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# Evaluating the Effectiveness of Nhis Healthcare Services in Enhancing Staff Access to Medical Care in South-East Nigeria's Federal Tertiary Institutions

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## Abstract

Access to affordable healthcare remains a major policy concern in Nigeria, where high out-of-pocket expenditure continues to limit equity and service utilization. The National Health Insurance Scheme (NHIS) was established to promote financial protection and improve access to quality medical care, yet its operational effectiveness across tertiary institutions remains uncertain. This study evaluated the effectiveness of NHIS healthcare services in enhancing staff access to medical care in selected federal tertiary institutions in South-East Nigeria. The study adopted a descriptive survey design. The population comprised 6,500 NHIS-enrolled staff, from which a sample of 400

respondents was drawn using Yamane's formula. Data were collected through structured questionnaires, validated by expert review, and analyzed using descriptive statistics, regression, and analysis of variance (ANOVA). Findings revealed that NHIS services were moderately effective, particularly in affordability and timeliness, but constrained by administrative inefficiency and limited staff awareness. Regression results showed that administrative efficiency, service quality, and awareness jointly influenced overall effectiveness ($R^2 = 0.612$, $p < 0.05$). It was concluded that improving NHIS effectiveness requires enhanced administrative responsiveness, better service delivery standards, and continuous staff sensitization.

**Keywords:** Administrative efficiency, Healthcare access, NHIS effectiveness, Service quality, Tertiary institutions

## 1. Introduction

Access to quality healthcare remains a critical component of human welfare and an essential indicator of social and economic development. Despite significant global progress, the challenge of equitable and effective healthcare delivery persists, particularly in low- and middle-income countries. The World Health Organization (2024) reports that over 4.5 billion people still lack full coverage for essential health services, while nearly one billion people experience catastrophic health expenditures every year. In developed nations such as Germany, Japan, and Canada, well-regulated social health insurance systems have proven effective in improving health outcomes through equitable financing and administrative efficiency (Bashar et al., 2025). These examples show that successful health insurance requires not only broad coverage but also institutional transparency, accountability, and service quality.

In sub Saharan Africa, healthcare financing still depends largely on out of pocket spending, limited public budgets, and donor contributions. This reliance continues to expose households to financial hardship and restrict access to needed medical services (Amo Adjei & Anku, 2021). Some African countries have made notable progress in addressing this imbalance. Ghana and Rwanda, for instance, have demonstrated that strong institutional frameworks and well managed national insurance schemes can significantly expand healthcare access and reduce inequality (Sarkodie, 2022; Niyonzima & Uwizeyimana, 2023). Their experience suggests that the true measure of a health insurance programme's success lies not only in enrolment numbers but in its ability to deliver timely, affordable, and quality care to beneficiaries.

Nigeria's health sector continues to struggle with underfunding and poor service delivery. National health expenditure has remained below five percent of the gross domestic product, while households bear more than two thirds of total health spending through direct payments (World Bank, 2024). To mitigate this burden, the Federal Government established the National Health Insurance Scheme in 2005, which was later restructured into the National Health Insurance Authority in 2022 to enhance coverage and improve efficiency (National Health Insurance Authority Act, 2022). The primary objective of the scheme is to provide affordable healthcare through risk pooling, cost sharing, and standardized service delivery. However, two decades after

its inception, questions remain about its effectiveness in improving access to healthcare for beneficiaries, particularly among staff in federal tertiary institutions.

Several studies have reported that although the scheme has improved affordability, it continues to face operational challenges such as delays in claims processing, drug shortages, and limited coordination between the National Health Insurance Authority and Health Maintenance Organizations (Alawode & Adewole, 2021; Okoro & Nwachukwu, 2023). These administrative weaknesses often lead to dissatisfaction among enrollees and undermine confidence in the system. The problem is especially visible in federal tertiary institutions, which serve as important testing grounds for the effectiveness of the scheme. Employees in these institutions were among the first groups to be enrolled under the Formal Sector Social Health Insurance Programme and therefore provide valuable insights into how efficiently the scheme operates in practice.

This study is both academically and practically relevant. Academically, it contributes to the growing body of literature on healthcare financing and the determinants of effective health insurance delivery in developing economies. It explores the relationship between administrative efficiency, service quality, and staff awareness as determinants of healthcare access. Practically, the study provides evidence based recommendations that can help policymakers and institutional administrators improve service responsiveness, reduce administrative bottlenecks, and strengthen public confidence in the scheme. The findings will also support the National Health Insurance Authority's efforts to achieve the goals of universal health coverage as outlined in Sustainable Development Goal 3. The objectives of this study are as follows: (1) To evaluate the effectiveness of National Health Insurance Scheme healthcare services in enhancing staff access to medical care in selected federal tertiary institutions in South East Nigeria. (2) To examine the extent to which administrative efficiency, service quality, and staff awareness influence the perceived effectiveness of National Health Insurance Scheme healthcare delivery.

The study is limited to federal tertiary institutions in South East Nigeria, specifically the University of Nigeria Nsukka, Alvan Ikoku Federal College of Education Owerri, and the Federal Polytechnic Oko. It focuses on academic and non-academic staff who have been enrolled in the scheme for at least three years. The analysis covers the dimensions of timeliness, affordability, service quality, and administrative responsiveness, while excluding private institutions and non-enrolled staff. These boundaries ensure a focused and context specific evaluation of the effectiveness of the National Health Insurance Scheme within Nigeria's federal tertiary education sector.

## 2. Literature Review

### 2.1 Conceptual Review

Health insurance is widely recognized as a social and economic instrument for reducing financial barriers to healthcare access and ensuring equitable health outcomes. The World Health Organization (2023) defines health insurance as a mechanism that pools financial resources to protect individuals against the economic consequences of illness and to guarantee universal access to essential services. It operates on the principle of risk sharing, where the healthy subsidize the

sick and higher-income earners support those with lower incomes. According to Alawode and Adewole (2021), the effectiveness of any national health insurance scheme depends on administrative capacity, consistent funding, and adequate service delivery networks.

Healthcare access encompasses the ability of individuals to receive appropriate care when needed without suffering undue financial, geographical, or social hardship. Penchansky and Thomas (1981) conceptualized access as comprising five dimensions: availability, accessibility, affordability, accommodation, and acceptability. In low- and middle-income countries, affordability and timeliness often determine whether health services are utilized effectively. Studies such as Effiong, Ekpenyong, and Etim (2024) have shown that despite the introduction of social insurance schemes, many Nigerians still experience catastrophic healthcare expenditures, especially among low-income earners. This highlights the need to assess not only enrolment levels but also the effectiveness of the scheme in facilitating access.

Effectiveness, in the context of health insurance, refers to the degree to which services provided through the scheme achieve the intended objectives of affordability, quality, and satisfaction. The National Health Insurance Authority (2023) defines effectiveness as the capability of health service delivery mechanisms to meet beneficiaries' expectations, ensure administrative transparency, and promote equity. In Nigeria, the NHIS was designed to improve access by addressing three key dimensions; financial protection, service utilization, and quality of care. However, Okoro and Nwachukwu (2023) argue that administrative inefficiency and inadequate monitoring mechanisms limit the realization of these goals. Therefore, assessing the effectiveness of NHIS services among employees of tertiary institutions requires a multidimensional approach that considers affordability, timeliness, administrative efficiency, and awareness of benefits.

Administrative efficiency plays a crucial role in health insurance performance. According to the BMC Public Health (2025) study on the implementation of NHIS in Enugu State, ineffective claims management, delayed reimbursements, and inconsistent communication between Health Maintenance Organizations (HMOs) and healthcare providers significantly reduce service quality and user trust. Similarly, the Charting the Path to Universal Health Coverage in Nigeria report (Bashar et al., 2024) emphasizes that effective coordination, digital infrastructure, and stakeholder participation are central to strengthening health-insurance delivery systems. Service quality, another key determinant of effectiveness, refers to the technical competence of providers, adequacy of facilities, and responsiveness to beneficiaries' needs. When beneficiaries perceive that health facilities deliver prompt and comprehensive care, their satisfaction and trust in the scheme increase (Abah, Ojobo, & Okolobia, 2024).

Staff awareness is equally critical in influencing scheme performance. In their qualitative assessment of NHIS implementation, Alawode and Adewole (2021) found that low understanding of benefit packages among enrollees led to misinformation, under-utilization, and dissatisfaction. Similarly, the Evaluation of the Performance and Challenges of NHIS in Nigeria (2025) revealed that staff who lacked knowledge of their entitlements were more likely to bypass the scheme entirely, choosing out-of-pocket care even when covered. Thus, conceptualizing effectiveness

within NHIS involves examining how administrative responsiveness, service quality, and staff awareness interact to determine accessibility and satisfaction.

**2.2 Theoretical Framework**

This study draws upon two theories that explain the functioning and outcomes of complex policy systems: the Systems Theory and the Top-Down Implementation Theory.

The Systems Theory, originally developed by Ludwig von Bertalanffy in 1968, views organizations as interconnected subsystems that must function cohesively to achieve collective goals. In the context of the NHIS, the theory implies that effective healthcare delivery depends on coordination among all stakeholders, including the National Health Insurance Authority, HMOs, service providers, and enrollees. Ibrahim and Adebayo (2023) argue that inefficiencies in any of these subsystems can disrupt overall system performance, leading to poor service quality and reduced user confidence. Hence, effective collaboration and feedback mechanisms are essential to achieving optimal results.

The Top-Down Implementation Theory, developed by Pressman and Wildavsky (1984) and expanded by Sabatier and Mazmanian (1987), emphasizes that the success of public policies depends on how effectively central directives are translated into actionable programs at the operational level. The theory assumes that policy outcomes are determined by clarity of objectives, adequate resources, and accountability of implementing agencies. Within the NHIS context, this theory highlights that even if the policy framework is robust, its success ultimately depends on the administrative capacity of institutions and the compliance of implementing agents. According to Driving the Implementation of the National Health Act of Nigeria (Ilesanmi et al., 2023), delays in resource release, overlapping responsibilities, and weak supervision mechanisms frequently undermine intended outcomes. Therefore, integrating both theories provides a comprehensive understanding of NHIS performance as a function of systemic interdependence and effective policy execution.

**2.3 Empirical Review**

Empirical studies across Nigeria and other African countries provide insights into the performance and limitations of national health-insurance schemes. Alawode and Adewole (2021) conducted a qualitative study that identified low awareness, inadequate administrative coordination, and frequent drug stock-outs as key challenges undermining NHIS efficiency. They concluded that these deficiencies were particularly severe at the subnational levels, where monitoring and enforcement mechanisms were weak.

A similar study by the Effiong et al (2025) examined the sustainability of NHIS implementation in Enugu State and found that inflation, poor accountability, and manpower shortages hinder effective operation. The study noted that delays in claims reimbursement and inconsistent benefit packages reduced the scheme's credibility among both providers and beneficiaries. These findings were echoed by The Nigeria National Health Insurance Authority Act and Its Implications (2022), which emphasized that the 2022 reform aimed to address these bottlenecks by restructuring the governance and oversight of health-insurance activities across the federation.

Further empirical evidence from Bashar et al., (2024) highlighted that digital innovations, such as e-claims processing and real-time monitoring systems, could significantly improve administrative efficiency and beneficiary satisfaction. Similarly, Effiong et al (2025) reported that income level, education, and perceived benefit adequacy were the most significant predictors of enrolment and utilization, suggesting that effective communication and affordability are central to improving access.

At the federal level, Pillah (2025) revealed that poor funding, lack of transparency, and weak infrastructure were major barriers to effective implementation. The authors emphasized that staff often faced long waiting times, low drug availability, and poor referral systems. In the Federal Capital Territory, Alawode and Adewole (2025) found that administrative bottlenecks and inadequate feedback mechanisms discouraged service utilization and eroded trust in the scheme.

Furthermore, Ilesanmi et al., (2023) examined the broader policy environment and concluded that while the National Health Act provided a solid legal foundation for achieving universal health coverage, implementation was hindered by overlapping functions and limited technical capacity at the state and institutional levels. In a broader African context, WHO (2024) underscored that financial sustainability, health workforce shortages, and inefficient governance systems remain persistent barriers to effective service delivery under national health-insurance frameworks.

Additionally, Abah, Ojobo, and Okolobia (2024) assessed the relationship between NHIS participation and service quality in Nigeria's Federal Capital Territory. Their findings indicated that enrolment in the scheme was associated with higher utilization of formal healthcare services but lower satisfaction levels due to bureaucratic delays. Similarly, Adebiyi,& Adeniji (2021) found that low awareness and exclusion of key medical services from the benefit package contributed to low enrolment and partial utilization.

Across African nations, comparative research demonstrates that sustained government investment, transparent regulation, and digitalized administration enhance the effectiveness of health-insurance schemes. For instance, Eze, & Chukwuma (2024) showed that insurance expansion led to modest improvements in access and health outcomes but that infrastructural deficiencies and workforce shortages continued to limit impact. Taken together, these studies reveal that effectiveness is determined not solely by enrolment coverage but by the efficiency, quality, and responsiveness of the entire service delivery chain.

**2.4 Research Gap**

While numerous studies have examined the implementation and challenges of the NHIS in Nigeria, a notable gap remains in understanding its effectiveness within the context of federal tertiary institutions. Most empirical works focus on general population coverage, policy frameworks, or the informal sector, neglecting the unique administrative and demographic characteristics of university and polytechnic environments. Employees in tertiary institutions are typically more informed, yet face institutional bureaucracies that can hinder smooth access to healthcare.

Moreover, existing research rarely integrates the multidimensional indicators of effectiveness—affordability, timeliness, service quality, administrative efficiency, and awareness—into a single

analytical framework. Previous works tend to assess either financial protection or service utilization without connecting these with satisfaction and administrative performance. Similarly, the transition from the NHIS to the NHIA under the 2022 Act has not been adequately evaluated in empirical studies concerning its impact on service delivery within academic institutions.

This study fills these gaps by providing a comprehensive assessment of the effectiveness of NHIS healthcare services among staff in South East Nigeria's federal tertiary institutions. It adopts an integrated model that links administrative structures, service quality, and staff awareness to healthcare access outcomes. By focusing on an educated, formally employed population, the research offers nuanced evidence that can inform policy reforms, strengthen institutional collaboration, and contribute to Nigeria's pursuit of universal health coverage.

## 3. Methodology

The study adopted a descriptive survey research design, which is appropriate for assessing existing conditions, relationships, and perceptions within a population. This design was chosen because it allows for the systematic collection and analysis of quantitative data to evaluate how effectively the National Health Insurance Scheme (NHIS) enhances staff access to medical care in federal tertiary institutions in South-East Nigeria. According to Creswell and Creswell (2023), descriptive surveys provide a structured approach for describing trends and determining relationships among measurable variables without manipulating the research environment. This design was particularly suitable for this study since the focus was on staff experiences and institutional service delivery patterns rather than experimental outcomes.

The population of the study comprised all NHIS-enrolled academic and non-academic staff of three selected federal tertiary institutions in South-East Nigeria: University of Nigeria Nsukka, Alvan Ikoku Federal College of Education Owerri, and Federal Polytechnic Oko. The total population was approximately 6,500 staff across the three institutions. Because it was impractical to study the entire population, a sample size was determined using Yamane's (1967) formula for finite populations at a 95 percent confidence level and a 5 percent margin of error. The computation yielded a sample size of about 380 respondents. To allow for potential non-responses, 400 questionnaires were distributed proportionately across the institutions, ensuring balanced representation of both academic and non-academic staff.

Primary data were collected through a structured questionnaire designed to capture respondents' views on accessibility, affordability, service quality, and administrative efficiency of NHIS healthcare services. The questionnaire contained both closed-ended and Likert-scale items, which made responses easier to quantify and analyze. Data collection was carried out both physically and electronically to enhance coverage and convenience. Secondary data were obtained from institutional NHIS records and relevant policy documents. The research instrument was subjected to expert review to ensure content validity, while a pilot test conducted on 30 respondents outside the study area confirmed its reliability before the main administration.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize responses. Inferential analyses, including multiple regression and analysis of variance (ANOVA), were conducted to test the hypotheses and determine the relationship between administrative efficiency, service quality, staff awareness, and NHIS effectiveness. The level of significance was set at 0.05, and results were presented in tables and figures accompanied by concise interpretations. Ethical approval was obtained from the participating institutions, and all respondents provided informed consent. Participation was voluntary, and confidentiality of information was maintained throughout the study.

## 4. Data Analysis and Discussion

A total of 400 questionnaires were distributed across the three selected federal tertiary institutions in South-East Nigeria. Out of these, 372 were duly completed and returned, representing a response rate of 93 percent, which was considered adequate for analysis. Twenty-eight questionnaires were either incomplete or invalid and were excluded from the final dataset. The analysis therefore proceeded with 372 valid cases drawn from the University of Nigeria Nsukka, Alvan Ikoku Federal College of Education Owerri, and Federal Polytechnic Oko.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics were used to summarize demographic data and respondents' perceptions of NHIS effectiveness, while inferential statistics such as regression and analysis of variance (ANOVA) were used to test the study hypotheses. The results are presented and interpreted below.

### 4.1 Descriptive Analysis

**Table 1: Demographic Characteristics of Respondents (n = 372)**

| Variable | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 210 | 56.5 |
| | Female | 162 | 43.5 |
| Age (years) | 20 – 35 | 94 | 25.3 |
| | 36 – 45 | 158 | 42.5 |
| | 46 – 55 | 87 | 23.4 |
| | 56 and above | 33 | 8.8 |
| Staff Category | Academic | 218 | 58.6 |
| | Non-academic | 154 | 41.4 |
| Duration of NHIS enrolment | 1 – 3 years | 83 | 22.3 |
| | 4 – 6 years | 139 | 37.4 |
| | 7 years and above | 150 | 40.3 |

The demographic profile indicates that both male and female staff were well represented, with 56.5 percent male and 43.5 percent female participants. Most respondents (65.9 percent) were between 36 and 55 years of age, suggesting mature participants with adequate experience using NHIS services. Academic staff constituted the majority (58.6 percent), while non-academic staff made up 41.4 percent. A significant proportion of respondents (77.7 percent) had been enrolled in the NHIS for more than three years, making them knowledgeable enough to assess its effectiveness within their institutions.

**Table 2: Descriptive Statistics on Perceived Effectiveness of NHIS Healthcare Services**

| Variable | Mean ($\bar{x}$) | Std. Deviation | Interpretation |
|---|---|---|---|
| Timeliness of healthcare access | 3.82 | 0.81 | High |
| Affordability of medical services | 3.74 | 0.77 | High |
| Service quality (drugs, consultation, diagnosis) | 3.69 | 0.84 | Moderate–High |
| Administrative efficiency (claims, approvals, reimbursement) | 3.46 | 0.92 | Moderate |
| Staff awareness and understanding of NHIS processes | 3.55 | 0.86 | Moderate–High |
| Overall effectiveness composite score | 3.65 | 0.84 | Moderately Effective |

On a five-point scale, the composite mean score of 3.65 indicates that NHIS healthcare services were perceived as **moderately effective** in enhancing access to medical care among staff. Respondents rated affordability ($\bar{x}$ = 3.74) and timeliness ($\bar{x}$ = 3.82) relatively high, suggesting that the scheme has helped reduce the cost burden and improved promptness of service in approved facilities. However, administrative efficiency recorded the lowest mean ($\bar{x}$ = 3.46), implying persistent delays and bureaucratic bottlenecks in claims processing and authorization.

This descriptive pattern demonstrates that while NHIS has improved affordability and general access, operational challenges still constrain full effectiveness. The finding aligns with earlier observations in policy evaluations that administrative coordination remains the weakest component of NHIS implementation in Nigeria.

**4.2 Hypothesis Testing and Inferential Analysis**

**Table 3: Multiple Regression Analysis on Predictors of NHIS Effectiveness**

| Predictor | Unstandardized B | Std. Error | Beta | t-value | Sig. (p) |
|---|---|---|---|---|---|
| Constant | 1.142 | 0.241 | – | 4.739 | 0.000 |
| Administrative Efficiency | 0.284 | 0.061 | 0.325 | 4.653 | 0.000 |

| Predictor | Unstandardized B | Std. Error | Beta | t-value | Sig. (p) |
|---|---|---|---|---|---|
| Service Quality | 0.256 | 0.058 | 0.309 | 4.397 | 0.001 |
| Staff Awareness | 0.193 | 0.057 | 0.217 | 3.386 | 0.004 |
| **$R^2 = 0.612$** | **Adj. $R^2 = 0.607$** | **$F(3, 368) = 193.62$** | **$p < 0.05$** | | |

The regression model produced an $R^2$ value of 0.612, indicating that approximately 61 percent of the variation in NHIS effectiveness was explained by the combined effects of administrative efficiency, service quality, and staff awareness. All three predictors were statistically significant ($p < 0.05$), confirming their strong influence on perceived effectiveness. Administrative efficiency emerged as the strongest predictor ($\beta = 0.325$), followed closely by service quality ($\beta = 0.309$). Staff awareness had a smaller but still significant influence ($\beta = 0.217$). These results suggest that improvements in administrative processes and service quality would lead to greater overall effectiveness of NHIS healthcare delivery.

**Table 4: One-Way ANOVA of NHIS Effectiveness by Institution**

| Source | Sum of Squares | df | Mean Square | F | Sig. (p) |
|---|---|---|---|---|---|
| Between Groups | 8.231 | 2 | 4.116 | 5.284 | 0.006 |
| Within Groups | 288.764 | 369 | 0.783 | | |
| Total | 296.995 | 371 | | | |

The ANOVA test revealed a statistically significant difference ($p = 0.006 < 0.05$) in perceptions of NHIS effectiveness among the three institutions. Post-hoc inspection showed that respondents from the University of Nigeria Nsukka rated the scheme slightly higher than those from Alvan Ikoku and Federal Polytechnic Oko. The difference may reflect variations in administrative coordination or the level of institutional support for NHIS operations.

### 4.3 Discussion of Findings

The findings of this study indicate that the NHIS has made moderate progress in improving staff access to healthcare within Nigeria's federal tertiary institutions. Most respondents affirmed that the scheme had enhanced affordability and timeliness of care, which aligns with its core objective of reducing out-of-pocket spending and promoting equitable access. However, administrative efficiency remains a challenge, as evidenced by lower mean scores and strong regression weight. Delays in claims processing, inadequate communication between Health Maintenance Organizations and healthcare providers, and limited monitoring mechanisms appear to weaken the scheme's overall performance.

The results also show that staff awareness significantly influences the perceived effectiveness of NHIS healthcare services. Respondents who demonstrated better understanding of NHIS procedures and entitlements were more likely to report satisfaction with healthcare access. This

finding suggests that awareness campaigns and regular institutional sensitization can substantially enhance participation and service utilization.

The regression results confirm that administrative efficiency, service quality, and staff awareness jointly determine NHIS effectiveness. The high explanatory power ($R^2 = 0.612$) underscores the need for an integrated reform strategy that addresses these three pillars simultaneously. Differences across institutions revealed by ANOVA further highlight the importance of localized management practices. Institutions with proactive NHIS units, better record-keeping, and more responsive administrative systems tend to provide smoother healthcare access for their staff.

Overall, the evidence suggests that while the NHIS has achieved partial success in fulfilling its mandate, effectiveness remains constrained by managerial and operational inefficiencies. Strengthening administrative accountability, digitizing claims and record management, and improving communication between NHIA offices, HMOs, and institutional NHIS units would significantly improve service quality and staff satisfaction. The findings support the view that policy effectiveness depends not only on design but on sustained implementation fidelity at the institutional level.

## 5. Conclusion and Recommendations

The purpose of this study was to evaluate the effectiveness of the National Health Insurance Scheme (NHIS) in enhancing staff access to medical care in selected federal tertiary institutions in South-East Nigeria. The study also examined how administrative efficiency, service quality, and staff awareness influence the perceived effectiveness of the scheme. Evidence from the analysis revealed that NHIS healthcare services were perceived as moderately effective among employees of the three institutions studied. The findings demonstrated that the scheme has contributed significantly to improved affordability and timeliness of care, thereby reducing financial hardship and facilitating greater access to health services among enrolled staff. However, challenges persist in administrative processes, claims management, and staff awareness, which continue to hinder optimal performance.

The regression results confirmed that administrative efficiency, service quality, and staff awareness jointly accounted for a substantial portion of the variation in perceived NHIS effectiveness. Administrative efficiency was found to be the strongest determinant, indicating that the speed and transparency of claims processing, the responsiveness of Health Maintenance Organizations, and the coordination of NHIS units within institutions are critical to the scheme's overall performance. Service quality also played a key role, suggesting that improvements in the availability of drugs, diagnostic services, and the attitude of healthcare providers directly enhance staff satisfaction. In addition, staff awareness emerged as an important factor, showing that informed employees who understand their rights and benefits under the NHIS are better able to utilize services and assess them more positively.

These findings highlight the importance of strengthening institutional structures to improve NHIS operations at the tertiary education level. The results suggest that effectiveness is not solely a

function of policy design but also of how well the system is administered at the point of service delivery. Institutions with organized NHIS desks, effective communication channels, and supportive leadership recorded higher satisfaction levels. Thus, for the NHIS to achieve its objective of universal access and financial protection, it must ensure consistent administrative responsiveness, efficient coordination with service providers, and continuous engagement with beneficiaries.

Based on the research objectives and findings, the following recommendations are proposed:

1. The National Health Insurance Authority and institutional NHIS units should adopt digital systems for claims processing, record management, and communication between Health Maintenance Organizations and service providers. Automation would reduce delays, improve accountability, and eliminate paperwork-related bottlenecks. Periodic audits and performance evaluations should also be conducted to monitor administrative compliance and ensure prompt reimbursements.
2. Partner hospitals should be adequately equipped with essential drugs, diagnostic tools, and trained personnel to meet the healthcare needs of insured staff. Regular monitoring visits and feedback mechanisms should be established to ensure that service standards are maintained. Collaboration between NHIA and tertiary institutions should emphasize continuous improvement in the quality of care provided to beneficiaries.
3. Institutions should organize regular sensitization programs, workshops, and seminars to educate staff about their entitlements, rights, and procedures under the NHIS. Creating awareness materials and establishing dedicated help desks within each institution would help resolve complaints and improve user satisfaction. Increased awareness will enhance trust, utilization, and transparency in the scheme's operations.
4. A structured monitoring and evaluation system should be established to track NHIS performance indicators such as service timeliness, staff satisfaction, and claims turnaround time. Continuous feedback from staff should guide decision-making and policy adjustments at both institutional and national levels.

   The suggestion to establish a structured monitoring and evaluation (M&E) system is vital for ensuring the NHIS's ongoing effectiveness and responsiveness. To strengthen this recommendation, we propose a detailed framework that can guide implementation and assessment. Here are some actionable insights:

   **Adopt an Established Framework for M&E**

   1. **WHO's Health System Building Blocks:** Utilize this framework to evaluate components such as service delivery, health workforce, information systems, and governance.
   2. **Health Information System Standards:** Align with standards from organizations like the WHO or the International Health Partnership to ensure data quality, interoperability, and usability.

3. **Results-Based Management (RBM):** Implement RBM principles to focus on outcomes, facilitate accountability, and promote continuous improvement.

**Develop a Comprehensive M&E Framework**

4. Define clear, measurable indicators such as:
    1. Service timeliness (e.g., average claims processing time)
    2. Staff satisfaction (e.g., survey-based scores)
    3. Claims turnaround time
    4. Reimbursement accuracy
    5. Referral efficiency
5. Establish baseline metrics and target benchmarks.

**Implement Data Collection and Reporting Mechanisms**

6. Use digital dashboards and real-time data analytics tools.
7. Schedule regular performance reviews at institutional and national levels.
8. Ensure staff and stakeholders have access to performance reports for transparency.

**Incorporate Continuous Feedback Loops**

9. Conduct periodic surveys and focus groups with staff and beneficiaries.
10. Use feedback to identify bottlenecks and areas for improvement.
11. Adjust policies and operational procedures based on empirical evidence.

**Capacity Building and Training**

12. Train staff involved in data collection and analysis to ensure accuracy and consistency.
13. Promote a culture of data-driven decision-making.

**Benchmark and Learn from Best Practices**

14. Reference successful models such as the WHO's Health Metrics Network or the District Health Information System (DHIS2).
15. Adapt proven tools and methodologies to the local context

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