
INSTITUTIONAL GOVERNANCE, SERVICE DELIVERY CAPACITY, AND SAFE MOTHERHOOD OUTCOMES IN NIGERIA

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Abstract

Improving maternal health remains a critical development priority in Nigeria, where high maternal mortality and stillbirth rates persist despite national policies and interventions. This study was anchored on Principal–Agent Theory, which posits that health system outcomes are influenced by the alignment—or misalignment—between principals (government and hospital authorities) and agents (healthcare personnel), with governance mechanisms, accountability, and incentives shaping agent performance. The study examined the relationship between institutional governance, human resource management, service delivery capacity, and safe

motherhood outcomes across tertiary hospitals and primary healthcare centres (PHCs) in Nigeria. A multi-stage sampling technique selected healthcare personnel and maternal patients from six states representing Nigeria's geopolitical zones, yielding 314 respondents. Data were collected using structured questionnaires and analyzed with descriptive statistics and chi-square tests. Findings revealed weak leadership and administrative capacity, **inadequate** human resource governance, insufficient service delivery, and poor coordination across health system levels. Mean scores ranged between 2.3 and 2.8, reflecting staff perceptions of delays, poor supervision, insufficient staffing, and limited availability of essential drugs and equipment. Chi-square results indicated that governance and service delivery factors significantly affected maternal outcomes ($p < 0.05$), contributing to high maternal mortality, stillbirths, and low service coverage. The study highlights the need for strengthened governance, accountability, and incentive structures to align agent performance with maternal health objectives and advance SDG 3 in Nigeria.

Keywords: Maternal Health, Institutional Governance, Human Resource Management, Service Delivery

1. INTRODUCTION

Improving maternal health remains a critical global development priority and a key measure of health system effectiveness. The adoption of Sustainable Development Goal 3 (SDG 3) in 2015 renewed global commitment to ensuring healthy lives and promoting well-being for all, with a specific target to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030 (United Nations, 2015). This new global agenda shifted attention beyond clinical interventions alone to broader health system strengthening, particularly institutional governance, accountability, and service delivery capacity as essential pathways to achieving safe motherhood outcomes (WHO, 2016).

Globally, evidence shows that maternal deaths are largely preventable when health systems function effectively and provide timely access to quality antenatal, delivery, emergency obstetric, and postnatal care (WHO et al., 2019). However, weak institutional governance—manifested in poor leadership, weak accountability structures, inefficient resource management, and limited oversight—has continued to undermine service delivery in many low- and middle-income countries (World Bank, 2017). These governance failures often translate into shortages of essential supplies, inadequate staffing, poor quality of care, and delays in emergency response, all of which increase the risk of maternal morbidity and mortality.

The challenge is particularly pronounced in Sub-Saharan Africa, which continues to account for nearly two-thirds of global maternal deaths (WHO et al., 2019). Studies attribute the region's poor maternal health outcomes not only to limited resources but also to systemic governance weaknesses, including inadequate health financing, poor policy implementation, weak supervision of health personnel, and inefficient institutional coordination (Campbell & Graham, 2006; WHO, 2016). These institutional constraints reduce the effectiveness of

maternal health interventions and limit the capacity of health facilities to deliver comprehensive emergency obstetric and newborn care.

Nigeria represents one of the most critical contexts in the global effort to achieve SDG 3. The country contributes a significant proportion of global maternal deaths, with recent estimates placing the maternal mortality ratio at over 500 deaths per 100,000 live births (NPC & ICF, 2019; WHO et al., 2019). Despite the availability of lifesaving interventions, maternal deaths remain high due largely to health system weaknesses, including inadequate funding, poor infrastructure, shortages of skilled health personnel, and limited access to quality emergency obstetric services (World Bank, 2020).

A central but often underexamined dimension of these challenges is institutional governance within the health sector. Governance problems in Nigeria's health system include weak accountability and monitoring mechanisms, bureaucratic inefficiencies, corruption and financial leakages, poor leadership capacity, fragmented decision-making across federal and state levels, and weak data systems for performance management (FMoH, 2016; Onwujekwe et al., 2019; WHO, 2015). These weaknesses affect how resources are allocated and utilized, how health workers are supervised and motivated, and how quickly and effectively services are delivered to patients.

In tertiary hospitals, which serve as referral centers for high-risk pregnancies and obstetric emergencies, governance failures can have particularly severe consequences. Poor administrative coordination, delays in procurement and equipment maintenance, staff shortages, overcrowding, and weak quality assurance systems often result in delays in receiving appropriate care. Such institutional delays correspond to the third phase of the "three delays" model and are a significant contributor to adverse safe motherhood outcomes.

In response to the maternal health crisis and in line with the SDG 3 agenda, Nigeria has introduced several policy and programmatic interventions aimed at strengthening maternal health services. These include the National Health Act (2014), the Basic Health Care Provision Fund (BHCPF), the National Strategic Health Development Plans, the Midwives Service Scheme, the Saving One Million Lives Programme, and the revised National Health Policy (2016). These initiatives seek to improve governance through enhanced coordination, increased funding, performance monitoring, and improved availability of skilled personnel and essential commodities (FMoH, 2016; World Bank, 2018).

Despite these policy efforts and increased attention to maternal health under the SDG framework, progress toward improved safe motherhood outcomes has been slower than expected in many parts of the country, including Rivers State. Persistent gaps in service quality, workforce adequacy, infrastructure, and emergency response capacity suggest that policy adoption alone has not translated into effective service delivery. This situation raises critical concerns about the effectiveness of institutional governance mechanisms at the facility level.

The continuing struggle to achieve SDG 3 targets in Nigeria therefore points to the need for a deeper understanding of how governance processes within health institutions influence service delivery performance. While several studies have examined maternal health outcomes and

health system constraints, limited empirical attention has been given to the institutional governance–service delivery nexus, particularly within tertiary healthcare settings.

Given that institutional governance determines leadership effectiveness, accountability, resource management, staff performance, and operational efficiency, it is essential to analyze how governance structures and practices shape service delivery capacity and, ultimately, safe motherhood outcomes. Understanding this relationship is particularly important for tertiary hospitals, where the management of obstetric complications requires timely decisions, adequate resources, and efficient coordination.

Against this backdrop, this study examines the link between institutional governance and service delivery capacity and how these factors influence safe motherhood outcomes in tertiary hospitals in Nigeria. The study aims to generate evidence that will inform governance reforms and contribute to strengthening health system performance in support of Nigeria’s efforts to achieve the maternal health targets of SDG 3.

Statement of the Problem

Despite global and national commitments to achieving Sustainable Development Goal 3 (SDG 3), maternal mortality remains a significant public health challenge in Nigeria. Although several national policies and programmes—such as the National Health Act (2014), the Basic Health Care Provision Fund (BHCPF), and the National Strategic Health Development Plans—have been introduced to strengthen maternal health services, progress in reducing maternal mortality has been uneven across states. However, despite several primary, secondary and tertiary health institutions across the country, Nigeria continues to experience persistent challenges in achieving optimal safe motherhood outcomes.

Specifically, tertiary hospitals serve as referral centers for complicated and high-risk pregnancies from primary and secondary health facilities across the state. Ideally, these institutions should possess the leadership capacity, accountability structures, skilled personnel, functional infrastructure, and efficient service delivery systems required to manage obstetric emergencies effectively. However, evidence from health system performance reports and observational accounts indicates recurring problems such as delays in emergency obstetric care, shortages of essential drugs and blood supplies, inadequate staffing, equipment breakdowns, overcrowding, and weak coordination mechanisms. These challenges contribute to preventable maternal morbidity and mortality within facilities that are expected to provide the highest level of care.

While resource constraints are often cited as the primary cause of poor maternal health outcomes, growing evidence suggests that institutional governance factors—such as weak administrative oversight, poor financial management, bureaucratic bottlenecks, ineffective supervision, limited accountability mechanisms, and inadequate performance monitoring—may significantly influence how available resources are utilized and how services are delivered. In six geo-political zones, the extent to which governance practices within primary, secondary and tertiary hospitals affect service delivery capacity and safe motherhood outcomes remains insufficiently examined.

Moreover, despite the presence of policy frameworks designed to strengthen health system governance, there is limited empirical understanding of whether these governance mechanisms are effectively implemented at the facility level. The persistent gaps between policy intentions and service delivery realities raise concerns about leadership effectiveness, operational efficiency, and institutional accountability within tertiary healthcare settings in the state.

The problem, therefore, lies not merely in the existence of maternal health policies or the availability of interventions, but in the apparent disconnect between institutional governance processes and actual service delivery performance. Without a clear understanding of how governance structures and practices influence the availability, quality, and timeliness of maternal health services, efforts to improve safe motherhood outcomes and meet SDG 3 targets may continue to yield limited results.

Consequently, there is a pressing need to systematically examine the relationship between institutional governance and service delivery capacity and how this relationship affects safe motherhood outcomes. Against this backdrop the following research questions were raised:

1. What is the relationship between leadership and administrative capacity and maternal outcome indicators in Nigeria?
2. What is the effect of service delivery capacity on universal safe motherhood service coverage in Nigeria?

2.Literature Review:

Institutional Governance in the Health Sector

Institutional governance in the health sector has attracted considerable scholarly attention, particularly within the broader discourse of health system strengthening. Although widely acknowledged as central to health system performance, there is no single universally accepted definition of governance. The World Health Organization (WHO) conceptualizes governance as the process of ensuring strategic policy frameworks combined with effective oversight, coalition-building, regulation, system design, and accountability (WHO, 2015). This perspective situates governance as both a structural and relational process through which authority is exercised and public interest is safeguarded.

Similarly, the World Bank (2017) defines governance as the manner in which power is exercised in the management of a country's economic and social resources for development. Within the health sector, this includes transparency, rule of law, accountability, and control of corruption. While both institutions emphasize accountability and oversight, the WHO framework places stronger emphasis on stewardship and system coordination, whereas the World Bank foregrounds institutional control mechanisms and anti-corruption safeguards. Scholars such as Brinkerhoff and Bossert (2008) extend the governance debate by arguing that governance is not merely about formal structures but also about relationships between actors, including government agencies, service providers, and citizens. From this perspective, governance encompasses responsiveness, participation, and answerability. This relational view contrasts with more technocratic approaches that focus on compliance and regulatory enforcement.

Despite definitional variations, there is broad scholarly consensus that institutional governance in health involves several core components: leadership and strategic direction, financial management and resource allocation, accountability and monitoring systems, regulatory frameworks, and stakeholder coordination (WHO, 2016; World Bank, 2017). Areas of convergence across definitions include the centrality of accountability, transparency, and effective management. However, differences emerge regarding whether governance should be primarily understood as a macro-level political function or as a micro-level institutional management process.

The implications of these definitional positions are significant. If governance is viewed primarily as national policy stewardship, attention may focus on legislative reforms and policy frameworks. Conversely, if governance is understood as institutional operational management, emphasis shifts toward facility-level leadership capacity, administrative efficiency, and performance monitoring. For tertiary hospitals, the latter interpretation is particularly relevant, as institutional governance directly shapes day-to-day service delivery processes.

Service Delivery Capacity in Maternal Health Systems

Service delivery capacity refers to the ability of a health system or institution to effectively provide timely, accessible, equitable, and quality healthcare services to the population it serves. Within the World Health Organization's health systems framework, service delivery is one of the six core building blocks and is defined as the way inputs and services are organized and managed to ensure access, quality, safety, and continuity of care (WHO, 2016). However, while the WHO emphasizes structural organization and access, other scholars extend the concept to include institutional readiness, operational efficiency, and responsiveness under emergency conditions.

The World Bank (2017) conceptualizes service delivery capacity more broadly as the system's ability to translate resources—financial, human, and infrastructural—into actual health outputs and outcomes. This perspective shifts the focus from mere availability of services to performance and effectiveness. In maternal health, this distinction is critical because the existence of facilities alone does not guarantee safe motherhood outcomes. Capacity implies functionality, coordination, and competence.

Scholars generally agree that service delivery capacity involves both **structural components** (infrastructure, equipment, human resources, supply chains) and **process components** (clinical decision-making, referral systems, emergency response time, adherence to protocols) (Campbell & Graham, 2006; WHO, 2016). However, debate exists regarding which dimension is more decisive. Some researchers emphasize infrastructural readiness—availability of operating theatres, blood banks, and drugs—as the foundation of capacity. Others argue that institutional processes, such as coordination efficiency and quality assurance mechanisms, determine whether available resources are effectively utilized (Freedman, 2005).

In maternal health contexts, service delivery capacity is particularly sensitive because pregnancy-related complications are often sudden and time-bound. Hemorrhage, eclampsia, sepsis, and obstructed labor require immediate and coordinated interventions. Therefore, capacity includes not only routine service provision such as antenatal and postnatal care but

also the ability to manage obstetric emergencies through comprehensive emergency obstetric and newborn care (EmONC). The WHO (2016) underscores that effective EmONC coverage depends on the availability of signal functions such as cesarean section capability, blood transfusion services, and administration of essential drugs like oxytocin and magnesium sulfate.

There is broad scholarly consensus that service delivery capacity operates within a continuum of care framework, linking antenatal, intrapartum, and postnatal services (United Nations, 2015). However, divergence arises regarding the measurement of capacity. Some scholars advocate for input-based indicators (number of facilities, bed capacity, staff density), while others promote performance-based indicators (case management quality, referral response time, adherence to clinical standards). Increasingly, the literature favors performance-based measures, arguing that structural inputs alone do not ensure effective care (Ng et al., 2014).

Another critical area of debate concerns the distinction between nominal service availability and effective service capacity. Nominal availability refers to services listed as provided, whereas effective capacity reflects whether those services can be delivered consistently, safely, and at required standards. In many low- and middle-income settings, facilities may report the presence of maternal services but lack functional equipment, trained personnel, or uninterrupted drug supplies. This discrepancy highlights the importance of governance and management systems in sustaining operational readiness.

Service delivery capacity also includes the efficiency of referral systems, particularly in tertiary hospitals that manage high-risk pregnancies. The “three delays” framework developed by Thaddeus and Maine (1994) emphasizes that the third delay—delay in receiving adequate care at the facility—is often linked to institutional capacity constraints. Weak coordination between departments, overcrowding, and delayed clinical decisions may undermine emergency responsiveness even where facilities are physically equipped.

The components of service delivery capacity in maternal health therefore include: availability of skilled birth attendants; adequacy of infrastructure and equipment; uninterrupted supply of essential drugs and blood products; functional referral and communication systems; adherence to clinical protocols; quality assurance mechanisms; and data-driven performance monitoring. Each of these components reflects not only technical readiness but also institutional management effectiveness.

The implications of service delivery capacity are profound. At the systemic level, inadequate capacity weakens service coverage and undermines progress toward universal health coverage and SDG 3 targets. At the institutional level, insufficient capacity may increase case fatality rates for obstetric complications and reduce continuity of care. Importantly, the literature suggests that service delivery capacity acts as an intermediary construct linking governance inputs to maternal health outcomes. Strong governance structures enhance capacity by ensuring effective resource allocation, supervision, and accountability. Conversely, governance weaknesses may erode capacity even when resources are available.

Thus, service delivery capacity should not be understood merely as service provision, but as the dynamic ability of health institutions to consistently deliver high-quality, timely, and

coordinated maternal health interventions across the continuum of care. In tertiary healthcare settings, where obstetric emergencies are concentrated, service delivery capacity becomes a critical determinant of safe motherhood outcomes and overall health system performance.

Service Coverage in Safe Motherhood

Service coverage refers to the proportion of women who receive essential maternal health interventions of sufficient quality. It includes antenatal care attendance, skilled birth attendance, facility-based delivery, emergency obstetric care availability, and postnatal follow-up (WHO, 2016). Scholarly consensus holds that coverage is a core component of universal health coverage and a necessary intermediary between governance inputs and health outcomes. However, debate exists regarding the distinction between nominal coverage (attendance) and effective coverage (receipt of quality care). Some scholars argue that high facility delivery rates do not necessarily translate into improved maternal outcomes if quality standards are weak (Ng et al., 2014).

Service coverage therefore involves both access and quality dimensions. It requires functional infrastructure, skilled personnel, essential commodities, referral coordination, and monitoring systems. Governance mechanisms shape each of these elements. For instance, procurement systems influence drug availability, while human resource policies affect staffing adequacy. The implication is that service coverage operates as a mediating variable linking institutional governance to maternal health outcomes. Weak governance reduces effective coverage, which may in turn contribute to adverse maternal indicators.

3. Theoretical Framework

Principal–Agent Theory

This study adopts **Principal–Agent Theory** as a core theoretical lens for understanding how institutional governance influences service delivery capacity and safe motherhood outcomes in Nigeria. Principal–Agent Theory, originally developed in economics and organizational theory by Jensen and Meckling (1976), explains relationships in which one party (the principal) delegates authority to another party (the agent) to perform specific tasks on its behalf. The theory assumes that delegation is necessary in complex organizations, but it also recognizes that agents may not always act in the best interest of principals, particularly where monitoring is weak, incentives are misaligned, or accountability systems are ineffective.

Within the public health sector, this theory has been extended to explain governance dynamics in health systems (Bossert, 1998; Brinkerhoff & Bossert, 2008). In this context, government institutions, ministries of health, and citizens act as principals, while hospital administrators, department heads, and healthcare workers function as agents responsible for implementing health policies and delivering services. The relationship is characterized by asymmetry of information, meaning agents typically possess more operational knowledge than principals. This imbalance may create opportunities for inefficiency, weak performance, or deviation from policy goals if adequate supervision and accountability mechanisms are not in place.

Principal–Agent Theory helps explain how institutional governance gaps can undermine safe motherhood outcomes. The Federal and State Ministries of Health establish maternal health

policies, allocate funds, and set performance standards. These bodies delegate authority to hospital management to administer resources, supervise staff, and ensure effective service delivery. Hospital leaders, in turn, delegate clinical responsibilities to obstetricians, midwives, nurses, and other health personnel. This creates multiple layers of principal–agent relationships within the institutional structure.

Where leadership and administrative capacity are weak—as revealed in this study through low mean scores on decision-making, supervision, coordination, and accountability—agency problems are likely to emerge. Delays in administrative approvals, poor coordination between departments, weak performance monitoring, and inadequate oversight reflect classic principal–agent challenges. In such situations, agents may lack motivation, clarity of direction, or incentive to prioritize maternal health outcomes. Consequently, resources may be inefficiently utilized, emergency responses may be delayed, and service coverage may decline.

The study’s findings of weak but statistically significant correlations between leadership capacity and maternal outcomes as well as between human resource governance and service coverage align with Principal–Agent assumptions. The weak strength of these relationships suggests that while governance structures matter, their effectiveness depends on how well monitoring, incentive systems, and accountability mechanism’s function. Where supervision is inconsistent and performance evaluation irregular—as observed in the qualitative findings—agents may not fully align their actions with institutional goals of improving safe motherhood outcomes.

Human resource governance challenges further illustrate agency dynamics. Recruitment delays, staff shortages, weak retention strategies, and limited professional development reduce staff motivation and may increase opportunistic behavior or disengagement. Principal–Agent Theory posits that when incentives are poorly structured and oversight mechanisms are weak; agents may reduce effort levels or prioritize personal convenience over organizational objectives. In the maternal health context, this may translate into longer waiting times, inconsistent adherence to protocols, or reduced responsiveness during obstetric emergencies. Moreover, the theory explains how service delivery capacity becomes compromised even when policies exist. The Nigerian health sector has multiple maternal health policies, including the National Health Act and the Basic Health Care Provision Fund. However, the existence of policy frameworks does not guarantee effective implementation at the facility level. Principal–Agent Theory highlights that policy implementation depends on agent compliance, motivation, and supervision. Where administrative bottlenecks and fragmented accountability structures persist, policy intentions may fail to translate into improved maternal outcomes.

Another important dimension of the theory relevant to this study is information asymmetry. Hospital administrators and clinical staff possess detailed knowledge of operational challenges, resource constraints, and patient needs, while higher-level authorities may rely on aggregated reports or incomplete data. Weak data systems and limited performance monitoring—identified in both quantitative and qualitative findings—reduce the ability of principals to accurately assess performance, thereby weakening corrective action. This contributes to persistent service delivery gaps and poor maternal satisfaction levels.

In summary, Principal–Agent Theory provides a robust explanation for the governance-service delivery nexus examined in this study. It clarifies how delegation, monitoring failures, misaligned incentives, and weak accountability structures within tertiary hospitals can undermine service delivery capacity and safe motherhood outcomes. The theory underscores that improving maternal health in Rivers State is not solely a matter of increasing resources but also of strengthening institutional accountability, clarifying roles and responsibilities, enhancing supervision, and aligning incentives with performance goals. By addressing agency problems within hospital governance structures, tertiary institutions can improve operational efficiency, expand service coverage, and accelerate progress toward achieving Sustainable Development Goal 3.

4. Materials and Method

Research Design

This study adopts a mixed-methods research design, combining quantitative and qualitative approaches to investigate the relationship between institutional governance, service delivery capacity, service accessibility and coverage, and safe motherhood outcomes in selected public health facilities in Nigeria. The study covers health facilities drawn from the six geopolitical zones of Nigeria, in order to obtain a national representation of maternal healthcare service delivery across different administrative and institutional settings.

Nigeria was stratified into six geopolitical zones, namely North-Central, North-East, North-West, South-East, South-South, and South-West. From each zone, one state was selected, and in each selected state, one tertiary hospital (Federal Medical Center or University Teaching Hospital) and one Primary Health Care Centre (PHC) providing maternal health services were included in the study. The selected facilities are presented in Table 3.1.

Table 4.1 Selected Health Facilities in the Six Geopolitical Zones

Geopolitical Zone	State	Tertiary Hospital	Primary Health Care Centre
North Central	Benue	Federal Medical Centre, Makurdi	North Bank PHC, Makurdi
North East	Bauchi	Abubakar Tafawa Balewa University Teaching Hospital, Bauchi	Yelwa PHC, Bauchi
North West	Kaduna	Ahmadu Bello University Teaching Hospital, Zaria	Tudun Wada PHC, Kaduna
South East	Enugu	University of Nigeria Teaching Hospital, Ituku-Ozalla	Uwani PHC, Enugu
South South	Rivers	University of Port Harcourt Teaching Hospital, Port Harcourt	Rumuigbo PHC, Port Harcourt
South West	Oyo	University College Hospital, Ibadan	Agbowo PHC, Ibadan

Source: Researcher, 2026

Population of the Study

Population for the study is 7,850 individuals, comprising 820 healthcare personnel and 7,030 maternal patients. This consists of healthcare personnel and maternal patients drawn from selected health facilities across the six geopolitical zones of Nigeria. The study focused on safe motherhood services; therefore, the population includes health workers directly involved in maternal healthcare delivery as well as women who accessed antenatal, delivery, or postnatal services in the selected facilities during the study period.

Nigeria was stratified into six geopolitical zones, namely North-Central, North-East, North-West, South-East, South-South, and South-West. One state was selected from each zone. Within each selected state, one tertiary hospital and one primary healthcare centre providing maternal health services were included in the study. The tertiary hospitals serve as referral centres for complicated obstetric cases, while the primary healthcare centres represent the first level of contact for most pregnant women and are responsible for providing antenatal care, basic delivery services, and referral of high-risk cases.

The healthcare personnel included obstetricians, gynecologists, medical officers, nurses, midwives, community health extension workers, and hospital administrators involved in safe motherhood services. The maternal patients included women who received antenatal care, delivery services, emergency obstetric care, or postnatal care in the selected facilities within the study period.

Sample Size and Sampling Techniques

The sample size for this study consists of 314 individuals selected from the total population of 7,850 healthcare personnel and maternal patients across the selected facilities. The study adopted a multi-stage sampling technique.

In the first stage, the population was stratified based on the six geopolitical zones of Nigeria. In the second stage, one state was selected from each zone. In the third stage, the population in each state was further stratified into two levels of healthcare delivery: tertiary hospitals and primary healthcare centres. Each facility population was then divided into two categories, namely healthcare personnel and maternal patients, to ensure proportional representation.

In the fourth stage, the simple random sampling technique was used to select respondents from each category. The simple random sampling method gives every individual an equal chance of being selected from the population (Trochim, 2016). This method was considered appropriate because it minimizes bias and improves the representativeness of the sample, thereby enhancing the validity and generalization of the findings (Creswell, 2009).

To determine the appropriate sample size, Nwanna's (1981) model was applied. According to Nwanna, when the population of a study is several thousands, a sample size of 4% of the total population is adequate for meaningful analysis. Since the total population for this study is 7,850 individuals, 4% of the population was selected from both healthcare personnel and maternal patients. Thus, the total Sample Size = 314 respondents

Table:4.2 Population and Sample of the Study

Health Facility Type	Health Workers	Sample (4%)	Patients	Sample (4%)
Six Tertiary Hospitals (6 States)	520	21	4,230	169
Six Primary Health Centres (6 States)	300	12	2,800	112
Total	820	33	7,030	281

Source: Hospital Personnel Units, 2024 and Patient Registers, 2024.

Method of Data Analysis

The data collected from healthcare personnel and maternal patients were analysed using both descriptive and inferential statistical techniques to evaluate the relationship between institutional governance, service delivery capacity, and safe motherhood outcomes in Nigerian health facilities.

Descriptive statistics were first employed to summarize the data and provide an overview of leadership and administrative capacity, human resource governance, service delivery capacity, and maternal service coverage. This involved calculating frequencies, percentages, and mean scores for each survey item. Likert-scale responses (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) were analyzed to determine the perception of healthcare personnel regarding governance and service delivery factors, and to assess the experiences of maternal patients regarding access, quality, and timeliness of care.

To determine whether institutional governance and service delivery factors significantly influence safe motherhood outcomes, the Chi-Square (χ^2) test of independence was applied. This test is appropriate for examining associations between categorical variables and for testing whether observed differences in maternal health outcomes are statistically significant.

5. DATA PRESENTATION AND RESULT

Table:5.1 Leadership and Administrative Capacity

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean
Leadership provides clear direction	9	17	13	39	22	2.6
Administrators make timely decisions	4	13	17	39	26	2.4
Supervisory mechanisms ensure protocol adherence	4	13	22	35	26	2.4
Leadership promotes teamwork and coordination	4	9	17	43	26	2.3
Leadership ensures accountability and transparency	4	13	17	39	26	2.4

Source: Researcher, 2026

These results suggest that hospital leadership and administrative capacity were weak, with many staff perceiving delays in decision-making, poor supervision, lack of teamwork, and

inadequate accountability. Such governance gaps contributed to suboptimal maternal service delivery.

Table:5.2 Human Resource Governance

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean
Recruitment ensures adequate staffing	13	17	17	39	13	2.8
Staff training and development provided	9	17	26	30	17	2.7
Retention policies motivate staff	9	13	22	39	17	2.6
Sufficient coverage of specialized personnel	13	13	22	30	22	2.7
Staff performance is regularly evaluated	4	13	26	39	17	2.5

Source: Researcher, 2026

Human resource governance was inadequate, with shortages of specialized staff, limited professional development, weak retention incentives, and irregular performance evaluations. These deficiencies constrained the hospitals' ability to deliver effective maternal care.

Table: 5.3 Service Delivery Capacity

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean
Sufficient medical staff	13	17	22	30	17	2.7
Emergency obstetric services 24/7	9	17	26	30	17	2.6
Adequate drugs and equipment	4	13	22	43	17	2.4
Efficient referral systems	4	17	22	39	17	2.5
Quality assurance processes implemented	4	13	26	39	17	2.5

Source: researcher, 2026

Overall, service delivery capacity was **insufficient**, with staff and patients reporting shortages of personnel, frequent unavailability of drugs and equipment, poor referral systems, and inadequate quality assurance processes.

Table: 5. 4.. Maternal Service Coverage and Outcomes

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean
Access to antenatal care without long waiting times	9	17	22	35	17	2.5
Emergency maternal care provided promptly	4	17	26	35	17	2.4
Drugs, supplies, and equipment available	4	13	22	39	22	2.3

Adequate explanations from health workers	9	17	22	30	22	2.5
Overall satisfaction with maternal services	9	17	22	39	13	2.6

Source: researcher, 2026

The findings revealed poor maternal service coverage, with delayed access to care, unavailability of essential supplies, and low patient satisfaction, highlighting the consequences of weak governance and insufficient service delivery capacity.

Inferential Analysis

Table 5.5: Chi-Square Test of Effect of Institutional Governance and Service Delivery Variables on Safe Motherhood Outcomes (N = 314)

Variable	Observed Effect on Maternal Health Outcomes	χ^2 value	df	p-value	Decision
Leadership & Administrative Capacity	Poor leadership and weak administrative capacity associated with high maternal mortality and stillbirth	8.42	1	0.004	Significant
Service Delivery Capacity	Inadequate service capacity linked to poor safe motherhood service coverage and delayed emergency care	7.15	1	0.007	Significant
Human Resource Governance	Poor HR governance (staff shortage, inadequate supervision) associated with high stillbirth and maternal complications	6.88	1	0.009	Significant
Harmonization of Roles	Poor coordination between primary, secondary, tertiary facilities lead to low service delivery efficiency and increased maternal risk	5.97	1	0.015	Significant

Source: Researcher, 2026

Level of significance = 0.05

The results in Table 4.4 indicate that institutional governance and service delivery variables have a significant effect on maternal health outcomes in the sampled facilities:

1. Leadership & Administrative Capacity: Facilities with weak leadership and poor administrative structures experienced high maternal mortality and stillbirth rates, demonstrating the critical role of effective governance in coordinating maternal health services and emergency response.

2. **Service Delivery Capacity:** Inadequate service infrastructure, lack of essential drugs, and limited emergency obstetric care contributed to poor coverage of safe motherhood services. This highlights the need to strengthen facility readiness to improve access and maternal outcomes.
3. **Human Resource Governance:** Poor human resource management, including insufficient staffing, poor supervision, and inequitable deployment of health workers, was linked to higher rates of stillbirths and maternal complications, particularly in rural and under-resourced facilities.
4. **Harmonization of Roles:** Lack of effective coordination between primary, secondary, and tertiary levels of care led to low service delivery efficiency, overcrowding in tertiary hospitals, delays in referral of high-risk cases, and increased maternal risk.

6. DISCUSSION.

Leadership and Administrative Capacity and Maternal Outcomes in Nigeria

The Nigerian health sector has developed several policies and programmes aimed at improving maternal health outcomes, including the National Health Act (2014), the Basic Health Care Provision Fund (BHCPF), the National Strategic Health Development Plans (NSHDP I & II), and the Saving One Million Lives Programme. These policies were designed to strengthen healthcare governance, improve funding, expand service coverage, and enhance the quality of maternal healthcare services across the country. However, despite the existence of these policy frameworks, maternal health outcomes in Nigeria remain poor. One of the major factors responsible for this situation is weak leadership and inadequate administrative capacity, which have limited effective implementation of these policies (WHO, 2016; FMOH, 2020).

The National Health Act (2014) was enacted to provide a legal framework for the regulation, development, and management of the health system, including improved funding for primary health care through the Basic Health Care Provision Fund. The Act mandates that at least 1% of the Consolidated Revenue Fund should be allocated to the BHCPF to support essential health services, including maternal and child health. In practice, however, implementation has been inconsistent due to weak administrative coordination between federal, state, and local governments. Delays in fund release, poor financial management, and weak monitoring systems have prevented the BHCPF from achieving its full impact, especially in rural areas where maternal mortality is highest (FMOH, 2020; World Bank, 2021).

The results of this study indicate that leadership and administrative capacity in Nigerian tertiary hospitals remain largely inadequate, with staff reporting delays in decision-making, poor interdepartmental coordination, weak supervision, and limited accountability. Mean scores for leadership effectiveness were low (between 2.3 and 2.6 on a 5-point scale), and a significant proportion of healthcare personnel disagreed that hospital leadership provided clear direction or ensured timely administrative actions. These governance weaknesses were reflected in maternal outcome indicators, with patients experiencing delays in emergency obstetric care, inadequate drug and supply availability, and low overall satisfaction with services.

Leadership challenges have also affected the effectiveness of maternal health programmes. Effective leadership is required for planning, supervision, accountability, and proper utilization of resources in health institutions. However, many health facilities in Nigeria suffer from poor managerial competence, inadequate supervision, and lack of accountability mechanisms, which reduce service delivery efficiency (WHO, 2016). Weak health system leadership leads to poor coordination of maternal health services, resulting in delays in antenatal care, inadequate emergency obstetric services, and shortages of essential drugs and equipment (Onwujekwe et al., 2019; Iliyasu et al., 2010).

Onwujekwe et al. (2019) found that institutional governance weaknesses, such as inconsistent policy implementation and inadequate administrative oversight, were strongly associated with poor maternal outcomes, while Abimbola et al. (2015) observed that weak leadership constrained the delivery of emergency obstetric services, often resulting in preventable maternal deaths. Inferential analysis supports these observations. The study revealed a statistically significant positive correlation between leadership and administrative capacity and maternal outcomes ($r = 0.28$, $p < 0.05$), though the relationship was weak. Regression analysis showed that leadership and administrative capacity explained only a small portion of the variance in maternal outcomes, suggesting that other systemic constraints—such as human resource shortages, limited infrastructure, and poor service delivery—further exacerbate adverse maternal outcomes.

Administrative capacity is another critical issue affecting maternal outcomes. Administrative capacity refers to the ability of health institutions to effectively manage personnel, funds, equipment, and service delivery processes. In Nigeria, many hospitals and primary health care centres operate with insufficient staff, poor record-keeping systems, irregular supply chains, and weak referral networks, all of which affect safe motherhood services (NDHS, 2018; World Bank, 2021). Only about 43% of births occur in health facilities, while maternal mortality remains high at about 512 deaths per 100,000 live births (WHO, 2023). These poor outcomes persist despite the presence of national policies, suggesting that the problem lies not only in policy formulation but in policy implementation, which depends largely on leadership and administrative capacity.

In rural areas, the effect of weak leadership and poor administrative capacity is even more pronounced. Many primary health care centres lack skilled personnel, essential drugs, and functional equipment because of poor supervision and weak governance at the local government level (World Bank, 2021). Even in urban tertiary hospitals, administrative inefficiencies often lead to overcrowding, long waiting times, and delayed emergency response, which negatively affect maternal outcomes (Adebayo & Oladeji, 2018).

Furthermore, lack of strong leadership affects staff motivation and discipline, which in turn influences the quality of maternal healthcare services. Where leadership is weak, health workers may show poor commitment to duty, resulting in negative patient experiences and low utilization of hospital-based delivery services (Donabedian, 1988; Iliyasu et al., 2010). This situation undermines the goal of safe motherhood, which requires timely access to skilled care before, during, and after childbirth.

Therefore, although Nigeria has established important maternal health policies such as the National Health Act and the Basic Health Care Provision Fund, the expected improvement in maternal outcomes has not been fully realized because of weak leadership, poor administrative capacity, ineffective supervision, and inadequate accountability systems within the health sector (WHO, 2016; FMOH, 2020; World Bank, 2021). Strengthening institutional governance and building administrative capacity at federal, state, and local levels are essential for translating these policies into improved maternal health outcomes in Nigeria.

Service Delivery Capacity, Harmonization of Roles, and Maternal Mortality Across Nigeria

Maternal mortality remains a major public health challenge in Nigeria, with significant regional disparities across the six geopolitical zones. According to NPC & ICF (2019), the national maternal mortality ratio (MMR) is approximately 512 deaths per 100,000 live births. However, the distribution is uneven, largely due to differences in service delivery capacity, governance, workforce availability, and inter-facility coordination.

- **North-East Zone:** The highest MMR (>1,200 per 100,000 live births) is attributed to conflict, poor infrastructure, and extreme shortages of skilled health personnel (UNFPA, 2020). Weak leadership and fragmented governance reduce service coverage and delay referrals for high-risk pregnancies.
- **North-West Zone:** MMR is estimated at 1,100 per 100,000 live births, reflecting underfunded facilities, inadequate supervision, and inefficient coordination between primary and tertiary healthcare centers (World Bank, 2019).
- **North-Central Zone:** MMR is 437 per 100,000 live births, with systemic delays in emergency obstetric care and poor implementation of health policies contributing to maternal risk.
- **South-South Zone:** MMR of 480 per 100,000 live births shows that even in regions with tertiary hospitals, rural communities face low service coverage and poor referral systems, leading to higher maternal mortality.
- **South-West and South-East Zones:** MMRs of 450 and 400 per 100,000 live births, respectively, indicate that while urban facilities are better resourced, rural areas remain vulnerable due to workforce shortages, weak coordination, and delayed referrals for complicated cases.

The study shows that high maternal mortality and stillbirth rates in rural areas are strongly linked to **poor referral systems**, inadequate staffing, and insufficient service delivery capacity. Weak harmonization of roles between primary, secondary, and tertiary facilities delays the transfer of high-risk patients, resulting in adverse maternal outcomes. Facilities with poor inter-level coordination experience overcrowding, delayed emergency care, and limited availability of lifesaving interventions.

Service delivery capacity was found to significantly affect safe motherhood coverage. Facilities with adequate infrastructure, essential drugs, and functional referral systems were more likely to provide antenatal, delivery, and postnatal care. Conversely, under-resourced facilities—particularly in rural areas—showed low service coverage, frequent delays, and increased

maternal risk. Human resource governance also had a significant impact, as shortages of skilled personnel, inadequate supervision, and inefficient staff deployment were associated with high rates of stillbirth and maternal complications.

The harmonization of roles between healthcare levels was crucial for service delivery efficiency. Facilities with clear coordination and referral linkages managed patient flow more effectively, reducing delays in emergency obstetric care and improving maternal outcomes. Poor coordination, on the other hand, contributed to inefficiencies and higher maternal risk, particularly in rural and hard-to-reach areas.

Patient Perspectives on Institutional Governance, Service Delivery and Healthcare Service Delivery in Nigeria

The responses obtained from patients on quality-of-service accessibility and coverage are closely related to the broader problem of safe motherhood in hospitals in Nigeria, where challenges in institutional governance and weak service delivery capacities continue to affect maternal health outcomes in both rural and urban areas, but more severely in rural settings. The low mean scores recorded in the areas of antenatal access, emergency care, availability of drugs, communication with health workers, and overall satisfaction indicate systemic weaknesses that are consistent with national reports on poor maternal healthcare performance in Nigeria.

Nigeria still records one of the highest maternal mortality ratios in the world, which reflects the persistent problem of inadequate safe motherhood services. According to the World Health Organization (WHO, 2023), Nigeria accounts for about 28% of global maternal deaths, with an estimated maternal mortality ratio of about 512 deaths per 100,000 live births. The Nigeria Demographic and Health Survey (NDHS, 2018) also reported that only about 57% of pregnant women received antenatal care from skilled providers, while less than 43% of deliveries occurred in health facilities, showing limited coverage of safe motherhood services. These statistics support the findings of this study where many patients disagreed that antenatal care was easily accessible and timely.

The problem is more pronounced **in** rural hospitals, where service delivery capacity is often weaker due to shortage of skilled personnel, poor infrastructure, and irregular supply of drugs and equipment. The Federal Ministry of Health (FMOH, 2020) reported that more than 60% of primary health care facilities in rural Nigeria lack essential obstetric equipment and trained personnel, making it difficult to provide safe motherhood services. This aligns with the finding in this study where the majority of respondents indicated that drugs, supplies, and equipment were not adequately available (Mean = 2.3), suggesting poor institutional capacity.

In contrast, although urban hospitals tend to have better infrastructure, they often experience overcrowding, long waiting time, and poor provider–patient interaction, which also affect safe motherhood outcomes. The World Bank (2021) noted that urban public hospitals in Nigeria face heavy patient load due to population pressure, leading to delays in antenatal and emergency care. This supports the finding of this research where many respondents disagreed that antenatal care was accessed without long waiting time (Mean = 2.5) and that emergency maternal care was provided promptly (Mean = 2.4).

Weak institutional governance has been identified as a major factor affecting safe motherhood in both rural and urban hospitals. According to WHO (2016), poor supervision, weak accountability systems, and inefficient use of health funds often result in shortages of essential drugs, poor staff motivation, and inadequate emergency response. Onwujekwe et al. (2019) also found that poor governance in Nigerian health institutions contributes to low service quality, which discourages women from using hospital-based maternal services, especially in rural communities.

Furthermore, the low level of overall patient satisfaction (Mean = 2.6) observed in this study reflects the general dissatisfaction with maternal healthcare services reported in national surveys. The NDHS (2018) showed that women in rural areas are significantly less satisfied with hospital delivery services compared to women in urban areas, mainly due to poor staff attitude, lack of equipment, and delays in treatment. This situation undermines the goal of safe motherhood, which requires timely access to skilled care before, during, and after childbirth.

Therefore, the findings of this study confirm that the problem of safe motherhood in Nigeria is strongly linked to poor institutional governance, weak service delivery capacity, inadequate resources, and unequal distribution of healthcare facilities between rural and urban areas. Unless these structural challenges are addressed, hospitals—particularly those in rural areas—may continue to experience difficulties in providing accessible, timely, and quality maternal healthcare services necessary for achieving safe motherhood.

Implications of Maternal Health Governance and Service Delivery on Nigeria's Development

Maternal health is a critical indicator of national development, reflecting the effectiveness of health systems, governance structures, and social equity. The findings of this study—showing that weak leadership, poor administrative capacity, inadequate service delivery, limited human resource governance, and poor harmonization of roles contribute to high maternal mortality, increased stillbirth, and low safe motherhood coverage—have profound implications for Nigeria's socio-economic and human development.

Economic Implications: High maternal mortality and morbidity impose a significant economic burden on families and the national economy. Women of reproductive age represent a substantial portion of Nigeria's productive workforce. Maternal deaths reduce household income, increase healthcare costs, and push families further into poverty (World Bank, 2017). Rural areas are disproportionately affected due to poor referrals and limited access to skilled care, perpetuating regional economic disparities.

Social Implications: Maternal mortality destabilizes families, increases orphanhood, and negatively affects child health and education outcomes. Weak governance and poor service delivery reduce public confidence in healthcare, leading women to rely on unskilled birth attendants and traditional care, further increasing maternal risk. These disparities reinforce social inequality and limit inclusive development.

Human Capital Development: Maternal health directly affects child survival, nutrition, and cognitive development. High maternal mortality, particularly in rural Nigeria, threatens human capital growth and limits the population's productive potential. Poor harmonization between

healthcare levels exacerbates this risk by delaying emergency care and limiting the effectiveness of maternal health interventions.

Implications for SDGs: High maternal mortality undermines progress toward SDG 3 (Good Health and Well-being), specifically the target to reduce global maternal mortality to less than 70 per 100,000 live births by 2030. It also affects SDG 1 (No Poverty), SDG 4 (Quality Education), and SDG 5 (Gender Equality), as maternal health is closely linked to household economic stability, child development, and women's empowerment.

Health System and Policy Implications: Strengthening governance, leadership, workforce management, and referral systems is essential for improving maternal outcomes. Policy interventions should prioritize:

- Strengthening hospital leadership and administrative accountability
- Expanding human resource capacity in rural areas
- Enhancing harmonization and referral systems between healthcare levels
- Investing in infrastructure and essential medical supplies

These measures would reduce maternal mortality, improve service coverage, enhance operational efficiency, and accelerate Nigeria's development across economic, social, and human capital dimensions. Beyond human resource governance, patient experiences, socio-cultural beliefs, and community-level constraints significantly influence the utilization of safe motherhood services in Nigeria. Even where health facilities exist, women may not access antenatal, delivery, or postnatal care due to cultural norms, financial limitations, low health literacy, and lack of trust in the health system. These factors interact with workforce shortages to further reduce service coverage, particularly in rural and underserved communities.

Cultural beliefs and traditional practices also play a major role in maternal health outcomes in Nigeria. In many communities, pregnancy and childbirth are viewed as natural events that do not require hospital care unless complications occur. Decision-making regarding maternal health is often influenced by husbands, mothers-in-law, or community elders, which may delay seeking skilled care (Adataro et al., 2019). Preference for traditional birth attendants remains high, especially in rural areas, due to cultural familiarity, lower cost, and perceived emotional support. These practices contribute to late presentation at health facilities, increasing the likelihood of emergency complications and maternal mortality.

At the community level, structural barriers such as poverty, poor transportation, insecurity, and distance to health facilities significantly limit safe motherhood service coverage. Many primary healthcare centres in rural Nigeria are located far from communities, and poor road networks make emergency referrals difficult. Even when tertiary hospitals have skilled personnel, delays in reaching these facilities reduce the chances of survival for both mother and baby (Ameh et al., 2019). Community-level poverty further restricts the ability of pregnant women to pay for transport, drugs, and delivery services, despite government policies aimed at free maternal care. Low health literacy and inadequate community awareness also contribute to poor maternal outcomes. Women with limited education are less likely to recognize danger signs in pregnancy or understand the importance of antenatal visits and skilled birth attendance (NPC & ICF, 2019). Weak community engagement and insufficient health education programs reduce the

effectiveness of maternal health interventions, even when services are available. This indicates that safe motherhood coverage depends not only on the availability of skilled personnel but also on community acceptance and awareness.

Findings from this study support these observations. Respondents reported that some patients avoided health facilities due to cultural beliefs, fear of mistreatment, and financial constraints, while healthcare workers noted that late presentation of patients often complicated delivery outcomes. These barriers interact with poor human resource governance, as understaffed facilities are less able to provide patient-centered care, community outreach, and health education.

Scholarly evidence confirms that maternal health outcomes are shaped by the interaction between health system factors and socio-cultural context. Campbell and Graham (2006) emphasize that improving safe motherhood requires not only skilled personnel but also community trust and demand for services. WHO (2016) similarly notes that respectful maternity care, community participation, and culturally sensitive service delivery are essential for increasing maternal health service utilization. Abimbola et al. (2015) further argue that strengthening governance must include community-level accountability and patient-centered approaches to ensure effective coverage.

In summary, while weak human resource governance limits the availability and quality of maternal health services in Nigeria, patient perceptions, cultural norms, and community-level barriers further restrict the utilization of these services. These factors contribute to delayed care-seeking, low facility-based delivery rates, high stillbirth rates, and persistent maternal mortality, particularly in rural areas. Therefore, improving safe motherhood service coverage requires a comprehensive approach that combines strong HR governance, community engagement, cultural sensitivity, improved patient experience, and better access to care across both tertiary hospitals and primary healthcare centres.

Human Resource Governance and Safe Motherhood Service Coverage in Nigeria

human resource governance across Nigerian health facilities—including tertiary hospitals and primary healthcare centres (PHCs)—is largely inadequate, negatively affecting safe motherhood service coverage nationwide. A major challenge is the low number of medical practitioners and skilled maternal health personnel, driven by poor human resource management, inadequate retention strategies, and the brain drain phenomenon, where trained staff migrate abroad for better remuneration, working conditions, and career advancement (Onwujekwe et al., 2019; WHO, 2021).

This shortage is particularly severe in rural and underserved areas, where PHCs often operate with minimal or no skilled staff, resulting in delayed antenatal care, poor monitoring of high-risk pregnancies, and slow referrals to tertiary hospitals. Empirical evidence supports these trends: Nigeria has 36 doctors and 144 nurses per 100,000 population, far below WHO-recommended thresholds for safe maternal care (FMoH, 2020), and approximately 25% of Nigerian-trained doctors migrate abroad within 10 years of practice (Anyangwe & Mtonga, 2007).

The consequences of these workforce challenges are evident in maternal outcomes. According to NPC & ICF (2019), Nigeria has a stillbirth rate of 36 per 1,000 births, with higher rates observed in rural areas where staffing deficits are most severe. The shortage of skilled personnel at both PHCs and tertiary hospitals contributes to overcrowding, long waiting times, and delayed emergency obstetric interventions, directly increasing maternal morbidity and mortality (Ameh et al., 2019; WHO, 2016).

Qualitative findings from this study further reinforce these patterns. Healthcare personnel reported that limited training, high attrition, poor retention, and weak supervision hindered their ability to provide comprehensive maternal services. Patients highlighted the unavailability of skilled staff and delays in care, which compromised safe motherhood. These challenges are compounded by weak governance and poor workforce planning, limiting the effective allocation and utilization of available personnel.

Scholarly evidence underscores these findings. Human resources are a central pillar of health systems (WHO, 2010), and effective HR governance—including recruitment, training, retention, supervision, and equitable distribution—directly influences maternal service coverage and outcomes. Campbell and Graham (2006) and Onwujekwe et al. (2019) emphasize that inadequate HR management in Nigerian health facilities—at both PHC and tertiary levels—reduces access to emergency obstetric care, delays referrals, and increases stillbirths. Abimbola et al. (2015) similarly note that weak staffing, poor performance evaluation, and limited professional development constrain maternal service delivery. The brain drain further exacerbates these gaps, leaving rural and underserved communities particularly vulnerable.

Inferential analyses in this study confirm the empirical and theoretical observations. Correlation analysis indicated a weak positive association between human resource governance and safe motherhood service coverage ($r = 0.31, p < 0.05$). While effective HR governance can improve service coverage, pervasive deficits in staffing, retention, and supervision across both tertiary hospitals and PHCs limit its impact. Regression analysis further revealed that human resource governance accounts for a small but significant portion of variance in maternal service coverage, highlighting that other systemic factors—such as leadership, infrastructure, and supply chain inefficiencies—also constrain service provision.

In summary, weak human resource governance and the effects of brain drain have created critical shortages of medical practitioners across both tertiary hospitals and PHCs in Nigeria, particularly in rural areas. These deficits lead to high maternal mortality, elevated stillbirth rates, delayed referrals, and inadequate service coverage, which undermine safe motherhood and national health development goals. Addressing these challenges requires nationwide policy and managerial interventions, including workforce planning, retention strategies, training expansion, supervision, and motivation at all levels of care (Campbell & Graham, 2006; Onwujekwe et al., 2019; Abimbola et al., 2015; WHO, 2016; Ameh et al., 2019).

7. Conclusion

This study demonstrates that institutional governance, human resource management, and service delivery capacity are critical determinants of safe motherhood outcomes in Nigeria.

Across both tertiary hospitals and primary healthcare centres (PHCs), deficiencies in leadership and administrative capacity, human resource governance, and harmonization of roles between health system levels have adversely affected maternal service coverage, particularly in rural and underserved areas.

Weak leadership and administrative structures have contributed to delays in decision-making, poor coordination, and limited accountability, which undermine the efficiency of maternal health interventions. Similarly, inadequate human resource governance, compounded by brain drain, poor retention, and insufficient training, has resulted in critical shortages of skilled personnel, delaying emergency obstetric care and contributing to high maternal mortality and stillbirth rates. Gaps in service delivery and referral harmonization between PHCs and tertiary hospitals further exacerbate these challenges, creating systemic bottlenecks that limit access to antenatal, delivery, and postnatal care.

The consequences of these governance and service delivery weaknesses extend beyond health outcomes. High maternal mortality and stillbirth rates reduce human capital, strain households, increase poverty, and hinder national development. In this sense, the challenges of governance, workforce management, and service delivery are not only health system issues but also critical development concerns.

In conclusion, achieving safe motherhood in Nigeria requires coordinated interventions that strengthen leadership, improve human resource governance, enhance service delivery, and ensure effective policy implementation and monitoring. Addressing these gaps will reduce maternal mortality, improve maternal service coverage, and contribute to broader socio-economic development, while advancing Nigeria's progress toward the Sustainable Development Goals, particularly SDG 3.

8. Recommendation-Actionable Strategies for Strengthening Governance and Safe Motherhood Service Coverage in Nigeria

Although this study emphasizes the need to strengthen governance and service delivery to improve safe motherhood outcomes in Nigeria, effective reform requires clear accountability mechanisms, structured capacity-building programs, and transparent resource allocation models that can be implemented at federal, state, and facility levels. Without concrete operational strategies, policy recommendations may remain theoretical and fail to produce measurable improvements in maternal health outcomes.

1. Establishment of a Clear Accountability and Performance Monitoring Framework

A major weakness in maternal health governance in Nigeria is the absence of a strong accountability system linking policy directives to facility-level performance. To address this gap, a results-based accountability framework should be adopted across tertiary hospitals and primary healthcare centres. Under this model, each facility should have defined indicators such as antenatal care coverage, skilled birth attendance rate, emergency obstetric response time, stillbirth rate, and maternal mortality ratio. These indicators should be monitored quarterly by state ministries of health and reported to the Federal Ministry of Health through a standardized digital reporting platform.

In addition, independent supervisory teams should conduct periodic audits of PHCs and tertiary hospitals to verify staffing levels, drug availability, and service quality. Linking performance outcomes to funding allocation under the Basic Health Care Provision Fund (BHCPF) would encourage compliance and improve service delivery. Evidence from WHO (2016) shows that performance-based monitoring improves maternal service coverage when combined with transparent reporting systems.

2. Strengthening Human Resource Capacity through Structured Training and Retention Programs

Improving safe motherhood coverage requires targeted capacity-building programs for maternal health personnel, particularly in rural and underserved areas. The Federal Ministry of Health, in collaboration with professional councils, should implement mandatory continuous professional development programs in emergency obstetric care, neonatal resuscitation, and referral management for doctors, nurses, and midwives.

To address the brain drain and uneven distribution of staff, a rural retention incentive scheme should be introduced, including hardship allowances, housing support, career advancement opportunities, and scholarship programs tied to service in underserved communities. Deployment policies should also ensure that every primary healthcare centre has at least one skilled birth attendant, while tertiary hospitals maintain adequate specialist coverage. Studies by Campbell and Graham (2006) and Onwujekwe et al. (2019) indicate that retention incentives and continuous training significantly improve maternal health outcomes in low-resource settings.

3. Improved Resource Allocation Model Based on Need and Population Burden

Current resource distribution in Nigeria is often influenced by administrative or political considerations rather than health needs. A more effective approach is the adoption of a **needs-based** resource allocation formula, where funding, equipment, and personnel are distributed according to population size, maternal mortality rates, facility workload, and rural-urban disparities.

Under this model, states and local governments with higher maternal mortality or lower service coverage should receive additional support from federal programs such as BHCPF. Facility-level budgeting should also allow managers limited financial autonomy to address urgent maternal health needs without excessive bureaucratic delays. Transparent financial tracking systems should be used to ensure that allocated funds reach the intended facilities. Evidence from Abimbola et al. (2015) suggests that equitable allocation models improve primary healthcare performance and maternal service utilization.

4. Strengthening Referral Systems and Inter-Facility Coordination

Weak referral systems remain a major contributor to maternal deaths in Nigeria. A functional three-tier referral network linking PHCs, general hospitals, and tertiary hospitals should be established in every state. This system should include emergency transport arrangements, communication channels between facilities, and clearly defined referral protocols for high-risk pregnancies.

State ministries of health should create maternal emergency response units responsible for coordinating referrals, monitoring delays, and ensuring that tertiary hospitals are prepared to receive complicated cases. Digital communication tools and mobile health platforms can be used to notify referral centres in advance, reducing treatment delays.

5. Community Engagement and Patient-Centered Service Delivery

Improving maternal health outcomes also requires strengthening the relationship between health facilities and communities. Community health committees should be empowered to participate in monitoring PHC performance, reporting staff absenteeism, and providing feedback on service quality. Regular health education campaigns should address cultural barriers, promote antenatal attendance, and encourage facility-based delivery.

Health workers should receive training in respectful maternity care, communication skills, and cultural sensitivity to improve patient trust and service utilization. WHO (2016) emphasizes that patient-centered care increases demand for skilled maternal services and reduces delays in seeking treatment.

6. Ensuring Policy Continuity and Reducing Political Interference

To prevent disruption of maternal health programs, key interventions such as BHCPF, Midwives Service Scheme, and Safe Motherhood initiatives should be protected through legally binding implementation guidelines and multi-year funding commitments. Independent oversight bodies, including professional associations and civil society organizations, should monitor policy implementation to ensure continuity across political administrations.

Reducing excessive political influence in staff deployment, facility siting, and fund allocation will promote more equitable service distribution and improve maternal health outcomes nationwide.

References

- Abimbola, S., Negin, J., Jan, S., & Martiniuk, A. (2015). Institutional determinants of primary healthcare performance in low- and middle-income countries: Implications for maternal health services in Nigeria. *Health Policy and Planning*, 30(1), 53–66. <https://doi.org/10.1093/heapol/czu071>
- Abimbola, S., Olaniyan, O., & Okoli, U. (2015). Governance and health service delivery in Nigeria: Exploring the relationship. *Health Policy and Planning*, 30(5), 542–552.
- Adebayo, A. M., & Oladeji, B. D. (2018). Challenges of maternal health service delivery in urban tertiary hospitals in Nigeria. *Nigerian Journal of Clinical Practice*, 21(12), 1587–1595. https://doi.org/10.4103/njcp.njcp_61_18
- Ameh, C. A., Msuya, S. E., & van den Broek, N. (2019). Health system strengthening and maternal health in Sub-Saharan Africa: Lessons from tertiary hospitals. *International Journal of Gynecology & Obstetrics*, 146(1), 3–10.
- Brinkerhoff, D. W., & Bossert, T. J. (2008). *Health governance: Concepts, experience, and programming options*. Health Systems 20/20 Project, USAID.

- Campbell, O., & Graham, W. (2006). Strategies for reducing maternal mortality: Getting on with what works. *The Lancet*, 368(9543), 1284–1299. [https://doi.org/10.1016/S0140-6736\(06\)69381-1](https://doi.org/10.1016/S0140-6736(06)69381-1)
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.
- Donabedian, A. (1988). The quality of care: How can it be assessed? *JAMA*, 260(12), 1743–1748. <https://doi.org/10.1001/jama.1988.03410120089033>
- Federal Ministry of Health (FMoH). (2016). *National Health Policy*. Abuja, Nigeria: FMoH.
- Federal Ministry of Health (FMOH). (2020). *National guidelines for maternal, newborn, and child health in Nigeria*. Abuja, Nigeria: Federal Ministry of Health.
- Freedman, L. P. (2005). Achieving the MDGs: Health systems as a core strategy. *The Lancet*, 365(9464), 115–120.
- Iliyasu, Z., Abubakar, I. S., Galadanci, H. S., & Aliyu, M. H. (2010). Maternal health in Northern Nigeria: Barriers to safe motherhood. *African Journal of Reproductive Health*, 14(3), 63–73. <https://doi.org/10.2307/23508048>
- Kirigia, J. M., Sambo, L. G., & Mwikisa, C. (2009). Human resources for health in Africa: Challenges and solutions. *African Journal of Health Economics*, 1(1), 1–12.
- Ng, M., Fullman, N., Dieleman, J., Flaxman, A., & Murray, C. (2014). Effective coverage: A metric for monitoring universal health coverage. *PLoS Medicine*, 11(9), e1001730.
- National Population Commission (NPC) & ICF. (2019). *Nigeria Demographic and Health Survey 2018*. Abuja, Nigeria: NPC & ICF.
- Onwujekwe, O., Uguru, N., Etiaba, E., Chikezie, I., Uzochukwu, B., & Okeke, C. (2019). Governance and health service delivery in Nigeria: Implications for maternal health. *BMC Health Services Research*, 19, 94. <https://doi.org/10.1186/s12913-019-3921-4>
- Onwujekwe, O., Uzochukwu, B., & Obikeze, E. (2019). Governance and quality of maternal health services in Nigeria: Evidence from tertiary hospitals. *Health Policy Open*, 1, 100009.
- Thaddeus, S., & Maine, D. (1994). Too far to walk: Maternal mortality in context. *Social Science & Medicine*, 38(8), 1091–1110.
- Trochim, W. M. K. (2016). *Research methods knowledge base* (3rd ed.). Cincinnati, OH: Atomic Dog Publishing.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. New York: UN.
- World Bank. (2017). *Governance and health service delivery: Evidence from developing countries*. Washington, DC: World Bank.
- World Bank. (2018). *Nigeria: Health sector transformation agenda*. Washington, DC: World Bank.
- World Bank. (2019). *Nigeria health system review: Regional disparities in maternal and child health*. Washington, DC: World Bank.
- World Bank. (2021). *Improving health outcomes in Nigeria: The role of governance and service delivery*. Washington, DC: World Bank.

World Health Organization (WHO). (2015). *WHO framework for action on health system strengthening*. Geneva: WHO.

World Health Organization (WHO). (2016). *Accountability for maternal, newborn, and child health: A global framework*. Geneva: WHO.

World Health Organization (WHO). (2016). *Standards for improving quality of maternal and newborn care in health facilities*. Geneva: WHO.

World Health Organization (WHO). (2023). *Maternal mortality in Nigeria: Country profile*. Geneva: WHO.

World Health Organization et al. (2019). *Trends in maternal mortality: 2000 to 2017*. Geneva: WHO.