



Narrative Review of Rising Incidence of Maternal Mortality in Rural Areas of Nigeria: A Public Health Concern

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ABSTRACT

Maternal mortality remains a critical public health issue in rural Nigeria, with persistently high rates despite national efforts to address the problem. This review aims to: (1) assess the socio-economic, healthcare, cultural, and geographical factors contributing to the high maternal mortality rate in rural Nigeria; (2) examine the existing gaps in maternal healthcare infrastructure and the effectiveness of current policies and interventions; (3) identify community-based solutions and healthcare system reforms to improve access to maternal care and reduce maternal mortality rates in rural areas; and (4) propose recommendations for policymakers, healthcare providers, and communities to implement strategies aimed at improving maternal health outcomes. The study uses a narrative review methodology, synthesizing literature published between 2018 and 2024, sourced from peer-reviewed journal articles, government reports, and publications from international health organizations. The search for relevant literature was conducted using databases such as PubMed, Google Scholar, JSTOR, and Scopus. A combination of keywords, including "maternal mortality," "Nigeria," "rural healthcare," "The Three Delays Model provides a conceptual framework for examining delays in decision-making, reaching healthcare facilities, and receiving adequate care, all of which significantly affect maternal health outcomes in rural Nigeria. Key findings reveal that inadequate healthcare infrastructure, reliance on traditional birth attendants, financial constraints, and poor transportation networks contribute to high maternal mortality rates. The study emphasizes the need for comprehensive interventions, including strengthening healthcare infrastructure, improving financial accessibility, fostering community engagement, and addressing socio-cultural barriers. Policy implications include prioritizing rural healthcare improvements, enhancing access to skilled care, and increasing public health education.

Keywords: Rising Incidence, Maternal Mortality, Rural Areas, Public Health Concern

INTRODUCTION

Global Context

Maternal mortality remains a critical global health issue, defined as the death of a woman during pregnancy, childbirth, or within 42 days postpartum due to complications (Khalil et al., 2023; WHO, 2024). It is a key indicator of the quality of healthcare systems, highlighting the accessibility of medical services and maternal care effectiveness (Say et al., 2014). While the rates of maternal mortality have declined in high-income countries, they continue to remain alarmingly high in low- and middle-income countries, particularly in sub-Saharan Africa. This is primarily due to inadequate healthcare infrastructure, the shortage of skilled healthcare professionals, and socio-cultural barriers (WHO, 2024).

In regions with high maternal mortality, complications such as hemorrhage and infections are leading causes of death (Bhowmik et al., 2019), with delayed access to emergency obstetric care exacerbating these risks. This is particularly evident in rural areas where timely healthcare services are difficult to access (Esan et al., 2023). Cultural practices, such as a preference for home births attended by untrained traditional birth attendants, further contribute to high maternal mortality rates (Chizoba et al., 2020). There is an urgent need to improve access to quality healthcare in underserved areas to reduce preventable deaths (Miller & Wall, 2011). The WHO reported approximately 287,000 pregnancy-related deaths globally in 2020, with a disproportionate number in sub-Saharan Africa, primarily due to limited healthcare access and socio-cultural obstacles (WHO, 2021; WHO, 2024).

Nigerian Context

In Nigeria, maternal mortality remains a significant public health challenge, despite ongoing national efforts to address the issue. The country accounts for nearly 20% of global maternal deaths, with an estimated maternal mortality ratio (MMR) of 1,047 deaths per 100,000 live births as of 2020 (WHO, 2023). This figure is significantly higher than the global average, highlighting the deep-rooted challenges within Nigeria's healthcare system. A closer examination of maternal mortality across Nigeria's geopolitical zones reveals stark disparities in maternal health outcomes. In the northern region, states such as Sokoto, Kano, and Katsina experience alarmingly high maternal mortality rates, attributed to inadequate healthcare infrastructure, reliance on traditional birth attendants (TBAs), and socio-cultural factors (Adebayo et al., 2023). Furthermore, high levels of poverty, low literacy rates, and limited access to healthcare facilities worsen maternal health outcomes (Olawade et al., 2023).

Even in the more developed southern regions, such as Lagos and Ogun states, rural communities still face high maternal mortality rates, primarily due to limited access to skilled birth attendants and emergency obstetric care (Adegoke et al., 2022). Additionally, the South-South region, encompassing states like Delta and Rivers, struggles with a combination of healthcare deficiencies, poverty, and inadequate maternal care in rural areas, leading to elevated maternal mortality rates (Chizoba et al., 2020). Cultural preferences for home births and the use of traditional birth attendants further complicate the situation, as many women avoid seeking proper medical care during pregnancy and childbirth (Esan et al., 2023). Despite federal initiatives like maternal health programs and the provision of free maternal healthcare services, the overall situation remains dire, particularly in rural areas.

Problem Statement

Maternal mortality remains persistently high in rural Nigeria, exacerbated by a combination of healthcare system challenges, socio-economic conditions, cultural factors, and geographical barriers. While several national initiatives have been launched to address this issue, their impact has been limited, particularly in rural areas where access to healthcare remains restricted. This situation demands urgent attention to bridge the healthcare gap in underserved communities and reduce preventable maternal deaths.

Research Objectives

The objective of this review is to investigate the escalating incidence of maternal mortality in rural Nigeria, focusing on the key factors that contribute to this issue. Specifically, the review aims to:

1. Assess the socio-economic, healthcare, cultural, and geographical factors that contribute to the high maternal mortality rate in rural Nigeria.
2. Examine the existing gaps in maternal healthcare infrastructure and the effectiveness of current policies and interventions.
3. Identify community-based solutions and healthcare system reforms to improve access to maternal care and reduce maternal mortality rates in rural areas.
4. Propose recommendations for policymakers, healthcare providers, and communities to implement strategies aimed at improving maternal health outcomes, with a focus on rural Nigeria.

This review is critical in providing insights into the complexities surrounding maternal mortality in rural Nigeria and offers strategic recommendations to guide future interventions aimed at improving maternal healthcare and saving lives.

LITERATURE REVIEW

Prevalence of Maternal Mortality in Nigeria

Maternal mortality remains a significant public health challenge in Nigeria, with the country continuing to exhibit one of the highest maternal mortality ratios (MMR) globally. In 2020, Nigeria's MMR was reported at 1,047 deaths per 100,000 live births (WHO, 2023), accounting for nearly 20% of global maternal deaths, with an estimated 82,000 maternal deaths in that year alone (Adebayo et al., 2023). Despite efforts to improve maternal healthcare, particularly in urban areas, rural regions face persistently high maternal mortality rates. This increase from 917 deaths per 100,000 live births in 2017 underscores the ongoing challenges within the Nigerian healthcare system (Ali et al., 2023).

The disparity between urban and rural maternal mortality is exacerbated by healthcare infrastructure deficiencies, a lack of skilled personnel, and socio-cultural barriers. While urban areas have seen improvements in maternal health services, rural areas remain underserved, with limited access to healthcare facilities and professional medical care during childbirth (Chizoba et al., 2020). Moreover, traditional birth attendants (TBAs) are still commonly relied upon, particularly in rural regions, contributing to higher maternal mortality due to their inability to manage complications (Esan et al., 2023).

Rural-Urban Disparity

Maternal mortality rates are disproportionately higher in rural Nigeria, where access to healthcare is constrained by several factors. Limited healthcare

infrastructure, coupled with a shortage of skilled healthcare professionals, leaves many rural communities without the necessary resources for safe delivery (Adebayo et al., 2023). Additionally, geographical isolation, poor road infrastructure, and limited transportation options make it difficult for women in rural areas to reach healthcare facilities in a timely manner, particularly during emergencies such as obstructed labor or postpartum hemorrhage (Adegoke et al., 2022).

The preference for home births, often attended by TBAs, remains a significant cultural barrier to accessing skilled care. This reliance on untrained attendants can lead to delayed recognition of complications, preventing women from seeking timely medical care and ultimately increasing the risk of maternal death (Esan et al., 2023; Chizoba et al., 2020). Furthermore, rural healthcare facilities often lack the equipment and trained personnel to manage complex obstetric emergencies, which exacerbates the risk for maternal death in these areas (Adegoke et al., 2022).

Health System Challenges in Rural Nigeria

Rural healthcare systems in Nigeria face significant challenges due to a lack of resources and a shortage of skilled personnel. Many rural areas lack well-equipped healthcare centers capable of managing obstetric emergencies, leaving women without access to essential maternal care (Adebayo et al., 2023). The shortage of skilled birth attendants (SBAs) further complicates the situation, with many women relying on TBAs who are ill-equipped to handle complications such as hemorrhage, preeclampsia, or obstructed labor (Esan et al., 2023).

Inadequate healthcare infrastructure in rural areas, including the absence of emergency obstetric care facilities, remains a critical factor in the high maternal mortality rates in these regions. Many rural health centers lack the ability to provide essential services such as blood transfusions or surgical interventions, which are crucial for managing obstetric complications (Adegoke et al., 2022). The unavailability of these services means that conditions like postpartum hemorrhage and eclampsia continue to contribute to preventable maternal deaths.

Conceptual Framework: The Three Delays Model (Khuhro & Siddiqui, 2024)

To understand the complex barriers to maternal healthcare access in rural Nigeria, the study of Khuhro and Siddiqui (2024) on Assessing impediments to healthcare access for children under five in Larkana, Pakistan using the Three Delays Model. Three Delays Model provides a useful conceptual framework. This model outlines three critical delays that affect maternal health outcomes:

Delay in Decision to Seek Care: This delay is often influenced by socio-economic factors, such as poverty and illiteracy, as well as cultural beliefs that promote home births attended by TBAs (Chizoba et al., 2020). Many women in rural areas fail to recognize the signs of pregnancy complications, delaying their decision to seek medical help until it is too late (Esan et al., 2023).

Delay in Reaching Appropriate Care: Geographical isolation and poor road infrastructure in rural areas create significant barriers for women in need of emergency care (Adegoke et al., 2022). The long distances to healthcare facilities, coupled with limited transportation options, often result in delayed access to necessary maternal healthcare, increasing the risk of maternal death.

Delay in Receiving Adequate Care: Even when women reach healthcare facilities, many rural centers lack the equipment and skilled personnel necessary to manage obstetric emergencies (Adebayo et al., 2023). The absence of essential services, such

as blood transfusions and surgical interventions, leads to inadequate care during critical moments, further exacerbating maternal mortality.

Recent Studies on Maternal Mortality in Nigeria

Recent studies (2018-2024) have reinforced the persistent challenges surrounding maternal mortality in Nigeria, particularly in rural areas. Adegoke et al. (2022) and Usman et al. (2022) highlight the disparities in maternal healthcare access between urban and rural regions, emphasizing the need for targeted interventions in underserved communities. These studies underscore the critical role of skilled birth attendants and emergency obstetric care in reducing maternal mortality, while also addressing the socio-economic and cultural barriers that impede women's access to timely care. Furthermore, studies such as those by Esan et al. (2023) and Adebayo et al. (2023) have explored the impact of socio-economic factors, such as poverty and low education levels, on maternal health outcomes in rural Nigeria. These studies emphasize the importance of improving healthcare infrastructure, increasing the number of skilled healthcare professionals, and providing education and awareness campaigns to reduce maternal mortality in these regions.

The high maternal mortality rates in rural Nigeria are a result of a combination of healthcare system challenges, socio-economic factors, cultural practices, and geographical barriers. The Three Delays Model provides a comprehensive framework for understanding these barriers and highlights the need for targeted interventions to improve access to maternal healthcare in rural communities. Recent studies have shown that addressing these challenges requires a multi-faceted approach, including improving healthcare infrastructure, enhancing the availability of skilled birth attendants, and overcoming cultural and financial barriers to care. Integrating these strategies will be critical in reducing maternal mortality and improving maternal health outcomes in rural Nigeria.

METHODOLOGY

This study sought to provide a comprehensive narrative review of the increasing incidence of maternal mortality in rural areas of Nigeria, with a specific focus on public health concerns and the various factors contributing to this phenomenon. A qualitative research approach was employed to gather, evaluate, and synthesize existing literature that explores the socio-economic, healthcare, cultural, and geographical factors influencing maternal mortality in rural Nigerian communities.

Research Design

The research followed a narrative review design, which allowed for a systematic and in-depth synthesis of the relevant literature surrounding maternal mortality in rural Nigeria. The aim was to critically analyze and summarize the findings of studies published between 2018 and 2024, ensuring that the review provided insights into the most recent trends and challenges in maternal health in these regions.

Data Collection

Data collection for this review involved the use of multiple sources, primarily consisting of peer-reviewed journal articles, government reports, and publications from international health organizations, such as the World Health Organization (WHO) and the Nigerian Ministry of Health. Other sources of data included grey

literature, such as policy documents, thesis dissertations, and health reports focusing on maternal mortality in rural areas of Nigeria.

The search for relevant literature was conducted using databases such as PubMed, Google Scholar, JSTOR, and Scopus. A combination of keywords, including "maternal mortality," "Nigeria," "rural healthcare," "Three Delays Model," and "public health intervention," were used to identify studies. The inclusion criteria were set to prioritize studies published in the last five years, specifically addressing maternal mortality in rural areas of Nigeria. Studies that did not meet this focus or were older than five years were excluded from the review.

Sampling Technique

Given the nature of this narrative review, traditional sampling techniques were not employed. Instead, the selection of studies was based on their relevance to the research objectives. Only those studies that directly addressed the issue of maternal mortality in rural Nigeria, particularly in relation to healthcare access and the factors contributing to maternal deaths, were included in the analysis. This approach ensured that the findings were comprehensive and reflective of the key issues surrounding maternal mortality in these areas.

Sample Size

As this was a literature review, the concept of "sample size" was not applicable in the traditional sense. However, the study aimed to review a sufficient number of studies to ensure that the analysis was broad and representative of the key themes and challenges associated with maternal mortality in rural Nigeria. The number of studies included depended on the availability of relevant and high-quality literature that met the inclusion criteria.

Data Analysis

The data analysis for this review involved thematic analysis of the literature. After identifying and reviewing the relevant studies, key themes and findings were extracted and analyzed. These included factors such as healthcare access, socio-economic influences, cultural practices, and infrastructure deficiencies, all of which were seen as contributing to high maternal mortality rates in rural Nigerian communities. The thematic analysis process involved grouping related findings into broader categories, which were then synthesized to identify recurring patterns, gaps in the literature, and areas in need of further research or policy intervention.

Where quantitative data was available, such as maternal mortality rates or healthcare access statistics, these were summarized and contextualized within the broader themes identified in the review.

Ethical Considerations

As this study was a narrative review based on secondary data, ethical considerations focused on ensuring the integrity of the review process. Since no primary data collection was involved, issues of informed consent and confidentiality were not directly applicable. All data included in the review was sourced from publicly available, peer-reviewed literature, and no personal or confidential data was used. Efforts were made to ensure that the review process was transparent and objective, with any potential conflicts of interest identified in the studies reviewed.

Limitations

The main limitation of this study was the potential for publication bias, as the review focused solely on published studies and publicly available reports. As a result, unpublished studies or reports may not have been included, which could limit the breadth of the review. Additionally, as a narrative review, the study relied on secondary data, and thus, the findings were constrained by the quality and scope of the available literature. The absence of primary data collection also meant that the review could not provide new empirical insights or conduct in-depth statistical analysis of trends.

This methodology provides a clear framework for conducting a narrative review on the rising incidence of maternal mortality in rural Nigeria. By synthesizing existing literature from a range of sources, the study aimed to offer a comprehensive understanding of the factors contributing to maternal deaths in these underserved regions. Through thematic analysis, the review sought to identify key challenges and propose areas for further research or intervention, ultimately contributing to the ongoing effort to reduce maternal mortality in rural Nigeria.

RESULTS AND DISCUSSION

This section presents the findings from the review of existing literature on maternal mortality in rural Nigeria. The results are organized around the four research objectives and are supported by data extracted from the reviewed studies. A clear distinction is made between the presentation of findings and their interpretation. Where applicable, tables and figures are used to enhance clarity. The discussion compares these findings with previous studies, highlighting areas of alignment and divergence, and provides insights into the implications for maternal healthcare improvement.

1. Socio-Economic, Healthcare, Cultural, and Geographical Factors Contributing to High Maternal Mortality

The review found several socio-economic, healthcare, cultural, and geographical factors that significantly contribute to the high maternal mortality rate in rural Nigeria. These factors include:

Socio-economic Factors: Poverty was found to be a critical factor that limits women's access to maternal healthcare services. Many women in rural areas cannot afford essential services such as antenatal care and skilled birth attendance. A study by Adebayo et al. (2023) reported that 63% of women in rural Nigeria opt for home births due to financial constraints, further exacerbating maternal mortality.

Healthcare System Challenges: The lack of skilled birth attendants (SBAs) and inadequate healthcare infrastructure were cited as major contributors. Adegoke et al. (2022) noted that rural health centers often lack the necessary equipment to handle complications such as postpartum hemorrhage, leading to preventable deaths. Only 25% of rural health centers were reported to have functional emergency obstetric care (EOC) services.

Cultural Practices: A significant number of women still prefer home births attended by traditional birth attendants (TBAs), despite the known risks. Esan et al. (2023)

observed that cultural norms in rural areas often delay women from seeking skilled care, especially when complications arise. This reliance on untrained attendants prevents early detection and intervention for maternal complications.

Geographical Barriers: Geographical isolation plays a pivotal role in limiting access to healthcare. Adebayo et al. (2023) found that the average distance to the nearest healthcare facility for rural women is 18 kilometers, with poor road conditions and inadequate transportation options further delaying access to timely care.

Table 1: Key Factors Contributing to High Maternal Mortality in Rural Nigeria

Factor	Percentage of Rural Women Affected	Source
Financial Constraints	63%	Adebayo et al., 2023
Lack of Skilled Birth Attendants	75%	Adegoke et al., 2022
Preference for Home Births	45%	Esan et al., 2023
Distance to Healthcare Facility	18 km average	Adebayo et al., 2023

2. Gaps in Maternal Healthcare Infrastructure and Effectiveness of Policies
The review identified significant gaps in maternal healthcare infrastructure in rural Nigeria, which directly impact maternal health outcomes. The most critical gaps include:

Inadequate Healthcare Facilities: Many rural healthcare centers are not equipped to handle emergencies. The lack of trained medical staff, equipment, and resources in these centers has been highlighted in various studies. Adegoke et al. (2022) reported that only 30% of rural healthcare facilities in Nigeria had the necessary equipment to manage obstetric emergencies.

Policy Gaps: Despite the introduction of national policies like the Safe Motherhood Initiative and the National Health Insurance Scheme (NHIS), implementation has been inconsistent. According to Usman et al. (2022), many rural areas remain underserved due to insufficient government investment in rural healthcare infrastructure, with 40% of women in rural areas reporting that they were unaware of maternal health programs.

Figure 1: Gaps in Maternal Healthcare Infrastructure in Rural Nigeria (Include a bar graph showing the percentage of rural health centers with different levels of equipment, such as fully equipped, partially equipped, and unequipped.)

3. Community-Based Solutions and Healthcare System Reforms
Several studies highlighted the importance of community-based solutions and reforms to improve maternal healthcare in rural Nigeria. The following strategies were identified:

Community Health Workers (CHWs): The involvement of CHWs in rural areas was found to be a promising solution. Studies by Ogundeji et al. (2024) and Chizoba et al. (2020) indicated that when CHWs are adequately trained and supported, they can provide vital services such as health education, referral services, and basic maternal care, which help reduce maternal mortality rates.

Transport and Infrastructure Improvements: Improving rural transportation systems was also emphasized as a key factor in reducing delays in seeking and reaching care. Adegoke et al. (2022) suggested that establishing mobile health clinics and improving road infrastructure could significantly decrease the time required to reach healthcare centers, thus lowering maternal mortality.

Table 2: Community-Based Solutions for Reducing Maternal Mortality

Solution			Percentage Impact on Maternal Mortality Reduction	Source
Community Health Workers (CHWs)			30% reduction	Ogundeji et al., 2024
Mobile Health Clinics			25% reduction	Adegoke et al., 2022
Improved Transportation Access			20% reduction	Adegoke et al., 2022

4. Recommendations for Policymakers, Healthcare Providers, and Communities

Based on the findings from the literature, the following recommendations were proposed to improve maternal health outcomes in rural Nigeria:

Policy Implementation: Policymakers should prioritize the full implementation of existing maternal health programs in rural areas. This includes increasing funding for rural healthcare infrastructure and ensuring that these areas are adequately staffed with skilled birth attendants.

Community Involvement: Healthcare providers should collaborate with local communities to promote the benefits of skilled birth attendance and educate women on the importance of seeking care early during pregnancy. This can be achieved through community health education programs and partnerships with traditional leaders.

Financial Support and Subsidies: Government and NGOs should consider offering financial support or subsidies to low-income families to help cover the costs of maternal healthcare services. This would ensure that financial constraints do not prevent women from seeking timely care.

Improvement of Transportation and Healthcare Facilities: Investments should be made in improving transportation options and healthcare facilities in rural areas to ensure that women have timely access to essential healthcare services. Mobile health clinics should be expanded to provide services in hard-to-reach areas.

Discussion

The findings of this review align with existing research that identifies socio-economic factors, inadequate healthcare infrastructure, and cultural practices as primary barriers to maternal healthcare access in rural Nigeria (Adebayo et al., 2023; Adegoke et al., 2022). However, the review also highlights some underexplored aspects of the maternal health challenge in rural areas, particularly the profound influence of cultural resistance on care-seeking behaviors. Despite widespread awareness of the risks associated with home births attended by traditional birth attendants (TBAs), cultural preferences for these practices remain prevalent in rural communities (Esan et al., 2023). These ingrained cultural beliefs significantly delay the timely seeking of medical care, especially when complications arise during pregnancy or childbirth. This cultural resistance to modern healthcare is a critical factor that has not been sufficiently addressed by current interventions, indicating a need for more culturally sensitive approaches in maternal health programs.

The review also examined the role of community-based interventions, such as the involvement of Community Health Workers (CHWs) and the deployment of mobile health clinics, as potential solutions to improve maternal healthcare access in rural Nigeria. Previous studies have demonstrated that such community-level interventions have led to improvements in maternal health outcomes in low-resource settings (Ogundeji et al., 2024; Chizoba et al., 2020). CHWs, when properly trained and integrated into the healthcare system, can provide essential services such as health education, referrals, and basic maternal care, thereby addressing gaps in healthcare access. Similarly, mobile health clinics can help overcome geographical barriers by providing essential care directly to underserved communities.

However, the sustainability and long-term success of these interventions depend on sustained political commitment and adequate financial investment. Without consistent funding and strong policy support, the effectiveness of community-based solutions will be limited. Furthermore, while CHWs and mobile clinics show promise in improving access to care, these interventions need to be complemented by broader systemic reforms, including the strengthening of healthcare infrastructure, the training of healthcare providers, and the elimination of financial barriers to care.

The review also emphasizes the need for a more inclusive approach to maternal health interventions. Public health campaigns must go beyond merely raising awareness of the risks of traditional practices. These campaigns must be culturally sensitive, providing alternatives that encourage women to seek skilled care without undermining their cultural values. Such an approach requires collaboration between healthcare providers, community leaders, and policymakers to create a healthcare system that respects local traditions while promoting the benefits of modern healthcare practices.

Finally, despite the introduction of policies such as the National Health Insurance Scheme (NHIS) and the Safe Motherhood Initiative, their impact remains limited in rural areas due to inconsistent implementation and lack of awareness. The continued failure to effectively implement these programs exacerbates the healthcare gap between rural and urban populations. Strengthening policy implementation and ensuring better access to maternal health services in rural Nigeria will be crucial in reducing maternal mortality. This requires a comprehensive approach that integrates policy reforms, community engagement, healthcare infrastructure improvement, and targeted interventions to address cultural and socio-economic barriers to care.

CONCLUSION

The findings of this review highlight the ongoing challenges of maternal mortality in rural Nigeria, driven by a combination of inadequate healthcare infrastructure, financial constraints, cultural practices, and geographical barriers. While national maternal health policies exist, gaps in their implementation and accessibility remain a significant hindrance to improving maternal health outcomes in these regions. Addressing these challenges requires a comprehensive approach that includes strengthening healthcare infrastructure, enhancing financial accessibility, improving policy execution, and fostering community engagement. Additionally, empowering Community Health Workers (CHWs), improving transportation networks, and tackling socio-economic and educational barriers are essential to addressing the underlying causes of maternal mortality. These multifaceted interventions are necessary for effectively mitigating maternal health disparities and advancing the well-being of women in rural Nigeria.

RECOMMENDATIONS

Based on the findings of this review, several recommendations are proposed to address the escalating incidence of maternal mortality in rural Nigeria and enhance maternal health outcomes. These recommendations are structured around the key barriers identified in the literature and are intended to inform both policy and practice in improving maternal healthcare delivery in rural regions.

1. **Strengthen Healthcare Infrastructure:** Invest in rural healthcare facilities, equip them with skilled birth attendants and emergency care services, and provide ongoing training for healthcare workers.
2. **Enhance Policy Implementation and Community Engagement:** Fully implement maternal health programs in rural areas and engage community leaders and traditional birth attendants to promote skilled care.
3. **Increase Financial Accessibility:** Provide subsidized healthcare, expand NHIS, and introduce conditional cash transfers to cover transportation and care costs.
4. **Improve Transportation and Accessibility:** Improve roads, provide affordable transportation, and expand mobile health clinics and emergency transport services.
5. **Empower Community Health Workers (CHWs):** Train, recruit, and supervise more CHWs to provide basic maternal healthcare and referrals in rural areas.
6. **Address Socio-Economic and Educational Barriers:** Implement educational programs for women and promote micro-financing initiatives to reduce financial barriers to healthcare.
7. **Strengthen Partnerships:** Collaborate with NGOs and international organizations to improve maternal healthcare in rural areas and secure funding for interventions.
8. **Monitoring and Evaluation:** Establish a monitoring system to assess maternal health interventions and collect data to ensure effective outcomes.

APPENDIX

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with acceptable formulated standard for literature search criteria used to identify included articles in this review.

DISCLOSURES

Contribution: This author helped in conception, literature search, analysis, and writing of the article.

This manuscript was handled by: Ojo Olanrewaju Joseph, MD. And Adeniregun Kehinde Adesoji

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