# EVALUATION OF THE IMPACT OF NATIONAL HEALTH INSURANCE AUTHORITY (NHIA) ON THE ACCESSIBILITY OF MEDICINE AT THE UNIVERSITY OF BENIN TEACHING HOSPITAL (UBTH)


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**A PROJECT SUBMITTED TO THE DEPARTMENT OF CLINICAL PHARMACY AND PHARMACY PRACTICE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DOCTOR OF PHARMACY (PHARM. D) DEGREE OF THE UNIVERSITY OF BENIN, NIGERIA.**

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## CERTIFICATION

We certify that Dan-Aletor Omorogbe John conducted this work with Matriculation number PHA1908474 in the Department of Clinical Pharmacy and Pharmacy Practice, University of Benin, Benin City, Nigeria in partial fulfillment of the requirement for the award of the Doctor of Pharmacy (PharmD) degree.

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## DEDICATION

I dedicate this work to God Almighty, the giver of life and the source of all wisdom. I also humbly dedicate it to my parents and siblings for their unwavering love and support.

## ACKNOWLEDGEMENT

I am grateful to God Almighty for His mercy, grace, and unfailing guidance throughout this work. My sincere appreciation goes to my supervisor, Professor Ehijie Enato, for the opportunity to work under his supervision and for his valuable support and direction during this research.

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## ABSTRACT

**Background:** Access to essential medicines is central to Universal Health Coverage, yet patients continue to face high out-of-pocket costs, frequent drug stock-outs and limited formularies. The National Health Insurance Authority (NHIA, formerly NHIS) aims to improve affordability and access, but its real-world impact on medicine accessibility at tertiary hospitals requires evaluation.

**Objectives General:** To evaluate the impact of NHIA on accessibility to medicines at the University of Benin Teaching Hospital (UBTH).

**Method:** A cross-sectional, descriptive survey of NHIA-enrolled patients attending the General Patients Clinic (GPC) and Consultant Out-patients (COPD) NHIA pharmacy units at UBTH. A structured, self-administered questionnaire was completed by 311 patients (100% response rate). Data were coded and analysed in SPSS v21, using descriptive statistics and Chi-square tests; significance set at $p < 0.05$.

**Results:** 311 respondents (majority 41–60 years, 58.2% male) participated in the study. Overall, accessibility and service efficiency under NHIA were rated moderate: respondents acknowledged improved affordability, but reported persistent problems with drug availability and the collection process. Major barriers were drug stock-outs, long waiting times and poor staff communication. Statistically significant associations were observed between medicine accessibility and age ($\chi^2$=22.0, p=0.005), education ($\chi^2$=13.8, p=0.03), duration of NHIA enrolment ($\chi^2$=16.9, p=0.02) and awareness ($\chi^2$=6.00, p=0.05). Perceived NHIA efficiency was significantly associated with age ($\chi^2$=15.5, p=0.04). A cross-tabulation of barriers/recommendations versus efficiency showed no significant association ($\chi^2$=11.46, p=0.32).

**Conclusions:** NHIA enrolment at UBTH provides measurable financial relief and improves affordability of medicines, but is constrained by operational challenges—chiefly inconsistent medicine supply, limited formulary coverage and administrative delays. Strengthening supply-chain management, expanding the NHIA drug list, digitalizing claims and pharmacy workflows, improving staffing and instituting routine beneficiary feedback are recommended to enhance medicine accessibility and service efficiency.



**Keywords:** Accessibility; cross-sectional; drug stock-outs; essential medicines; health insurance; NHIA; University of Benin Teaching Hospital; Nigeria.

# CHAPTER ONE

# INTRODUCTION

## 1.0 Background of Study

Access to essential medicines is a fundamental component of effective healthcare delivery and a critical determinant of health outcomes (World Health Organization [WHO], 2021). In Nigeria, the high cost of medications and out-of-pocket expenditure have historically posed significant barriers to treatment, particularly for low- and middle-income populations (Uzochukwu et al., 2019). To address these challenges, the Nigerian government established the National Health Insurance Scheme (NHIS), now restructured as the National Health Insurance Authority (NHIA) under the NHIA Act of 2022, with the aim of achieving universal health coverage through financial protection and improved access to quality healthcare services, including medications (Federal Government of Nigeria, 2022).

Health insurance refers to a structured method of covering healthcare expenses, in which individuals or groups make regular contributions—either through premiums or taxes—into a shared pool of funds. This collective fund is then used to finance all or part of the healthcare services outlined by an insurance policy or statutory provisions. Most health insurance systems share certain core features, including prepaid financial contributions, pooling of resources to spread risk, and access to benefits based on membership, contributions, or employment status. Depending on the design, a health insurance plan may cover a narrow set of services or a broad spectrum of medical care, and can offer either full or partial reimbursement for the healthcare costs incurred (Encyclopaedia Britannnica, 2022). The benefits may consist of the right to certain medical services or reimbursement to the insured for specified medical costs. Some types of

health insurance may also include income benefits for working time lost because of sickness (i.e., disability leave) or parental leave (Encyclopaedia Britannnica, 2022).

In Nigeria, National Health Insurance Authority (NHIA) formerly known as the National Health Insurance Scheme (NHIS), is a social health insurance programme designed by the Nigerian government to complement sources of financing the health sector and to improve access to health care for the majority of Nigerians. The Nigeria government established the National Health Insurance Scheme (NHIS) under decree 35 of the 1999 constitution, however, the scheme did not become operational until about 6 years later on the 6 June, 2005 when it was officially launched and commencement of services to enrollees started in September of the same year (Obalum et al, 2022). Individuals enrolled in the scheme are entitled to a broad range of healthcare benefits, including outpatient services with necessary consumables, access to prescribed medicines, pharmaceutical care, and diagnostic tests listed in the National Essential Drug List and the approved Diagnostic Test List. The scheme also covers maternity services for up to four live births per contributor or couple in the Formal Sector Programme, as well as preventive health services such as immunization under the National Programme on Immunization, health education, family planning, and both antenatal and postnatal care. Enrollees may consult various specialists—including physicians, pediatricians, obstetricians, gynecologists, general and orthopedic surgeons, ENT surgeons, dental surgeons, radiologists, psychiatrists, ophthalmologists, and physiotherapists—while hospitalization is provided in a standard ward for up to 15 cumulative days per year in non-military hospitals, with no limit in military hospitals; the primary provider covers bed-space charges for the first 15 days, after which costs are borne by the beneficiary or employer. Additional benefits include eye examinations and basic eye care excluding spectacles and contact lenses, access to certain prosthetic devices limited to Nigerian-

made artificial limbs, and preventive dental services such as consultations, oral health education, amalgam fillings, simple extractions, and other pain-relief procedures. Teachers are one of the beneficiaries of NHIA due to the work schedule in terms of taking care of the school children and also a teacher being absent in class or school would disorganize the class and students been taught by such teacher. In order to avoid not being able to afford the cost of his or her health requirements and also because of the various benefits of NHIA, which prevents absence of teachers in their field of work, which would affect the students and also disrupt academic activities, there is need evaluate he services of NHIA as it is provided for themselves or for their family members. In order to determine whether NHIA is achieving their aims and objectives there is need to also evaluate their services for future modifications.

The Decree 35 of 1999 created the National Health Insurance Scheme (NHIS) to guarantee that all Nigerians have equitable access to high-quality medical care (National Health Insurance Scheme, 2025). The Rural Community Social Health Insurance Program (RCSHIP), the Urban Health Self-employed Social Health Program (FSSHIP) for employees in the formal sector were the three programs that consolidated the NHIS implementation, which started in 2002. The program's goals were to increase population access to high-quality healthcare services and offer universal health coverage (Eze et al., 2024). The NHIS was created to provide fair healthcare for all residents as a policy reaction to the nation's notable health inequities and the financial strain of out-of-pocket costs (Akinyemi, et al., 2021). Despite being in existence for over two decades, awareness of the NHIS remains low in Nigeria, particularly in sub-urban areas and among the informal sectors. Previous studies have shown that a substantial section of the populace is uninformed of the actuality of the NHIS plans. Moreso access to healthcare services under the scheme remains a tedious task (Okafor & Are, 2020). In addition, administrative bottlenecks,

lengthy wait times, and a lack of information on how to use the scheme deter people from seeking healthcare services through it (Bolarinwa et al., 2021). Adebola (2020) claims that many healthcare facilities, especially in sub-urban areas, are not accredited by the NHIS, which limits the options available to enrollees. Furthermore, the cost of enrolling in the NHIS is sometimes prohibitive for many Nigerians, particularly those living below the poverty line (Eze, et al 2024). Although the government has introduced various cost-sharing models to make the scheme more affordable and reduce healthcare costs, out-of-pocket expenses, premiums, and co-payments still present financial challenges and this tends to affect the NHIA's objective of financial risk protection (Okafor & Are, 2020: Okewale et al., 2024).

Evaluation means the process of judging or calculating the quality, importance, amount, or value of something including the services of the NHIA (Cambridge dictionary, 2023). The evaluation would be done bearing in mind their stated objectives as it concerns the patients' welfare. Some many variables might determine the opinion of the patients during evaluation. Most patients are reluctant to use health care services under NHIA because these healthcare services are usually provided by government hospitals which are sometimes perceived to offer low quality healthcare services. Some healthcare services are perceived to be better rendered by private hospitals that are not under the NHIA.

The University of Benin Teaching Hospital (UBTH), a major tertiary healthcare institution in Edo State, serves a diverse patient population, many of whom are enrolled under the NHIA scheme. While NHIA is expected to improve medicine accessibility by subsidizing or fully covering the cost of approved drugs, anecdotal evidence and preliminary reports suggest that enrollees still face challenges such as drug stock-outs, limited formularies, and occasional out-of-pocket payments (Aregbeshola & Khan, 2018). This study seeks to evaluate the actual impact of

the NHIA on medicine accessibility at UBTH, examining whether the scheme has met its objectives in this setting and identifying any persistent gaps or barriers that affect patient access to essential medications.

### 1.1 Conceptual Review : National Health Insurance Authority (NHIA)

The Nigerian government established the National Health Insurance Scheme (NHIS) in 1999 through Act 35 of the 1999 Constitution as a social health insurance initiative designed to provide affordable, fair, and accessible healthcare services to all citizens, particularly vulnerable populations. The scheme was built on the principles of risk pooling and social solidarity, ensuring that financial contributions from members are used collectively to fund healthcare services for all enrollees. In 2022, the National Health Insurance Authority (NHIA) Act was enacted to broaden the mandate of the scheme by striving for universal health insurance coverage, supporting the development of state-led insurance programs, and strengthening financing mechanisms and governance structures. The Act also seeks to improve public awareness, reinforce healthcare infrastructure, and enhance overall system accountability (Bolarinwa et al., 2021; Eze et al., 2024).

**Structure of the NHIA**

**i. The Formal Sector Program (FSP)**: The scheme extends coverage to employees in the organized private sector as well as workers at the federal, state, and local government levels, with the required financial contributions shared between employers and their staff.

**ii. Informal Sector Program (ISP):** This scheme targets individuals in the informal sector, including farmers, artisans, self-employed persons, and other independent workers. It operates

primarily through community-based health insurance models and various micro-insurance arrangements.

**iii. Vulnerable Group Program (VGP):** This scheme is designed to extend health coverage to populations at greater risk, including pregnant women, children under five, older adults, and individuals with disabilities. This program is largely financed through government subsidies and support from donor agencies.

**iv. The Tertiary Institutions Social Health Insurance Program (TISHIP):** This program ensures that students attending post-secondary educational institutions have access to essential healthcare services.

### 1.2 Statement of Problem

Access to affordable and quality healthcare remains one of the most pressing challenges in Nigeria. Despite interventions by government and development partners, the health system continues to suffer from poor infrastructure, high out-of-pocket expenditures, limited access to essential medicines, and inequitable service delivery. The National Health Insurance Authority (NHIA), formerly known as the National Health Insurance Scheme (NHIS), was reformed under the NHIA Act of 2022 to provide a more robust framework for achieving Universal Health Coverage (UHC) in Nigeria. The NHIA is strategically positioned to fill significant gaps in the healthcare system, particularly in tertiary institutions such as the University of Benin Teaching Hospital (UBTH), by improving access to medicines and reducing the financial burden on patients.

One of the foremost gaps NHIA aims to address is the high out-of-pocket (OOP) expenditure on healthcare services. Over 70% of healthcare financing in Nigeria is sourced directly from

individuals, leading to financial hardship, reduced health-seeking behavior, and delays in treatment (World Health Organization [WHO], 2021). NHIA is expected to offer financial protection through pre-paid risk pooling and health insurance coverage, reducing the incidence of catastrophic health spending and enhancing the affordability of essential medicines and services (NHIA, 2023). Another significant gap is the inadequate access to essential medicines in public hospitals like UBTH. Patients frequently encounter stock-outs of vital medications and are forced to purchase drugs from external pharmacies at higher prices. This undermines continuity of care and treatment adherence. NHIA is expected to address this through effective medicines supply chain management, bulk procurement, and improved coordination with accredited facilities to ensure availability and affordability of essential drugs (Yadav, 2022). The low insurance coverage and poor public awareness of health insurance benefits also constitute major challenges. Before the enactment of the NHIA Act in 2022, health insurance coverage was voluntary and reached only a fraction of the population. NHIA now has a mandate to ensure that health insurance becomes mandatory for all Nigerians, with special provisions for the informal sector, rural dwellers, and vulnerable populations (Obuaku-Igwe, 2016). By increasing health insurance penetration and public awareness through state-supported and community-based schemes, NHIA can close this coverage gap and facilitate wider access to care.

Despite being insured, many patients still experience poor quality of care and inefficiencies in service delivery**.** This includes delays in accessing care, poor customer service, and lack of essential medicines even within NHIA-accredited hospitals. NHIA is expected to enforce minimum standards for healthcare delivery by regularly accrediting facilities, monitoring compliance, and implementing quality assurance programs. A well-functioning grievance redress mechanism is also necessary to enable patients to report issues and receive timely interventions

(Transparency International, 2019). In addition, NHIA is poised to address the fragmented nature of health financing in Nigeria. The country currently has multiple, uncoordinated funding mechanisms, including donor-driven programs, out-of-pocket payments, and state-level insurance schemes. These systems often overlap or work in silos. NHIA is expected to coordinate these various streams into a unified framework to improve efficiency, reduce duplication, and optimize the use of limited health resources (World Bank, 2020). Equity in access to healthcare also remains a significant issue. Rural populations, the poor, and the elderly often face more challenges in accessing quality care. NHIA is expected to subsidize premiums for the poor and vulnerable and expand coverage to marginalized groups by accrediting more rural-based and primary healthcare providers. This will help address geographic and socio-economic disparities in access to health services (NHIA, 2023). Another structural issue NHIA is expected to resolve is the lack of a sustainable drug pricing model. Drug prices in Nigeria are highly variable and unregulated, which undermines affordability. NHIA is expected to standardize drug pricing across all accredited providers by using evidence-based pricing systems and centralized procurement approaches, which can significantly lower medicine costs and ensure fair pricing nationwide (Cameron et al., 2019). Ultimately, the NHIA is expected to contribute to improved population health outcomes by enabling consistent access to preventive, curative, and rehabilitative health services. This aligns with Nigeria's commitment to achieving Universal Health Coverage and Sustainable Development Goal. "Ensure healthy lives and promote well-being for all at all ages" (UN, 2015).

The University of Benin Teaching Hospital (UBTH), located in Benin City, Edo State, is one of Nigeria's oldest and most reputable tertiary healthcare institutions. Established in 1973, UBTH serves as a referral center for numerous secondary and primary healthcare facilities across the

South-South and South-East regions of Nigeria. It provides a broad range of clinical, diagnostic, emergency, and surgical services, in addition to serving as a center for teaching, research, and the training of healthcare professionals. However, despite its extensive mandate, UBTH, like many other public tertiary hospitals in Nigeria, faces significant challenges related to the availability, affordability, and accessibility of essential medicines and healthcare services. These challenges underscore the gaps that the National Health Insurance Authority (NHIA) is expected to fill within the Nigerian healthcare system. One of the most persistent problems at UBTH is the frequent unavailability of essential medicines. Patients often report being instructed to purchase their prescribed drugs from external pharmacies due to stock-outs at the hospital pharmacy. This situation is worsened for NHIA enrollees, who sometimes discover that NHIA-accredited pharmacies in UBTH are either out of stock or do not carry the medicines covered under the insurance scheme. As Yadav (2022) explains, such medicine supply chain inefficiencies are common in developing countries and often result from fragmented procurement systems, poor inventory control, and underfunding. This lack of availability contributes to high out-of-pocket (OOP) expenditure, even among those theoretically covered by NHIA. While NHIA was designed to reduce financial burdens on patients, a large proportion of UBTH's patients—especially those in the informal sector—are either not enrolled or underinsured. The WHO (2021) reports that over 70% of total health spending in Nigeria is still financed out-of-pocket, a figure that is reflected in the experiences of many UBTH patients. NHIA is therefore expected to reduce such financial vulnerability by expanding coverage and enforcing mandatory insurance enrollment as stipulated in the 2022 NHIA Act (NHIA, 2023). Additionally, insurance coverage at UBTH remains limited, despite the hospital's accreditation under NHIA. The NHIA unit at UBTH primarily serves civil servants and formal sector employees, leaving out a vast population

of informal workers, artisans, students, and retirees. Obuaku-Igwe (2016) emphasizes that inequitable coverage and weak enforcement of health insurance policy contribute to poor utilization of NHIA services, especially in tertiary hospitals. The NHIA Act (2022) seeks to resolve this by making insurance coverage mandatory for all citizens and legal residents in Nigeria, including through state-supported and community-based health insurance models.

Operational inefficiencies are another challenge within the NHIA framework at UBTH. Delays in prescription approval, long wait times at NHIA service points, and limited awareness among patients. Transparency International (2019) warns that such systemic inefficiencies and lack of transparency can undermine trust in health institutions and discourage enrollment. Strengthening NHIA's supervision, quality assurance, and feedback mechanisms at the facility level is crucial for improving service delivery at UBTH. Infrastructural challenges also affect the availability of NHIA-covered services at UBTH. Poor storage facilities, inadequate cold chain equipment, and lack of real-time inventory tracking systems limit the hospital's ability to consistently stock certain essential medicines especially vaccines, insulin, and biologicals. According to the WHO (2021), effective pharmaceutical storage and logistics are foundational to ensuring medicine availability in hospital settings. NHIA's role in supporting health facilities with resources for supply chain management and digital infrastructure is critical in this regard.

### 1.3 Significance Of Study

This study is of great importance as it provides critical insights into how the implementation of the National Health Insurance Authority (NHIA) influences the accessibility of essential medicines in tertiary healthcare settings such as the University of Benin Teaching Hospital (UBTH). In a country where out-of-pocket expenditure remains the major form of healthcare financing, the NHIA was established to promote equity, financial risk protection, and improved

access to care. Evaluating its performance in the area of medicine accessibility is vital for all key stakeholders in the healthcare system.

**1) For Policy**

The outcome of this research will provide evidence-based insights for health policymakers to assess the extent to which NHIA has fulfilled its mandate of improving medicine accessibility. By highlighting gaps in drug availability, coverage limitations, and inefficiencies in insurance reimbursements at facilities such as the University of Benin Teaching Hospital (UBTH), the study will enable policy actors to redesign existing implementation strategies. Specifically, the study can guide the review and reform of NHIA policies to include more comprehensive and responsive drug benefit packages, improved logistics for medicine distribution, and the integration of electronic claims processing for timely reimbursements. As noted by Obuaku-Igwe (2016), weak policy implementation and limited insurance coverage have continued to hinder equitable access to healthcare services in Nigeria, particularly among informal and vulnerable populations. Furthermore, this study supports the national health financing agenda by offering a robust analysis of how NHIA's operations affect medicine accessibility a major determinant of health-seeking behavior and treatment outcomes. The findings can serve as a blueprint for the Federal Ministry of Health and NHIA to strengthen inter-agency collaboration, establish standard drug pricing frameworks, and ensure accountability among accredited providers (Cameron et al., 2019). In addition, the research contributes to the monitoring and evaluation framework of NHIA by providing baseline data that can inform future strategic plans. These insights can also assist State Health Insurance Schemes (SHIS) in scaling context-specific policies to meet regional health needs and reduce the financial burden of medicine purchases on households (NHIA, 2023). Ultimately, the study is significant for national health policy as it directly informs the

design of sustainable and inclusive health insurance models, contributing to Nigeria's broader objective of achieving UHC and the Sustainable Development Goals (SDG 3.8), which emphasizes access to safe, effective, quality, and affordable essential medicines for all (United Nations, 2015).

**2) For Practice**

For healthcare providers—particularly physicians, pharmacists, and nurses—the study offers data-driven guidance on how NHIA implementation affects the timely and equitable availability of prescribed medicines. This will enable clinicians to make more appropriate treatment decisions aligned with the NHIA drug formulary and reimbursement structure, thus minimizing the risk of patients abandoning treatment due to unaffordable or unavailable medications (Uzochukwu et al., 2019). From the pharmaceutical practice perspective, the findings are expected to highlight operational barriers such as drug stock-outs, delayed supply chain processes, and limited formularies. These issues, if addressed, can support better inventory control, procurement planning, and coordination between pharmacy departments and NHIA-accredited distributors (Adebisi et al., 2021). This will enhance medicine availability, reduce wastage, and ensure efficient use of hospital resources. Furthermore, the study promotes the application of patient-centered care by identifying how administrative lapses, poor communication, and policy misunderstandings affect patients' ability to access needed medicines. This can inform the development of more responsive standard operating procedures (SOPs) that integrate NHIA guidelines into clinical workflows, thereby improving treatment adherence and patient satisfaction (Obuaku-Igwe, 2016). In addition, the study emphasizes the need for continuous capacity-building among frontline healthcare workers especially NHIA desk

officers and pharmacists on current insurance policies, claims processes, and medicine coverage protocols. Improved staff competence in navigating the NHIA system can enhance service efficiency and strengthen patient trust in institutional healthcare systems (WHO, 2021).

**3) For Patients**

For patients, especially those reliant on public health facilities like UBTH, access to essential medicines is a critical determinant of health outcomes. Despite being enrolled in the NHIA scheme, many patients still encounter barriers such as delayed drug dispensation, partial coverage of prescribed medicines, and unexpected out-of-pocket expenses. This study seeks to uncover such challenges and provide evidence-based recommendations for improving drug availability and affordability under NHIA (Onwujekwe et al., 2019). By highlighting patient experiences and perceptions, the study gives a voice to those most affected by policy implementation gaps. The findings will help tailor NHIA services more closely to patient needs, promoting equity in healthcare delivery and reducing financial hardship due to medicine purchases. This aligns with the broader goals of Universal Health Coverage (UHC) and ensures that insurance truly protects the poor and vulnerable (Uzochukwu et al., 2015).

**4) For Hospital**

For UBTH, the study offers strategic insights into how NHIA implementation influences institutional performance. Medicine stock-outs, reimbursement delays, and bureaucratic hurdles in claim processing can affect service quality, patient flow, and revenue generation. By identifying these challenges, the study equips hospital administrators and pharmacy departments with actionable data to enhance drug supply chain management, streamline internal NHIA

procedures, and improve coordination with insurance stakeholders (Adebisi et al., 2021). Furthermore, better alignment between NHIA policies and hospital practices can improve patient satisfaction, reduce service delays, and enhance UBTH's reputation as a center of excellence. Strengthened NHIA implementation can also contribute to more predictable budgeting, efficient use of hospital resources, and stronger accountability mechanisms (WHO, 2021).

In summary, this study contributes significantly to enhancing both patient welfare and institutional efficiency. It provides a framework for refining NHIA service delivery, ensuring that patients receive timely and affordable access to medicines, while enabling hospitals like UBTH to deliver high-quality, sustainable healthcare services.

## 1.4. Literature Review

### 1.4.1 The National Health Insurance Scheme: Awareness, Accessibility, and Affordability, and Patronage

The NHIA Act 2022 recognizes the critical role of education and public awareness in promoting voluntary compliance and ensuring widespread participation in the scheme. It emphasizes the need for public information campaigns to educate Nigerians about the importance of health insurance and the benefits of enrolling in the program (Eze et al., 2024). Despite this, awareness remains limited, particularly among populations in suburban areas, many of whom are unaware of the advantages offered by the NHIS (Uguru et al., 2024). Additionally, a prevailing climate of mistrust affects participation, as some Nigerians question the scheme's effectiveness and ability to deliver quality healthcare services (Adebisi et al., 2020). According to Adebola (2020), targeted educational and awareness initiatives are essential for building trust and increasing enrollment. Although the NHIS is intended to provide equitable access to quality healthcare

services for all citizens, regardless of socio-economic status or location (NHIA, 2022), access continues to be a significant challenge, particularly in suburban regions. Unequal distribution of NHIS-accredited facilities across states exacerbates this problem, while bureaucratic barriers such as lengthy enrollment procedures and complex claims processes further discourage potential participants (Abiola et al., 2019). To enhance accessibility, government and stakeholders must invest in healthcare infrastructure, especially in underserved areas, which includes equipping facilities, training healthcare personnel, and deploying them appropriately (Okafor & Are, 2020; Fatile et al., 2024). Improving access also requires reducing administrative and financial hurdles and simplifying the enrollment process to encourage broader participation (Adebisi et al., 2020).

Affordability remains a key factor influencing the population's utilization of healthcare services under the NHIS (Akinwode & Adewole, 2021). Household or individual income significantly determines whether one can pay NHIS premiums or must rely on out-of-pocket expenditures (Akinyemi et al., 2021). The relatively high premium rates, coupled with the limited range of healthcare services covered, often make the scheme less affordable for formal sector workers living in suburban areas (Uguru et al., 2024). Introducing tiered premiums based on income levels could enhance affordability and encourage enrollment (Abiola et al., 2019). Expanding the range of medical services covered by the NHIS would also reduce out-of-pocket expenses and make the program more attractive to potential members (Kofoworola et al., 2020). Since its inception, the NHIS has experienced low overall patronage, largely because its enrollees are predominantly government or private-sector employees, leaving out informal sector workers, the self-employed, and the unemployed (Adebisi et al., 2020; Eze et al., 2024). Formal sector employees are more likely to enroll because employer contributions reduce their financial burden

(Akinyemi et al., 2021). Strengthening partnerships with key private-sector stakeholders could further boost enrollment, improve care quality, and increase public confidence in the scheme (Okafor & Are, 2020). Moreover, implementing flexible payment options and offering subsidized premiums tailored to informal workers, self-employed individuals, and private organizations could significantly enhance participation in the program (Ameh et al., 2021).

### 1.4.2 Theoretical Review

#### Risk Pooling Theory

Over time, this approach has been shaped and refined by experts in insurance, economics, and public health. Pioneering thinkers such as John Graunt (1662), Adam Smith (1776), and Karl Gunnar Myrdal (1956) have contributed to its development. The theory emphasizes that healthcare expenses are often unpredictable and can be financially devastating, making it difficult for individuals to bear the full cost alone. To address this, a risk-pooling mechanism is established, in which a large group of people, known as the "risk pool," contributes a fixed amount—usually in the form of premiums—into a common fund. This pooled fund is then used to cover the medical costs of members who fall ill or sustain injuries.

The concept of risk pooling is a central principle in health insurance, including programs such as the National Health Insurance Scheme (NHIS). By pooling contributions from all members to cover the medical expenses of those who need care, the mechanism provides financial protection and spreads the economic risk associated with healthcare across the entire group. This approach reduces the individual financial burden, making access to healthcare services more attainable. However, scholars such as Rothschild and Stiglitz (1976) have highlighted a key limitation: the

risk of adverse selection. Individuals with a higher likelihood of needing medical care, particularly those with chronic conditions, are more inclined to enroll, whereas healthier individuals often opt out. This imbalance can distort the risk pool, drive up costs, and threaten the long-term sustainability of the insurance program.

Pauly (1968) argues that moral hazard tends to increase in health insurance systems, as individuals may engage in riskier behavior or overutilize medical services when protected from the direct financial costs of care. Musgrove (1996) emphasizes that effective risk sharing relies on strong governance, adequate healthcare infrastructure, and proper regulatory oversight, warning that weak institutions, corruption, and mismanagement can significantly undermine these mechanisms. Additionally, Normand and Weber (1994) note that risk-pooling schemes often fail to include the most vulnerable populations—such as informal sector workers and rural residents—unless targeted subsidies or cross-subsidization strategies are deliberately implemented.

### 1.4.3 Empirical Review

Adebisi et al. (2019) examined the extent to which the National Health Insurance Scheme has achieved its established goals. The study assessed the scheme's objectives and its level of performance across various sectors, revealing that the program has yet to meet its intended targets. The authors recommended strengthening scheme management through increased public awareness, improved accessibility to accredited facilities, and stronger collaboration with stakeholders to ensure affordable healthcare delivery. In a related study, Okafor and Are (2020) explored NHIS awareness and accessibility among patients in Lagos State. Although their findings showed a relatively high level of awareness, participants still experienced significant

difficulties in accessing the scheme. The study therefore proposed that more healthcare facilities be accredited in order to expand access and improve service availability.

Alawode and Adewole (2021) conducted a qualitative study involving national-level stakeholders, insurance organizations, and healthcare professionals working in suburban areas to examine the implementation challenges associated with the National Health Insurance Scheme. Their research explored the viewpoints of subnational actors and key stakeholders regarding issues related to the design and operationalization of the NHIS. The findings highlighted several obstacles, including low public awareness, prevailing superstitious beliefs, inefficient payment systems, frequent medication stockouts, and inadequate administrative and supervisory capacity. The authors concluded that, alongside establishing a legal framework mandating health insurance enrollment, extensive public sensitization efforts are necessary to improve understanding of the scheme. In a separate study, Akinyemi et al. (2021) assessed civil servants' awareness and participation in the NHIS in Ibadan using a quantitative research approach. Their results showed high levels of both awareness and enrolment among respondents. The study recommended implementing targeted interventions to address barriers related to access, utilization, and the overall functioning of the scheme.

Eze et al. (2024) conducted an analysis of the National Health Insurance Scheme (NHIS) in Nigeria, with particular attention to its operational challenges and implementation gaps. Their study highlighted key issues such as persistently low enrolment rates, inconsistent availability of healthcare professionals, and the continued reliance on substantial out-of-pocket payments by citizens. The findings revealed that weak healthcare infrastructure, poor service delivery systems, and ineffective resource management have collectively contributed to substandard care quality

under the scheme. The authors recommended that broad policy dialogue and strategic reforms be pursued to address these challenges, strengthen the scheme's performance, and ensure adequate financial protection and improved healthcare delivery for the Nigerian population.

## 1.5 Definition Of Terms

### National Health Insurance Authority (NHIA)

NHIA refers to the government agency responsible for implementing the national health insurance scheme in Nigeria. Its goal is to improve access to affordable and quality healthcare services, particularly through financial risk protection and increased coverage of essential services, including medicines, for enrollees.

### Accessibility

Accessibility in this study refers to the ease with which NHIA-enrolled patients at UBTH can obtain prescribed essential medicines. It includes the availability of medicines at the hospital pharmacy, the affordability (as influenced by NHIA coverage), physical access (location and waiting time), and patient satisfaction with the drug supply process.

### Essential Medicines

These are the medicines that satisfy the priority healthcare needs of the population and are expected to be available in the health facility at all times in adequate amounts, appropriate dosage forms, and at prices the health system and patients can afford (WHO, 2021).

Justification of Study

Access to essential medicines is a fundamental component of quality healthcare and a key indicator of a functional health system. In Nigeria, the high cost of medicines, frequent stock-

outs, and heavy reliance on out-of-pocket payments have continued to hinder universal access to medicines. The National Health Insurance Authority (NHIA), formerly known as the National Health Insurance Scheme (NHIS), was established to enhance equitable access to healthcare services and reduce the financial burden on citizens through risk pooling and prepayment mechanisms. However, despite years of implementation, concerns persist regarding the actual impact of the scheme on medicine accessibility, especially in tertiary healthcare facilities such as the University of Benin Teaching Hospital (UBTH).

UBTH serves as a major referral and teaching hospital in southern Nigeria, catering to diverse patients including NHIA enrollees and self-paying individuals. It provides an ideal setting to evaluate how well the NHIA is meeting its objectives of improving medicine availability, affordability, and overall access. Understanding the extent to which NHIA coverage has influenced medicine accessibility in this institution is critical for identifying existing gaps in policy implementation and supply-chain management.

This study is therefore justified because it will generate empirical evidence on whether the NHIA has improved the timely availability and affordability of essential medicines in UBTH. The findings will help hospital administrators, policymakers, and the NHIA itself to identify operational challenges such as reimbursement delays, formulary restrictions, and procurement inefficiencies that may undermine medicine access. Furthermore, the study will provide baseline data for improving the performance of NHIA at tertiary hospitals and for guiding reforms aimed at achieving Universal Health Coverage (UHC) in Nigeria.

By evaluating the real-world effects of the NHIA on medicine accessibility at UBTH, this study contributes to bridging the evidence gap between health insurance policy design and practical outcomes in medicine supply and patient welfare.

## 1.7 Research Questions

1) How does medicine accessibility under NHIA vary across patient socioeconomic groups (age, income, education, urban/rural)?
2) How does medicine accessibility under NHIA vary across patient socioeconomic groups (age, income, education, urban/rural)?
3) What are patients' perceptions and satisfaction with access to medicines under NHIA at UBTH?
4) To what extent has NHIA improved equitable access to essential medicines for vulnerable populations attending UBTH (children, elderly, low-income)?

## 1.8 Objectives

### General objectives

To evaluate the impact of NHIA on the accessibility to medicine at the University of Benin Teaching Hospital (UBTH)

### Specific objectives

- To assess how NHIA enrollment affects patients' access to essential medicines at UBTH.
- To evaluate the efficiency of NHIA drug reimbursement and stock availability systems at UBTH.
- To identify challenges NHIA enrollees face in obtaining prescribed medications

# CHAPTER TWO

# METHODS

## 2.0 Study Design

The research employed a cross-sectional descriptive study design to evaluate the impact of NHIA on the accessibility of medicine at UBTH. The study's purpose is to identify these barriers by collecting and analyzing data from different patients. This study will help improve the quality of service provided by pharmacist in hospital and also help create awareness on the roles National Health Insurance Authority in the accessibility to medicines.

## 2.1 Study Setting

The study was conducted at the General Patient Clinic (GPC) and Consultant Out-Patient Department (COPD) NHIA Unit Pharmacy of the University of Benin Teaching Hospital (UBTH), located in Benin City, Nigeria. The UBTH is a major tertiary healthcare facility, serving as a referral center for a wide range of medical services, including pharmaceutical care. The GPC and COPD NHIA Unit Pharmacy specifically caters to patients providing them with access to a variety of medications and pharmaceutical care services. The study setting involved both the pharmacy environment and the patients who visit the GPC and COPD NHIA Unit Pharmacy for their pharmaceutical care needs. Data was collected from patients enrolled in the NHIA who are seeking medication and related pharmaceutical care services during their visits to the pharmacy. This population includes both chronic care patients who regularly seek treatment and new patients who are accessing services for the first time. The setting facilitated the inclusion of a diverse group of patients with varying levels of income, education, and healthcare

needs, providing a comprehensive and representative perspective for addressing the research objectives.

**Study Population**

The study population comprised of patients visiting the General practice clinic NHIA and Consultant Outpatient Department NHIA pharmacy unit at the University of Benin teaching hospital.

**Inclusion/Exclusion Criteria**

The inclusion criteria for participation in the study were as follows:

- Adult patients (18 years and above) who are registered with the GPC NHIA and COPD NHIA unit pharmacy at the University of Benin Teaching Hospital.
- Patients who were receiving pharmaceutical care services through the GPC (general practice clinic) and COPD pharmacy at the study site.
- Patients who were willing to provide informed consent to participate in the study.
- Patients who are literate or capable of understanding the questionnaire or interview for the purposes of data collection.
- Patients who hasd visited the pharmacy unit for pharmaceutical care services at least once in the past 3 months prior to the study.

The exclusion criteria for the study are as follows:

- Minors (under 18 years of age).
- Non-GPC and COPD NHIA beneficiaries (patients who do not receive care under the scheme at the GPC and COPD unit).

- Patients with cognitive impairments or those unable to comprehend the study due to language barriers, mental health conditions, or other disabilities that hinder participation.
- Patients who refuse to provide informed consent or do not wish to participate in the study.

**Sample Size Determination**

The sample size for this study was calculated using the formula for estimating proportions in a population, as stated below

**Sample size(n) =**

Where:

N = Population Size = 1076 (total number of patients visiting GPC pharmacy unit).

Z = *Z* is the Z-score corresponding to the desired level of confidence (e.g., 1.96 for a 95% confidence level), which will be 1.96 for this study.

p = Standard of deviation = 0.5

e = the desired margin of error = 0.05

n = 283

Using attrition rate of 10%

sample size = 283 + 10% of 283

sample size = 311

**Sampling Technique**

For this study, a convenient sampling technique was employed to select participants. A simple random sampling was used for selecting a representative sample from the population. The total number of patients that visit the units was obtained and used to determine sample size.

### 2.2.1 Data Collection Tool

The primary tool for data collection was a self-administered questionnaire, designed in accordance with the study objectives and informed by a review of relevant literature. The respondents were patients at the General Practice Clinic (GPC) and Consultant Out-Patient Deparment (COPD) NHIA Unit Pharmacy at the University of Benin Teaching Hospital (UBTH). These patients were provided with standardized questionnaires, which facilitated the collection of quantitative data.

The questionnaire included a series of structured questions aimed at capturing the patients' perspectives on several key areas. By analyzing the responses, the study aimed to gain a comprehensive understanding of these aspects within the context of the patient population at the UBTH GPC and COPD NHIA Unit Pharmacy. The questionnaire was meticulously divided into several sections to ensure comprehensive data collection.

The first section was used to collect sociodemographic data, including information such as age, gender, education level, and employment status. This helped in understanding the background of the respondents and in identifying any demographic trends.

The second section focused on determining patients accessibility to medicine in the NHIA unit. Questions in this section aimed to determine patients satisfaction with these services.

The third section investigated the efficiency of the NHIA units at the hospital to determine the effectiveness of University of Benin Teaching Hospital accessibility to medicine by patients.

The final section explored major challenges and possible recommendations of patients to the NHIA units to enable effective service.

### 2.2.2 Data Analysis

Data collected was coded and entered into SPSS version 21.0 software (SPSS Inc. Chicago IL USA). Descriptive statistics was used to report the frequencies. Inferential analysis was conducted with the aid of Chi-square, and p-values $< 0.05$ was considered significant.

The respondents were patients at the General Patient Clinic (GPC) and Consultant Out-Patient Department (COPD) NHIA Unit Pharmacy at the University of Benin Teaching Hospital (UBTH). These patients were provided with standardized questionnaires, which facilitated the collection of quantitative data.

The questionnaire included a series of structured questions aimed at capturing the patients' perspectives on several key areas. By analyzing the responses, the study aimed to gain a comprehensive understanding of these aspects within the context of the patient population at the UBTH General Patient Clinic (GPC) and Consultant Out-Patient Deparment (COPD) NHIA Unit Pharmacy.

## 2.3 Ethical Considerations

Permission to undertake this study was obtained from the University of Benin teaching hospital ethical committee. Informed consent was also sought and obtained from the participants in this study.

The research information was provided to the participants for voluntary and autonomous participation, and the possibility to withdraw at any time they wish. The principles of voluntary participation, anonymity, and confidentiality was maintained throughout the study.

### 2.3.1 Informed consent:

Before participants were included in the study, they were provided with clear and concise information about the study, its objectives, and its role in the study. Participants were given the option to participate or decline to participate in the study, and they were informed that their decision would not affect their grades or status in the university.

### 2.3.2 Confidentiality:

The data collected from the participants were kept confidential and stored securely to prevent unauthorized access.

### 2.3.3 Voluntary participation:

Participation in the study was voluntary, and participants were free to withdraw from the study at any time without any negative consequences.

### 2.3.4 Protection of vulnerable participants:

Special consideration was given to vulnerable participants, such as those with pre-existing no knowledge or those experiencing distress as a result of the study. Participants were given access to support services if necessary.

### 2.3.5 Respect for cultural and religious beliefs:

The study was conducted with respect for the cultural and religious beliefs of the participants. The questionnaire was designed to avoid any questions or topics that may be offensive or insensitive to specific group

# CHAPTER THREE

# RESULTS

## 3.0 Data Presentation

A total of 311 structured questionnaires were administered to NHIA-enrolled patients attending the General Practice Clinic (GPC) and Consultant Out-Patient Department (COPD) NHIA unit pharmacies at the University of Benin Teaching Hospital (UBTH). All instruments were returned fully completed, yielding a 100% response rate and no missing data after initial verification.

Prior to analysis, the dataset underwent validation and cleaning (consistency checks, coding of categorical variables and verification of scale directionality). Analyses were performed using SPSS version 21.0. Descriptive statistics (frequencies, percentages, means and standard deviations) are used to summarise respondents' socio-demographic characteristics and item-level responses. Composite indices for key constructs (accessibility, efficiency and barrier/recommendation scores) were computed as mean scores from constituent Likert items and where appropriate dichotomized at the scale midpoint for inferential testing. Associations between categorical variables were evaluated using Chi-square tests of independence, with statistical significance set at $\mathbf{p < 0.05}$.

Tables that follow present the descriptive results first (socio-demographics, accessibility, efficiency, and barriers/recommendations), followed by inferential analyses that examine relationships between respondent characteristics and perceptions of NHIA service performance. Each table is accompanied by a concise, table-focused interpretation to aid clarity and facilitate evidence-based discussion.

### 3.1 Descriptive Statistics

This section presents the descriptive analysis of the study variables. It provides a summary of respondents' socio-demographic characteristics, their perceptions of medicine accessibility and service efficiency under the NHIA, as well as reported challenges and recommended improvements. Frequencies, percentages, and mean scores are used to illustrate the distribution of responses and highlight key patterns within the dataset, forming the basis for subsequent inferential analysis.

#### 3.1.0 Social Demographics Characteristics of respondents (N=311).

**Table 1** summarizes the core socio-demographic profile of the study sample (N = 311). These descriptors provide essential context for interpreting subsequent analyses of NHIA medicine accessibility and service efficiency, since age, education, employment and enrollment duration may influence both healthcare needs and utilization of insurance processes.

**Table 1: Socio-Demographic Characteristics of Respondents (N=311)**

| Variable | Frequency | Percentage(%) |
|---|---|---|
| **Age** | | |
| 18-30 Years | 11 | 3.5 |
| 31-40 Years | 38 | 12.2 |
| 41-50 Years | 92 | 29.6 |
| 51-60 Years | 123 | 39.5 |
| 60 and Above | 47 | 15.1 |
| **Gender** | | |
| Male | 181 | 58.2 |
| Female | 130 | 41.8 |
| **Marital Status** | | |
| Single | 21 | 6.8 |
| Married | 241 | 77.5 |
| Divorced | 26 | 8.4 |
| Widowed | 23 | 7.4 |
| **Educational Level** | | |
| No Formal Education | 8 | 2.6 |
| Primary | 8 | 2.6 |
| Secondary | 30 | 9.6 |
| Tertiary | 265 | 85.2 |

| | | |
|---|---|---|
| **Employment Status** | | |
| Employed | 232 | 74.6 |
| Unemployed | 26 | 8.4 |
| Student | 28 | 9.0 |
| Retired | 25 | 8.0 |
| **Type of Patient** | | |
| Outpatient | 215 | 69.1 |
| Inpatient | 96 | 30.9 |
| **Duration of NHIA** | | |
| Less than 1 Year | 27 | 8.7 |
| 1-3 Years | 91 | 29.3 |
| Over 3 Years | 193 | 62.3 |
| **Are you aware you are covered** | | |
| Yes | 308 | 99.0 |
| No | 3 | 1.0 |

### 3.1.1 Respondents Accessibility to Medicine at NHIA (N=311)

**Table 2** presents respondents' perceptions of medicine accessibility under the National Health Insurance Authority (NHIA) at UBTH. The findings indicate a mixed level of accessibility, with affordability scoring relatively high, while consistent availability and ease of obtaining medications remained suboptimal. The responses show that although patients acknowledge financial relief through subsidized NHIA medicines, persistent stockouts and operational inefficiencies continue to undermine optimal access.

**Table 2: Respondents Accessibility to Medicine at NHIA (N=311)**

| VARIABLE | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **All my prescribed medications are usually available under the NHIA coverage?** | 19(6.1%) | 57(18.3%) | 69(22.2%) | 115(37.0%) | 51(16.4%) |
| **The process of obtaining medicines under NHIA at UBTH is straightforward and stress free?** | 21(6.8%) | 79(25.4%) | 64(20.4%) | 115(37.0%) | 32(10.3%) |
| **I rarely experience stockouts of NHIA covered medicines?** | 11(3.5%) | 44(14.1%) | 66(21.2%) | 150(48.2%) | 40(12.9%) |
| **Alternative drugs are provided when prescribed ones are unavailable?** | 22(7.1%) | 110(35.4%) | 82(26.4%) | 78(25.1%) | 19(6.1%) |

| | | | | | |
|---|---|---|---|---|---|
| **I consider the medicines under NHIA to be affordable and accessible?** | 50(16.1%) | 165(53.1%) | 54(17.4%) | 33(10.6%) | 9(2.6%) |
| **My access to medicines under NHIA at UBTH has reduced my need to buy drugs elsewhere?** | 27(8.7%) | 124(39.9%) | 83(26.7%) | 61(19.6%) | 16(5.1%) |
| **Overall, I am satisfied with the accessibility of NHIA covered medicines at UBTH?** | 25(8.0%) | 89(28.6%) | 104(33.4%) | 77(24.8%) | 16(5.1%) |

**Table 2 Respondent Mean and Standard Deviation**

| VARIABLE | MEAN (±STD) | INTERPRETATION |
|---|---|---|
| All my prescribed medications are usually available under the NHIA | 3.39 (1.14) | High |

| | | |
|---|---|---|
| coverage? | | |
| The process of obtaining medicines under NHIA at UBTH is straightforward and stress free? | 3.19 (1.12) | High |
| I rarely experience stockouts of NHIA covered medicines? | 3.53 (1.00) | High |
| Alternative drugs are provided when prescribed ones are unavailable? | 2.88 (1.05) | Moderate |
| I consider the medicines under NHIA to be affordable and accessible? | 2.31 (0.96) | Low |
| My access to medicines under NHIA at UBTH has reduced my need to buy drugs elsewhere? | 2.73 (1.03) | Low |

| | | |
|---|---|---|
| Overall, I am satisfied with the accessibility of NHIA covered medicines at UBTH? | 2.90 (1.00) | Moderate |

**Cut off =2.98**

### 3.1.2 Respondents Score on Efficiency NHIA Services at UBTH

**Table 3** presents respondents' perceptions of the efficiency of NHIA services at the University of Benin Teaching Hospital. The data reveal mixed efficiency levels. Respondents acknowledged NHIA's effectiveness in facilitating medicine access (Q16) and showed understanding of the drug list (Q19). However, long waiting times (Q17) and inadequacy of drug lists (Q21) reduce overall service efficiency. Importantly, the low mean in Q23 (2.42) indicates that despite challenges, respondents still have confidence in NHIA and would recommend it to others. Hence, efficiency is rated moderate but acceptable, with main weaknesses in timeliness and drug list adequacy.

**Table 3: Respondents Score on efficiency of NHIA services at UBTH (N=311)**

| VARIABLES | Strongly Agree | Agree | Neutral | Disagree | Strongy Disagree |
|---|---|---|---|---|---|
| **NHIA has been effective in helping me access medicines?** | 24(7.7%) | 133(42.8%) | 76(24.4%) | 64(20.6%) | 14(4.5%) |
| **The time it takes to collect medicines after seeing the doctor is acceptable?** | 16(5.1%) | 93(29.9%) | 65(20.9%) | 106(34.1%) | 31(10.0%) |
| **NHIA staff at UBTH helpful and informative about NHIA entitlements and attends to patients promptly and professionally?** | 26(8.4%) | 99(31.8%) | 73(23.5%) | 80(25.7%) | 33(10.6%) |
| **I understand the list of medicines covered under NHIA?** | 23(7.4%) | 124(39.9%) | 78(25.1%) | 64(20.6%) | 22(7.1%) |

| | | | | | |
|---|---|---|---|---|---|
| **I believe the overall efficiency of NHIA service delivery at UBTH is satisfactory?** | 21(6.8%) | 93(29.9%) | 110(35.4%) | 63(20.3%) | 24(7.7%) |
| **The NHIA drug list is sufficient to meet most of my medical needs?** | 14(4.5%) | 82(26.4%) | 85(27.3%) | 106(34.1%) | 24(7.7%) |
| **I have delayed or abandoned treatment due to non-availability of medicines?** | 35(11.3%) | 103(33.1%) | 67(21.5%) | 82(26.4%) | 24(7.7%) |
| **Based on my experience, I would recommend NHIA enrollment to others?** | 56(18.0%) | 139(44.7%) | 60(19.3%) | 40(12.9%) | 16(5.1%) |

**Table 3 Respondents Mean and Standard Deviation.**

| VARIABLES | MEAN (±STD) | INTERPRETATION |
|---|---|---|
| NHIA has been effective in helping me access medicines? | 2.71 (1.02) | Moderate |
| The time it takes to collect medicines after seeing the doctor is acceptable? | 3.14 (1.10) | High |
| NHIA staff at UBTH helpful and informative about NHIA entitlements and attends to patients promptly and professionally? | 2.98 (1.15) | Moderate |
| I understand the list of medicines covered under NHIA? | 2.80 (1.07) | Moderate |
| I believe the overall efficiency of NHIA service delivery at UBTH is satisfactory? | 2.92 (1.03) | Moderate |
| The NHIA drug list is sufficient to meet most of my medical | 3.14 (1.03) | High |

| | | |
|---|---|---|
| needs? | | |
| I have delayed or abandoned treatment due to non-availability of medicines? | 2.86 (1.15) | Moderate |
| Based on my experience, I would recommend NHIA enrollment to others? | 2.42 (1.08) | Low |

**Cut-off = 2.87**

### 3.1.3 Respondents Score of Challenges of NHIA at UBTH

**Table 4** summarises respondents assessment of major operational challenges affecting NHIA service delivery at UBTH and, implicitly, the areas they identify as priorities for reform. Items are presented as Likert-scale responses (Strongly Agree; Agree; Disagree; Strongly Disagree). These patient-sourced ratings show which structural and procedural constraints are most prominent to patients and therefore require prioritisation in policy and facility-level interventions.

**Table 4: Respondents Score of Challenges of NHIA at UBTH**

| Variables | Frequency | Percentage (%) |
|---|---|---|
| A | 16 | 5.1 |
| B | 20 | 6.4 |
| C | 36 | 11.6 |
| D | 14 | 4.5 |
| AB | 19 | 6.1 |
| AC | 12 | 3.9 |
| AD | 21 | 6.8 |
| BC | 18 | 5.8 |
| CD | 30 | 9.6 |
| ABC | 46 | 14.8 |
| BCD | 39 | 12.5 |
| E | 40 | 12.9 |
| **Total** | 311 | 100.0 |

A = Drug Stock-out

B = Poor staff Communication

C = Long wait time

D = High out of pocket expenses

E = Unavailability of covered drugs

AB = Drug Stock-out + Poor staff Communication

BC = Poor staff Communication + Long wait time

ABC = Drug Stock-out + Poor staff Communication + Long wait time

BCD = Poor staff Communication + Long wait time + High out of pocket expenses

**Q24 =** What challenges do you face when trying to access NHIA-covered medicines at UBTH? (Check all that apply)

### 3.1.4 Respondents score on Recommendation to NHIA Units

**Table 5** presents prioritised recommendations for strengthening NHIA service delivery at UBTH. The items reflect users' preferred interventions for enhancing medicine access, operational efficiency, and patient experience. Responses were rated on a four-point Likert scale (Strongly Agree to Strongly Disagree), enabling quantification of beneficiary-driven reform priorities.

**Table 5: Respondents score on Recommendation to NHIA Units**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Increase supply | 85 | 27.3 |
| Regular checks | 32 | 10.38 |
| Reduce time | 27 | 8.7 |
| Create feedback | 42 | 13.5 |
| Staffing | 63 | 20.3 |
| Others | 62 | 19.9 |

**Q25 =** What suggestions would you give to improve medicine accessibility under NHIA at UBTH _____?

## 3.2 Inferential Statistics

This section presents the inferential analysis conducted to examine the relationships between key study variables. Using the Chi-square test of independence, the analysis explores whether respondents' socio-demographic characteristics significantly influenced their perceptions of NHIA medicine accessibility and service efficiency at UBTH. In addition, the association between identified recommendations and perceived efficiency was assessed. A significance level of $\mathbf{p < 0.05}$ was adopted to determine statistical significance. The results provide empirical evidence to support or refute hypothesised relationships and inform interpretation of NHIA performance within the study setting.

### 3.2.0 Association Between Accessibility of Medicines At Ubth and Some key Demographics (Gender, Employment Status, Duration, Type of Patient).

**Table 6** presents the results of a Chi-square test conducted to examine the association between respondents' accessibility to medicines under the National Health Insurance Authority (NHIA**)** and their key socio-demographic characteristics. The demographic variables assessed include age, gender, educational level, employment status, duration of NHIA enrollment, type of patient, and awareness of NHIA coverage. Statistical significance was determined at $\mathbf{p < 0.05}$, meaning that any p-value below this threshold indicates a significant association between the variables.

**Table 6: Summary Table of Chi-Square Results Showing Association Between Accessibility of Medicines At UBTH and Some key Demographics**

| Variable | Chi-Square | df | p=value | Interpretation |
|---|---|---|---|---|
| Age vs Accessibility | 22.0 | 8 | **0.005** | **Significant** ($p<0.05$) |
| Gender vs Accessibility | 2.22 | 2 | 0.32 | **Not Significant** ($p>0.05$) |
| Education vs Accessibility | 13.80 | 6 | **0.03** | **Significant** ($p<0.05$) |
| Employment vs Accessibility | 8.21 | 6 | 0.22 | **Not Significant** ($p>0.05$) |
| Duration vs Accessibility | 16.9 | 4 | **0.02** | **Significant** ($p<0.05$) |
| Type of Patient vs Accessibility | 2.00 | 2 | 0.39 | **Not Significant** ($p>0.05$) |
| Awareness vs Accessibility | 6.00 | 2 | **0.05** | **Significant** ($p<0.05$) |

### 3.2.1 Association between NHIA Efficiency and key Demographics

**Table 7** presents the results of the Chi-square analysis examining the association between respondents' perceptions of NHIA service efficiency at the University of Benin Teaching Hospital (UBTH) and various demographic characteristics. The table highlights which factors significantly influence perceived efficiency and which do not. As shown, age was the only demographic variable significantly associated with NHIA efficiency perceptions, while gender, education, employment status, duration of enrollment, type of patient, and awareness showed no significant associations. This suggests that respondents' views of NHIA efficiency are largely consistent across most demographic categories, with the exception of age.

**Table 7: Summary Table of Chi-Square Results Showing Association Association between NHIA Efficiency and key Demographics**

| Variable | Chi-Square | df | p=value | Interpretation |
|---|---|---|---|---|
| Age vs Accessibility | 15.5 | 8 | **0.04** | **Significant** ($p<0.05$) |
| Gender vs Accessibility | 0.91 | 2 | 0.63 | **Not Significant** ($p>0.05$) |
| Education vs Accessibility | 4.72 | 2 | 0.57 | **Not Significant** ($p>0.05$) |
| Employment vs Accessibility | 8.18 | 6 | 0.22 | **Not Significant** ($p>0.05$) |
| Duration vs Accessibility | 4.35 | 4 | 0.37 | **Not Significant** ($p>0.05$) |
| Type of Patient vs Accessibility | 2.77 | 2 | 0.22 | **Not Significant** ($p>0.05$) |
| Awareness vs Accessibility | 1.17 | 2 | 0.55 | **Not Significant** ($p>0.05$) |

### 3.2.1 Cross-tabulations Between Barriers, Recommendations (Q25) and NHIA Efficiency

**Table 8** explores the relationship between the barriers to accessing NHIA-covered medicines, the recommendations suggested by respondents, and their perceived efficiency of NHIA services at the University of Benin Teaching Hospital (UBTH). The cross-tabulation analysis was conducted to determine whether variations in suggested improvement arrears corresponded with differences in efficiency ratings among beneficiaries.

**Table 8: Cross-tabulations Between Barriers, Recommendations (Q25) and NHIA Efficiency**

| | 1.00 (Low) | 2.00 (Moderate) | 3.00 (High) | Total |
|---|---|---|---|---|
| Increase supply | 9 | 71 | 5 | 85 |
| Regular checks | 4 | 23 | 5 | 32 |
| Reduce time | 4 | 19 | 4 | 27 |
| Create feedback | 10 | 28 | 4 | 42 |
| Staffing | 7 | 50 | 6 | 63 |
| Others | 4 | 51 | 7 | 62 |
| Total | 38 | 242 | 31 | 311 |

# CHAPTER FOUR

## DISCUSSION

The National Health Insurance Authority (NHIA), formerly known as the National Health Insurance Scheme (NHIS), was established to enhance financial risk protection and promote equitable access to quality healthcare services for all Nigerians through pre-payment and risk-pooling mechanisms. Although the scheme has undergone reforms to expand coverage and strengthen service delivery, evidence suggests that operational inefficiencies continue to undermine its effectiveness across health facilities (Aregbeshola & Khan, 2018; Obikeze & Onwujekwe, 2020). Despite more than two decades of implementation, several systemic gaps such as, inconsistent availability of essential medicines, administrative bottlenecks, delayed reimbursement processes, and workforce constraints have persisted, limiting the NHIA's capacity to achieve its intended outcomes of improved access and service efficiency. Within this context, the findings from this study offer valuable insights into beneficiaries' perceptions of the accessibility and efficiency of NHIA services at the University of Benin Teaching Hospital (UBTH), a major tertiary healthcare institution in Southern Nigeria. Understanding patient-reported experiences at this level of care is crucial, as tertiary hospitals serve as referral centers and are expected to model best practices in NHIA implementation. The results contribute to the growing body of evidence highlighting persistent barriers to optimal utilization of NHIA services and provide a foundation for recommending evidence-driven strategies to enhance service delivery, medicine accessibility, and patient satisfaction within the scheme.

The socio-demographic profile of respondents indicated that the majority were within the 51–60-year age group, followed by those aged 41–50 years, with comparatively fewer young adults represented. This pattern suggests that utilization of the NHIA scheme at UBTH is more

prevalent among older adults, which is expected given the increased healthcare needs, chronic disease burden, and service utilization typically associated with advancing age. The predominance of married and employed respondents further implies that NHIA beneficiaries are largely individuals with stable income and family responsibilities likely reflecting enrolment through formal employment structures that provide mandatory or employer-supported health insurance. This finding is consistent with the observations of Adewale et al. (2019), who reported that formal sector employees constitute the largest proportion of NHIS enrollees nationally. Educational attainment among respondents was notably high, with 85.2% possessing tertiary-level qualification. This aligns with evidence that higher educational status is positively associated with awareness, enrolment, and active utilization of health insurance services in Nigeria (Eze et al., 2021). Individuals with higher literacy levels are more likely to understand their health entitlements, navigate administrative processes, and demand accountability in service delivery. Additionally, the study revealed that outpatient service users accounted for 69.1% of respondents, indicating that NHIA services at UBTH are predominantly accessed for outpatient care rather than inpatient services. This mirrors the trend identified by Fadare et al. (2019), who found that NHIS utilization in tertiary hospitals in Nigeria is largely outpatient-driven, possibly due to quicker service contact, lower co-payments, and ease of access for routine medical care.

The overall results indicated moderate accessibility of medicines under the NHIA at UBTH, with respondents expressing mixed satisfaction across different indicators. Participants generally agreed that NHIA-covered medicines are affordable and that alternative medications are occasionally provided during stockouts. However, there was notable disagreement regarding the consistent availability of medicines and the perceived ease of the collection process. These patterns suggest that persistent stockouts, delays, and procedural inefficiencies remain key

constraints to medicine access within the scheme. Such findings corroborate previous studies in Nigeria, which have documented frequent shortages of NHIA medicines in public health facilities and highlighted systemic bottlenecks in procurement and distribution processes (Ogunleye et al., 2020; Obikeze & Onwujekwe, 2020). Comparable evidence from Ghana's NHIS indicates that inefficiencies in the supply chain and delays in reimbursement similarly contribute to intermittent drug availability, undermining the reliability of insurance coverage for enrollees (Amporfu, 2018). Notably, respondents' perception that medicines are generally affordable aligns with the NHIA's objective of providing financial protection and reducing out-of-pocket (OOP) expenditure, echoing findings from Onoka et al. (2021) and Aregbeshola & Khan (2023). Overall, while the NHIA mitigates some financial barriers, operational inefficiencies continue to limit seamless access to essential medicines, highlighting the need for strengthened supply chain management and administrative reforms.

The overall results indicated moderate accessibility of medicines under the NHIA at UBTH, with respondents expressing mixed satisfaction across different indicators. Participants generally agreed that NHIA-covered medicines are affordable and that alternative medications are occasionally provided during stockouts. However, there was notable disagreement regarding the consistent availability of medicines and the perceived ease of the collection process. These patterns suggest that persistent stockouts, delays, and procedural inefficiencies remain key constraints to medicine access within the scheme. Such findings corroborate previous studies in Nigeria, which have documented frequent shortages of NHIA medicines in public health facilities and highlighted systemic bottlenecks in procurement and distribution processes (Ogunleye et al., 2020; Obikeze & Onwujekwe, 2020). Comparable evidence from Ghana's NHIS indicates that inefficiencies in the supply chain and delays in reimbursement similarly

contribute to intermittent drug availability, undermining the reliability of insurance coverage for enrollees (Amporfu, 2018). Notably, respondents' perception that medicines are generally affordable aligns with the NHIA's objective of providing financial protection and reducing out-of-pocket (OOP) expenditure, echoing findings from Onoka et al. (2021) and Aregbeshola & Khan (2023). Overall, while the NHIA mitigates some financial barriers, operational inefficiencies continue to limit seamless access to essential medicines, highlighting the need for strengthened supply chain management and administrative reform.

The results presented in Table 5 indicate significant associations between accessibility to NHIA medicines and four demographic factors: age ($p = 0.005$), education ($p = 0.03$), duration of NHIA enrollment ($p = 0.02$), and awareness of the scheme ($p = 0.05$). In contrast, gender, employment status, and patient type were not significantly associated with accessibility. The influence of age suggests that older enrollees perceive better access to NHIA medicines, likely due to prolonged exposure to the system and increased engagement with healthcare services. This aligns with prior findings indicating that older individuals, who often manage chronic conditions, develop greater familiarity with NHIA procedures and institutional workflows (Ogunleye et al., 2020). The significant effect of education underscores the critical role of health literacy in optimizing insurance benefits, as more educated respondents are likely better equipped to understand NHIA coverage, navigate claim processes, and resolve administrative challenges effectively (Eze et al., 2021). Similarly, the duration of enrollment was positively correlated with accessibility, consistent with Obikeze & Onwujekwe (2020), who reported that long-term enrollees acquire greater system knowledge and establish stronger relationships with service providers, thereby improving their access experience. Awareness of the scheme also emerged as a significant predictor, highlighting the necessity of continuous public education and

information dissemination to enhance patient engagement. Notably, the lack of association with gender and employment status indicates that NHIA access at UBTH is relatively equitable across these categories, corroborating Aregbeshola & Khan (2023), who reported minimal gender-based disparities in NHIS service utilization when administrative protocols are consistently applied. Collectively, these findings emphasize the interplay of demographic and informational factors in shaping beneficiaries' experiences with NHIA services.

In examining the determinants of NHIA efficiency, age was the only demographic factor significantly associated with perceived service efficiency ($p = 0.04$), while gender, education, and occupation showed no significant influence. This finding indicates that perceptions of NHIA efficiency are generally consistent across the patient population, regardless of socio-demographic differences. Older respondents may report higher perceived efficiency due to greater familiarity with institutional procedures and adjusted expectations over time. Conversely, younger participants, with less tolerance for administrative delays and procedural bottlenecks, tend to perceive inefficiency more critically. These observations align with previous studies by Odeyemi (2021) and Eze et al. (2021), which demonstrated that older beneficiaries often express higher satisfaction with NHIA services owing to their prolonged engagement and accumulated experience navigating healthcare processes.

The crosstab analysis produced a Chi-square value of 11.46 ($p = 0.32$), indicating no statistically significant association between the identified barriers or recommended interventions and respondents' perceived NHIA efficiency. This finding suggests that, although patients encountered operational challenges—such as frequent drug stockouts, delays in prescription processing, and procedural inefficiencies—these factors did not substantially influence their overall evaluation of service efficiency, which remained moderate. Beneficiaries appear to

cognitively separate the NHIA's structural and operational limitations from its overarching utility, particularly its role in reducing out-of-pocket healthcare expenditure and providing financial protection. This nuanced perception aligns with the "moderate satisfaction paradox" described by Ogunleye et al. (2020), whereby enrollees tolerate procedural shortcomings due to the economic relief conferred by insurance coverage. From a theoretical perspective, this finding resonates with risk-pooling principles, wherein the perceived value of financial protection may outweigh temporary operational inconveniences, reinforcing continued scheme utilization despite systemic inefficiencies (Pauly, 1968; Musgrove, 1996). Moreover, the result highlights the importance of distinguishing between perceived efficiency and objective service quality: while patients may report satisfaction with accessibility and affordability, they remain vulnerable to disruptions in supply chains and administrative processes that could undermine long-term trust and adherence. Comparative evidence from other African NHIS contexts supports this interpretation; for instance, Amporfu (2018) and Essien (2025) document that insured patients maintain overall satisfaction even when facing recurrent drug shortages, provided the scheme offsets major financial burdens. Importantly, the qualitative feedback remains highly informative for policy and operational planning. Respondents frequently recommended increasing medicine supply, expanding the NHIA drug formulary, and improving staffing levels—interventions that directly target structural inefficiencies. Although the Chi-square analysis indicates a lack of statistical significance, the practical implications of these recommendations are considerable. Systematic attention to these operational gaps is essential to prevent the erosion of trust and to sustain engagement with the scheme. Strengthening supply chain management, integrating digital inventory tracking, and optimizing workforce allocation at UBTH's NHIA units could

directly address the concerns raised and enhance both the perceived and actual efficiency of the system.

Conclusively, the findings of this study corroborate existing literature, demonstrating that while the NHIA/NHIS has enhanced financial protection by improving affordability, overall accessibility and operational efficiency remain moderate due to persistent administrative and logistical constraints. Comparable patterns have been reported in Nigerian contexts, including Lagos (Ogunleye et al., 2020), Enugu (Eze et al., 2021), and Oyo State (Aregbeshola, 2019). In contrast, evidence from Ghana (Amporfu, 2018) and Kenya (Maina et al., 2020) illustrates that systematic improvements such as robust governance, digitalization of processes, and proactive feedback mechanisms can substantially strengthen both access and efficiency. This convergence of findings underscores the broader, universal challenge of translating health insurance schemes from financial risk mitigation to effective, equitable service delivery.

## LIMITATIONS OF STUDY

While this study provides valuable insight into the influence of the National Health Insurance Authority (NHIA) on medicine accessibility at the University of Benin Teaching Hospital (UBTH), several limitations must be acknowledged, as they may affect interpretation and generalization of the findings.

The limitations of this study includes

### 1. Restricted Study Location:

This research was conducted exclusively at UBTH, a tertiary healthcare institution in Edo State, Nigeria. Although UBTH is a major referral center with diverse patient categories, its NHIA

service delivery, capacity, and operational structure may differ from those of secondary or primary healthcare facilities. Therefore, generalization of the findings to other hospitals or regions should be done with caution. To mitigate this, the study captured a wide range of NHIA beneficiaries across both the General Practice Clinic (GPC) NHIA Unit and the Consultant Outpatient Department (COPD) NHIA Unit, ensuring diverse patient representation.

**2. Cross-Sectional Study Design:**

The study employed a cross-sectional design, assessing participants' experiences at a single point in time. Such a design does not reflect potential temporal variations in NHIA operations, such as changing drug availability, seasonal stock fluctuations, or policy adjustments. To reduce this limitation, data collection was conducted across different clinic days over several weeks to better reflect routine service patterns.

**3. Self-Reported Data:**

Data were obtained through self-administered questionnaires, which rely on respondents' honesty, recall, and interpretation. This introduces the risk of response bias, including social desirability bias, where participants may present more favourable responses. To minimize this, respondents were assured of anonymity and confidentiality, and informed that their responses would not influence the quality of care received. Additionally, the questionnaire was pre-tested to ensure clarity and consistency.

**4. Limited Scope of Variables:**

The study focused mainly on accessibility to medicines and system efficiency. Other important dimensions of health insurance performance—such as service quality, timeliness of claim reimbursement, equity of access, and patient health outcomes—were not assessed. While this

narrow focus allowed for in-depth exploration of accessibility, a broader scope would provide a more comprehensive evaluation of NHIA effectiveness. Future research is encouraged to incorporate these additional variables.

**5. Lack of Qualitative Insights:**

The study adopted a purely quantitative methodology. Although quantitative data allowed for objective measurement of trends, the absence of qualitative methods limited deeper insight into patient experiences, perceptions, and contextual barriers. To partly address this limitation, an open-ended question section was included in the questionnaire to allow respondents to express personal views, challenges, and suggestions in their own words.

**6. Potential Sampling Bias:**

Despite achieving an adequate sample size (n = 311) across the GPC and COPD NHIA units, only patients present during the data collection period were included. This may have excluded enrollees who were absent due to dissatisfaction, severity of illness, or other barriers, potentially biasing results towards more active or satisfied participants. To reduce bias, systematic sampling was applied to ensure proportional representation of both regular and occasional users of the NHIA units.

# CHAPTER FIVE

## CONCLUSION AND RECOMENDATION

This study demonstrates that the National Health Insurance Authority (NHIA) has contributed to enhanced access to essential medicines and reduced out-of-pocket expenditure among enrollees at the University of Benin Teaching Hospital (UBTH). However, the benefits remain constrained by persistent operational challenges, particularly medicine stock-outs, limited formulary coverage, administrative delays, and human resource gaps across both the General Practice Clinic (GPC) and Consultant Outpatient Department (COPD) NHIA Pharmacy Units. Although demographic characteristics such as age and education influenced perceptions of access, efficiency-related concerns were reported across all groups, reflecting systemic limitations rather than user-specific factors. To improve the scheme's effectiveness, targeted reforms are required, including strengthening supply chain mechanisms, expanding the NHIA drug formulary, enhancing digitalisation of claims and pharmacy operations, and building staff capacity for responsive patient-centred care. Embedding routine monitoring and beneficiary feedback systems will further support accountability and evidence-driven improvements. In essence, while NHIA implementation at UBTH has yielded measurable gains, more coherent policy, institutional, and operational reforms are essential to optimise service delivery and accelerate progress toward Universal Health Coverage and Sustainable Development Goal 3.8 on equitable access to quality and affordable essential medicines.

### RECOMMENDATIONS

Based on the findings of this study, it is evident that while the National Health Insurance Authority (NHIA) has made significant strides in enhancing access to medicines at the University of Benin Teaching Hospital (UBTH), several gaps persist at policy, institutional, and

community levels. To address these challenges, targeted interventions are required to strengthen the supply chain, optimize service delivery, enhance beneficiary engagement, and ensure sustainable access to essential medicines. The recommendations presented below are structured to provide actionable guidance for policymakers, hospital administrators, and community stakeholders, with the aim of promoting efficiency, equity, and patient-centered healthcare within the NHIA framework.

## A. POLICY-LEVEL RECOMMENDATION

### 1. Strengthening NHIA Supply Chain and Procurement Systems:

The NHIA should implement a transparent, technology-driven procurement system to minimize medicine stockouts. This could include regular audits, optimized logistics management, and direct supplier contracts, ensuring consistent availability of essential drugs (World Health Organization [WHO], 2021).

### 2. Expansion of the NHIA Drug Formulary:

The NHIA-covered medicines list should be periodically reviewed and expanded to incorporate essential and newly approved drugs, particularly for chronic conditions such as hypertension, diabetes, and cancer. Such expansion would enhance patient satisfaction and reduce reliance on out-of-pocket purchases.

### 3. Enhancing Funding and Reimbursement Efficiency:

Federal and state governments should prioritize adequate funding allocations for the NHIA drug program. Timely reimbursement to accredited hospitals is crucial, as delays often result in stock

shortages. Prompt disbursement of funds will enable facilities to maintain adequate pharmaceutical inventories.

**4. Institutionalizing Feedback and Monitoring Mechanisms:**

The NHIA should establish structured feedback mechanisms—such as digital portals, helplines, or suggestion boxes—to enable real-time issue detection and resolution. Regular patient satisfaction surveys can serve as a monitoring tool, fostering accountability and continuous improvement.

**B. HOSPITAL-LEVEL RECOMMENDATIONS**

**1. Enhancement of Human Resource Capacity**:

UBTH management should recruit additional NHIA desk officers, pharmacists, and support personnel to reduce administrative delays and patient waiting times. Continuous professional development focusing on customer relations and communication skills is recommended to improve service quality.

**2. Strengthening Communication and Patient Education:**

Hospitals should implement regular orientation sessions and develop educational materials—including brochures, posters, and digital content—to inform enrollees about NHIA benefits, claims procedures, and available pharmaceutical services.

**3. Integration of Digital Record Systems:**

The adoption of automated NHIA prescription and claims processing systems will minimize paperwork, improve data accuracy, and reduce waiting times. Electronic prescription systems

can also support real-time monitoring of stock levels, facilitating proactive management of medicine shortages.

**4. Periodic Performance Evaluation:**

UBTH NHIA units should conduct quarterly assessments of key service delivery indicators, including drug availability, patient waiting times, and satisfaction levels. Such evidence-based evaluations will inform management decisions and promote continuous service improvement.

## C. COMMUNITY AND BENEFICIARY-LEVEL RECOMMENDATIONS

**1. Enhancing Public Awareness Campaigns:**

Sustained community sensitization initiatives should be conducted to increase understanding of NHIA enrollment procedures, benefits, and utilization. Special focus should be placed on younger populations and workers in the informal sector.

**2. Promoting Beneficiary Engagement and Feedback:**

Patients should be encouraged to report challenges through formal complaint mechanisms. Active beneficiary participation fosters transparency, accountability, and responsiveness in service delivery.

**3. Promoting Health Literacy:**

Partnerships between NGOs, media organizations, community leaders, and the NHIA should be leveraged to improve health literacy among enrollees. Ensuring beneficiaries understand their entitlements and the procedures for redress enhances service utilization and empowers patients to make informed healthcare decisions.

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# APPENDIX

## QUESTIONNAIRE

Good day, I am a final year student of Faculty of Pharmacy, University of Benin conducting a research on the evaluation of the impact of NHIA on the accessibility of medicine at UBTH. Kindly take out few minutes to complete the questionnaire.

**Section A: Demographic Information**

1. Age: a) 18 -30 { } b) 31 – 40 { } c) 41 -50 { } d) 51 –60 { } e) 60 and above { }
2. Gender: a) ☐ Male b) ☐ Female
3. Marital Status: a)☐ Single b) ☐ Married c) ☐ Divorced d) ☐ Widowed
4. Educational Level:

   a)☐ No formal education b) ☐ Primary c) ☐ Secondary d) ☐ Tertiary
5. Employment Status: a)☐ Employed b) ☐ Unemployed c)☐ Student d) ☐ Retired
6. Type of Patient: a) ☐ Outpatient b) ☐ Inpatient
7. Duration of NHIA enrollment:

   a)☐ Less than 1 year b) ☐ 1–3 years c) ☐ Over 3 years
8. Are you aware you are covered under NHIA? a) ☐ Yes b) ☐ No

National Health Insurance Authority (NHIA) is a body with the aim of achieving universal health coverage through financial protection and improved access to quality healthcare services, including medications

**Section B: Access to Medicines under NHIA**

**Instructions:** Please indicate how much you agree or disagree with each of the following statements by selecting one of the following options:

**Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)**

**A B C D E**

| S/N | QUESTIONS | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 9 | All my prescribed medications are usually available under the NHIA coverage? | | | | | |
| 10 | The process of obtaining medicines under NHIA at UBTH is straightforward and stress free? | | | | | |
| 11 | I rarely experience stockouts of NHIA covered medicines? | | | | | |
| 12 | Alternative drugs are provided when prescribed ones are unavailable. | | | | | |
| 13 | I consider the medicines under NHIA to be affordable and accessible? | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 14 | My access to medicines under NHIA at UBTH has reduced my need to buy drugs elsewhere? | | | | | |
| 15 | Overall, I am satisfied with the accessibility of NHIA covered medicines at UBTH? | | | | | |

**Section C: Efficiency of NHIA Services at UBTH**

| S/N | QUESTIONS | SA | A | N | D | SD |
|---|---|---|---|---|---|---|
| 16 | NHIA has been effective in helping me access medicines? | | | | | |
| 17 | The time it takes to collect medicines after seeing the doctor is acceptable? | | | | | |
| 18 | NHIA staff at UBTH helpful and informative about NHIA entitlements and attends to patients promptly and professionally? | | | | | |
| 19 | I understand the list of medicines covered under NHIA? | | | | | |
| 20 | I believe the overall efficiency of NHIA service delivery at UBTH is satisfactory? | | | | | |

**Section D: Challenges and Recommendations**

21) The NHIA drug list is sufficient to meet most of my medical needs.

a)▢ Strongly Disagree b) ▢ Disagree c) ▢ Neutral d) ▢ Agree e) ▢ Strongly Agree

22) I have delayed or abandoned treatment due to non-availability of medicines.

a)▢ Strongly Disagree b) ▢ Disagree c) ▢ Neutral d) ▢ Agree e) ▢ Strongly Agree

23) Based on my experience, I would recommend NHIA enrollment to others.

a)▢ Strongly Disagree b) ▢ Disagree c) ▢ Neutral d) ▢ Agree e) ▢ Strongly Agree

24) What challenges do you face when trying to access NHIA-covered medicines at UBTH? (Check all that apply)

a)☐ Drug stock-out b)☐ Poor staff communication c)☐ Long wait time

d)☐ High out-of-pocket expenses e)☐ Unavailability of covered drugs

25) What suggestions would you give to improve medicine accessibility under NHIA at UBTH _____?