



Environmental Accounting (Suleiman, et al. 2026) DOI: <https://doi.org/10.59479/jiaheri.v2i1.136>

Evaluation of Universal Health Coverage Under the Kaduna State Contributory Health Management Agency (Kadchma) In Kaduna State, Nigeria

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Abstract

This study assessed the Implementation of Universal Health Coverage (UHC) under the Kaduna State Contributory Health Management Agency (KADCHMA) in Kaduna State, Nigeria. It examined the dimensions of implementation, affordability, accessibility, enrollment, and quality of services, while identifying challenges faced by beneficiaries. A cross-sectional survey design was adopted, and data were obtained from healthcare workers and clients across selected health facilities. Findings revealed significant progress in improving access to affordable health services; however, persistent challenges such as inadequate funding, poor awareness, and limited infrastructure hinder full realization of universal health coverage. The study recommends increased government investment, stronger community awareness campaigns, and improved monitoring and evaluation mechanisms to sustain progress toward achieving UHC in Kaduna State and Nigeria as a whole.

Keywords: Evaluation, Universal Health, Kaduna State, Health Management, Agency.

Introduction

Universal Health Coverage (UHC) is a key component of the United Nations Sustainable Development Goal (SDG) 3, which aims to “ensure healthy lives and promote well-being for all at all ages” by 2030 (World Health Organization [WHO], 2021). UHC ensures that all people and communities can access essential health services without suffering financial hardship. It involves access to promotive, preventive, curative, rehabilitative, and palliative care of adequate quality (Feldhaus & Mathauer, 2018). Globally, achieving UHC is recognized as a cornerstone of sustainable development and human capital improvement (Devi, 2022).

Despite the global momentum toward UHC, many developing countries, including Nigeria, still face deep-rooted barriers such as weak healthcare systems, insufficient funding, and a high burden of communicable and non-communicable diseases (Hogan et al., 2018). In Nigeria, healthcare delivery is structured at three levels: primary, secondary, and tertiary care. However, these levels are often poorly integrated, and access remains largely dependent on out-of-pocket (OOP) payments, which account for more than 70% of total health expenditure (Aikins, 2021). This high OOP expenditure leads to catastrophic health spending, pushing millions of families into poverty each year (Devi, 2022).

To address these challenges, the Federal Government of Nigeria introduced the National Health Insurance Scheme (NHIS) in 2005, recently upgraded to the National Health Insurance



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Authority (NHIA), to improve access and financial protection. However, coverage remains limited to less than 10% of the population, mostly in the formal sector (Fenny et al., 2018). Recognizing this gap, several states, including Kaduna, established state contributory health management agencies to expand coverage to informal sector workers, rural dwellers, and vulnerable groups.

Kaduna State's Contributory Health Management Agency (KADCHMA) was established to provide equitable access to affordable and quality healthcare through organized health insurance for all residents. KADCHMA operates as a semi-autonomous institution managing funds, enrolling beneficiaries, accrediting providers, and reimbursing services. It seeks to reduce OOP expenditure, enhance service utilization, and strengthen healthcare delivery systems.

However, despite the existence of KADCHMA, many residents of Kaduna State still face difficulties accessing affordable healthcare due to issues such as inadequate sensitization, low enrollment, and infrastructural challenges. There is also limited empirical evidence evaluating the extent to which KADCHMA has advanced UHC goals within the state.

Statement of the Problem

The majority of Kaduna State's population depends on out-of-pocket expenditure for healthcare services. This situation exacerbates poverty and limits access to essential services. The establishment of KADCHMA aimed to reduce these challenges, yet several years after its inception, there is still uncertainty about its effectiveness in improving accessibility, affordability, and service quality. Evaluating its implementation is therefore crucial to determine progress and identify gaps that require policy attention.

Objectives of the Study

1. To examine the level of KADCHMA implementation in Kaduna State.
2. To determine how affordability affects service utilization.
3. To evaluate accessibility to healthcare services under KADCHMA.
4. To examine the impact of enrollment on beneficiaries.
5. To assess the quality of healthcare services.
6. To identify challenges affecting KADCHMA implementation.

Significance of the Study

This study contributes to the understanding of state-level health insurance programs in Nigeria, providing evidence-based insights for policymakers, healthcare administrators, and development partners. It also serves as a reference for other states seeking to strengthen their health insurance programs and promote universal health coverage in line with global best practices (Jaca et al., 2022).

Literature Review

Conceptual Framework of Universal Health Coverage

Universal Health Coverage (UHC) refers to ensuring that all individuals and communities have access to the full range of quality health services they need without financial hardship (WHO, 2019). It rests on three dimensions: (1) population coverage who is covered, (2) service coverage what services are covered, and (3) financial protection what proportion of costs are covered. Achieving UHC requires health systems that are efficient, equitable, and adequately financed.



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According to Edelman and Kudzma (2021), UHC is both a moral and economic imperative. Healthier populations contribute to productivity, economic growth, and poverty reduction. Furthermore, the WHO framework emphasizes that UHC cannot be achieved without strong primary healthcare systems and sustainable financing mechanisms (Barron et al., 2022).

Health Insurance and Financing Models

Health insurance is a key strategy for achieving UHC by pooling risks and resources to protect individuals from high medical costs. In Nigeria, the National Health Insurance Scheme (NHIS) was designed to improve healthcare access, yet its coverage is minimal compared to population needs (Fenny et al., 2018). The introduction of the National Health Insurance Authority (NHIA) Act in 2022 now mandates health insurance for all Nigerians and decentralizes implementation to state agencies (Alawode & Adewole, 2021).

Kaduna State's KADCHMA operates under this decentralized model. Its financing relies on contributions from government, employers, employees, and voluntary enrollees. However, limited fiscal space and irregular contributions hinder its efficiency. Studies have shown that inadequate funding and poor premium collection limit the sustainability of similar schemes across Nigeria (Aikins, 2021; Ipinnimo et al., 2022).

Universal Health Coverage in Africa

Many African countries have adopted health insurance schemes as pathways to UHC. Ghana's National Health Insurance Scheme (NHIS) and Kenya's National Hospital Insurance Fund (NHIF) have improved healthcare access but face sustainability issues due to weak financial mechanisms (Van der Wielen & Johnson, 2018). Rwanda's community-based insurance model, which integrates government subsidies for the poor, is often cited as one of Africa's most successful examples (Fadlallah et al., 2018). These experiences demonstrate the importance of context-specific models supported by political commitment and efficient governance.

Challenges in Achieving UHC

Major obstacles to achieving UHC in developing countries include poor health infrastructure, inadequate human resources, weak governance, corruption, and inequitable access to rural healthcare (Eboime, 2019; Singh, 2019). High population growth and limited domestic revenue mobilization also strain health budgets (Aikins, 2021). In Nigeria, low awareness and mistrust of insurance programs further limit participation (Olugbenga, 2017).

Kaduna State faces similar challenges uneven distribution of healthcare facilities, poor service quality, and low community participation. Without addressing these systemic issues, progress toward UHC remains slow.

Empirical Studies

Several empirical studies have examined the impact of health insurance on UHC outcomes. Krishna (2013) reported that access to social health insurance in India reduced catastrophic spending and improved service utilization. In Ghana, Fenny et al. (2018) found that insurance coverage significantly improved maternal and child health outcomes. However, in Nigeria, studies by Aikins (2021) and Abonyi et al. (2022) noted that administrative inefficiencies, funding gaps, and weak monitoring systems limit the success of health insurance programs.



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Theoretical Framework

The Public–Private Partnership and Community-Based Health Insurance Model underpin this study. It emphasizes collaboration among government, private sector, and communities to mobilize resources, share risks, and improve service delivery (Fadlallah et al., 2018). This approach fosters sustainability and ensures that programs like KADCHMA remain community-owned and responsive to local needs.

Methodology

Research Design

To carry out the research. A descriptive cross-sectional survey design was employed to gather data from KADCHMA beneficiaries and health workers.

Population and Sampling

The study population consisted of 949,132 enrollees across 1,068 primary healthcare centers. Using Taro Yamane’s formula, a sample of 389 respondents was drawn using random sampling.

Instrument and Data Collection

A structured questionnaire was used to collect data on implementation, affordability, accessibility, enrollment, service quality, and challenges.

Data Analysis

Descriptive and inferential statistics were used. Mean scores above 3.00 indicated positive responses, while those below 3.00 indicated challenges.

Results

Table 1: Demographic Characteristics of Respondents (N = 389)

Variable	Category	Frequency	Percentage (%)
Gender	Male	214	55.0
	Female	175	45.0
Age (Years)	18–30	94	24.2
	31–40	158	40.6
	41–50	92	23.7
	51 and above	45	11.5
Educational Level	Secondary	56	14.4



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Variable	Category	Frequency	Percentage (%)
Occupation	Tertiary	248	63.8
	Postgraduate	85	21.8
	Health Worker	123	31.6
	Civil Servant	104	26.7
	Trader/Artisan	98	25.2
	Farmer	64	16.5

Most respondents were within 31–40 years of age, with tertiary education being predominant. This suggests a relatively educated respondent pool, enhancing the reliability of responses.

Table 2: Respondents’ Perception of KADCHMA Implementation

Statement	Mean	Std. Dev.	Remark
KADCHMA has improved access to health services	3.89	0.82	Agreed
The scheme is effectively implemented across LGAs	3.65	0.93	Agreed
There is regular monitoring and supervision	3.24	0.91	Moderate
There is transparency in fund utilization	2.95	1.08	Disagreed

Interpretation: The scheme has improved access and implementation but needs greater transparency and monitoring.

Table 3: Affordability and Accessibility of Health Services

Indicator	Mean	Std. Dev.	Remark
Health services are affordable under KADCHMA	3.82	0.79	Agreed
Out-of-pocket spending has reduced	3.56	0.85	Agreed



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Indicator	Mean	Std. Dev.	Remark
Health facilities are physically accessible	3.68	0.88	Agreed
Rural dwellers have equal access to facilities	2.84	0.96	Disagreed

While affordability and general access improved, rural communities remain disadvantaged.

Table 4: Quality of Service and Client Satisfaction

Item	Mean	Std. Dev.	Remark
Availability of essential drugs	3.45	0.84	Agreed
Staff attitude and professionalism	3.71	0.77	Agreed
Waiting time for patients	2.92	0.99	Disagreed
Cleanliness of facilities	3.66	0.83	Agreed
Overall satisfaction with KADCHMA services	3.74	0.81	Agreed

Respondents were generally satisfied with services, although long waiting times remain a concern.

Table 5: Major Challenges Identified by Respondents

Challenge	Frequency	Percentage (%)
Inadequate funding	105	27.0
Poor awareness and sensitization	87	22.4
Shortage of trained personnel	74	19.0
Administrative delays	69	17.7
Poor infrastructure (rural areas)	54	13.9

The most pressing issues are financial and informational, reflecting systemic weaknesses in Nigeria's health sector.



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Discussion of Results

The findings reveal significant improvements in healthcare affordability and accessibility under KADCHMA, consistent with global evidence linking insurance schemes to better health outcomes (Barron et al., 2022). However, unequal access across regions and limited funding constrain progress. The findings align with similar studies that emphasize the importance of strong governance and equitable resource allocation for UHC achievement (Aikins, 2021; Fenny et al., 2018).

Conclusion

The Kaduna State Contributory Health Management Agency has made measurable progress toward universal health coverage by improving affordability and service access. Nevertheless, gaps in infrastructure, funding, and awareness continue to hinder optimal performance. Strengthening institutional capacity and stakeholder collaboration is essential for sustainability.

The Kaduna State Contributory Health Management Agency (KADCHMA) is a health service initiative in Kaduna state, Nigeria. The agency provides health services to the citizens of Kaduna, including those who are unemployed or have no formal education. The KADCHMA has been implemented by the National Health Insurance Scheme (NHIS), which aims to provide affordable and accessible healthcare services to the citizens of Kaduna.

The study found that civil servants in Kaduna state agree with the aim of NHIS, providing health insurance for vulnerable groups, employee pay, and financial management. The accessibility of health care services was also agreed upon, with respondents being aware of the benefits of health services and the general cost of health insurance premiums

Major Findings

- 3 Kaduna State has effectively implemented the KADCHMA scheme, providing high affordability, accessibility, and quality of health services.
- 4 Enrollment strategies are perceived as somewhat low, and clients face significant challenges and there is room for improvement.
- 5 Despite these challenges, respondents show strong agreement on key aspects of KADCHMA, including implementation, affordability, accessibility, quality, enrollment strategies, and challenges faced by clients with regards to healthcare services.
- 6 High-quality health services improve KADCHMA and can persuade a large number of clients to sign up for the scheme.
- 7 The services provided by KADCHMA are considered affordable by the respondents, enhancing the scheme's accessibility.
- 8 The services offered by KADCHMA are widely accessible to the respondents, which is crucial for the success of any health management scheme.

Recommendations

The study recommends as stated below:

1. Increase government funding for state health insurance programs.
2. Intensify public awareness and enrollment campaigns.



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3. Improve infrastructure, especially in rural health facilities.
4. Regularly train health workers on quality service delivery.
5. Establish transparent financial management and monitoring systems.
6. Foster partnerships between government, private sector, and communities.

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