care and help at mitigating certain challenges. Equally important is the adoption of community engagement and feedback systems. The NHIA should create accessible channels such as toll-free hotlines, suggestion boxes, and periodic stakeholder forums through which enrollees can report service issues, provide feedback, and participate in healthcare planning. This participatory approach will help build public trust and ensure that health services are responsive to the needs of the population.

The NHIA should collaborate with state emergency medical services and local health authorities to establish standardized protocols, improve ambulance response times, and streamline referral pathways for critical cases. This will reduce delays and improve outcomes in life-threatening situations. Recognizing the regional disparities identified in the study, NHIA should adopt state-specific implementation strategies rather than relying solely on a uniform national framework. These strategies should reflect each state's socio-economic conditions, health system capacity, and governance structure to ensure more relevant and effective interventions. There is a need to strengthen national quality assurance frameworks through collaboration between NHIA, the Federal Ministry of Health and regulatory bodies. It is believed that would help at institutionalizing a comprehensive quality monitoring system that includes regular assessments, performance benchmarking, and public reporting of service outcomes.

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