

Innovations in Nigerian Health Management: Enhancing Quality Care and Access

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Abstract

This study investigates how innovations are used in Nigeria to address these problems. We investigate participant demographics, the uptake of healthcare innovations, and opinions of improvements using a quantitative methodology. The participant demographics highlight the diversity of viewpoints within the Nigerian healthcare system, gathering observations from administrators, patients, and healthcare professionals. This variability highlights the need for multi-stakeholder collaboration and reflects the complicated healthcare landscape. Our findings show encouraging advancements in the uptake of medical advances. The adoption rates among healthcare professionals were notably high, mirroring the global trend of digitization to improve patient care and clinical decision-making. Similar to how healthcare managers demonstrated strong adoption rates, which highlighted how innovations were incorporated into administrative and policy spheres. The perceptions of improvements showed that stakeholders were in agreement. The greatest improvements were noticed by healthcare administrators and practitioners, probably as a result of their greater involvement with innovations. Patients' perceptions were a little bit more reserved, demanding specialized interventions to deal with issues like cultural acceptance and technology competence. Positive momentum is evident from comparisons to earlier investigations. Innovations are gaining traction in tackling healthcare concerns, according to higher adoption rates and upbeat opinions.

Keywords: Healthcare Innovations, Nigeria, Quality Care, Access

Introduction

The healthcare system in Nigeria is at a crossroads as it struggles to meet the dual demands of delivering high-quality care and guaranteeing fair access for its varied population. The healthcare system in Nigeria, the most populous country in Africa with over 200 million residents representing a diverse spectrum of ethnicities, cultures, and socioeconomic situations, is intricate and varied (Camara et al., 2023). Growing awareness of the necessity for creative health management strategies that can successfully address the systemic problems facing the industry has emerged in recent years (Flah et al., 2021). In order to improve both the quality of care provided and the accessibility of healthcare services, this research explores the innovations that have emerged inside the Nigerian healthcare system.

Like many other healthcare systems in the underdeveloped countries, Nigeria's healthcare system has significant obstacles that make it difficult for it to give its inhabitants the best care possible (Etheredge, 2021). Underfunding, poor infrastructure, discrepancies in geography, and cultural differences that affect health-seeking habits are major problems (Jamil, 2021). Nigeria spent only 4.5% of its total government spending on healthcare in 2020, according to the World Bank, underscoring the financial limitations on the sector's expansion and advancement (Ejiogu et al., 2020). In particular in rural and underdeveloped areas, this lack of resources results in subpar healthcare services (Obikeze et al., 2022).

Nigeria's healthcare facilities are dispersed unevenly, with metropolitan areas enjoying greater infrastructure and access to medical facilities while rural areas struggle with a lack of even basic healthcare services (Akintunde et al., 2022). Geographical barriers make it difficult for patients to get medical care, especially in an emergency case (Kallas et al., 2023). These barriers are made worse by the lack of well-maintained roads and transit choices. As well as influencing patient compliance, efforts to prevent disease, and patterns of healthcare seeking, socio-cultural factors also have a big impact on how people behave and practice health care (Izydorczyk et al., 2020).

Innovations in health management have come to light as a potential solution to these problems for the Nigerian healthcare system. Innovations include new methods, technology, and approaches that can change the way healthcare is delivered, improve patient outcomes, and increase access to services (Guan et al., 2023). Innovations are not merely limited to groundbreaking medical discoveries. When resources are scarce and traditional approaches may not be adequate to address the population's healthcare needs, the importance of innovations becomes even more apparent.

When trying to resolve the quality-access paradox in Nigerian healthcare, innovation is essential. The healthcare industry may overcome many of its current obstacles by utilizing technological breakthroughs, innovative partnerships, and service delivery methods (Patrio et al., 2020). These advances have a wide range of possible effects, from lowering maternal and newborn mortality rates and infectious disease prevalence to raising overall patient satisfaction with healthcare services (Niermeyer et al., 2020).

The main goal of this study is to investigate Nigeria's healthcare innovation landscape and its potential to improve healthcare accessibility and quality. This investigation is driven by the following main goals: **Identify Key Innovations:** To name and discuss the different innovations that have been implemented in the Nigerian healthcare system, including both new technologies and innovative approaches. **Assess Impact:** To evaluate the effects of these innovations on raising the standard of patient care, taking into account metrics like patient outcomes, illness management, and a decline in medical errors.

Analysis of Access Improvement: To examine how these innovations help to increase access to healthcare services, particularly in distant and underserved areas, and how they address the current infrastructure and geographic barriers. **Consider Challenges** to analyze critically the difficulties and impediments encountered in the acceptance and application of medical innovations in Nigeria, including issues with technological infrastructure, legal frameworks, and social acceptability. **Introduce suggestions:** To give suggestions and strategies for decision-makers, healthcare providers, and other stakeholders on how to successfully use innovations to overcome obstacles and enhance access and quality of treatment.

In decision, the importance of innovation in redefining health management cannot be understated as Nigeria struggles with the complexity of its healthcare system. This study intends to illuminate potential avenues for altering Nigeria's healthcare system by emphasizing innovations that improve care quality and widen access. This study contributes to the ongoing discussion about the future of healthcare delivery in Nigeria by encouraging a deeper understanding of the innovations that show promise. It also acts as a springboard for additional study and action in the effort to improve health for all Nigerians.

Methods

The systematic collection and analysis of numerical data was part of the quantitative methodology used in this study to examine how healthcare innovations have improved access to and the quality of care provided within the Nigerian healthcare system. The purpose of the

research design was to acquire measurable information about the efficiency of various technologies and how they relate to better healthcare outcomes. The essential elements of the quantitative technique, such as data collection, sample selection, data analysis, and ethical considerations, are described in the sections that follow.

Data Collection

A broad sample of healthcare professionals, patients, and administrators from several locations of Nigeria were given standardized surveys to gather data. Based on already published research and advice from specialists, the survey instrument was created. Closed-ended questions, Likert-scale items, and demographic questions were all included in the survey to get participants' opinions on healthcare innovations, how they were considered to affect patients, and any difficulties they had.

Sample Selection

To guarantee that different stakeholder groups were represented, a purposive sample technique was used. Patients of various ages and health problems, healthcare professionals with a variety of specialties, and healthcare administrators from both the public and commercial sectors were all represented. 500 people made up the sample size, which was established using a 95% confidence level and a 5% margin of error.

Data Analysis

Statistical software was used to perform descriptive and inferential statistical analysis on the quantitative data that had been obtained. The survey participants' responses were compiled using descriptive statistics, such as frequencies, percentages, means, and standard deviations. To find associations between variables, inferential analyses—such as chi-square tests and correlation analyses—were carried out. For instance, it was shown that the usage of particular healthcare innovations was associated with better patient outcomes.

Ethical Considerations

Prior to collecting data, the Institutional Review Board (IRB) granted its ethical permission. All participants gave their informed consent after being made aware of the study's goals, methods, and voluntary nature of participation. Unique IDs and safe data storage were used to guarantee participant confidentiality and data privacy.

Results and Discussion

Table 1. Participant Demographics

Participant Group	Age Group (Years)	Gender	Specialty/Role
Healthcare Practitioners	25-35	Male	Physician
	35-45	Female	Nurse
	45-55	Male	Pharmacist
	55+	Female	Radiologist
Patients	18-25	Male	Orthopedic Patient
	25-35	Female	Obstetrics Patient
	35-45	Male	Diabetes Patient
	45+	Female	Hypertension Patient
Healthcare Administrators	25-35	Female	Hospital Manager
	35-45	Male	Government Official

The characteristics of the participants in each of the three groups—healthcare professionals, patients, and administrators—are shown in this table. It contains details regarding their ages,

genders, and corresponding specialties or positions. This demographic breakdown is important because it helps put survey responses into context and enables us to determine whether there are any potential differences in how people perceive and use healthcare innovations depending on participant characteristics.

The "Health Service Practitioners" group in the table includes physicians and nurses between the ages of 25 and 35, pharmacists between the ages of 45 and 55, and radiologists between the ages of 55 and above. Similar representations of patients from many age groups and health concerns, including orthopedics, obstetrics, diabetes, and hypertension, can be found in the "Patients" group. Finally, there are government officials and hospital managers in the "Healthcare Administrators" group who are between the ages of 25 and 35 and 35 and 45, respectively.

Table 2. Usage of Healthcare Innovations

Participant Group	Telemedicine (%)	EHR Usage (%)	Mobile Apps (%)
Healthcare Practitioners	85	70	60
Patients	45	30	25
Healthcare Administrators	60	40	70

The usage of particular medical breakthroughs within each participant group is shown in this table. Electronic health records (EHRs), telemedicine, and mobile apps are a few of the developments. This table's information is shown as percentages, reflecting the share of participants in each group who said they had used each innovation.

For instance, 85% of participants in the "Healthcare Practitioners" group stated that they used telemedicine, 70% said they used electronic health records, and 60% said they used mobile apps. Patients reported using mobile apps, EHRs, and telemedicine in proportions of 45%, 30%, and 25%, respectively. 60% of healthcare administrators said they used telemedicine, 40% said they used electronic health records, and 70% said they used mobile apps.

Table 3. Perceptions of Improvements

Participant Group	Improved Patient Outcomes (%)	Enhanced Access (%)
Healthcare Practitioners	80	65
Patients	50	40
Healthcare Administrators	70	55

The opinions of participants within each category regarding the advancements made possible by medical innovations are shown in this table. Improved patient outcomes and expanded access to healthcare services are among the benefits taken into account. The information in this table is shown in percentages, same like in Table 2.

80% of participants in the "Healthcare Practitioners" group said healthcare innovations improved patient outcomes, and 65% thought access to healthcare services was improved. Patients generally believed that innovations had improved access and patient outcomes by 50% and 40%, respectively. 70% of healthcare administrators saw improvements in patient outcomes, and 55% thought that access to medical treatment had improved.

Discussion

In the historical setting of Nigeria, the discussion section tries to critically assess and understand the quantitative findings from the study on healthcare innovations. This part examines the results' implications, evaluates them against the body of prior research, and identifies both trends and variances. The conversation that follows is organized around three main themes: participant demographics, use of medical technologies, and views of

advancements. The participant demographics provide fascinating insights into the range of viewpoints present in the Nigerian healthcare system. The age range of healthcare professionals, such as doctors, nurses, pharmacists, and radiologists, reflects a multigenerational workforce devoted to patient care (Lambert et al., 2023). Patients from various age groups and health conditions took part, reflecting the wide range of health issues Nigeria faces (Porter et al., 2021). From a policy-making and administrative perspective, healthcare administrators—including hospital management and government representatives—contribute important opinions (Bhatti et al., 2021).

The results of our study support Abimbola and Montagu's contention that a multi-sectoral approach involving politicians, healthcare practitioners, and administrators is essential for healthcare reform when compared to other studies' analyses of this demographic distribution. Our study's participant demographic diversity highlights the value of taking into account different stakeholder viewpoints when evaluating the effects of healthcare innovations. The survey's findings show that different participant groups have adopted healthcare advances at different rates. Electronic health records (EHRs), mobile apps, and telemedicine all showed relatively high adoption rates among healthcare professionals (85%, 70%, and 60%, respectively). This is consistent with the global trend toward digitizing healthcare systems to better clinical decision-making, improve patient care, and streamline workflows. Patient acceptance rates were moderate, with 45% of patients using telemedicine, 30% using electronic health records, and 25% using mobile apps. Indicating that these innovations are gaining popularity in both the administrative and clinical domains, healthcare administrators also demonstrated moderate to high adoption rates.

The adoption rates of healthcare innovations in our study are more optimistic than those previously reported in the Nigerian setting when compared to the work of Lopes and Ribeiro (Parracha et al., 2023). This shows that initiatives to promote and incorporate these technologies into the healthcare system have had success, which may enhance access to high-quality care. Although there are differences, participants' assessments of the advantages brought about by healthcare advancements are similar across categories. The biggest perceived gains in patient outcomes (80%) and access (65%) were reported by healthcare professionals. With 50% citing improved treatment outcomes and 40% mentioning improved access, patients viewed changes to be slightly less significant. Between these two groups, healthcare administrators saw better patient outcomes perceived by 70% and greater access perceived by 55%.

The World Health Organization's case studies on innovations in health service delivery are comparable to our findings in that they frequently result in better patient outcomes and increased access to care (Beres et al., 2019). The larger percentages of perceived improvements among healthcare professionals and administrators in our survey, however, might point to a greater understanding of the potential advantages such innovations could have for patient care. Patients' more circumspect impressions may be influenced by things like digital literacy, patient empowerment, and first-hand encounters with the technologies. The analysis of our data reveals Nigeria's healthcare innovations' upward trend. The convergence of perspectives among stakeholders points to a general comprehension of the benefits of these developments. Healthcare administrators and practitioners appear to be more accepting of innovations' capacity to address problems with the healthcare system, based on their higher adoption rates and more favorable perceptions.

The low patient acceptance rates, however, raise concerns about potential obstacles such the digital gap, cultural attitudes, and resource awareness. It may be necessary to implement stronger digital literacy programs and focused educational campaigns to close this gap. It's also

important to investigate ways to improve patient engagement and promote cultural acceptance of innovations. This study examines participant demographics, utilization rates, and views of improvements to provide insight into the present state of healthcare innovations in Nigeria. The results show a tendency in favor of incorporating innovations into the healthcare system, with administrators and practitioners taking the lead. Although encouraging, there are still difficulties in ensuring that all patients have access to and use technology. The limitations of the study, such as the cross-sectional nature of the data, highlight the need for longitudinal studies to monitor the long-term impact of innovations on healthcare outcomes.

This study adds to the larger conversation about healthcare innovations and their potential to improve access and quality care by contrasting and contrasting our findings with prior research. In order to overcome obstacles, seize opportunities, and lay a solid foundation for sustainable healthcare innovation in Nigeria, policymakers, healthcare providers, and stakeholders must work together.

Conclusion

To revolutionize the healthcare landscape and solve the issues of access and quality care, innovations in Nigerian health management are essential. The complex interactions between healthcare innovations, the Nigerian context, and the perspectives of various stakeholders have been examined in this study. A thorough knowledge has been developed through a quantitative methodology that includes participant demographics, usage rates of healthcare innovations, and perceptions of changes. The participant demographics emphasized the diversity of knowledge and experiences within the Nigerian healthcare sector. This diversity reflects the intricate mosaic of opportunities and difficulties in healthcare that exist across all age groups, professions, and responsibilities. These results highlight the significance of multi-stakeholder participation in developing efficient healthcare plans that meet the particular requirements of distinct demographic segments.

The uptake of medical breakthroughs demonstrated encouraging development. The commendably high adoption rates among healthcare professionals may indicate their openness to adopting transformational technologies and methods. This adoption trend is in line with global initiatives to digitally transform healthcare delivery systems for better effectiveness and patient outcomes. Additionally, healthcare administrators demonstrated high adoption rates, indicating a rising understanding of the importance of innovations in healthcare governance, administration, and policy-making. The perceptions of improvements showed how various stakeholders agreed on the beneficial effects of healthcare advances. The highest improvements were seen by healthcare practitioners and administrators, highlighting their greater involvement in the implementation and administration of innovations. Although generally good, patient impressions were more nuanced, highlighting the necessity of removing obstacles linked to digital literacy, patient education, and cultural acceptance.

Encouragement was found in the progress made compared to earlier investigations. The current study showed higher adoption rates and more upbeat opinions of healthcare innovations, in contrast to earlier issues observed in the Nigerian healthcare system. This may mark a turning point in Nigeria's healthcare trajectory, with innovations perhaps playing a crucial part in resolving the long-standing problems with access and high-quality care. However, difficulties persist. The low rates of patient uptake prompt questions about fair access and the demand for focused efforts to close the digital gap and improve patient involvement. To ensure that innovations benefit all facets of society and leave no one behind, future efforts should center on sustainable strategies.

This study's findings emphasize the importance of innovations in Nigerian health administration as a spur to development. The report adds insightful information to the discussion on healthcare transformation by illuminating the demographic environment, adoption trends, and perceptions of improvements. Adopting innovations in a way that is inclusive and sensitive to cultural differences appears to be a promising approach as Nigeria works to develop a healthcare system that provides high-quality care and equal access. Collaboration amongst stakeholders, supported by evidence-based insights, will play a critical role in determining how healthcare innovations will shape the future of a healthy nation.

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