Review
Adewoye et. al., Glob. South Health Horiz. 2025 1(2):1-
10.63950/gshh.2025.1.2.19

Strengthening Nigeria's Health System: A Scoping Review of Recent Reforms, Implementation Outcomes, and Systemic Challenges (2015–2025)

Adewoye AA[1], Lawal SA[1], Obadina AO[2], Ibor GO[3]
1 Department of Public Health, Babcock University, Ilishan-Remo, Ogun State, Nigeria
2 McPherson University, Ogun State, Nigeria
3 University of Calabar, Calabar, Cross River State, Nigeria

Date of Submission: 27th July 2025
Date of Acceptance: 10th August 2025
Date of Publication: 30th October 2025

Abstract

Introduction: Nigeria's health system continues to face systemic challenges, including underfunding, fragmented governance, workforce shortages, and inequitable access to services, despite repeated reforms. While numerous initiatives have been implemented to strengthen the health system in line with Universal Health Coverage (UHC) goals, existing evidence remains fragmented and lacks comprehensive synthesis. This review aimed to map, synthesise, and critically assess health system strengthening initiatives in Nigeria from 2015 to 2025, highlighting their outcomes, implementation barriers, and policy implications.

Methods: A scoping review was conducted per the PRISMA-ScR (2020) guidelines and the Arksey and O'Malley framework, as enhanced by Levac et al. A mixed-methods approach was employed to incorporate both qualitative and quantitative studies. Four major databases, PubMed, Scopus, ScienceDirect, and Google Scholar, were systematically searched between April 21 and May 13, 2025, for studies published from January 2015 to May 2025. Eligibility criteria were defined using the Population–Concept–Context (PCC) framework. Eleven studies met the inclusion criteria.

Synthesis: Five thematic domains emerged: national policy reforms, digital health innovations, community-based interventions, infrastructure and service delivery, and governance and financing. Key initiatives included the National Health Act, NHIA Act, Basic Health Care Provision Fund (BHCPF), digital tools such as ClinPak and mHealth apps, and community models like Community-Based Health Insurance (CBHI). While many initiatives led to improved healthcare access, patient satisfaction, and service delivery, especially in underserved areas, most faced sustainability challenges due to political instability, poor infrastructure, fragmented implementation, and insufficient financing. Innovative Nigerian solutions, such as a decentralised offline patient ID system, showed promise for improving health information systems and coverage.

Conclusion: Although Nigeria has introduced significant health reforms over the past decade, their success remains uneven. Future efforts must prioritise policy continuity, systems integration, equitable financing, and scaling of context-specific innovations. This review underscores the need for coordinated, evidence-informed strategies to build a resilient health system and achieve UHC. Longitudinal research is needed to assess the sustainability, impact, and scalability of these interventions across diverse geopolitical contexts.

Keywords: Health system strengthening, Nigeria, Universal Health Coverage, Health reform, Digital health, Patient satisfaction, Community-based health insurance

Introduction

Nigeria, the most populous country in Africa, continues to face persistent and systemic challenges in delivering equitable, efficient, and high-quality healthcare. Despite decades of investment, reform efforts, and international partnerships, the Nigerian health system remains constrained by chronic underfunding, workforce shortages, weak infrastructure, fragmented governance, and substantial disparities in access, particularly in rural and underserved regions (1, 2, 3).

Health indicators such as maternal and child mortality, immunisation coverage, and access to essential services remain below regional and global targets. A significant contributor to these poor outcomes is the fragility of Nigeria's health system, which exhibits inefficiencies across all six World Health Organisation (WHO) health system building blocks: service delivery, health workforce, health information systems, access to essential medicines, financing, and leadership/governance (3). For instance, out-of-pocket expenditures still account for over 70% of total health spending in Nigeria, pushing vulnerable households further into poverty and deterring timely healthcare access (4).

In response to these systemic failures, Nigeria has implemented a series of health reform initiatives in the past decade, including legislative and policy frameworks such as the National Health Act (2014), the Basic Health Care Provision Fund (BHCPF), the National Health Insurance Authority (NHIA) Act (2022), and digital health innovations like the Nigeria Health Sector Digital Transformation Strategy (2020–2024). Programs such as Saving One Million Lives (SOML), Community-Based Health Insurance (CBHI), and various mobile health (mHealth) platforms have aimed to increase healthcare access and improve service delivery (5, 6, 7).

However, despite this array of initiatives, implementation has often been inconsistent, underfunded, or politically compromised, leading to fragmented and uneven health gains. The available evidence on these reforms remains dispersed across academic, policy, and programmatic sources, often without a consolidated synthesis of their outcomes, scalability, or sustainability. Previous reviews have focused on singular programs or narrow outcomes, failing to capture the broader ecosystem of health system strengthening in Nigeria (8, 9). As such, a critical gap exists in the literature: there is no comprehensive scoping review that maps recent health system strengthening efforts in Nigeria, identifies patterns of success and failure, and highlights opportunities for integrated and sustainable reform.

This review seeks to address that gap by systematically mapping recent health system strengthening initiatives implemented in Nigeria between 2015 and 2025, analysing their outcomes, and synthesising the implementation barriers reported across the literature. The review adheres to the PRISMA-ScR (2020) guidelines and employs a mixed-method scoping methodology that combines quantitative and qualitative insights.

Objectives

Specifically, this review aims:

1. To synthesise evidence on key health system strengthening initiatives implemented in Nigeria from 2015 to 2025.
2. To evaluate the reported outcomes and impacts of these initiatives on healthcare delivery and population health.
3. To identify implementation challenges and systemic barriers hindering their success.

By consolidating available evidence, this review intends to inform policymakers, development partners, researchers, and other stakeholders in designing context-appropriate, evidence-based reforms to accelerate Nigeria's progress toward Universal Health Coverage (UHC).

Recent contributions further underscore the importance of cross-sectoral governance, innovation uptake, and policy coherence in overcoming structural health system limitations in Nigeria (10, 11, 12).

Methods

Study Design

This study employed a scoping review approach in line with the PRISMA Extension for Scoping Reviews (PRISMA-ScR, 2020) guidelines. The methodology was grounded in the Arksey and O'Malley framework (13), with enhancements by Levac et al. (14) to ensure methodological rigour and iterative analysis. A mixed-method scoping review (MMSR) design was adopted, integrating qualitative and quantitative studies to capture both breadth and depth of evidence related to health system strengthening in Nigeria. This design improves validity and interpretive richness while allowing flexibility to map a wide array of interventions, outcomes, and contextual challenges (15).

Eligibility Criteria

The eligibility criteria were developed using the Population–Concept–Context (PCC) framework to ensure consistency and transparency in study selection. Table 1 summarises the inclusion and exclusion criteria. The ten-year window (2015–2025) was selected to focus on recent reforms following the passage of the National Health Act in 2014, which marked a significant shift in health system policy and funding structure in Nigeria.

Table 1: Eligibility Criteria Using PCC Framework

Criteria	Inclusion	Exclusion
Population	Studies focused on health systems in Nigeria at the federal, state, or local government levels.	Studies unrelated to health systems (e.g., biomedical or clinical trials not tied to systems).
Concept	Studies on health system transformation initiatives, reforms, policies, or interventions.	Studies without reference to system-level initiatives or reforms.
Context	Studies conducted within the Nigerian health context.	Studies not based in or applicable to the Nigerian health system.
Source Type	Peer-reviewed articles, program evaluations, government documents, and grey literature with institutional affiliation (defined as "credible literature").	Blogs, opinion pieces, editorials, or commentaries lacking empirical data or peer review ("non-substantiated commentaries").
Language	English (official language of instruction and publication in Nigeria).	Non-English publications.
Time	Studies published between January 2015 and July 2025.	Studies published before 2015.

Search Strategy

A comprehensive literature search was conducted across four major academic databases: PubMed, Scopus, ScienceDirect, and Google Scholar. The search covered studies published between January 1, 2015, and May 13, 2025. The search window for data collection spanned April 21 to May 13, 2025.

Boolean operators were used to refine the search results: "AND" was used to link major concepts (e.g., "health system strengthening" AND "Nigeria"). "OR" combined synonymous terms (e.g., "healthcare reform" OR "healthcare transformation"). "NOT" excluded irrelevant terms where applicable. Medical Subject Headings (MeSH) and keyword strings were adapted to the syntax of each database. Table 2 presents the final query structure.

Table 2: Sample Search Strings

Database	Search Query String
SCOPUS	TITLE-ABS-KEY(("strengthening health system*" OR "healthcare reform" OR "healthcare transform*" OR "initiatives") AND ("healthcare outcomes" OR "healthcare access*" OR "health service delivery" OR "health governance") AND ("Nigeria") AND PUBYEAR > 2014 AND PUBYEAR < 2026 AND (LIMIT-TO(DOCTYPE,"ar")))
PubMed	("health system strengthening"[Title/Abstract] OR "healthcare reform" OR "health system transformation") AND ("Nigeria") AND ("health outcomes" OR "universal health coverage" OR "health financing" OR "digital health") AND ("2015"[Date - Publication] : "2025"[Date - Publication])
ScienceDirect	("health system strengthening" OR "healthcare reform" OR "health system transformation") AND ("Nigeria") AND ("universal health coverage" OR "digital health" OR "governance") AND (pub-date > 2015)
Google Scholar	intitle:("health system strengthening" OR "healthcare reform" OR "health system transformation") AND ("Nigeria") AND ("health outcomes" OR "UHC" OR "digital health")

Study Selection and Screening

The database search yielded a total of 465 records. After automatic and manual de-duplication, 112 duplicate entries were removed, resulting in 353 unique records for title and abstract screening. Of these, 279 records were excluded for lacking relevance to the study focus. The full texts of 74 potentially eligible studies were sought; however, 46 could not be retrieved due to access restrictions, incomplete publications, or unavailability of full texts. Ultimately, 28 studies were assessed for eligibility, and 11 met the inclusion criteria.

Table 3: Search Summary by Database

Database	Search Date	Filters Applied	Records Retrieved	Notes
Scopus	26-Apr-25	English; 2015–2025	79	Refined with the "service delivery" keyword
PubMed	2-May-25	English; 2015–2025	83	Used Title/Abstract filters for precision

ScienceDirect	2-May-25	English; articles only	105	Limited to research articles
Google Scholar	3-May-25	English; full title matching	198	Used "allintitle" refinement for specificity
Total	April 21–May 13, 2025	Combined filter	465	After de-duplication, 353 remained for screening

PRISMA Flow Diagram

The study selection process is illustrated in Figure 1. All numbers have been reconciled for accuracy.

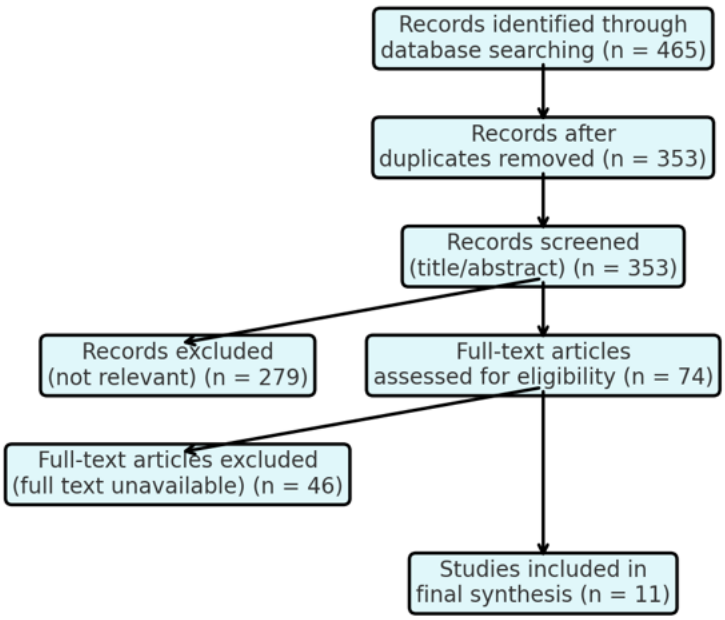

Figure 1: PRISMA-ScR Flow Diagram

Data Extraction and Charting

A standardised data extraction form was developed in Excel. Variables extracted included: author(s), publication year, study design, geographic focus, intervention or policy examined, outcomes reported, and implementation challenges. Mixed-method data (qualitative and quantitative) were coded thematically for synthesis and organised using the WHO health system building blocks as a secondary analytical lens.

Synthesis

Synthesis of Findings

To enhance clarity and policy relevance, the included studies are synthesised thematically into five major domains of health system strengthening in Nigeria: National Policy Reforms, Digital Health Innovations, Community-Based Interventions, Health Infrastructure and Service Delivery, and Governance and Financing Mechanisms.

1. National Policy Reforms

Multiple initiatives at the national level aimed to address systemic constraints in Nigeria's health system. Chief among these were legislative frameworks such as the National Health Act (2014) and the National Health Insurance Authority (NHIA) Act (2022). These acts sought to institutionalise healthcare financing through mechanisms like the Basic Health Care Provision Fund (BHCPF) and the Vulnerable Group Fund (5, 16). While these policies laid a structural foundation, implementation challenges, particularly political instability, weak enforcement mechanisms, and governance fragmentation, limited their efficacy (9, 16).

Moreover, the National Strategic Health Development Plan and National Health Promotion Policy were adopted to guide multi-sectoral efforts towards Universal Health Coverage (UHC), yet these, too, experienced partial rollout due to bureaucratic inertia and resource disparities between federal and state governments (9).

2. Digital Health Innovations

Nigeria has seen growing adoption of digital health tools, driven in part by the COVID-19 pandemic and the push for decentralised service delivery. Innovations such as mHealth applications (e.g., SaferMom, Hudibia, Mobile Authentication Service) were found to increase access to health education and remote consultations, especially in rural areas (7). Similarly, digital systems like ClinPak and Video Training Applications (VTR) improved maternal and child health services and frontline health worker performance (17). Yet, technological interventions were often hampered by infrastructural challenges, including unreliable electricity, poor internet connectivity, and the absence of policy

frameworks to support integration and sustainability (7, 18). A unique innovation was the development of decentralised offline patient identification systems, which demonstrated improved interoperability across health facilities and enhanced UHC enrolment (18).

3. Community-Based Interventions

Community-level reforms were instrumental in expanding access to care, especially among underserved populations. The Community-Based Health Insurance (CBHI) scheme was shown to improve the affordability of services, supported by strong political engagement and multistakeholder involvement (6). Likewise, the Informal Medical Outreach (IMO) program bridged service gaps for marginalised groups, though its lack of integration into national systems limited sustainability (19). Despite their promise, community interventions often faced political interference and inconsistent execution across states, reflecting the decentralised nature of Nigeria's health governance (6).

4. Health Infrastructure and Service Delivery

Interventions targeting primary healthcare infrastructure and service delivery highlighted the persistent fragility of Nigeria's PHC system. Studies revealed deficits in basic diagnostics, personnel, and health information management. Notably, Elemuwa et al. (20) emphasised the critical role of PHC laboratories in preventive and curative care and highlighted their marginalisation in funding and policy prioritisation.

In Northeast Nigeria, where conflict and humanitarian crises are prevalent, infrastructure development has remained limited. Although workforce expansion and community engagement were attempted, these efforts were constrained by underfunding, insecurity, and chronic shortages of skilled personnel (20, 21).

5. Governance and Financing Mechanisms

Across all categories, governance emerged as a recurrent challenge. Political instability, fragmentation of authority, and lack of long-term policy continuity hindered the success of even well-designed reforms (5, 16). Funding constraints were universal, spanning federal underinvestment, inefficient subnational resource allocation, and donor-dependence (8, 9).

Decentralised systems also suffered from poor coordination among government tiers, limiting scalability and integration. These findings are consistent with assessments from other LMICs where political economy factors often undermine health system transformations (22).

Table 5: Key Findings from Included Studies

Thematic Domain	Initiative/Program	Reported Outcomes	Challenges Identified
National Policy Reforms	NHIA Act, National Health Act, BHCPF	Improved financing structures, legal mandates	Partial implementation, governance gaps
Digital Health	mHealth (SaferMom, MAS), ClinPak, VTR	Increased access, service efficiency	Infrastructure, power, and internet issues
Community-Based	CBHI, Informal Medical Outreach	Expanded coverage for underserved groups	Lack of integration, political dominance
Infrastructure & Delivery	PHC laboratory upgrade, workforce expansion	Improved early diagnosis, service delivery	Resource scarcity, security threats
Governance & Finance	Strategic Plan, Vulnerable Group Fund	Prioritised maternal/child health	Poor coordination, insufficient funding

Figure 2 shows a bar chart visualising the number of initiatives grouped by domain: Policy Reform, Digital Health, Community-Based, Infrastructure, and Governance.

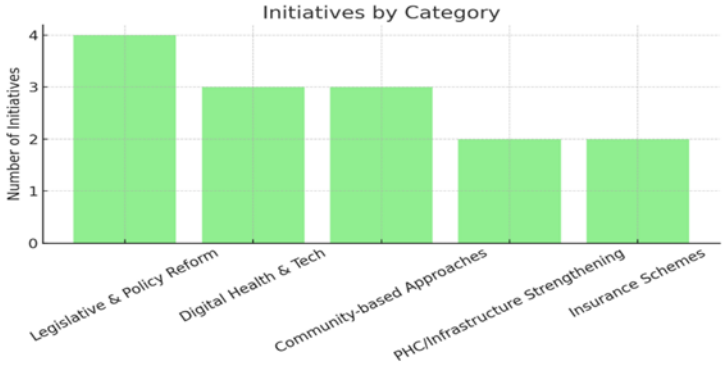

Figure 2: Initiatives by Category

Figure 3 is a bar chart showing the frequency of outcomes such as increased access, improved service delivery, workforce motivation, and patient satisfaction.

Figure 3: Reported Outcomes by Category

Figure 4 is a bar chart indicating the top barriers: inadequate funding, political instability, poor infrastructure, workforce shortage, and lack of stakeholder engagement.

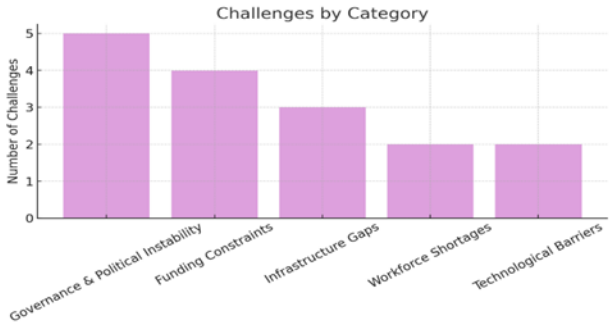

Figure 4: Implementation Challenges Identified

Discussion

Nigeria's challenges are not unique. Similar patterns are observed in other low- and middle-income countries (LMICs) such as Kenya, Uganda, and Bangladesh, where decentralisation without adequate funding or coordination leads to fragmented reforms. However, Nigeria's experience is further complicated by political instability and wide regional disparities, particularly in conflict-affected zones like the Northeast (22).

Digital health interventions have succeeded in contexts like Rwanda due to strong central leadership and strategic donor alignment, factors lacking in Nigeria's implementation environment. While initiatives like the decentralised patient ID system represent homegrown innovations, their impact is limited without systems integration and institutional buy-in (18).

This scoping review synthesised recent health system strengthening efforts in Nigeria between 2015 and 2025, revealing a diverse array of reforms targeting financing, digital health, service delivery, and governance. While these interventions align with global principles for achieving Universal Health Coverage (UHC) and Sustainable Development Goal 3, they continue to face systemic and contextual barriers that limit their scalability and sustainability.

To interpret the findings, we draw on the WHO's health system building blocks and the Donabedian framework (structure-process-outcome). These frameworks help evaluate how Nigeria's reforms have attempted to strengthen the foundations (e.g., governance, health workforce, financing), improve service processes (e.g., delivery, digital innovations), and achieve desirable health outcomes (e.g., increased coverage, patient satisfaction).

Health Financing and National Policy Reform

The National Health Act (2014) and the subsequent NHIA Act (2022) were designed to reduce financial barriers to care through pooled funding mechanisms like the Basic Health Care Provision Fund (BHCPF) and Vulnerable Group Fund. While structurally sound, their implementation has been uneven. Political instability, overlapping responsibilities across tiers of government, and inadequate monitoring frameworks have hindered these reforms, especially at subnational levels (5, 16).

This is consistent with findings by Ugwu et al. (10), who highlight that federal-state fiscal misalignment remains a significant bottleneck in health systems decentralisation. These challenges also resonate with broader LMIC patterns, where reforms often falter due to political economy constraints and weak institutional capacity (22).

The implementation of these reforms must also be aligned with Nigeria's National Strategic Health Development Plan II (2018–2022) and the recently launched Health Sector Renewal Investment Initiative (2023–2030), both of which emphasise equitable primary care, human resource development, and strategic purchasing.

Digital Health: Innovations and Contradictions

Digital innovations such as mHealth apps, ClinPak, and video training tools (e.g., VTR) have demonstrated potential in improving maternal and child health service delivery, health worker performance, and patient satisfaction (7, 17). However, their success has been inconsistent. In urban or donor-supported environments, these tools flourish, but in underserved areas, poor internet connectivity, erratic power supply, and lack of integration into health information systems restrict impact (18).

The decentralised offline patient ID system presents a notable innovation. Its adaptability to low-resource settings and its potential to strengthen health information systems position it as a scalable solution for accelerating UHC enrolment (18). This finding is reinforced by Abiodun et al. (12) in Babcock University Medical Journal, who opined that patient-centred technologies increase service continuity in informal settlements when aligned with community health worker systems.

However, the absence of a national digital health governance framework leaves these innovations fragmented. Strategic alignment with the Nigeria Health Sector Digital Transformation Strategy (2020–2024) is crucial for moving beyond pilot programs to system-wide digital integration.

Community-Based Interventions and Equity

Community-led interventions such as CBHI and Informal Medical Outreach (IMO) addressed structural inequities by extending access to populations traditionally excluded from formal health systems (6, 19). These models reflect the principle of community engagement outlined in the WHO's UHC action agenda.

Nonetheless, sustainability concerns persist due to limited institutional recognition and unstable funding streams. Riddle et al found similar issues with community-based programs in Sierra Leone and Ghana, noting that without government-backed regulatory and financial frameworks, such innovations risk becoming parallel systems rather than transformative platforms (23).

To improve long-term outcomes, Nigeria should incorporate successful CBHI schemes into national health insurance architecture and expand accountability mechanisms to track equity and coverage impacts.

Infrastructure, Workforce, and Fragility Contexts

Basic health infrastructure and workforce capacity remain persistent weaknesses, especially in conflict-affected zones like Northeast Nigeria. Elemuwa et al. (20) emphasised the underfunded state of PHC laboratories, which limits diagnostic capacity and early disease detection. Similarly, Musa et al. (21) illustrated how workforce attrition due to insecurity undermines service delivery despite policy commitments to revitalisation. These findings mirror those of Fofah (24) and Onwujekwe et al. (25), who argue that Nigeria's health system is deeply vulnerable to regional shocks, a factor that must be considered in all future UHC planning.

Governance and Political Economy

Governance-related challenges, such as a lack of continuity, stakeholder misalignment, and decentralised dysfunction, cut across all reform areas. Although the federal government introduces most policies, implementation is primarily subnational, resulting in fragmentation (9). Onwujekwe et al. (25) underscore the need for cross-programmatic coordination and leadership accountability, while Amedari and Ejidike (26) highlight how systemic inefficiencies reduce return on investment, even when resources are available. Governance reforms under the Health Sector Renewal Investment Initiative must prioritise regulatory clarity, fiscal accountability, and participatory planning to overcome these gaps.

Linking to SDG 3 and Nigeria's UHC Roadmap

This review shows that while Nigeria has made progress on specific indicators (e.g., maternal health, insurance expansion, digital health), it is unlikely to meet SDG 3 targets without accelerated implementation of integrated and resilient health system reforms. The findings provide actionable insights for the UHC roadmap:

1. Expand fiscal space for health by meeting Abuja Declaration targets and prioritising primary care investment.
2. Institutionalise digital health governance for scale-up and interoperability.
3. Mainstream community-based programs within national systems to ensure sustainability and equity.
4. Develop conflict-sensitive health strategies for fragile regions.

Study limitations

Several limitations should be acknowledged. The review included only English-language publications, potentially excluding relevant francophone or indigenous-language studies. Grey literature was selectively included; program reports and donor evaluations not available in indexed databases may have been missed. The search covered up to May 2025; the review may not reflect the latest developments in the evolving health sector landscape. Most studies

included were descriptive or cross-sectional, limiting causal inference.

Conclusion

Nigeria's pursuit of health system transformation over the past decade reflects both its ambition to achieve Universal Health Coverage and the complex realities of systemic reform in a resource-constrained and politically fragmented environment. The diverse range of interventions, spanning policy, digital innovation, and community-based models, demonstrates that meaningful progress is possible. However, progress remains uneven, and reforms often falter at the point of implementation due to entrenched governance challenges, underinvestment, and inadequate system integration.

To move from piecemeal gains to sustainable transformation, Nigeria must invest in building cohesive, resilient, and inclusive health systems. This requires prioritising political continuity, institutional coordination, and equitable financing mechanisms across federal and state levels. National reforms must not only be well-designed but also embedded in operational structures that ensure accountability, transparency, and adaptability at all levels of the health system.

Innovative, context-specific solutions, such as the decentralised offline patient identification system, offer valuable models for other low- and middle-income countries navigating similar constraints. These homegrown technologies should be institutionalised, scaled, and linked to broader digital governance frameworks. Likewise, community-based interventions like CBHI and informal outreach programmes must be recognised not as stopgaps, but as essential components of a health system committed to equity.

Policymakers should seize the opportunity presented by the Health Sector Renewal Investment Initiative and Nigeria's broader UHC roadmap to bridge the gap between policy intent and implementation reality. This will require targeted investments in health infrastructure, human resources, and digital health systems, alongside greater community participation and intergovernmental alignment.

Looking ahead, future research should prioritise longitudinal and impact evaluation studies that assess not only the outcomes but also the sustainability and scalability of these reforms. Comparative studies across geopolitical zones and subnational governments will also be critical to understanding what works, where, and why. There is a pressing need to explore the long-term effects of digital and financing innovations on health equity, service quality, and population health outcomes.

Ultimately, Nigeria's pathway to UHC lies not in the novelty of reforms but in their sustained, inclusive, and coordinated execution. Achieving this will demand not just more resources, but smarter governance, bolder leadership, and deeper accountability to the communities the health system is meant to serve.

Abbreviations

BHCPF: Basic Health Care Provision Fund
CBHI: Community-Based Health Insurance
EMR: Electronic Medical Record
FMoH: Federal Ministry of Health
IMO: Informal Medical Outreach
LMICs: Low- and Middle-Income Countries
MAS: Mobile Authentication Service
MMSR: Mixed-Method Scoping Review
mHealth: Mobile Health
NHIA: National Health Insurance Authority
NHIS: National Health Insurance Scheme
NSHDP II: National Strategic Health Development Plan II
PHC: Primary Health Care
PRISMA-ScR: Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews
SOML: Saving One Million Lives
SDG: Sustainable Development Goal
UHC: Universal Health Coverage
VTR: Video Training Resource
WHO: World Health Organisation

Declarations

Ethics Approval: Not applicable. This study is a scoping review of publicly available literature and did not involve human participants or the collection of primary data.

Data Availability: All data analysed during this study are included in the published articles and reports referenced. Extracted data tables can be made available by the corresponding author upon reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Funding sources: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author contributions: AAA and LSA conceptualised the study. AAA, OAO and IGO conducted the literature search and data extraction. AAA performed the analysis and wrote the initial manuscript. LSA supervised the work. All authors reviewed, edited, and approved the final manuscript.

Acknowledgements: The authors thank colleagues and supervisors at Babcock University for methodological insights and support during manuscript preparation.

References

1. Balogun JA. The vulnerabilities of the Nigerian healthcare system. In: The Nigerian healthcare system: pathway to universal and high-quality health care. Cham: Springer International Publishing; 2022. p. 117–52. https://doi.org/10.1007/978-3-030-88863-3_5
2. Abah VO. Poor health care access in Nigeria: a function of fundamental misconceptions and misconstruction of the health system. In: Healthcare Access—New Threats, New Approaches. London: IntechOpen; 2022. https://doi.org/10.5772/intechopen.108530

3. Abubakar I, Dalglish SL, Angell B, Sanuade O, Abimbola S, Adamu AL, et al. The Lancet Nigeria Commission: investing in health and the future of the nation. Lancet. 2022;399(10330):1155–200. https://doi.org/10.1016/S0140-6736(21)02488-0
4. Aregbeshola BS. Towards health system strengthening: a review of the Nigerian health system from 1960 to 2019 [Internet]. SSRN; 2021 [cited 2025 Jul 25]. Available from: https://ssrn.com/abstract=3766017
5. Croke K, Ogbuoji O. Health reform in Nigeria: the politics of primary health care and universal health coverage. Health Policy Plan. 2024;39(1):22–31. https://doi.org/10.1093/heapol/czad107
6. Lawal AF. Politics of healthcare reform in Africa: insights from rural Nigeria. Berumpun Int J Soc Polit Humanit. 2024;7(1):26–38. https://doi.org/10.33019/berumpun.v7i1.144
7. Babatunde AO, Abdulkareem AA, Akinwande FO, Adebayo AO, Omenogor ET, Adebisi YA, et al. Leveraging mobile health technology towards achieving universal health coverage in Nigeria. Public Health Pract. 2021;2:100120. https://doi.org/10.1016/j.puhip.2021.100120
8. Elebesunu EE, Oke GI, Adebisi YA, Nsofor IM. COVID-19 calls for health systems strengthening in Africa: a case of Nigeria. Int J Health Plann Manage. 2021;36(6):2035–43. https://doi.org/10.1002/hpm.3296
9. Obalum DC, Alkali F, Agwu SK. Analysis of health care policies and strategies in Nigeria. J Med Stand Ethics. 2023;1(1):19–26.
10. Ugwu CN, Ugwu OPC, Alum EU, Eze VHU, Basajja M, Ugwu JN, et al. Sustainable development goals (SDGs) and resilient healthcare systems: addressing medicine and public health challenges in conflict zones. Medicine (Baltimore). 2025;104(7):e41535. https://doi.org/10.1097/MD.0000000000041535
11. Olu-Abiodun O, Abdalredha R, Faturoti A, Abiodun O. Voices from Iraq: emerging clinical evidence and implications for global health equity. Babcock Univ Med J. 2025;8(S1):1. http://dx.doi.org/10.38029/babcockuniv.med.j..v8iS1.785
12. Abiodun O, Olu-Abiodun OO, Faturoti AF. Charting a new course for Global South health research: equity, evidence, and action. Glob. South Health Horiz. 2025;1(1):1–7. http://dx.doi.org/10.63950/gshh.2025.1.1.8
13. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. Int J Soc Res Methodol. 2005;8(1):19–32. https://doi.org/10.1080/1364557032000119616
14. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. Implement Sci. 2010;5:69. https://doi.org/10.1186/1748-5908-5-69
15. Coetzee BJ. Mixed-method scoping reviews: expanding insight through integrated design. J Adv Res Methodol. 2019;3(2):45–53.
16. Abubakar I, Angell B, Colbourn T, Onwujekwe O, Abimbola S. Priorities and health packages in reforming the Nigerian health system: experience from the Lancet Nigeria Commission. In: Country-Led Priority Setting for Health. 2023. p. 145.
17. Akaba GO, Dirisu O, Yalma RM, Allisop MJ, Ebenso B. Innovative application of digital health solutions to strengthen health systems and improve health outcomes in rural populations of Abuja, Nigeria. Trop J Obstet Gynaecol. 2023;39(3):383–97.
18. Chukwu E, Ekong I, Garg L. Scaling up a decentralized offline patient ID generation and matching algorithm to accelerate universal health coverage: insights from a literature review and health facility survey in Nigeria. Front Digit Health. 2022;4:985337. https://doi.org/10.3389/fdgth.2022.985337
19. Oyeyemi A, Oyeyemi N, Sawyer W, Omu E, Angalabiri-Owei B, Chima I, et al. Optimising informal medical outreach for universal health coverage and health system strengthening in low- and middle-income countries. J Community Med Prim Health Care. 2025;37(1):91–101. https://doi.org/10.4314/jcmphc.v37i1.8
20. Elemuwa CO, Ainu M, Adias TC, Ufuoma RS, Sunday OA, Elemuwa UG, et al. Transforming primary healthcare in Nigeria: enhancing universal health coverage through strong and sustainable primary healthcare laboratories. 2024. https://doi.org/10.32388/74E67L
21. Musa SS, Ibrahim AM, Ogbodum MU, Haruna UA, Gololo AA, Abdulkadir AK, Ukaegbu E, Agyapong J, Shallangwa MM, Adamu NA, Muhammad BA. Revitalizing the state of primary healthcare towards achieving universal health coverage in conflict affected fragile northeastern Nigeria: Challenges, strategies and way forward. Narra X. 2024 Dec 29;2(3):e178-. https://doi.org/10.52225/narrax.v2i3.178
22. Alawode G, Adewoyin AB, Abdulsalam AO, Ilika F, Chukwu C, Mohammed Z, et al. The political economy of the design of the Basic Health Care Provision Fund (BHCPF) in Nigeria: a retrospective analysis for prospective action. Health Syst Reform. 2022;8(1):2124601. https://doi.org/10.1080/23288604.2022.2124601
23. Ridde V, Kok M, Agyepong IA, Falisse JB, Smout E, Druetz T, et al. Strengthening sub-Saharan Africa's health systems: a synthesis of research addressing the performance of health systems and the roles of community health workers. Glob Health. 2018;14(1):85. https://doi.org/10.1186/s12992-018-0447-5
24. Fofah J. Obstacles and challenges affecting the move towards universal healthcare coverage in Nigeria [dissertation]. Swansea (UK): Swansea University; 2021.
25. Onwujekwe O, Ezenwaka U, Agwu P, Nwokolo C, Ukwuije F, Earle AJ, et al. Assessing root causes and

solutions to address cross-programmatic inefficiencies in a subnational health system: a case study of Anambra State, Nigeria. Health Syst Reform. 2024;10(3):2441533. https://doi.org/10.1080/23288604.2024.2441533

26. Amedari MI, Ejidike IC. Improving access, quality and efficiency in health care delivery in Nigeria: a perspective. PAMJ ne Health. 2021;5(3). https://doi.org/10.11604/pamj-oh.2021.5.3.28204