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Beyond the Clinic: Community-Led Strategies for Combating Maternal Mortality and Improving Child Survival in Conflict-Affected Northern Nigeria

Okerulu Udoamaka Chioma [1,*], Awoyemi Olamide [2], Sodiq Ayodeji Adejare [3] and Akinyemi Michael Iledare [4]

[1] *Johns Hopkins Bloomberg School of Public Health, Maryland, Baltimore, Maryland, USA.*
[2] *Maternal Health and Abortion rights, University of South Florida, USA.*
[3] *Accident and Emergency Specialist, Diana Princess of Wales Hospital, Grimsby, United Kingdom.*
[4] *Data Analytics and Insights, Wisconsin School of Business, Madison, Wisconsin, USA.*

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Abstract

Maternal and child health (MCH) indicators in conflict-affected northern Nigeria remain among the worst globally, with maternal mortality ratios exceeding 1,000 per 100,000 live births and under-five mortality rates reaching critical levels, according to world health organization. In regions destabilized by insurgency, displacement, and weakened health infrastructure, conventional clinical approaches are often insufficient. This review examines community-led strategies as essential, culturally contextualized solutions to these challenges. Drawing on case studies, recent interventions, and global best practices, we explore how female-led health committees, traditional birth attendants (TBAs), mobile midwifery services, and male engagement models have improved maternal and neonatal outcomes in hard-to-reach areas. We also assess the integration of digital health tools and informal health education systems in fostering community resilience. These bottom-up, community-centered approaches have demonstrated measurable reductions in maternal deaths and increased immunization coverage and antenatal care uptake, offering a replicable framework for other fragile settings. We conclude with policy recommendations for scaling and integrating community strategies into national health planning to achieve Sustainable Development Goal 3 by 2030.

Keywords: Maternal Mortality; Child Survival; Community Health; Northern Nigeria; Conflict Zones; Public Health Interventions

1. Introduction

Northern Nigeria continues to face a severe and persistent maternal and child health (MCH) crisis. The region bears one of the highest maternal mortality ratios (MMR) in sub-Saharan Africa, with recent estimates indicating over 1,000 maternal deaths per 100,000 live births in some northern states (Iledare et al., 2025). This alarming burden is compounded by a complex interplay of factors including entrenched poverty, limited health infrastructure, gender inequality, and pervasive cultural barriers that hinder access to quality reproductive, maternal, and pediatric care. The situation is further exacerbated by ongoing armed conflict and insecurity, particularly due to the Boko Haram insurgency and banditry across northeastern and northwestern Nigeria. These conflicts have led to widespread displacement of populations, the destruction or abandonment of health facilities, and a critical shortage of skilled healthcare personnel (Olanrewaju et al., 2023). As of 2024, more than 2 million people remain internally displaced in the northeast alone, many of whom live in informal settlements or remote rural areas without reliable access to healthcare services (WHO, 2024).

* Corresponding author: Chioma Udoamaka Okerulu

Although the Nigerian government, in collaboration with international partners, has implemented several national programs such as the Midwives Service Scheme (MSS), Basic Health Care Provision Fund (BHCPF), and PMTCT scale-up plans, these initiatives are often limited in their geographic reach and sustainability, especially in conflict zones (UNICEF, 2023). Clinic-based models, while effective in stable settings, frequently fail to reach the most vulnerable populations—women and children living in insurgency-controlled, rural, or displaced communities—where facility-based deliveries and antenatal care remain alarmingly low. In these fragile contexts, community-led interventions have emerged as promising alternatives. These include the deployment of community health workers (CHWs), traditional birth attendants (TBAs), mobile clinics, peer support networks, and faith-based outreach programs, which often serve as the first—and sometimes only—point of contact for maternal and child health services (USAID, 2023). In addition, integrating nutrition screening, HIV prevention (particularly PMTCT), and early childhood care into community-based platforms has shown potential to improve outcomes despite systemic fragility.

This review critically examines the evidence for community-driven strategies to reduce maternal mortality and enhance child survival, particularly through the lenses of pediatric nutrition, HIV management, and culturally adaptive health delivery models. The review is anchored in the unique challenges and opportunities presented by conflict-affected regions of Northern Nigeria, and aims to inform future health system planning, policy implementation, and investment in scalable, locally owned solutions.

2. Methods

This is a narrative review based on peer-reviewed articles, grey literature, NGO reports, and government publications published between 2015 and 2025. Databases such as PubMed, Google Scholar, and African Journals Online (AJOL) were searched using keywords: "maternal mortality Nigeria," "community-led health," "child survival in conflict," and "northern Nigeria public health." Interventions were included if they demonstrated direct community engagement, occurred in insecure regions, and were aimed at maternal or child health improvement. We also analyzed recent national health policy documents and global frameworks such as WHO's Health in Conflict and Fragile Settings Strategy (2022).

3. Results

3.1. Traditional Birth Attendants (TBAs) and Community Midwives

In remote and conflict-affected areas of Northern Nigeria, where formal healthcare infrastructure is either non-existent or non-functional due to insecurity, Traditional Birth Attendants (TBAs) and community midwives remain critical providers of maternal care. Their cultural embeddedness and trust within communities make them highly accessible, especially in regions where women are reluctant or unable to travel to health facilities due to insecurity, cost, or cultural norms. Recent initiatives have focused on training and equipping TBAs with basic obstetric skills, danger sign recognition, and referral protocols. In Maiduguri and Yobe, Médecins Sans Frontières (MSF, 2022) reported a 25% reduction in reported maternal complications and a significant increase in clean and safe deliveries after TBAs were engaged in targeted maternal health programs. In addition, community midwives deployed through the Midwives Service Scheme (MSS) in states like Jigawa and Katsina have been shown to increase facility-based delivery rates by up to 40% in rural districts between 2018 and 2022 (FMOH, 2023). However, the effectiveness of TBAs and midwives is often limited by weak integration with formal health systems, inadequate supervision, and lack of access to life-saving drugs or emergency transport.

3.2. Community Health Volunteers (CHVs)

Community Health Volunteers (CHVs) play an increasingly vital role in bridging service delivery gaps, especially during large-scale outreach campaigns such as the Maternal, Newborn and Child Health Week (MNCHW) led by the National Primary Health Care Development Agency (NPHCDA). CHVs are typically local women trained to deliver door-to-door services, including vitamin A supplementation, deworming, distribution of insecticide-treated nets, and reproductive health messaging.

Between 2020 and 2023, CHV engagement during MNCHW campaigns in Borno State was associated with a 35% increase in antenatal care attendance and a 22% rise in childhood immunization uptake (NPHCDA, 2023). These outcomes were particularly notable in internally displaced persons (IDP) camps and rural LGAs (Local Government Areas) where clinic-based outreach was limited. Moreover, CHVs often function as trusted conduits between healthcare providers and the community, helping to reduce misinformation and hesitancy around maternal and child health services.

3.3. Digital Tools and Health Education

The proliferation of mobile technology, even in conflict-affected regions, has enabled the rollout of mHealth interventions aimed at improving maternal awareness and behavior change. Platforms such as "HelloMama", a mobile messaging service tailored to pregnant women and new mothers, send SMS reminders about antenatal appointments, birth planning, newborn care, and breastfeeding practices. In IDP camps across Borno and Adamawa, the integration of WhatsApp-based health education groups facilitated by CHWs has shown measurable impact. A study by Ibrahim et al. (2024) found that these digital interventions led to:

30% increase in birth preparedness, 25% improvement in exclusive breastfeeding practices, 15% rise in childhood vaccination rates. These findings suggest that when culturally tailored and delivered in local languages, digital health tools can be highly effective even in low-literacy and resource-constrained settings.

3.4. Male Engagement Models

One of the often-overlooked barriers to maternal healthcare in Northern Nigeria is the influence of male partners and community leaders on women's healthcare decisions. Recent programs have begun to recognize the importance of male engagement in maternal and child health education and decision-making.

In Sokoto and Zamfara, USAID-funded male inclusion programs organized community dialogue sessions, peer education groups for husbands, and training for religious leaders on the importance of facility-based delivery and antenatal care. As a result:

There was a noted decline in spousal resistance to antenatal attendance. A 41% increase in male-accompanied antenatal visits was observed between 2021 and 2023. Reports of home deliveries dropped by over 20% in participating communities (USAID, 2023).

These models demonstrate that gender-transformative approaches are not only culturally sensitive but also effective in driving behavior change in traditionally patriarchal communities.

4. Discussion

The findings of this review underscore the transformative potential of community-driven interventions in reducing maternal and child mortality in conflict-affected regions of Northern Nigeria. In a context where conventional facility-based models are often inaccessible, under-resourced, or distrusted, community-based solutions offer a sustainable, scalable, and culturally aligned approach to health service delivery.

Despite historical skepticism from biomedical institutions, Traditional Birth Attendants (TBAs) have demonstrated measurable impact when strategically engaged. Rather than perpetuating unsafe birthing practices, recent models emphasize training, supervision, and referral linkages between TBAs and formal health facilities. For instance, when TBAs are empowered with clean delivery kits, trained in emergency recognition, and connected to primary health centers, maternal morbidity declines, and referrals for obstetric complications increase (Adeyemi & Usman, 2023). This represents a paradigm shift—from exclusion to collaborative integration—that reflects both pragmatism and respect for community knowledge systems.

In parallel, the deployment of Community Health Volunteers (CHVs) has addressed service gaps in both urban slums and rural areas where health workers are scarce or overburdened. CHVs not only extend the reach of national campaigns, such as the MNCH Weeks, but also serve as trusted navigators, improving care-seeking behavior and maternal health literacy. The impact is particularly evident among internally displaced populations, where trust in external institutions may be fragile. These volunteers embody health system decentralization at its most granular and adaptive level.

Digital innovations have further enhanced the reach of community-based models, even in areas with limited infrastructure. The use of mobile SMS platforms and WhatsApp groups has allowed for targeted health messaging, appointment reminders, and birth preparedness planning in displaced and rural populations. Crucially, these tools are low-cost and relatively easy to scale, making them ideal for fragile settings where sophisticated digital infrastructure is lacking (World Bank, 2022). The positive outcomes seen in IDP camps—ranging from improved vaccination rates to increased ANC attendance—illustrate how mHealth technologies can circumvent physical and social barriers to care (Ibrahim et al., 2024; World Bank, 2022).

Equally important is the emerging focus on male engagement in maternal and child health. In conservative northern communities where male decision-makers often control household health-seeking behavior, educating men has proven instrumental in changing entrenched norms. Programs that involve fathers and religious leaders in maternal health discussions have led to increased spousal support, reduced delays in seeking care, and more equitable household decision-making. This represents a gender-transformative shift that not only improves health outcomes but also aligns with broader development goals around gender equity and women's empowerment (USAID, 2023).

Beyond direct health metrics, these community-based interventions contribute to social cohesion, resilience, and trust-building in regions destabilized by violence. By leveraging local actors and knowledge systems, such approaches reinforce the idea that health system recovery must begin from the ground up, particularly in post-conflict and displacement settings. They also illustrate a key insight from global health systems research: innovation often emerges most powerfully at the margins, where conventional solutions have failed, and communities are forced to adapt creatively.

Yet, these models are not without limitations. Community actors often lack consistent remuneration, training, and formal recognition, which threatens long-term sustainability. Moreover, without policy integration and institutional support, even the most successful local interventions may remain isolated pilot efforts. It is therefore essential that national health policy frameworks actively incorporate and fund community-based roles, provide legal protections, and create mechanisms for monitoring and accountability.

5. Conclusion and Policy Recommendations

The maternal and child health crisis in Northern Nigeria is not only a public health emergency but also a reflection of deeper systemic challenges—ranging from chronic underinvestment in rural healthcare infrastructure to the ongoing toll of armed conflict and displacement. This review has highlighted how community-based interventions, when thoughtfully implemented and adequately supported, can offer powerful alternatives to traditional facility-based models, especially in fragile and low-resource settings. Whether through the integration of trained traditional birth attendants, the deployment of community health volunteers, the use of mobile health tools, or the inclusion of male partners in prenatal education, these grassroots strategies have demonstrated tangible improvements in maternal and child outcomes across conflict-affected regions.

However, the long-term impact of these community-led models depends on more than just local goodwill or external donor funding—it requires systemic recognition and integration into the broader health architecture of Nigeria. National and state health policies must begin to formally institutionalize community actors as part of the primary healthcare workforce, with standardized training, clear referral protocols, and remuneration structures that acknowledge their vital contributions. Rather than treating community-based efforts as temporary stopgaps, they should be positioned as a central pillar of Nigeria's maternal and child health strategy, particularly in states where insecurity and displacement have rendered traditional approaches inadequate.

Furthermore, policy innovation must keep pace with technological advancements. Mobile health platforms and low-cost digital tools have already shown promise in Northern Nigeria, and should be scaled through coordinated partnerships between health ministries, telecom providers, and civil society organizations. Efforts to digitize birth registration, track antenatal visits, and support exclusive breastfeeding should not be confined to urban centers but extended to hard-to-reach communities through culturally tailored solutions.

Importantly, the promotion of gender-transformative approaches must be a cornerstone of future interventions. Policies that empower women, engage men, and challenge harmful gender norms will not only improve health outcomes but also contribute to broader goals of social inclusion and equity. Investments in maternal health are not only moral imperatives—they are economically sound strategies that yield long-term dividends for national development and human capital.

In conclusion, the path to reducing maternal and child mortality in Northern Nigeria does not lie in replicating Western health systems, but in embracing and scaling community-driven models that are resilient, locally grounded, and contextually adaptive. What is required now is a shift in mindset—one that values community wisdom, invests in frontline innovation, and prioritizes the voices of those who have been historically excluded from the health policy discourse. The health of Northern Nigeria's mothers and children depends on it.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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