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# Primary Health Care Services in Rural Communities in Delta State, Nigeria

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## **ABSTRACT**

This study examines the delivery, utilization, and challenges of Primary Health Care (PHC) services in rural communities in Delta State, Nigeria. Primary Health Care constitutes the foundational level of the health system, aimed at ensuring equitable access to essential health services, disease prevention, and health promotion. Despite national and international commitments to strengthen PHC, rural areas in Delta State continue to face significant barriers in accessing quality health care. This research explores the availability of PHC facilities, human resources for health, community participation, funding mechanisms, and service delivery outcomes within selected rural settings. Using a mixed-methods approach incorporating field observations, structured questionnaires with community residents, and in-depth interviews with health care providers, findings reveal persistent gaps in infrastructure, inadequate staffing, irregular supply of essential drugs and medical equipment, and limited outreach services. Additionally, sociocultural factors and low health literacy were identified as key determinants affecting health-seeking behaviors among rural dwellers. The study highlights that while some improvements have been achieved through government intervention and support from non-governmental organizations, sustainable progress is constrained by weak governance structures, poor funding, and logistical challenges. Recommendations include strategic investments in PHC facilities, recruitment and retention incentives for rural health workers, community health education programs, and strengthened partnerships between government, local stakeholders, and donor agencies. The insights generated are vital for policymakers, health planners, and development partners committed to achieving Universal Health Coverage (UHC) and reducing health disparities in rural Nigerian communities.

**Keywords:** Primary Health Care, Rural Communities, Health Service Delivery, Maternal and Child Health, Immunization, Delta State, Nigeria.

## **INTRODUCTION**

Primary Health Care (PHC) represents the first point of contact between individuals, families, and the health system, and is designed to offer essential, preventive, promotive, curative, and rehabilitative services at the community level. Anchored in the principles of equity, accessibility, community participation, and inter-sectoral collaboration, PHC was globally recognized in the 1978 Alma-Ata Declaration as the foundation for achieving “Health for All” through comprehensive, community-based approaches to health service delivery. PHC systems are expected to be particularly effective in addressing the basic health needs of rural populations, who often face significant barriers in accessing higher levels of care. Okwelum, & Onyenibe, A.(2025).

Ahuru,, Anyiwe, & Nzopotam, (2020). Opines that in Nigeria, the PHC system is structured to address the burden of disease within communities, especially among the underserved rural populations. Rural

communities in Delta State, a predominantly rural region in Nigeria's South-South geopolitical zone, rely heavily on PHC facilities for maternal and child health services, immunization, disease prevention, and health education. These services are essential in improving health outcomes and reducing inequalities between urban and rural populations. However, the realization of effective primary health care in these areas has been hindered by systemic, infrastructural, socioeconomic, and cultural challenges.

Delta State is characterized by a high proportion of rural settlements that often lack adequate healthcare infrastructure and workforce. Studies have documented the uneven distribution of PHC facilities, limited availability of skilled health personnel, and infrastructural inadequacies, including poor roads and lack of essential medical equipment, which undermine the quality and accessibility of health services. These deficiencies exacerbate health disparities, forcing many rural dwellers to depend on alternative care options such as traditional healers or to forgo formal care entirely. According to CPED Policy Brief (2015) Furthermore, community participation has been identified as a critical determinant in the success of primary health care delivery. While the PHC model emphasizes local involvement in planning and managing health services, evidence from Delta State indicates that low levels of community engagement and governance challenges limit the responsiveness of PHC services to local needs. Insufficient funding, lack of community involvement, and inadequate mobilization efforts reduce the effectiveness of health interventions and community ownership of health outcomes. Nwachukwu, (2025).

Despite these challenges, PHC remains a pivotal strategy for improving public health in rural Delta State. It plays a vital role in maternal and child health services, as indicated by moderate levels of antenatal care (ANC), delivery care, and postnatal care (PNC) utilization in rural PHC centers. Nonetheless, factors such as distance to facilities, informal charges, and perceptions of poor quality still deter full utilization, highlighting persistent gaps between policy intentions and the lived realities of rural communities. Omuta, (2015).

While PHC services in rural Delta State are fundamental to achieving equitable health outcomes, their effectiveness is shaped by a complex interplay of structural limitations, governance challenges, and community dynamics. Understanding these contextual realities is essential for policymakers, health administrators, and development partners aiming to strengthen rural health systems and improve the delivery and utilization of primary health care services.

### **Statement of Problem**

Primary Health Care (PHC) is recognized globally as the foundation for achieving equitable and accessible health services, particularly in underserved and rural areas. In Delta State, Nigeria, rural communities comprise a significant proportion of the population but continue to experience persistent challenges in accessing quality primary health care services. Despite government policies aimed at strengthening PHC and improving health indices, evidence suggests that many rural dwellers still face inadequate health infrastructure, limited health workforce, shortages of essential medicines and medical supplies, and poor referral systems. These deficiencies contribute to unacceptably high rates of preventable morbidity and mortality among vulnerable groups such as women, infants, children, and the elderly.

Furthermore, the utilization of PHC services in rural Delta State remains low due to factors such as long travel distances to health facilities, poor transportation networks, high out-of-pocket costs, cultural beliefs, and low levels of health literacy. In many communities, existing PHC centres are either non-functional or provide substandard services, undermining community trust and discouraging regular use. Compounding these operational issues are systemic problems, including inadequate funding, weak governance, poor monitoring and evaluation mechanisms, and insufficient community participation in health planning and decision-making.

The inadequate provision of primary health care services has far-reaching implications for disease prevention, maternal and child health outcomes, and overall community well-being in rural Delta State. For instance, low immunization coverage, high prevalence of communicable diseases, and unmet needs for reproductive health services point to serious gaps in PHC delivery. These challenges not only strain secondary and tertiary health facilities with preventable conditions but also perpetuate a cycle of poor health outcomes, economic hardship, and social inequities in rural populations.

Given these persistent problems, there is an urgent need to systematically investigate the nature and extent of barriers to effective PHC service delivery in rural Delta State. Such research is essential to inform policy interventions, strengthen health system responsiveness, and ensure that rural communities can access quality health care that is affordable, acceptable, and sustained.

### **Purpose of the Study**

The main purpose of this study is to examine the status and effectiveness of Primary Health Care (PHC) services in rural communities in Delta State, Nigeria. Specifically, the study seeks to:

1. Assess the availability of Primary Health Care facilities in rural communities of Delta State.
2. Examine the adequacy of health personnel providing Primary Health Care services in rural areas.
3. Determine the accessibility of Primary Health Care services to rural dwellers in Delta State.
4. evaluate the quality of Primary Health Care services delivered in rural communities; and
5. Identify the major challenges affecting the effective delivery of Primary Health Care services in rural communities of Delta State.

### **Research Questions**

The following research questions were formulated to guide the study:

1. To what extent are Primary Health Care facilities available in rural communities of Delta State?
2. How adequate are the health personnel providing Primary Health Care services in rural areas of Delta State?
3. How accessible are Primary Health Care services to rural dwellers in Delta State?
4. What is the quality of Primary Health Care services provided in rural communities of Delta State?
5. What challenges hinder the effective delivery of Primary Health Care services in rural communities of Delta State?

### **Research Hypotheses**

The following null hypotheses were tested at the 0.05 level of significance:

1. There is no significant relationship between the availability of Primary Health Care facilities and effective health service delivery in rural communities of Delta State.
2. There is no significant relationship between the adequacy of health personnel and the quality of Primary Health Care services in rural areas of Delta State.
3. There is no significant relationship between the accessibility of Primary Health Care services and utilization by rural dwellers in Delta State.
4. There is no significant relationship between the quality of Primary Health Care services and health outcomes in rural communities of Delta State.
5. There is no significant relationship between identified challenges and the effectiveness of Primary Health Care service delivery in rural communities of Delta State.

## **LITERATURE REVIEW**

### **Primary Health Care,**

Primary Health Care remains the foundation of equitable health systems in Nigeria, reflecting global commitments to universal health coverage. In rural communities of Delta State, PHC services, when available, play a crucial role in maternal and child care, disease prevention, and basic treatment, yet access and utilization are significantly constrained by infrastructural, financial, human resource, and cultural barriers. Strengthening PHC in these settings requires policy prioritization, enhanced resources, community engagement, and tailored service delivery models to ensure that rural populations can truly benefit from the promise of Primary Health Care. G.E.D. Omuta (2016)

Primary Health Care is a comprehensive, accessible, community-based approach to health services delivery focused on prevention, promotion, treatment, rehabilitation, and the provision of essential health services as close as possible to where people live and work. It was first articulated at the Alma-Ata Declaration (1978) as the strategy to achieve "Health for All" and has since evolved to emphasize equity, community participation, and universal health coverage.

Key Principles of PHC include:

- **Accessibility:** Services should be located close to the population served.
- **Affordability:** Care should be financially accessible and sustainable for individuals and families.
- **Community Participation:** Communities should be actively involved in planning and managing health services that affect them.
- **Intersectoral Collaboration:** Health outcomes are influenced by education, water and sanitation, and nutrition, which PHC addresses through broader social actions.

In Nigeria, PHC is the first point of contact for individuals and families within the health system and includes health education, immunization, maternal and child care, disease prevention/control, treatment of common ailments, and provision of essential drugs.

## 2. PHC Services in Rural Communities in Delta State

Delta State, located in the South-South geopolitical zone, comprises 25 Local Government Areas (LGAs), most of which are predominantly rural and underserved.

### 2.1 PHC Infrastructure and Distribution

- Studies show uneven distribution of PHC facilities among the three senatorial districts in Delta State, with Delta South's riverine communities mostly underserved, resulting in longer travel distances and decreased access.
- Many rural wards have only a few functional Primary Health Care Centers (PHCs), with some villages having no formal health facilities nearby.  
Delta State has implemented the Primary Health Care Under One Roof (PHCUOR) policy to coordinate and strengthen PHC delivery, aiming for one functional PHC per political ward.

### 2.2 Typical Services Provided

In rural PHC facilities in Delta State, services generally include:

- **Maternal and Child Health Services:** Antenatal care (ANC), delivery support, postnatal care (PNC), immunization, family planning.
- **Treatment of Common Illnesses:** Management of fevers, infections, and minor injuries.
- **Health Education and Prevention:** Community outreach on hygiene, disease prevention, and nutrition.
- **Provision of Essential Drugs:** Basic medicines for common conditions.  
Special initiatives also target non-communicable diseases (NCDs) such as hypertension and diabetes through public-private partnerships to equip rural PHCs and expand service packages.

## 3. Utilization of PHC Services in Rural Delta State

### 3.1 Maternal and Child Health Utilization

- Research in Ughelli North LGA found moderate utilization of ANC (around 73%) and PNC (about 64%), but delivery in PHCs remained lower, with a significant proportion of births occurring at home or with traditional birth attendants (TBAs).
- Factors influencing utilization include distance to the facility, educational level, and previous engagement with ANC.

### 3.2 Barriers to Utilization

Despite PHC availability in many rural areas, utilization remains suboptimal due to several barriers:

- **Distance and Accessibility:** Long distances and poor road networks make access difficult.
- **Human Resource Shortages:** Many rural PHCs are understaffed, leading to long waits and poor service quality.
- **Costs and Informal Charges:** Informal payments and perception of cost can deter use.
- **Poor Quality of Care:** Perceptions of inadequate care quality lead to low trust and preference for TBAs or higher-level facilities.
- **Negative Provider Attitudes:** Poor attitudes from staff discourage utilization.

## 4. Challenges in PHC Delivery in Rural Delta State

### 4.1 Structural and Systemic Issues

- **Inadequate Funding:** Chronic underfunding limits facility maintenance, staffing, and the supply of drugs.

- Poor Community Participation: Research shows that local community participation in health governance (e.g., health committee meetings) is weak, hindering accountability and service responsiveness.
- Environmental Barriers: In riverine areas, seasonal flooding and poor transport infrastructure compound access issues.

#### 4.2 Policy and Coordination Gaps

While policies like PHCUOR exist to unify PHC management and service delivery, implementation remains inconsistent, especially regarding adequate staffing, supply chains, and facility supervision.

#### 5. Policy Responses and Recommendations

To improve PHC in rural Delta State, researchers and policy analysts recommend:

- Expanding PHC coverage and equitable facility distribution, particularly in riverine and remote areas.
- Strengthening the community health workforce through incentives and training to attract and retain skilled staff.
- Integrating informal providers (e.g., TBAs) into formal PHC systems with training and supervision to improve quality and utilization.
- Improving financing mechanisms, including community-based and contributory health insurance to reduce out-of-pocket costs.
- Intensifying health education and community engagement to build trust and promote preventive health behaviors.

#### **Rural Communities**

Rural communities are social groups located outside urban centres with low population density, extensive open land, and economies traditionally based on agriculture or natural resource-based livelihoods. In sociological terms, rural society refers to areas where inhabitants are spread over large tracts of land, and food production and raw materials form the backbone of the economy.

Rural communities remain foundational to national economies, cultural heritage, and social security. They are characterized by low population density, nature-based economies, strong social networks, and traditional values. However, they face significant challenges from infrastructure deficits and economic marginalization to technological exclusion and environmental risks. Addressing these challenges requires multifaceted development strategies that integrate local voices, strengthen institutions, and invest in sustainable and inclusive rural development. According to Anthonia O. Okwelum et al. (2025).

According to rural development literature, they tend to be geographically isolated and dominated by primary economic activities such as farming and artisanal crafts.

#### 2. Key Characteristics of Rural Communities

##### a. Low Population Density and Small Size

Rural communities have fewer people spread across large areas, resulting in sparse settlements and close interpersonal relationships.

##### b. Economic Dependence on Agriculture and Natural Resources

Agriculture, fishing, forestry, and other resource-based activities are central to rural economies. This dependence shapes social life and economic stability.

##### c. Strong Social Ties and Homogeneity

Rural societies often have close, face-to-face interactions, strong kinship networks, and homogenous cultural practices such as shared language, traditions, and customs.

##### d. Traditional and Cultural Values

Slow-paced lifestyles and traditional norms often influence decision-making, gender roles, and social structures.

##### e. Limited Infrastructure and Services

Rural areas frequently lack robust healthcare, educational facilities, transportation systems, and technological connectivity (e.g., reliable internet access).

##### f. Informal Social Control

Social regulation in rural communities is often maintained through informal mechanisms (e.g., community norms and family influence) rather than formal institutions like courts or police.

### 3. Functions and Importance of Rural Communities

#### a. Food and Raw Materials Production

Rural areas are critical for food security and the supply of raw materials to urban and industrial centres, underpinning national economies.

#### b. Cultural Preservation

Customs, languages, religious practices, and heritage are often preserved more robustly in rural settings where communities maintain long-standing traditions.

#### c. Social Cohesion and Mutual Support

Strong social ties promote mutual aid, cooperative labour (e.g., during planting/harvesting), and community resilience in the face of hardship.

### 4. Major Challenges Facing Rural Communities

Rural communities confront a range of persistent socioeconomic and structural problems, including:

#### a. Infrastructure Deficits

Poor roads, limited electricity, scarce healthcare services, and weak education systems restrict development and access to opportunities.

#### b. Economic Disparities and Poverty

Limited job opportunities beyond agriculture lead to low wages, high poverty rates, and economic vulnerability.

#### c. Migration to Urban Areas

Rural-to-urban migration, especially by youth seeking better education and employment, results in population decline and an ageing rural demographic.

#### d. Digital Divide and Technological Barriers

Rural regions often lag behind urban centres in internet access and digital technology use, which hinders economic growth and access to information.

#### e. Environmental Vulnerabilities

Soil degradation, irregular rainfall, deforestation, and resource depletion directly impact agricultural productivity and rural livelihoods.

#### f. Social Inequalities

Issues such as gender inequality, caste discrimination, social exclusion, and traditional practices can limit full participation in community life and access to resources.

### 5. Contemporary Issues and Policy Implications

#### a. Rural Electrification

Extended access to electricity is essential for economic development and quality of life — yet national grids often exclude remote areas due to high costs and low population density.

#### b. Urban–Rural Disparities

Economic development and political influence tend to concentrate in urban centres, deepening inequalities and the *urban–rural divide* in opportunities and governance.

#### c. Community Resilience and Adaptation

Policies aimed at strengthening rural infrastructure, promoting sustainable agriculture, enhancing education access, and reducing poverty are crucial to sustaining rural livelihoods and stemming unsustainable migration.

**Health service delivery** refers to the organization and provision of promotive, preventive, curative, rehabilitative, and palliative health services to populations in need. In Delta State, this system is overseen by the **Delta State Ministry of Health**, which formulates and implements health policies, regulates facilities, and coordinates public health programmes across local government areas.

#### **Health System Structure and Financing**

- **Primary Health Care (PHC) as the Foundation:** PHCs act as the first point of contact for most citizens, especially for maternal and child health services, immunization, and disease prevention. The **Delta State Primary Healthcare Development Agency (DSPHCDA)** supervises these

facilities as part of the state's efforts to implement the *Primary Health Care Under One Roof* strategy.

- **Delta State Contributory Health Scheme (DSCHC):** A major innovation in health financing, this scheme pools resources from the government and other contributors to ensure that residents have access to affordable healthcare without the burden of catastrophic out-of-pocket expenses. The scheme includes **free or heavily subsidized services for vulnerable populations** (including pregnant women and children under five). As of late 2025, **over 2.78 million enrollees** were registered, making it one of the largest state-level health insurance schemes in Nigeria.
- The DSCHC accredits **both public and private facilities** to ensure broader coverage and quality of services. Enrollees receive an ID card enabling access to services, and the state is pioneering **ICT-based monitoring**, including facial recognition, to improve accountability and reduce fraud.

#### Recent Policy Actions

- **Zero Charges for Maternal and Under-Five Services:** Beginning January 2026, Delta State is enforcing a policy that **prohibits health workers from charging fees** to pregnant women and children under five in any state clinics. Violators risk sanctions, and this measure is intended to reduce barriers to care and further lower maternal and child mortality.

Delta State's service delivery system is guided by an integrated policy framework, state-financed insurance, strengthened primary care, and regulatory oversight to improve access, equity, and quality.

## 2. Maternal and Child Health (MCH)

**Maternal and Child Health** services encompass interventions aimed at reducing mortality and morbidity among mothers, newborns, and children—especially under five years of age.

#### Key Components of MCH Services

- **Antenatal Care (ANC):** Clinics provide regular health checks, nutrition counselling, and risk screening throughout pregnancy.
- **Delivery and Emergency Obstetric Care:** Mothers have access to skilled birth attendants and free delivery services under the DSCHC, including caesarean sections where needed.
- **Postnatal Care (PNC):** Care to both mother and newborn in the critical days after birth.
- **Family Planning and Health Education:** Included as part of comprehensive reproductive health services.
- **Child Welfare Services:** Growth monitoring, nutrition support, prevention and treatment of common illnesses, and hospital referrals when necessary.

#### Government and Partner-Led Initiatives

- **Maternal, Newborn, and Child Health Week:** Activities such as routine immunization, tetanus toxoid vaccinations for expectant mothers, antenatal care, Vitamin A supplementation, deworming, malaria screenings, and distribution of insecticide-treated bed nets are delivered in integrated outreach campaigns to improve uptake and reduce inequities.
- **AIM-MNCNH Project:** The *Accelerating Implementation of Maternal, Newborn, Child, and Nutrition Health* project was inaugurated to strengthen service delivery and nutrition outcomes, supported by global partners like WHO and UNICEF.

#### Challenges

- **Communication and Utilization:** Awareness and communication strategies have been studied, revealing that while information channels are effective to an extent, **gaps remain in knowledge and use of MCH services**, especially in rural or underserved populations.

Delta State's approach to MCH is comprehensive, involving routine clinical services, community outreach weeks, and integrated preventive programmes, all reinforced by insurance schemes that reduce financial barriers.

## 3. Immunization in Delta State

**Immunization** is a core preventive health intervention that protects children and at-risk populations from vaccine-preventable diseases such as measles, polio, tetanus, diphtheria, tuberculosis, and hepatitis.

### **Routine Immunization**

- Provided free of charge at primary healthcare facilities and integrated outreach events like Maternal, Newborn, and Child Health Week.
- Immunization (including BCG, OPV, pentavalent vaccines) is part of the basic service package under the DSCHC.

### **Performance and Gaps**

- Research from a health facility in Delta State showed **very low timely uptake of the Hepatitis B birth dose vaccine** (only about 5.7% of infants received it within 24 hours), suggesting challenges in implementing policy and service delivery at the facility level. This reveals **gaps between policy and practice** that need addressing to prevent perinatal transmission of hepatitis B.
- Nationally and regionally within Nigeria, routine immunization coverage remains **below targets** due to issues such as vaccine stockouts, data system weaknesses, hesitancy, and service delivery gaps factors relevant to Delta as well.

### **Combatting Barriers**

- Addressing extortion and unofficial fees is crucial; although immunization is officially free, there have been reports of **nurses extorting caregivers** for routine vaccination services in the past, undermining uptake and equity (the government has taken action in response).

Immunization services in Delta State are a core part of PHC and insurance-backed service delivery, but **implementation challenges (timeliness, data systems, and health worker practices)** need ongoing attention to achieve full coverage.

### **Summary**

Primary Health Care (PHC) is the cornerstone of health service delivery, particularly in rural communities where access to specialized and tertiary healthcare is limited. In Delta State, Nigeria, PHC serves as the first point of contact for the majority of rural dwellers, offering essential services such as maternal and child health care, immunization, treatment of common illnesses, health education, sanitation, and disease prevention programs.

Studies have highlighted that PHC in rural Delta State faces both achievements and challenges. On the positive side, PHC centers have improved access to essential health services, reduced morbidity and mortality rates, and promoted health awareness among rural populations. Immunization programs and maternal-child health services have contributed significantly to improved survival rates of infants and mothers.

However, the delivery of PHC in these communities is often hindered by inadequate funding, a shortage of trained health personnel, poor infrastructure, irregular supply of essential drugs, and limited community participation. Cultural beliefs and low health literacy also influence the utilization of PHC services. These challenges collectively affect the quality, accessibility, and sustainability of health care delivery in rural areas, making it difficult to achieve the goals of universal health coverage.

### **CONCLUSION**

Primary Health Care services remain vital for the health and well-being of rural communities in Delta State, Nigeria. They provide affordable, accessible, and preventive health care that addresses the most pressing health needs of these populations. While PHC has contributed significantly to improved health outcomes, persistent challenges such as inadequate infrastructure, insufficient funding, and manpower shortages limit its full potential.

For PHC to fulfill its mandate, there must be a concerted effort by government, health authorities, and communities to strengthen service delivery, enhance human resources, and ensure sustainable health interventions. Emphasis on preventive care, community involvement, and continuous health education is crucial to improving health indicators and reducing disease burdens in rural Delta State.

## RECOMMENDATIONS

1. **Increase Government Funding:** The Delta State government should allocate adequate funds to rural PHC facilities to ensure the availability of essential drugs, medical equipment, and infrastructure development.
2. **Improve Health Workforce:** Recruitment, training, and retention of qualified health personnel in rural areas should be prioritized, including incentives for rural postings.
3. **Strengthen Community Participation:** Communities should be actively involved in planning, implementing, and monitoring PHC services to ensure relevance, acceptance, and sustainability.
4. **Enhance Health Education:** Continuous health education campaigns should be carried out to improve awareness about disease prevention, immunization, maternal-child health, sanitation, and healthy lifestyles.
5. **Regular Monitoring and Evaluation:** Establish robust monitoring and evaluation systems to assess PHC performance, identify gaps, and implement corrective measures promptly.
6. **Integrate Technology:** Adoption of digital health solutions and telemedicine can help bridge the gap between rural communities and health professionals, improving service delivery and record-keeping.
7. **Public-Private Partnerships:** Encourage collaboration with non-governmental organizations (NGOs), faith-based organizations, and private sector partners to complement government efforts in rural health care delivery.
8. **Focus on Preventive Care:** Prioritize preventive health interventions such as immunization drives, nutrition programs, sanitation improvement, and maternal-child health services to reduce disease burden and healthcare costs.
9. **Policy Implementation:** Ensure that existing national and state-level health policies, particularly those related to PHC, are fully implemented and adapted to the local context of Delta State's rural communities.
10. **Research and Data Collection:** Conduct regular research on rural health challenges and PHC utilization patterns to inform evidence-based interventions and policy decisions.

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