

Primary Health Care Financing Mechanisms and Out of Pocket Healthcare Expenditures Among Service Users: Implications for achieving Universal Health Coverage in Kogi State, Nigeria

Adaji Abdul

Department of Public Administration, Auchi Polytechnic, Auchi, Edo State, Nigeria
adajiabdulhero48@gmail.com

Hassan Achimugu, PhD

Department of Public Administration, Prince Abubakar Audu, University, Anyigba, Kogi State, Nigeria
hassanachimugu@gmail.com

Abstract

This study examined the influence of Primary Health Care (PHC) financing mechanisms on out-of-pocket healthcare expenditures among service users in Kogi State, Nigeria, with a view to assessing their implications for achieving Universal Health Coverage (UHC). The study adopted a descriptive cross-sectional survey design. The target population comprised 1,344,493 residents and users of PHC facilities across six selected Local Government Areas. Using Taro Yamane's formula, a sample size of 400 respondents was determined and proportionately distributed across the selected LGAs. A multi-stage sampling technique was employed to select respondents, while 20 key informants were purposively selected for interviews. Primary data were collected through structured questionnaires and semi-structured interview, while secondary data were obtained from relevant textbooks, journal articles, government publications, and policy documents. Of the 400 questionnaires administered, 372 were completed and returned. Quantitative data were analyzed using descriptive statistics and Simple Linear Regression with the aid of IBM SPSS Statistics Version 25, while qualitative data were analyzed using thematic content analysis. The findings revealed that most respondents perceived PHC services as unaffordable and reported that financial barriers significantly limited their utilization of PHC services. Respondents also identified inadequate availability of essential medicines as a major challenge confronting PHC facilities. Regression analysis showed that PHC financing mechanisms have a statistically significant influence on out-of-pocket healthcare expenditures among service users in Kogi State. Findings from the key informant interviews further revealed that inadequate budgetary allocation, delayed release of funds, limited health insurance coverage, frequent stock-outs of essential medicines, and weak implementation of financing programmes continue to undermine financial risk protection and the attainment of Universal Health Coverage. The study recommended increased government funding for PHC, timely disbursement of the Basic Health Care Provision Fund, expansion of health insurance coverage, regular supply of essential medicines, strengthening of PHC governance and accountability systems, and intensified monitoring and evaluation to accelerate progress toward Universal Health Coverage.

Keywords: Primary Health Care, PHC Financial Mechanisms, Universal Health Coverage, Out of Pocket Health Expenditure, Financial Risk Protection, Health Insurance

INTRODUCTION

Globalization is placing increasing pressure on health systems worldwide, exposing weaknesses in their ability to provide equitable and accessible healthcare services that meet the changing needs of

populations (Daboul, 2013 cited in Dada, 2023). In response to these challenges, Primary Health Care (PHC) has been recognized as the cornerstone of effective health systems due to its emphasis on social justice, equity, community participation, and universal access to healthcare (Wael Daboul, 2022 cited in Dada, 2023).

Primary Health Care serves as the first point of contact between individuals and the healthcare system and remains the most accessible level of care, particularly for rural and underserved populations (WHO, 2018; Adamu, Aminu, Sadiq, Mustapha, Yau, Al Amin, Audu & Isyaku, 2025). PHC is designed to provide affordable, essential, and community-based healthcare services that address the majority of health needs of the population. The World Health Organization recognizes PHC as a whole-of-society approach to health and well-being that is responsive to the needs and preferences of individuals, families, and communities (WHO, 2019). Since the Alma-Ata Declaration of 1978, PHC has remained central to global efforts aimed at achieving equitable healthcare access and improved population health outcomes. The declaration emphasized health as a fundamental human right and advocated for universal access to essential healthcare services through community participation and intersectoral collaboration (WHO, 2024; Musa, Adamu, Molly, Usman, Ahmed, Abdulafeez, Enyinnaya, Joseph, Muktar, Nuruddeen, Bello, & Don, 2024). Evidence suggests that approximately 80% of healthcare needs can be effectively addressed at the primary healthcare level when adequately funded and properly managed (WHO, 2023).

One of the critical functions of PHC is to facilitate financial risk protection, a core component of Universal Health Coverage (UHC). Financial risk protection ensures that individuals and households can access healthcare services without experiencing financial hardship or catastrophic health expenditures. According to the WHO (2018), achieving Sustainable Development Goal 3.8 requires strengthening PHC systems and establishing effective financing mechanisms capable of reducing direct out-of-pocket healthcare spending. The effectiveness of PHC in delivering financial risk protection is largely dependent on the financing mechanisms that support service delivery. These mechanisms include government budgetary allocations, health insurance schemes, the Basic Health Care Provision Fund (BHCPF), donor support, and other pooled financing arrangements. Effective health financing systems facilitate equitable access to healthcare services while protecting households from the economic consequences of illness. Conversely, weak financing systems often result in increased reliance on out-of-pocket payments, which remain a major barrier to healthcare utilization in many developing countries.

In Nigeria, the development of the National Health Policy and the establishment of the PHC system were intended to improve healthcare access and affordability, particularly at the grassroots level. However, despite several reforms and investments, the PHC system continues to face significant challenges, including inadequate funding, shortages of health personnel, poor infrastructure, insufficient medical equipment, and limited availability of essential medicines (Aregbeshola, 2017 cited in Musa et al., 2024). These challenges have weakened the ability of PHC facilities to provide affordable healthcare services and have contributed to the continued dependence of households on out-of-pocket expenditure for healthcare. Recognizing the importance of PHC financing, the Federal Government of Nigeria introduced the Basic Health Care Provision Fund (BHCPF) as a key strategy for improving PHC financing and advancing Universal Health Coverage. In Kogi State, the government, through the Kogi State Primary Health Care Development Agency (KSPHCDA), has implemented several financing interventions, including the operationalization of the BHCPF and the provision of counterpart funding to strengthen PHC service delivery (KSPHCDA, 2022 cited in Adaji, Lawal & Onimisi, 2023).

Despite these efforts, concerns remain regarding the effectiveness of existing PHC financing mechanisms in reducing financial barriers to healthcare and protecting households from catastrophic health expenditures. Understanding the influence of PHC financing mechanisms on financial risk protection is therefore essential for informing health financing reforms and advancing Universal Health Coverage in Kogi State.

Statement of the Problem

Financial risk protection remains a major challenge within Nigeria's healthcare system despite numerous policy initiatives and reforms aimed at improving healthcare financing. A functional healthcare system requires adequate financing, efficient resource allocation, skilled personnel, quality service delivery, and equitable access to healthcare services (WHO, 2018). However, these essential components remain inadequate in many Primary Health Care facilities, particularly in rural communities. In response to these challenges, the Kogi State Government, through the Kogi State Primary Health Care Development Agency (KSPHCDA), has implemented several interventions aimed at strengthening PHC financing and service delivery. These interventions include the establishment of the State and Local Emergency Routine Immunization Coordination Centres (SERICC and LERICC), baseline assessments of PHC facilities, implementation of the Primary Health Care Under One Roof (PHCUOR) policy, and the operationalization of the Basic Health Care Provision Fund (BHC PF) with a counterpart contribution of ₦100,000,000 (KSPHCDA, 2022 cited in Adaji, Lawal & Onimisi, 2023).

Despite these financial interventions and policy commitments, significant financing-related challenges persist across PHC facilities in Kogi State. Many facilities continue to experience inadequate funding, shortages of essential drugs, poor infrastructure, insufficient healthcare personnel, and weak maintenance systems (Aregbeshola & Khan, 2017 cited in Adaji, Lawal & Onimisi, 2023). These deficiencies often compel patients to seek healthcare services from alternative providers at higher costs or pay directly for healthcare services, thereby increasing household financial burden. Consequently, many households remain vulnerable to catastrophic health expenditures and impoverishment arising from healthcare costs. This situation undermines one of the key objectives of Universal Health Coverage, which is to ensure that individuals can access needed healthcare services without suffering financial hardship. The persistence of high out-of-pocket expenditure suggests that existing PHC financing mechanisms may not be providing adequate financial risk protection for the population.

Given the central role of financial risk protection in achieving Universal Health Coverage and improving population health outcomes, there is a need to critically examine the extent to which PHC financing mechanisms influence financial risk protection in Kogi State. This study therefore seeks to assess the influence of Primary Health Care financing mechanisms on financial risk protection in Kogi State, Nigeria, with particular emphasis on government funding, the Basic Health Care Provision Fund, health insurance schemes, and out-of-pocket healthcare expenditure.

Research Questions

The research question below was formulated to guide the study.

To what extent does Primary health care financial mechanisms reduce out of pocket healthcare expenditures among service users in Kogi State?

Objectives of the study

The main objective of the study is to assess the influence of Primary Health Care financing mechanisms on financial risk protection and Universal Health Coverage in Kogi State, Nigeria, 2015- 2025. The specific objective is to: Assess the extent to which Primary health care financial mechanisms reduce out of pocket healthcare expenditures among service users in Kogi State.

Hypothesis of the Study

H0: Primary health care financial mechanisms have no significant influence on out of pocket healthcare expenditures among service users in Kogi State.

CONCEPTUAL REVIEW

Primary Health Care

Yisa, Ogunniyi & Dine (2025) posit that primary health care (PHC) is a comprehensive strategy involving the entire society in promoting health. It is an important facet in improving quality of life, emphasising equitable access to health promotion, disease prevention and treatment, rehabilitation and palliative care for all individuals, thereby reducing disparities and improving overall health outcomes. Primary Health care is the lowest level and the entry point to healthcare services, which comprise the Health Posts, Primary Health Clinics and Primary Health Centres. Primary Healthcare Centre provides basic primary care services which includes promotive, preventive, curative and rehabilitative services. Its services are based on local technology and can be easily managed by the local people and community (Adaji, Lawal & Onimisi, 2023). Akinseye, (2020) posits that primary health care is cheaper and affordable to the people in rural communities.

Primary healthcare is defined by the Alma Ata Conference as essential healthcare that is provided to all individuals and families in the community at all times, at a cost that the community and the nation can afford, and with their full participation and means that are acceptable to them. This definition applies to all stages of development, in the spirit of self-reliance and self-determination. Primary healthcare is dependent on methods and technologies that are helpful, reasonable from a scientific standpoint, and socially acceptable (Dada, 2023). Primary healthcare is dependent on methods and technologies that are helpful, reasonable from a scientific standpoint, and socially acceptable. It serves as the primary goal and function of the nation's health system and is essential to the community's overall social and economic development. PHC affects society and politics in a big way. In addition to providing basic healthcare needs in a more equitable, appropriate, and effective manner, it specifically outlined a plan of action that would address the underlying social, economic, and political reasons of poor health (PHAO 2022, cited in Dada, 2023). Principles such as universal accessibility and coverage based on need, comprehensive care with an emphasis on disease prevention and health promotion, individual and community involvement and self-reliance, inter sectoral action for health, appropriate technology, and cost-effectiveness in relation to available resources were to form the foundation of the PHC approach (PHCA). Social justice had a major effect on the concept of PHC (PHAO 2022 cited in Dada, 2023).

Corroborating the above assertions, Adamu et al (2025) aver that primary healthcare is a deliberate and systematic effort to develop a health care system that caters to the needs of majority populations and poor citizens, at an affordable and sustainable cost and with a guarantee of quality health care service through government primary health care centres and faith-based clinics in rural and suburban areas, while secondary and tertiary health facilities serve urban populations. The primary

healthcare system is designed to be cost effective and designated as the first point of call for all, irrespective of the social or economic status. The right to enjoy the highest attainable standard of health is one of the most fundamental human rights in the constitution of the World Health Organization (World Health Organization, 2008 cited in Adamu et al, 2025)).

To Olalubi & Bello (2020), Primary Health Care (PHC) still remains the minimum package of healthcare that should be provided to every individual and community across Nigeria Health System. The aim is to improve relatively the health status of the nation ensuring provision of healthcare services to people in the rural area which is indicated by reduced mortality and morbidity and improved survival rates in such communities. According of Erinoshio in Alaba (2020), primary health care was defined at the conference (on health Alma-Ata 1978 in former USSR) as essential health based on practical, scientifically, sound and socially acceptable methods and technologically made universally accessible to individuals and families in the community and country can afford to maintain at every stage of their development in the spirit of self-determination and self-reliance. He noted that primary health care forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community with the national health system bringing health care as much as possible to where people live and work and constitutes that first element of community health process.

In order to accomplish the lofty goal of "Health for All," primary healthcare has become a popular tactic since its establishment in 1978 (Dada, 2023). Achieving Health for All which encompasses the rich and the poor, the educated and the ignorant, the old and the young, men and women, children and the elderly is the only path to a healthy world. By providing preventative, therapeutic, and rehabilitation treatments, the primary healthcare system is a grassroots approach intended to address the key health challenges in the community (Goffin & Olise, 2018 cited in Dada, 2023). The term "primary healthcare" refers to care which is "based on practical, scientifically sound, socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation, and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance" (WHO, 2021).

Primary healthcare's core principles highlight the strategy's great value. Fundamental healthcare, community involvement, equity, inter-sectoral collaboration, and the use of appropriate technology are the guiding principles that support primary healthcare's efficacy in achieving universal health coverage (A.O. et al., 2019 cited in Dada, 2023). Primary health care is intended to provide services to the majority of the population based on needs without regard to financial, social, or geographic constraints through their involvement in the planning, administration, and assessment of health programs. It means leveraging resources from both inside and outside the health sector and using technology depending on applicability (A.O. et al., 2019 cited in Dada, 2023).

According to Akinwumi, OlaOlorun., Adesina, Durodola, Amole, Singer & Levine (2022), the World Health Organization (WHO) described primary health care (PHC) as an "essential health care based on scientifically sound and socially acceptable methods and technology, made universally accessible to all individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development, in the spirit of self-reliance and self-determination". Akin to the above, Olise, (2012) in Adaji, Lawal & Onimisi (2023) posits that Primary Healthcare is a grass root approach

meant to address the main health problems in the community by providing preventive, curative and rehabilitative services.

One of the most essential human rights included in the World Health Organization's constitution is the right to the best possible health (World Health Organization, 2018). Therefore, it is the responsibility of each and every UN member to provide its citizens with accessible, universal healthcare. The most practical way to carry out the aforementioned commitment is through primary healthcare (PHC). Primary health care is a comprehensive approach to health and welfare that takes into account the unique requirements, preferences, and characteristics of each individual, family, and community (WHO, 2019).

It is obvious from the above assertions that Primary Healthcare was intended to be a grassroot programme through which the rural populace can participate by identifying their own health problems and also have access to the health solutions at the Primary Healthcare Centres close to them before referral to secondary or tertiary health institutions. Therefore, primary healthcare as the first point of contact of the individuals, family and community with national health care system bringing healthcare close to people. It is thus imperative to conclude that primary healthcare is the basic essential health care made available and universally accessible to individuals and families in the community through the active participation of the people at a low and affordable cost.

Goals and Objective of Primary Healthcare

Primary healthcare is defined by the Alma Ata Conference as essential healthcare that is provided to all individuals and families in the community at all times, at a cost that the community and the nation can afford, and with their full participation and means that are acceptable to them (Dada, 2023) This definition applies to all stages of development, in the spirit of self-reliance and self-determination. Primary healthcare is dependent on methods and technologies that are helpful, reasonable from a scientific standpoint, and socially acceptable. It serves as the primary goal and function of the nation's health system and is essential to the community's overall social and economic development. In light of this, Dada, (2023) posits that the PHC's goals are:

1. The Alma Ata Declaration's global objective is to achieve self-reliance and Health for All by the year 2000.
2. Health is created or destroyed where people live and work, therefore it starts at home, in the classroom, and at work.
3. It also implies that people will utilize better methods than they do now to prevent illnesses, treat unavoidable illnesses, and lessen disabilities, as well as to have better ways of developing, aging, and passing away gracefully.
4. It also means that the population will be distributed equally among all available health resources.
5. It implies that everyone will have appropriate access to basic healthcare services that are reasonably priced.

Principles and Elements of Primary Healthcare

According to Dada (2023), the principles of PHC are:

1. **Equity/Equitable Distribution:** The first crucial component of the primary health care plan is equity, or the equitable distribution of health services. Everyone has to have access to health care, regardless of their financial status; wealthy or not, living in an urban or rural

- area, should not be a barrier. Since most people in developing nations live in towns, the majority of them do not currently have access to health care.
2. **Community Participation:** The State is the one with main responsibility. The promotion of each person's own health and welfare must involve families, communities, and individuals as part of primary health care. PHC coverage cannot be achieved in the absence of community involvement in the planning, provision, and upkeep of healthcare services.
 3. **Intersectoral Coordination:** PHC, according to the Alma-Ata Declaration, encompasses not just the health sector but also adjacent disciplines and facets of local and national development, including housing, industry, public works, education, housing, agriculture, animal husbandry, and food production.
 4. **Appropriate Technology:** Excellent science-based technology is adaptable to local conditions, well-liked by users and intended beneficiaries, and easily maintained by the general public using resources that their community and nation can afford. Using the right healthcare technologies is one of the most crucial ways to improve the accessibility and availability of healthcare services. It is "technology that is scientifically sound, adaptable to local needs, and acceptable to those who apply it and to whom it is applied," according to one description.
 5. **Support Mechanism Made Available:** Support networks are essential for both a healthy lifestyle and a good standard of living. The support mechanism is a well-known technique in basic healthcare for raising quality of life. Customers of primary health care receive instrumental, personal, physical, emotional, and spiritual support in order to meet its goals. Primary health care requires an adequate quantity and distribution of licensed medical physicians, nurses, community health workers, allied health professionals, and other professionals who work together as a health team and get local and referral-level assistance.

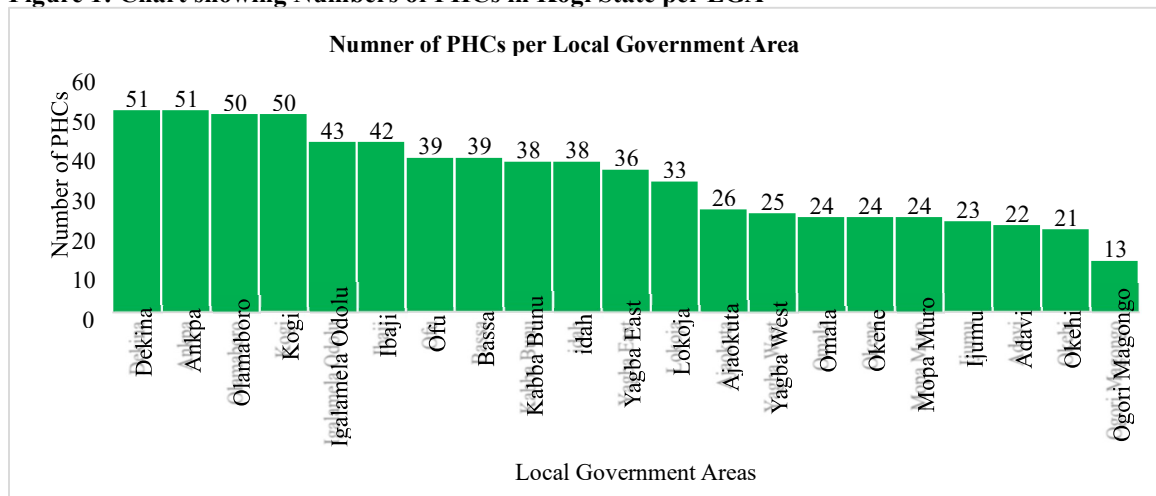
The Nature and Structure of Primary Healthcare in Kogi State

There are three tiers of Health Care Delivery Services in Kogi State, namely: Primary, Secondary and Tertiary. The Ministry of Health is responsible for the overall supervision of the health system. It also oversees all parastatals and Health Training institutions. There is a Kogi State Hospitals Management Board (HMB) that coordinates and supervises the day-to-day management of Secondary Health Care facilities. Kogi State Health Insurance Agency with a mandate to provide every resident of Kogi State equitable access to quality and affordable health care services irrespective of socioeconomic status to ensure Universal Health Coverage. Kogi State Primary Health Care Development Agency Coordinates and supervises all public Primary Health Care facilities in the state. There are also 3 tertiary health care facilities and 163 registered Private Health Care facilities respectively currently operating in the state (Kogi State Ministry of Health, 2025). Like other parts of Nigeria, the Kogi State Primary Health Care Development Agency (KSPHCDA) represents the third tier of health service delivery. Its mandate centers on preventive care, including community engagement, health education, hygiene promotion, environmental sanitation, immunization, and early detection of disease outbreaks. At the same time, primary healthcare facilities serve as the first point of contact for curative services delivered through health centers, clinics, dispensaries, and health posts. Oversight of the system rests with the Executive Director of KSPHCDA, who ensures compliance with national standards, while Directors of Primary Health Care (DPHCs) manage operations across the 21 Local Government Areas (LGAs). At the facility level, Community Health Extension Workers (CHEWs), often serving as Officers-in-Charge, and they provide frontline services and report directly to their respective PHCs.

Kogi State currently operates 712 PHC facilities distributed across all LGAs (KSPHCDA, 2025). Despite this structured framework, the workforce faces persistent shortages and uneven distribution. Rural and hard-to-reach LGAs remain underserved, while urban centers tend to have relatively higher staffing levels. The lack of critical cadres such as nurses, midwives, and physicians has particularly affected maternal and child health services. Addressing these challenges requires deliberate strategies for recruitment, redistribution, and retention of health workers. Without such measures, imbalances across workforce categories will continue to undermine effective delivery, even though some cadres such as CHEWs, are more widely available.

Kogi State has government-owned Primary Health Centers (PHCs) spread throughout its 21 Local Government Areas (LGAs), as shown in the figure below. According to the distribution, Ogori Magongo has the fewest PHCs (13), while Ankpa and Dekina Local Government Areas have the most (51) each, followed by Kogi and Olamaboro (50) each. The Basic Health Care Provision Fund (BHC PF) provides Direct Facility Financing (DFF) support to a subset of PHCs. The State's PHC facility database, which directs planning and resource distribution among the LGAs, contains specific information about these facilities.

Figure 1: Chart showing Numbers of PHCs in Kogi State per LGA



Source: Kogi State PHC Baseline Data 2025

Primary healthcare remains a central pillar in the Kogi State's Development Plan (2024 – 2056). The major thrust of health policy of the state is to improve access to healthcare and improve the efficiency of the healthcare delivery system. Hence, the State Government is working to provide community oriented primary healthcare services and ensure the improvement of health indicators in the State (Kogi State Ministry of Health, 2025).

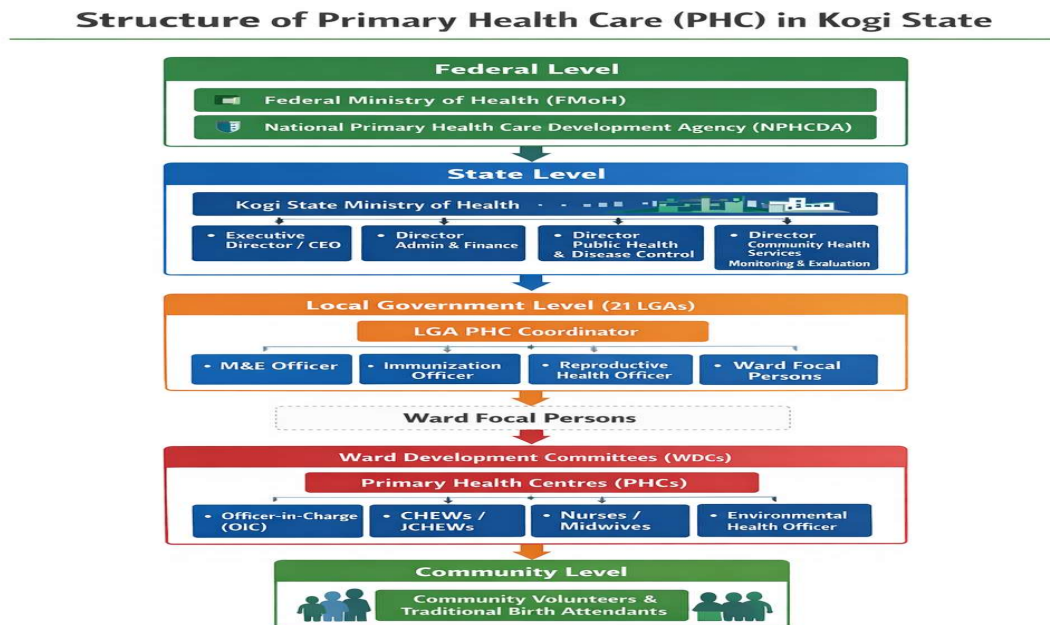
The Kogi State Ministry of Health and Human Services, is responsible for regulating the entire health sector of the state. The Ministry of Health oversees the State Strategic Health Development Plan and leads in policy formulation. The Ministry implements its strategies directly and through its Agencies, including the Kogi State Primary Healthcare Development Agency (SPHCDA),

Hospital Services Management Board, Kogi State Health Insurance Agency, Kogi State Drugs and Medical Supply Management Agency, and Kogi State Agency for the Control of AIDS.

To further improve healthcare delivery, various programmes are undertaken overtime such as the State Malaria Elimination Program and State AIDS and Sexually Transmitted Infection Control Programme (SASCP). There are also various program coordinators across disease areas and cross cutting issues such as, health insurance and monitoring and evaluation across the State. However, the State is working towards seamless “Primary Health Care Under One Roof”, managed by the State Primary Health Care Development Agency. The role of each institution/MDA in the primary healthcare sector in Kogi State is summarized below:

- i. **Ministry of Health:** Responsible for driving healthcare service delivery across Kogi State through the formulation of policies, regulations, and standards that ensure affordable, accessible, and high-quality healthcare for all residents.
- ii. **Kogi State Primary Healthcare Development Agency (KSPHCDA):** Charged with developing policies, strategies, guidelines, and operational plans that strengthen access to effective, efficient, and sustainable primary healthcare services throughout the state.
- iii. **Hospital Services Management Board:** Oversees the administration and operations of all General and Cottage Hospitals in Kogi State. The Board also provides critical data, insights, and technical advice to the Ministry of Health to support evidence-based policy formulation and planning.
- iv. **Kogi State Health Insurance Agency (KSHIA):** Facilitates access to affordable healthcare services for residents, including free primary healthcare for indigent children under five, indigent pregnant women, and persons living with disabilities. The agency also manages the disbursement of social health insurance funds to healthcare providers and ensures the financial sustainability of service delivery.
- v. **Kogi State Agency for the Control of AIDS (KOSACA):** Coordinates all state-level activities, programmes, and interventions related to the prevention, treatment, and management of HIV/AIDS.
- vi. **Kogi State Drugs and Medical Supply Management Agency:** Responsible for the selection, quantification, procurement, and distribution of medicines and medical supplies. The agency ensures that drugs are safe, effective, accessible, affordable, and available across all levels of primary healthcare, while promoting cost-effective supply chain practices.

Figure 2. Structure of PHC in Kogi State



Source: NPHCDA, 2025

Primary Healthcare Financing in Kogi State

Ata-Agboni & Noah (2024) aver that Access to adequate healthcare remains a challenge for many people living in Kogi State, Nigeria, especially among vulnerable populations such as those living in poverty, persons with disabilities, women and children. Despite progress towards increasing healthcare coverage, out-of-pocket payments remain a substantial barrier to access, resulting in financial hardship for households and contributing to persistent disparities in health outcomes. According to a study by Okoli et al., (2017) cited in Ata-Agboni & Noah (2024), out-of-pocket expenditure for healthcare is common practice in Kogi State, accounting for over 60% of total health expenditures. This finding aligns with data reported by the Nigerian National Bureau of Statistics (2019) cited in Ata-Agboni & Noah (2024), indicating that 56.5% of household expenditure goes toward paying for healthcare services. High levels of out-of-pocket spending limit access to needed healthcare services for vulnerable populations who often cannot afford to pay for treatment (Uzochukwu et al., 2018, cited in Ata-Agboni & Noah, 2024).

In addition, Ata-Agboni & Noah (2024) aver that direct costs associated with seeking healthcare, transportation expenses represent another significant financial barrier for many residents of Kogi State. A study conducted by Ogunbode et al., (2019) cited in Ata-Agboni & Noah (2024)) found that approximately half of respondents cited transport costs as a reason for delaying or foregoing healthcare services. Moreover, lack of awareness regarding available subsidies exacerbates financial difficulties experienced by vulnerable communities. For example, Uzochukwu et al.

(2018) cited in Ata-Agboni & Noah (2024) revealed that only 44.4% of pregnant women were aware of free antenatal care services offered by the federal government.

To address these barriers, several initiatives aimed at improving financial protection and expanding healthcare coverage have been implemented in Kogi State. One notable effort is the Basic Health Care Provision Fund (BHC PF), established under the National Health Act (2014) to provide funding for basic healthcare services in underserved areas. However, despite initial implementation, ongoing operationalization issues persist. For example, only two local government areas had fully functional BHC PF structures as of December 2019, limiting its potential reach (Onyeonoro et al., 2020 cited in Ata-Agboni & Noah (2024).

Another strategy being advanced is the adoption of public–private partnership (PPP) models to enhance access to affordable healthcare services. Through harnessing private sector investment, managerial efficiency, and technical expertise, these collaborations seek to broaden the scope and quality of healthcare delivery while reducing dependence on out-of-pocket expenditures. Although this approach holds considerable promise, existing evidence indicates mixed outcomes, underscoring the importance of sustained monitoring, rigorous evaluation, and continuous refinement to ensure that such partnerships effectively contribute to equitable and sustainable health system strengthening.

Empirical Review

Rahman, Masako, Lohan, Kassai, Awan, Pempa, & Sato (2025) conducted a study on Progress towards universal health coverage in South Asia, 2000–2030: an examination of the twin elements of primary healthcare provision and financial protection. Universal health coverage (UHC) is crucial for achieving Sustainable Development Goal (SDG) 3: Good Health and Well-being. The study projects UHC progress in seven South Asian countries by 2030, focusing on two crucial underpinning components, primary healthcare (PHC) service coverage and financial risk protection. The study applied Bayesian random-effects models to project UHC indicators linked to PHC and financial risk protection including the Composite Coverage Index, catastrophic health expenditures (CHE) and impoverishing health expenditures. Data were sourced from the WHO Global Health Observatory, Demographic Health Surveys, National Health Surveys and the WHO Global Health Expenditure database. The study concludes that this is the first study to project trends towards UHC in South Asia using Bayesian estimates of both health coverage and financial risk protection. Progress towards UHC requires advances in both service coverage and health financing reform. Although service coverage is improving, financial protection remains insufficient, particularly in rural and conflict-affected areas. Targeted PHC investment, context-sensitive financing reforms and stronger risk-pooling mechanisms are essential, drawing lessons from stable settings (Bhutan, Sri Lanka) to guide strategies in fragile contexts (Afghanistan, Pakistan).

Okungbowa (2023) assessed Health Financing Progress towards Universal Health Coverage in Nigeria (2015-2022). He postulates that Universal Health Coverage (UHC) is vital to achieving Sustainable Development Goals. It ensures that everyone has access to quality healthcare without financial hardship. Though the reliance on public health expenditure is the gold standard to achieve UHC, however, out-of-pockets payments dominates health financing in low-income countries including Nigeria. Against this backdrop, the present study assessed the drive towards UHC in Nigeria using the newly launched World Health Organisation-Health Financing Progress Matrix

(HFPN) 2.0. The result showed that Nigeria's drive towards UHC is hindered majorly by the double whammy of poor governance and inadequate public health financing. While the Abuja Declaration of 2001 mandated African countries to devote at least 15% of government expenditure to the health sector, however, on average, Nigeria spends 4%. It was observed that the large proportion of the informal sector-put at 65% of GDP poses a huge fiscal challenge to the government in raising revenue. More worrisome is the catastrophic and impoverishing out-of-pocket payments hovering around 70% as against the SDG3.8.2 indicator of at most 25%. Again, the national health insurance only covers less than 7% of the population, mainly government and private employees in urban areas, thus leaving behind a sizeable proportion of the rural population. There is also the problem of technical inefficiencies as evidenced in a plethora duplication, overlaps, and misalignments of core health system functions across health programs. As things stand, the goals of UHC i.e., Utilization relative to need, financial protection, and quality health care may not be realized if the national and subnational governments do not only scale up public spending but also strengthen the health system by improving; governance, public finance management, amongst others reforms. Thus, framing the drive towards UHC in Nigeria within the context of "development bargain," as Stefan Dercon puts it, holds promise to accelerate the drive towards UHC in Nigeria.

Onwujekwe, Ezumah, Mbachu, Obi, Ichoku, Uzochukwu & Hong (2019) Exploring effectiveness of different health financing mechanisms in Nigeria; what needs to change and how can it happen? Data analysis was guided by a conceptual framework which draws from various approaches for assessing health financing mechanisms. Data was examined for current practices, what needs to change and how the change can happen. The study found that health financing mechanisms in Nigeria do not operate optimally. Allocation and use of resources are neither evidence-based nor results-driven. Resources are not allocated equitably or in a manner that minimizes wastage and improves efficiency. None of the mechanisms effectively protects individuals/households from catastrophic health expenditure. Issues with social health insurance cut across legal frameworks and use of Health Maintenance Organisations (HMOs) as purchasers. The concomitant effect is that attainment of Universal Health Coverage is greatly compromised. In order to improve efficiency of health financing mechanisms, government needs to allocate more funds for purchasing health services; this spending must be based on evidence (strategic), and appropriately tracked. The legislation that established National Health Insurance Scheme should be amended such that social health insurance becomes mandatory for all citizens. Implementation of the latter should be complemented by revision of benefit package, strict oversight and regulation of HMOs. The study concluded that in order to improve health financing in the country, legal and regulatory frameworks need to be revised. Efficient utilization of resources could be improved through strategic purchasing arrangements and strict oversight.

Theoretical Framework

Human Capital Theory

Human Capital Theory (HCT) emerged in the mid-twentieth century as a major economic framework explaining how investments in education, health, and skills development enhance productivity and national growth. The theory fundamentally argues that human beings possess productive capacities that can be improved through deliberate investment. Early foundations were laid by classical economists such as Adam Smith (1776), but the modern formulation is credited primarily to Theodore Schultz and Gary Becker in the 1960s. In contemporary development discourse, Human Capital Theory provides a strong analytical basis for justifying investments in

health systems, particularly Primary Health Care (PHC), as a strategic pathway toward achieving Universal Health Coverage (UHC). This discussion examines the theory's proponents, assumptions, strengths, weaknesses, and its relevance to PHC and UHC attainment in Kogi State.

Theodore W. Schultz (1902–1998) formally introduced Human Capital Theory in his seminal 1961 article titled “Investment in Human Capital”, published in the *American Economic Review*. He argued that expenditures on education, health, migration, and information are investments that yield returns in the form of increased productivity and income (Schultz, 1961). Schultz emphasized that improvements in the quality of human beings were central to economic growth, particularly in developing countries. Gary S. Becker (1930–2014) expanded the theory in his influential book *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (1964). Becker provided mathematical modeling and empirical evidence demonstrating how investments in education and training increase lifetime earnings (Becker, 1964). He conceptualized health as both a consumption and an investment good, arguing that better health improves labor productivity and extends working life. Jacob Mincer (1922–2006) further strengthened the empirical foundation of the theory through the development of the Mincer earnings function, which quantitatively linked schooling and work experience to income differentials (Mincer, 1974). His econometric work provided measurable tools for evaluating returns to human capital investment.

Assumptions of Human Capital Theory

Human Capital Theory is built upon several fundamental assumptions:

1. Expenditures on education and health are investments that yield future economic returns.
2. Improved health and education increase individual productivity and earning potential.
3. Individuals and governments make rational choices to invest in human capital based on expected cost–benefit outcomes.

Strengths of Human Capital Theory

Strong Economic Justification for Health Investment

1. The theory provides policymakers with a compelling economic rationale for investing in PHC and preventive healthcare.
2. Numerous cross-country studies demonstrate a positive relationship between health, education, and economic growth.
3. The theory supports long-term planning in public health financing and workforce development.

Weaknesses and Critiques of Human Capital Theory

1. Critics argue that the theory reduces human beings to economic instruments, ignoring social justice and equity concerns (Bowles & Gintis, 1975).
2. Political instability, governance failures, and corruption may limit returns on human capital investments.

Primary Health Care (PHC) is the cornerstone of an effective health system. According to WHO (2010), PHC improves population health outcomes and reduces inequities, which are goals of UHC. From a human capital perception: Investment in PHC reduces disease burden, Maternal and child healthcare improves cognitive development immunization programs protect future workforce productivity. Thus, preventive services reduce long-term healthcare costs. In Kogi State,

strengthening PHC infrastructure, recruiting skilled health workers, and ensuring drug availability represent investments that enhance the state's human capital base. Universal Health Coverage seeks to ensure that all individuals receive necessary health services without financial hardship (WHO, 2010). Human Capital Theory is relevant to the study in that Healthy populations contribute more effectively to economic output. Reduced morbidity increases labor force participation in Kogi State. Also, high out-of-pocket payments undermine household economic stability. UHC protects families from catastrophic expenditures, preserving human capital accumulation. Furthermore, investment in training and retaining PHC workers strengthens service quality and system sustainability. Similarly, effective PHC culminates in the attainment of UHC which implies improved maternal and child health. This undoubtedly enhances educational attainment and future earnings potential.

Systems theory

Ludwig von Bertalanffy (1901–1972) developed General Systems Theory (GST) in the 1940s and formally articulated it in General System Theory. He argued that systems across disciplines share similar principles such as interdependence, feedback, and equilibrium (Bertalanffy, 1968). Talcott Parsons (1902–1979) applied systems thinking to sociology in the 1950s through structural-functionalism. Parsons conceptualized society as a system composed of interrelated institutions performing functions necessary for stability (Parsons, 1951). David Easton (1917–2014) introduced systems theory into political science in *The Political System* (1953) and later refined it in *A Systems Analysis of Political Life* (1965). He conceptualized politics as a system of interactions through which authoritative allocations of values are made for society.

According to Easton (1953), a system is made up of different parts that make up a whole. Koontz et al (1983) in Laxmikanth (2011) also see a system as an assemblage of things interconnected or interdependent, so as to form a complex unit. Laxmikanth (2011) says a system is a complex whole having a number of parts. These parts of the system are called sub systems. These systems are interrelated and interdependent for their functioning. The system has a defined boundary through which it interacts with its environment. This environment of a system is called a Suprasystem.

A system receives inputs from the environment and sends output into the environment after transformation process. Furthermore, a system adjusts itself continuously to the requirements of changes in the environment. This is facilitated by the feedback mechanism. Thus, there is a balance between the system and its environment, this makes a system cyclical (Ezeani 2006). By systems, Bertalanffy (1971) in Ogunnaike, Taye, Sholarin and Ezeugwu (2014) means complexes of elements standing in interaction. The closed system is called closed if it neither takes in any remits matter (only energy exchange is possible and taken into account). The system is called open if there is a continual input and output of both energy and matter in it. Also, Griffiths (1964) in Ogunnaike, Taye, Sholarin and Ezeugwu (2014) added that all systems except the smallest have sub-systems and all but the largest have supra systems, which are their environment. Each system or subsystem conceptualized as having a boundary. The boundary of a system is the component that separates the system from its environment and filters the inputs to and the output from the system. Inputs, processes, and outputs of an organization are all stages in the system's cycle of events. The open system theory also emphasizes the necessary dependence of any organization upon its environment. Also Richard (1964) in Ogunnaike, Taye, Sholarin and Ezeugwu (2014) defines a system as an organized or complex whole, an assemblage or combination of things or parts forming a complex or unitary whole.

Strengths of Systems Theory

1. Holistic analysis of complex systems. For instance, health systems are complex, involving financing, workforce, infrastructure, governance, and communities. Systems theory captures these interconnections.
2. Easton's input-output model provides a clear structure for analyzing policies.
Emphasis on Feedback
3. Its monitoring and evaluation mechanisms align well with reforms and useful for reform and planning
4. It encourages integrated rather than fragmented interventions.

Weaknesses of Systems Theory

1. Critics argue Easton's model underplays political conflict and power irregularity.
2. In fragile systems, equilibrium may not exist.
3. Coordination across sectors may be difficult in resource-limited settings.

In Kogi State, inputs include public demand for accessible PHC services, demand for reduced out-of-pocket payments, support from development partners, and political commitment to UHC. These inputs are processed by government institutions such as: Kogi State Ministry of Health, State Primary Health Care Development Agency, and legislative bodies into policies, budgets, and reforms and the outputs are released in the form of PHC revitalization projects, recruitment of health workers, implementation of state health insurance schemes and drug supply chain reforms. Consequently, the Feedback mechanisms may include, community response to service quality, Health indicators such as maternal mortality and immunization rates. It is important to note that poor feedback may result in system instability, while effective feedback enhances adaptation and sustainability.

PHC is an interconnected subsystem. In Kogi State, it is influenced by, financing mechanisms, human resources, infrastructure, community participation and governance. Systems theory prevents isolated interventions (e.g., building facilities without staff or drugs). UHC Requires System-Wide Coordination through PHC to achieve its mandate. Thus, achieving UHC requires, financial risk protection, service availability, improvement in quality of service and accountability. These elements are interdependent and interrelated to achieve a common goal. Furthermore, evaluating PHC performance in kogi state paves the way for adjustment of health policies to ensure responsiveness to community needs.

It is pertinent to note that Systems Theory provides the most comprehensive framework for analysing health systems, because it views society and organizations as interrelated components working together to achieve a common goal. In the context of healthcare, the system includes institutions, policies, health workers, financing mechanisms, infrastructure, and service delivery processes that interact to produce health outcomes. Universal Health Coverage (UHC) is fundamentally a health system goal, requiring coordinated functioning of multiple elements such as health workforce, financing, governance, medicines, infrastructure, and service delivery. Similarly, Primary Health Care (PHC) serves as the foundation of the health system by providing essential services that improve accessibility, equity, and efficiency in healthcare delivery. Because PHC operates within a broader health system structure, Systems Theory provides the most

appropriate conceptual lens for analysing how different components interact to influence the attainment of UHC. Primary healthcare involves multiple actors including government agencies, healthcare workers, communities, and development partners. Systems Theory explains how these actors interact within the health system. Achieving UHC requires coordination between financing, governance, workforce, infrastructure, and service delivery. Systems Theory allows the researcher to examine these relationships holistically. The theory is useful in analysing how government policies, administrative structures, and resource allocation influence PHC performance in Kogi State. Through the input–process–output–feedback model, Systems Theory enables assessment of how PHC contributes to expanding healthcare coverage and improving health outcomes in the State.

METHODOLOGY

3.1 Research Design

This study adopted a descriptive cross-sectional survey design. A cross-sectional survey is a quantitative research design in which data are collected from a population or a representative sample at a single point in time to examine the characteristics, opinions, behaviors, and relationships among variables within a study population. The design provides a snapshot of a phenomenon as it exists during the period of investigation rather than tracking changes over time (Creswell & Creswell, 2018).

Cross-sectional surveys are widely used in social science and public health research because they enable researchers to describe prevailing conditions and analyze associations among variables within a relatively short period (Bryman, 2016). The design was considered appropriate for this study because it facilitated the collection of data from Primary Health Care (PHC) service users and health personnel simultaneously, thereby providing empirical evidence on accessibility, quality of care, affordability, and challenges affecting PHC service delivery and the attainment of Universal Health Coverage (UHC) in Kogi State, Nigeria.

3.2 Population of the Study

The target population for this study comprised residents and users of Primary Health Care facilities within six selected Local Government Areas (LGAs) across the three senatorial districts of Kogi State, as well as key health personnel involved in the planning, administration, and implementation of PHC services. The selected LGAs were Dekina and Ofu (Kogi East Senatorial District), Ogori-Magongo and Ajaokuta (Kogi Central Senatorial District), and Lokoja and Kogi/Koton-Karfe (Kogi West Senatorial District). The combined population of these six LGAs was 1,344,493, which constituted the study population.

3.3 Sample size and Sample size Determination.

The sample size was determined using Taro Yamane's (1967) formula for sample size estimation. Thus, the sample size will be calculated using Taro Yamane's formula:

$$n = \frac{N}{1 + N(e^2)}$$

Where:

- n = sample size

N = population size (1,344,493)

- e = level of precision/margin of error (0.05)

Calculation:

$$e^2 = 0.05^2 = 0.0025$$

$$N(e^2) = 1,344,493 \times 0.0025 = 3,361.2325$$

$$1 + N(e^2) = 1 + 3,361.2325 = 3,362.2325$$

$$e = 1,344,493 / 3,362.2325 = 399.88$$

Therefore, the sample size for the study is approximated to 400

To distribute the 400 questionnaires proportionally across the six LGAs, proportionate sampling was used. Thus, the formula is; $n_i = N/N \times n$

Where:

n_i = sample size for each LGA

N_i = population of each LGA

N = total population (1,344,493)

n = total sample size (400)

Table 3.1 Population and Proportionate Sample Distribution

LGA	Population	Calculation	Sample Size
Dekina	378,711	$(378,711 / 1,344,493) \times 400$	113
Ofu	277,922	$(277,922 / 1,344,493) \times 400$	83
Lokoja	285,352	$(285,352 / 1,344,493) \times 400$	85
Kogi (Koton-Karfe)	167,012	$(167,012 / 1,344,493) \times 400$	50
Ogori/Magongo	57,824	$(57,824 / 1,344,493) \times 400$	17
Ajaokuta	177,672	$(177,672 / 1,344,493) \times 400$	52
Total	1,344,493		400

Source: Researchers' Computation (2026).

3.4 Sampling Technique

A multi-stage sampling technique was employed for the study. In the first stage, the three senatorial districts of Kogi State served as strata to ensure adequate representation of the state's socio-cultural and geographical diversity. In the second stage, two LGAs were purposively selected from each senatorial district based on population characteristics, rural–urban composition, and PHC service delivery patterns. The selected LGAs were Dekina and Ofu (Kogi East), Ogori-Magongo and Ajaokuta (Kogi Central), and Lokoja and Kogi/Koton-Karfe (Kogi West). In the third stage, three wards were randomly selected from each LGA using a simple random sampling technique (lottery method). Subsequently, three PHC facilities were selected from the sampled wards through simple random sampling. In the final stage, service users attending the selected PHC facilities were selected using systematic random sampling. This ensured that every eligible respondent had an equal probability of being included in the study.

To complement the survey data, twenty (20) key informants were purposively selected based on their positions, experience, and involvement in PHC planning, administration, and service delivery in Kogi State.

Below is a table showing the category and number of interviewees.

Table 3.2 Respondents for Interview

S/No	Category of interviewee	Expected No.
1	Director KSPHCDA	1
2	Kogi State Ministry of Health	1
3	LGA HOD, Health	6
4	PHC Facility Heads	6
5	Community Health Extension workers	3
6	Community leaders	3
Total		20

Source: Field survey, 2026.

3.6 Methods of Data Collection

Both primary and secondary sources of data were utilized. Primary data were collected through structured questionnaires and key informant interviews. The questionnaire consisted of closed-ended items designed using multiple-choice and five-point Likert scale formats. The instrument captured information on accessibility and utilization of PHC services, quality of healthcare delivery, affordability of services, awareness of UHC, and challenges affecting PHC performance. The questionnaires were administered through a combination of self-administration and trained field assistants to ensure adequate coverage and response rates. In addition, semi-structured interviews were conducted with health administrators, PHC coordinators, facility heads, and community stakeholders to obtain in-depth qualitative insights regarding PHC policy implementation, funding, workforce challenges, service delivery experiences, and prospects for achieving UHC.

Secondary data were obtained from textbooks, scholarly journals, government reports, policy documents, official publications, conference papers, and relevant online resources relating to Primary Health Care and Universal Health Coverage. These sources provided contextual, theoretical, and empirical support for the study.

3.7 Method of Data Presentation and Analysis

Data collected through questionnaires were coded, entered, and analyzed using IBM SPSS Statistics Version 25. Descriptive statistics, including frequencies and percentages, were used to summarize respondents' demographic characteristics and responses to research questions. Qualitative data obtained from key informant interviews were analyzed using thematic content analysis. Emerging themes and recurring patterns were identified and used to complement the quantitative findings. To test the research hypotheses and examine the influence of Primary Health Care financial mechanisms on out of pocket healthcare expenditures among service users in Kogi State, Simple Linear Regression (SLR) analysis was employed.

1 Data Presentation

Table 4.1: Questionnaire Distribution and Return Rate

Description	Frequency	Percentage
Questionnaire distributed	400	100%
Questionnaire returned	372	93%
Questionnaire not returned	28	7%

Source: Field Survey, 2026

Table 4.1 presents the distribution and return rate of the questionnaire administered to respondents. A total of 400 questionnaires were distributed to respondents, out of which 372 were correctly

completed and returned, representing a response rate of **93%**. Only 28 questionnaire, representing **7%**, were not returned. A response rate above 70% is generally considered adequate for survey research, as it minimizes the risk of non-response bias and enhances the credibility of the findings. The 93% return rate recorded in this study is therefore exceptionally high and indicates strong participation and cooperation from respondents. This high level of engagement suggests that the topic of the study was relevant and of interest to the participants. It also implies that the data obtained are sufficient representative of the target population and suitable for reliable statistical analysis. Furthermore, the low percentage of unreturned questionnaires (7%) suggests that issues such as respondent fatigue, lack of interest, or misunderstanding of the instrument were minimal. Consequently, the dataset can be regarded as robust and dependable for drawing valid conclusions.

SECTION A: DEMOGRAPHIC DATA

Table 4.2: Age Distribution of Respondents (N = 372)

Age (years)	Frequency	Percentage
18–30	150	40.3%
31–40	98	26.3%
41–50	72	19.4%
51–60	52	14.0%
Total	372	100%

Source: Field study, 2026

Table 4.2 presents the age distribution of the respondents. The data indicate that the largest proportion of respondents, 150 participants (40.3%), were within the 18–30 years age bracket. This group constitutes the majority of the sample, suggesting strong participation of young adults in the study. Individuals within this age range are often more active in community engagement and more likely to utilize primary health care services due to reproductive health needs, child health services, and general health awareness. Respondents aged 31–40 years accounted for 98 participants (26.3%), representing the second largest group. This age category typically consists of economically active individuals who are likely to have family responsibilities and regular interaction with healthcare services. Their representation ensures that the perspectives of middle-aged adults are well captured. Participants aged 41–50 years constituted 72 respondents (19.4%). This group is significant because individuals in this stage of life often experience increasing health challenges such as chronic conditions and therefore have substantial experience with healthcare services. The smallest proportion of respondents, 52 individuals (14.0%), were within the 51–60 years age bracket. Although this group represents the lowest percentage, their inclusion remains important because older adults typically have higher healthcare needs and greater reliance on primary healthcare services. Overall, the distribution shows that the study sample is dominated by younger adults, but still includes representation from middle-aged and older respondents. This diversity enhances the reliability of the findings because it reflects perspectives across different life stages.

Table 4.3: Sex Distribution of Respondents

Sex	Frequency	Percentage
Male	170	45.7%
Female	202	54.3%
Total	372	100%

Source: Field Survey, 2026

Table 4.3 presents the gender distribution of respondents. It shows that 202 respondents (54.3%) were female, while 170 respondents (45.7%) were male. This indicates a slight dominance of female participants in the study. The higher participation of females may be attributed to the nature of primary healthcare services, which often focus on maternal and child health, family planning, immunization, and other reproductive health services. Women typically interact more frequently with primary healthcare facilities due to pregnancy, childbirth, childcare, and family health responsibilities. Therefore, their higher representation in the study is consistent with healthcare utilization patterns observed in many developing countries. The near balance in gender distribution is important because it ensures that both male and female perspectives are adequately represented. Male participation, although slightly lower, remains substantial and contributes to the comprehensiveness of the study. The gender distribution enhances the validity of the findings, as the responses reflect the experiences of both sexes in accessing and utilizing primary healthcare services.

Table 4.4: Educational Qualification of Respondents

Education	Frequency	Percentage
Primary	48	12.9%
Secondary	94	25.3%
Diploma/NCE	110	29.6%
Degree/HND	120	32.2%
Total	372	100%

Source: Field Survey, 2026

The data in table 4.4 reveals that a majority of respondents (61.8%) have post-secondary education, either Diploma/NCE 110 respondents (29.6%) or Degree/HND 120 respondents (32.2%). Secondary school graduates account for 94 respondents (25.3%), and primary school leavers are the least represented at 48 respondents representing (12.9%). This indicates a fairly educated sample. Educational attainment is a critical factor influencing health-seeking behavior. Highly educated individuals are more likely to understand the importance of preventive care, recognize early symptoms, and actively seek PHC services. Consequently, this suggests that respondents' opinions regarding PHC accessibility and quality are likely informed by an adequate level of literacy. However, the presence of 12.9% of respondents with only primary education indicates that there may still be a segment of the population that could face challenges in accessing or understanding health information. Policy implications include the need for PHC communication strategies that accommodate varying literacy levels to ensure equitable healthcare understanding and utilization.

Table 4.5: Occupational Distribution of Respondents

Occupation	Frequency	Percentage
Student	70	18.8%
Civil Servant	80	21.5%
Business	96	25.8%
Farmer	34	9.1%
Driver	30	8.1%
Mechanic	26	7.0%
Tailor	18	4.8%
Others	18	4.8%

Occupation	Frequency	Percentage
Total	372	100%

Source: Field Survey, 2026

Table 4.5 above shows that business owners, 96 respondents (25.8%) and civil servants, 80 respondents (21.5%) formed the largest occupational groups, followed by students, 70 respondents (18.8%). Farmers, drivers, and artisans represent smaller proportions. This diverse occupational profile reflects varied socioeconomic statuses, which can influence access to PHC services. Civil servants often have structured healthcare benefits, while business owners may possess financial flexibility to access services. Conversely, farmers and informal-sector workers might face barriers due to lower income or distance from health facilities. Occupation therefore acts as a determinant of healthcare accessibility and utilization patterns. The diversity in occupation highlights the need for PHC programmes to consider both the formal and informal workforce when designing health intervention policies and programmes, ensuring equitable access regardless of economic status or employment type.

Table 4.6: Availability of Drugs in PHC Centres

Response	Frequency	Percentage
Strongly Agree	52	14.0%
Agree	96	25.8%
Undecided	34	9.1%
Disagree	112	30.1%
Strongly Disagree	78	21.0%
Total	372	100%

Source: Field Survey, 2026

Table 4.6 shows that more than half of respondents, 190 (51.1%) disagree and strongly disagree that drugs were adequately available. 148 respondents (39.8%) agree and strongly agree with the assertion, while 34 respondents (9.1%) had undecided opinion. This indicates that drug shortages remain a significant challenge, which can lead to incomplete treatments, reduced trust in PHC, and increased reliance on private pharmacies.

Table 4.7: Affordability of PHC Services

Response	Frequency	Percentage
Strongly Agree	84	22.6%
Agree	50	13.4
Undecided	30	8.1%
Disagree	84	22.6%
Strongly Disagree	124	33.3
Total	372	100%

Source: Field Survey, 2026

Table 4.7 shows respondents' view on affordability of PHC services. A total of 134 respondents (36%) perceived the cost of PHC treatment as affordable, while 208 respondents (55.9%) disagree. However, 30 respondents (8.1%) were undecided. A slight minority found services affordable, the proportion who disagree suggests that cost remains a serious barrier for a significant majority.

Affordability is critical to UHC; even moderate fees can limit access for low-income populations. Policy interventions such as subsidies, community health insurance, or free essential services may help address these barriers.

Table 4.8: Financial Barriers Rarely Prevent Me from Using PHC Services

Response	Frequency	Percentage
Strongly Agree	48	12.9%
Agree	76	20.4%
Undecided	40	10.8%
Disagree	118	31.7%
Strongly Disagree	90	24.2%
Total	372	100%

Source: Field Survey, 2026

Table 4.8 shows that 118 respondents (31.7%) of disagree and 90 (24.2%) strongly disagree that financial barriers rarely prevent them from using PHC services. In contrast, only 124 respondents (33.3%) agree and strongly agree with the assertion, while 40 respondents (10.8%) remained undecided. This denotes a combined 55.9% of respondents who believed that financial difficulties significantly affect their utilization of PHC services. This strongly indicates that financial constraints remain a major obstacle to healthcare access among the respondents. Although PHC services are expected to be affordable and community based, many people still struggle with direct and indirect healthcare costs such as consultation fees, purchase of drugs, transportation expenses, and laboratory charges. These costs discourage timely healthcare utilization, especially among low-income households and vulnerable populations. Also, economic hardship may force individuals to delay seeking medical attention or resort to self-medication and traditional remedies, which may worsen health conditions.

Test of Hypotheses

Simple Linear Regression (SLR) was employed to test the research hypothesis of the study to determine the nature, direction, and magnitude of the influence of Primary Health Care financial mechanisms on out of pocket healthcare expenditures among service users in Kogi State. The analysis was performed using IBM SPSS Statistics Version 25, consistent with the research methodology which prescribes inferential statistics to examine the influence of Primary Health Care financial mechanisms on out of pocket healthcare expenditures among service users.

A total of 372 valid questionnaires were retrieved and analyzed (representing a 93% response rate from 400 distributed questionnaires). All variables were measured on a five-point Likert scale: Strongly Agree = 5, Agree = 4, Undecided = 3, Disagree = 2, and Strongly Disagree = 1. Composite scores for each construct were computed by summing Likert responses of the constituent items and entered into SPSS for regression analysis.

Simple Linear Regression Model

Simple Linear Regression models the relationship between one independent variable (predictor) and one dependent variable (criterion) using the equation:

$$Y = a + bX + \varepsilon$$

Where: Y = Dependent variable (outcome); a = Constant (Y-intercept); b = Unstandardized regression coefficient (slope); X = Independent variable (predictor); ε = Error term.

The following SPSS output tables are generated for each hypothesis:

- (i) Model Summary: showing R, R², and Adjusted R²
- (ii) ANOVA: assessing overall model significance via F-statistic
- (iii) Coefficients: showing unstandardized coefficient (B), standardized coefficient (Beta), t-value, and significance level. The level of significance is set at $\alpha = 0.05$.

Decision Rule: The null hypothesis (Ho) is rejected if the p-value (Sig.) is less than 0.05. The coefficient of determination (R²) indicates the proportion of variance in the dependent variable explained by the independent variable. The strength of prediction is interpreted as follows:

R ² Value	Interpretation of Explanatory Power
< 0.10	Very Weak - predictor explains very little variance
0.10 - 0.29	Weak - small but meaningful explanatory power
0.30 - 0.49	Moderate - predictor accounts for a notable share of variance
0.50 - 0.69	Strong - predictor is a substantial explanatory variable
≥ 0.70	Very Strong - predictor explains the majority of variance

Source: Cohen (1988), as cited in Field (2018) and Pallant (2020)

Descriptive Statistics of Study Constructs

Prior to the regression analysis, descriptive statistics for all construct variables were computed in SPSS to characterize the dataset and verify data adequacy for regression. Table 2.1 presents the mean and standard deviation for each construct.

Hypothesis (Ho): PHC Financing Mechanisms and out of pocket healthcare expenditures among service users in Kogi State.

Ho: PHC financing mechanisms have no significant influence on out of pocket healthcare expenditures among service users in Kogi State.

Variables:

Independent Variable (X): PHC Financing Mechanisms

Items: Q16 – Q17 (health insurance scheme effectiveness, financial barriers to PHC access)

Dependent Variable (Y): out of pocket healthcare expenditures

Items: Q13, Q16, Q17 (affordability, insurance access, financial barrier experience)

Table 4.3.2a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	.578	.334	.332	4.152

Source: SPSS Version 25

Table 4.3.2b: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3201.18	1	3201.18	185.474	.000
Residual	6378.82	370	17.24		
Total	9580.00	371			

Source: SPSS Version 25

Table 4.3.2c: Coefficients

Model	Unstd. B	Std. Error	Standardized Beta	T	Sig.
(Constant)	7.923	0.694		11.416	.000
PHC Financing Mechanisms	0.541	0.040	.578	13.619	.000

Source: SPSS Version 25

Regression Equation:

Out of pocket healthcare expenditures = 7.923 + 0.541 (PHC Financing Mechanisms)

Interpretation:

The Model Summary shows that the simple linear regression model accounts for $R^2 = .334$ (Adjusted $R^2 = .332$) of the total variances in out of pocket healthcare expenditures. This means PHC Financing Mechanisms explains 55.9% of the variability in out of pocket healthcare expenditures among respondents in Kogi State, indicating a high level of explanatory power.

The ANOVA table confirms that the overall regression model is statistically significant: $F(1, 370) = 185.474$, $p = .000 < 0.05$. This indicates that the model fits the data significantly better than a model with no predictor, and that PHC Financing Mechanisms is a significant predictor of out of pocket healthcare expenditures. The Coefficients table reveals that the unstandardized regression coefficient $B = 0.541$ ($SE = 0.040$), with a standardized coefficient $Beta = .578$ and $t(370) = 13.619$, $p = .000 < 0.05$. For every one-unit improvement in PHC financing mechanisms, out of pocket healthcare expenditures increases by 0.541 units. The standardized coefficient $Beta = .578$ indicates a positive moderate-to-strong direct predictive relationship.

Decision: $F(1, 370) = 185.474$, $p = .000 < \alpha = 0.05 \rightarrow H_{01}$ is REJECTED. PHC Financing Mechanisms is a significant positive predictor of out of pocket healthcare expenditures ($B = 0.541$, $Beta = .578$, $t = 13.619$, $p < .001$, $R^2 = .334$).

Discussion of Findings

The study examined the influence of Primary Health Care (PHC) financing mechanisms on out-of-pocket healthcare expenditures among service users in Kogi State, Nigeria. The findings indicate that PHC financing plays a significant role in determining the extent of financial protection available to households seeking healthcare services.

The survey data substantiate this finding. While 55.9 per cent of respondents considered the general cost of PHC services not affordable, a significant proportion simultaneously acknowledged that

financial barriers did not prevent them from utilizing PHC services. Specifically, 55.9 per cent of respondents agree that financial barriers constrained their healthcare utilization. This apparent tension highlights a nuance reality: nominal service charges may be modest, but the cumulative burden of out-of-pocket costs, including consultation fees, drug purchases, transportation, and informal payments, renders PHC utilization financially prohibitive for many households, particularly low-income and rural populations. Corroborating the finding, finding from interview, shows that financing emerged as a critical determinant of financial risk protection under UHC. State-level officials reported that initiatives such as the Basic Health Care Provision Fund (BHCPF) and state health insurance schemes have begun to reduce out of pocket expenditure for some vulnerable populations. However, they acknowledged delays in fund disbursement and inadequate budget allocation as persistent challenges. The HOD health and facility heads in the LGAs highlighted that many PHC centres still operate with limited financial autonomy, leading to frequent stock outs of essential medicines and informal charges. This undermines the principle of financial risk protection. In the Same vein, community respondents and CHEWs consistently averred that households still bear significant costs for drugs, laboratory tests, and referrals, especially where services are unavailable at PHC level. This results in delayed care-seeking and catastrophic spending for low-income families. The implication is that while financing reforms are gradually improving financial protection, weak implementation and inadequate funding sustain high levels of out-of-pocket expenditure, thereby limiting progress toward UHC.

The hypothesis, which posited that PHC financing mechanisms have no significant influence on out of pocket healthcare expenditures among service users in Kogi State, was also rejected. The regression analysis produced a significant model: $F(1, 370) = 185.474$, $p = .000 < 0.05$, $B = 0.541$, $Beta = .578$, $R^2 = .334$. PHC financing mechanisms explain 33.4 per cent of the variance in financial risk protection among respondents, underscoring the centrality of health financing arrangements in determining the degree to which communities are shielded from catastrophic health expenditures.

These results are theoretically anchored in Systems Theory. Within the systems framework, health financing mechanisms constitute a critical input that determines whether the system's outputs accessible and affordable healthcare services are equitably distributed. A weak financing input generates insufficient financial risk protection as an output, exposing households to impoverishing health expenditure and disrupting societal equilibrium. As Easton (1965) observed, systemic outputs that fail to meet societal demands generate negative feedback, eroding public trust and further destabilizing the system. The high out-of-pocket expenditure burden documented in this study reflects precisely this systemic financing failure.

The findings resonate strongly with Onwujekwe, Ezumah, Mbachu, Obi, Ichoku, Uzochukwu and Hong (2019), who demonstrated that health financing mechanisms in Nigeria are neither evidence-based nor results-driven, failing to provide meaningful financial risk protection. Okungbowa (2023) similarly found that Nigeria's out-of-pocket expenditure rate of approximately 70 per cent far exceeds the SDG 3.8.2 benchmark of 25 per cent. Agboni and Noah (2024) specifically noted that in Kogi State, over 60 per cent of total health expenditure is borne out-of-pocket by households, mirroring the evidence from this study. The underperformance of the Basic Health Care Provision Fund (BHCPF) and the limited penetration of the Kogi State Health Insurance Agency further compound these financing challenges.

Internationally, Brazil's Sistema Único de Saúde guarantees healthcare as a constitutional right and deploys tax-based financing to eliminate user fees at the point of service delivery, thereby ensuring strong financial risk protection (Macinko and Harris, 2021). Rwanda's Mutuelles de Santé scheme,

funded by community contributions and government subsidies, has achieved broad financial protection coverage (Binagwaho, Scott and Rosewall, 2023). These international benchmarks underscore the urgent need for transformative health financing reforms in Kogi State to improve financial risk protection and advance UHC.

Conclusion

The findings of the study demonstrate that although PHC remains the foundation of healthcare delivery, its capacity to provide effective financial risk protection is constrained by inadequate financing, limited availability of essential medicines, and affordability challenges. Therefore, the study establishes that strengthening PHC financing mechanisms is indispensable for reducing out-of-pocket healthcare expenditures and achieving Universal Health Coverage in Kogi State. Sustainable financing, efficient resource utilization, expanded health insurance coverage, and strengthened PHC service delivery are therefore essential policy priorities for improving health outcomes and protecting households from catastrophic healthcare expenditures.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Government at both the Federal and Kogi State levels should substantially increase budgetary allocations to Primary Health Care in line with the Abuja Declaration and ensure timely release of funds to PHC facilities for effective service delivery.
2. The Basic Health Care Provision Fund (BHCPF) should be strengthened through transparent, timely, and accountable disbursement mechanisms to ensure uninterrupted provision of essential PHC services and medicines.
3. The Kogi State Health Insurance Agency should expand health insurance coverage, particularly among rural residents, informal sector workers, women, children, older persons, and other vulnerable populations, to reduce dependence on out-of-pocket healthcare payments.
4. Essential medicines and medical consumables should be consistently supplied to PHC facilities through strengthened procurement and supply chain management systems to eliminate frequent stock-outs and reduce the need for patients to purchase drugs from private pharmacies.
5. Government should remove or substantially subsidize user fees for essential PHC services, especially maternal and child health services, immunization, treatment of common illnesses, and preventive healthcare, to improve affordability and financial protection.

References

- Adaji, G. O., Lawal, E. E., & Onimisi, T. (2023). An assessment of the implementation of primary healthcare programmes in Lokoja Local Government Area of Kogi State, 2016–2021. *Wukari International Studies Journal*, 7(3).
- Adamu, U. M., Aminu, S. L., Sadiq, M. D., Mustapha, S. M., Yau, A., Al Amin, A., Audu, A. T., & Isyaku, A. (2025). Primary health care in Nigeria: An appraisal of the effect of foreign donations. *International Research Journal of Arts, Humanities and Social Sciences (IRJAHSS)*, 3(1).
- Ogunnaike, O. O., Taiye, T. B., Sholarin, A., & Ezeugwa, I. C. (2014). An empirical analysis of total quality management and perceived corporate image in higher education management. *European Scientific Journal*, 10(22).
- Alaba, E. D. (2020). Primary health care delivery among the Igalas in North Central Nigeria. *International Journal of Scientific Research in Education*, 13(3), 386–396.

- Akinseye, R.A. (2020). *Administration of Primary Health Care Programme in Local Government in Nigeria: A Case Study of Ibadan South West Local Government*. International Journal of Science and Healthcare Research, 3 (5): 327-337.
- Akinwumi, A. I., OlaOlorun, A. D., Adesina, S. A., Durodola, A. O., Amole, I. O., Singer, S. R., & Levine, H. (2022). Strong primary care services, an important feature of primary health care: What can Nigeria learn from Israel? *Frontiers in Public Health*, 10, 1006095. <https://doi.org/10.3389/fpubh.2022.1006095>
- Ata-Agboni, J. U & Noah, H (2024). Implementation of Health Service Delivery Component of the National Strategic Health Development Plan in Kogi State, Nigeria (2018-2022) *Journal of Good Governance and Sustainable Development in Africa (JGGSDA)*, 8, (5),. Available online at <http://journals.rcmss.com/index.php/jggsda>. Covered in Scopedatabase- <https://sdbindex.com/Sourceid/00000431>, google scholar, etc. ISSN: 2346-724X (P) 2354-158X (E)
- Laxmikanth, M. (2011). *Public administration*. Tata McGraw Hill Education.
- Macinko, J., & Harris, M. J. (2021). Brazil's family health strategy: Delivering community-based primary care in a universal health system. *New England Journal of Medicine*, 384(4), 356–363.
- Musa, S. S., Adamu, M. I., Molly, U. O., Usman, A. H., Ahmed, A. G., Abdulafeez, K. A., Enyinnaya, U., Joseph, A., Muktar, M. S., Nuruddeen, A. A., Bello, A. M., & Don, E. L. (2024). Revitalizing the state of primary healthcare towards achieving universal health coverage in conflict affected fragile northeastern Nigeria: Challenges, strategies and way forward. *Narra X*, 2(3), e178. <http://doi.org/10.52225/narrax.v2i3.178>
- Ogunnaike, O. O., Taiye, T. B., Sholarin, A., & Ezeugwa, I. C. (2014). An empirical analysis of total quality management and perceived corporate image in higher education management. *European Scientific Journal*, 10(22).
- Okungbowa, O. (2023). Assessing health financing progress towards universal health coverage in Nigeria (2015–2022). National Institute for Legislative and Democratic Studies.
- Olalubi, O. A., & Bello, I. S. (2020). Community-based strategies to improve primary health care services in developing countries: Case study of Nigeria. *Journal of Primary Health Care and General Practice*, 4(1).
- Onwujekwe O., Ezumah N., Chinyere M., Felix O, Hyacinth I., Benjamin U. & Hong W. (2019). Exploring effectiveness of different health financing mechanisms in Nigeria; what needs to change and how can it happen? *BMC Health Services Research*, 19:661
- Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS* (7th ed.). Routledge.
- Parsons, T. (1951). *The social system*. Free Press.
- Rahman, M. M., Li, M., Lohan, M. M., Kassai, R., Awan, R., Pempa, P., & Sato, M. (2025). Progress towards universal health coverage in South Asia, 2000–2030: An examination of the twin elements of primary healthcare provision and financial protection. *BMJ Global Health*, 10, e020052. <https://doi.org/10.1136/bmjgh-2025-020052>
- World Health Organization. (2018). *Primary health care on the road to universal health coverage: 2019 monitoring report*. WHO Press.
- World Health Organization. (2019). Report of the global conference on primary health care: From Alma-Ata towards universal health coverage and the Sustainable Development Goals.
- World Health Organization. (2021). Primary health care: Importance and meaning. <https://www.who.int>

World Health Organization. (2024). Declaration of Alma-Ata.

<https://www.who.int/publications/i/item/WHO-EURO-1978-3938-43697-61471>

Yisa, S. S., Ogunniyi, T. J., & Dine, R. D. (2025). Strengthening primary health care in Nigeria: A means to achieve universal health coverage. *BMJ Global Health*, 10(10), e018486.

<https://doi.org/10.1136/bmjgh-2024-018486>