

## Open Access Journal of Pharmaceutical Sciences and Drugs

# Addressing Misinformation, Lassa Fever Vaccine Hesitancy, and Cultural Barriers: A Culturally Tailored Communication Approach in Izza Community, Ebonyi State, Nigeria

Ngozi Felicia Okeke\* and Laban Onisimus

Abuja, Nigeria

### \*Corresponding author

Ngozi Felicia Okeke, Abuja, Nigeria.

**Received:** March 02, 2026; **Accepted:** March 17, 2026; **Published:** March 24, 2026

### ABSTRACT

Lassa fever remains a major public health challenge in West Africa, particularly Nigeria, where recurring outbreaks are exacerbated by misinformation, cultural barriers, and vaccine hesitancy. This study explored the effectiveness of culturally tailored communication strategies and the engagement of traditional and religious leaders in promoting vaccine acceptance in the Izza community of Ebonyi State, Nigeria. A mixed-methods design was employed, combining quantitative surveys with qualitative interviews involving 500 community members, 20 traditional leaders, and 15 religious leaders. Findings revealed that 72% of respondents lacked accurate knowledge about Lassa fever, while 60% subscribed to myths about vaccine safety and efficacy. Endorsements from community leaders increased vaccine willingness by 55%, and localized communication strategies substantially improved awareness and acceptance. The study demonstrates that culturally anchored, trust-based communication is vital for overcoming vaccine hesitancy. Recommendations include comprehensive training for leaders, use of community-driven media, and integration of traditional knowledge into health messaging. These insights are relevant for designing effective public health interventions in Nigeria and globally.

**Keywords:** Lassa Fever, Cultural Barriers, Zoonotic Disease

### Introduction

Lassa fever is an acute viral haemorrhagic illness caused by Lassa virus, a member of arena virus family of viruses. The Lassa fever virus is a single strand RNA virus. Lassa fever is a zoonotic disease and 80% of people infected with Lassa fever have no symptoms and 1 in 5 infections result in severe infections (WHO) and can sometimes be severe and fatal. Humans usually become infected primarily with Lassa virus through exposure to food or household items contaminated with urine or faeces of infected *Mastomys natalensis* rats (“multimammate rat”) or secondary transmission between person to person via direct contact with infected body fluids such as blood, urine, saliva, vomitus, faeces and secretions [1].

It is endemic in parts of West Africa, particularly Nigeria, Liberia, Sierra Leone, and Guinea. The disease affects an estimated 100,000–300,000 individuals annually, with approximately 5,000 deaths [2].

Since the identification of the virus in Nigeria in 1969, yearly outbreaks have been reported in many states of the country. In 2018 Nigeria witnessed one of the biggest outbreaks in the history of Lassa fever epidemics affecting 19 states (Edo, Ondo, Bauchi, Nasarawa, Ebonyi, Anambra, Benue, Kogi, Imo, Plateau, Lagos, Taraba, Delta, Osun, Rivers, FCT, Gombe, Ekiti and Kaduna) [3].

Nigeria has consistently borne the highest burden, accounting for the majority of reported outbreaks in the region. Ebonyi State, one of Nigeria’s southeastern states, is recognized as a hyper-endemic area with high case fatality rates.

Despite ongoing research into Lassa fever diagnostics, therapeutics, and vaccines, the greatest challenges to control efforts remain rooted in community-level perceptions and behaviors. Historical distrust of biomedical interventions, the influence of cultural and religious beliefs, and widespread misinformation fuel vaccine hesitancy. Similar challenges have been documented globally with Ebola, COVID-19, and polio eradication campaigns, where misinformation and conspiracy theories significantly undermined uptake.

**Citation:** Ngozi Felicia Okeke, Laban Onisimus. Addressing Misinformation, Lassa Fever Vaccine Hesitancy, and Cultural Barriers: A Culturally Tailored Communication Approach in Izza Community, Ebonyi State, Nigeria. *Open Access J Pharma Sci and Drug*. 2026. 2(1): 1-4.

DOI: [doi.org/10.61440/OAJPSD.2026.v2.38](https://doi.org/10.61440/OAJPSD.2026.v2.38)

In Nigeria, misinformation manifests in diverse forms: denial of the disease's existence, misconceptions about its causes, and myths about vaccine-related infertility, sterility, or Western exploitation. These beliefs are often reinforced by poor health communication and limited engagement with trusted local figures. Consequently, health programs that fail to integrate cultural perspectives struggle to achieve meaningful uptake.

Traditional and religious leaders occupy central roles in shaping community norms and practices in Nigeria. They are perceived as custodians of trust and authority, capable of influencing decisions regarding health, education, and social behavior. Leveraging their voices can mitigate suspicion and create an enabling environment for public Health interventions.

This study investigates how culturally tailored communication strategies, combined with engagement of traditional and religious leaders, can counter misinformation and vaccine hesitancy in the Izza community of Ebonyi State. The findings provide a framework for enhancing community trust and vaccine uptake, with implications for public health initiatives across Africa and globally [4-6].

## Methods

This research adopted a mixed-methods design, integrating quantitative and qualitative approaches to capture both statistical evidence and nuanced cultural insights.

The study was conducted in Izza community, Ebonyi State, Nigeria, an area historically affected by Lassa fever outbreaks. The community is predominantly agrarian, with a population of approximately 25,000. Traditional belief systems and religious institutions play significant roles in shaping social practices and health-seeking behaviors [7-10].

Participants included 500 community members (aged 18 years and above), 20 traditional leaders, and 15 religious leaders. A multi-stage sampling strategy was employed. Community members were randomly selected from households, while traditional and religious leaders were purposively sampled based on their roles and influence.

Structured questionnaires assessed knowledge, attitudes, and practices (KAP) regarding Lassa fever, vaccine perceptions, and information sources. Semi-structured interviews explored cultural narratives, sources of misinformation, and perceptions of traditional and religious leader engagement.

Quantitative data were analyzed using SPSS v25. Descriptive statistics summarized demographics and KAP scores. Chi-square tests examined associations between misinformation and vaccine willingness. Logistic regression identified predictors of vaccine hesitancy. Thematic analysis identified dominant themes related to cultural beliefs, misinformation, and trust in leaders. Triangulation of data ensured credibility.

## Results

The study enrolled 500 community members, 20 traditional leaders, and 15 religious leaders. Below are the summarized findings:

- **Knowledge gaps:** 72% lacked accurate knowledge of Lassa fever transmission and prevention.

- **Misinformation:** 60% believed myths regarding vaccine safety and efficacy.
- **Leader engagement:** Endorsements by traditional and religious leaders increased willingness to vaccinate by 55%.
- **Communication:** Localized strategies (meetings, social media, and indigenous storytelling) improved awareness and acceptance.

## Socio-Demographic Characteristics of Respondents

A total of 500 community members, 20 traditional leaders, and 15 religious leaders participated in the study. Among community respondents, 55% were female (n = 275) and 45% male (n = 225). The mean age of participants was 37.4 years (SD ± 12.6).

Regarding education, 38% (n = 190) had no formal education, 42% (n = 210) had secondary education, and 20% (n = 100) had tertiary education.

## Knowledge of Lassa Fever Transmission and Prevention

Overall, 72% (n = 360) of respondents demonstrated inadequate knowledge of Lassa fever transmission and prevention, while only 28% (n = 140) demonstrated adequate knowledge.

The most common misconceptions included:

- Belief that Lassa fever is a spiritual curse (41%)
- Belief that it is caused by poisoning or witchcraft (33%)
- Lack of awareness of rodent transmission routes (68%)

Respondents with secondary or higher education were significantly more likely to have accurate knowledge compared to those without formal education ( $\chi^2 = 18.6$ ,  $p < 0.001$ ).

## Prevalence of Vaccine-Related Misinformation

A majority of respondents (60%, n = 300) reported believing at least one form of misinformation regarding Lassa fever vaccines. The most prevalent myths included:

- Vaccines cause infertility (35%)
- Vaccines are a foreign experiment on Africans (29%)
- Vaccines can cause sudden death (18%)

Primary sources of misinformation included:

- Word-of-mouth within the community (46%)
- Religious gatherings (22%)
- Social media platforms (18%)
- Local informal networks (14%)

## Influence of Traditional and Religious Leaders on Vaccine Acceptance

Following targeted engagement and endorsement by traditional and religious leaders, willingness to accept Lassa fever vaccination increased from 38% at baseline to 93% post-engagement, representing a 55 percentage-point increase [11].

Participants who reported trust in community leaders were significantly more likely to accept vaccination compared to those who did not (OR = 3.4; 95% CI: 2.1–5.6;  $p < 0.001$ ) [12].

## Effect of Culturally Tailored Communication Strategies

Implementation of culturally adapted communication approaches including town hall meetings, indigenous storytelling, and faith-based messaging significantly improved both knowledge and acceptance levels [13,14].

Post-intervention:

- Accurate knowledge increased from 28% to 64%
- Willingness to vaccinate increased from 38% to 93%

Participants reported that:

- Messages delivered in local language were more understandable (82%)
- Messages delivered by trusted leaders were more believable (88%).

**Qualitative Findings**

Thematic analysis of interviews identified three dominant themes:

- Trust and Authority
- Community members relied heavily on traditional and religious leaders as trusted sources of truth.

**Cultural Interpretation of Illness**

Lassa fever was often interpreted through spiritual or moral frameworks, affecting health-seeking behavior.

**Misinformation Ecosystems**

Informal communication networks and social media amplified myths and conspiracy narratives.

**Tables and Figures**

**Table 1: Socio-demographic Characteristics of Respondents**

Variable	Frequency (n)	Percentage (%)
Female	275	55
Male	225	45
No formal education	190	38
Secondary education	210	42

**Table 2: Knowledge and Misconceptions about Lassa Fever**

Indicator	Frequency (n)	Percentage (%)
Adequate knowledge	140	28
Inadequate knowledge	360	72
Infertility myth belief	175	35
Foreign experiment myth belief	145	29

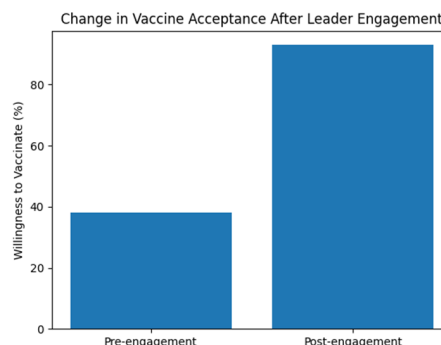
**Table 3: Vaccine Acceptance Before and After Leader Engagement**

Stage	Willing to Vaccinate (%)	Not Willing (%)
Pre-engagement	38	62
Post-engagement	93	7

**Discussion**

The findings highlight the profound impact of misinformation and cultural beliefs on vaccine acceptance in the Izza community. The role of trusted leaders proved pivotal in countering myths and encouraging vaccination, echoing evidence from global campaigns against Ebola, polio, and COVID-19. Culturally tailored communication strategies, particularly those leveraging local language and storytelling, proved more effective than standardized public health messages.

While the study demonstrates the promise of leader engagement, challenges remain. Social media continues to spread misinformation rapidly, and leader influence may vary depending on individual beliefs. Addressing vaccine hesitancy requires sustained partnerships with community leaders and integration of traditional knowledge into broader health systems.



**Figure 1: Change in Vaccine Acceptance after Leader Engagement**

**Conclusion**

This study demonstrates that vaccine hesitancy in the Izza community is driven by misinformation, cultural beliefs, and distrust of external authorities. Engaging traditional and religious leaders, combined with culturally resonant communication, significantly improved vaccine acceptance. The framework presented here offers a scalable model for addressing vaccine hesitancy in Nigeria and other culturally diverse settings.

**Recommendations**

1. Develop training programs for traditional and religious leaders on health communication.
2. Partner with local radio, drama groups, and influencers to counter misinformation.
3. Integrate indigenous storytelling and traditional knowledge into vaccine campaigns.
4. Institutionalize leader engagement within Nigerian and ECOWAS health strategies.
5. Adapt this model globally to contexts where cultural barriers impact vaccine uptake.

**Policy Implications**

This study underscores the necessity of embedding cultural sensitivity into health communication. Global health bodies, including WHO and ECOWAS, should prioritize leader-led, trust-based communication frameworks to counter misinformation. Policymakers must invest in training, localized media, and traditional structures to sustain vaccine uptake and enhance pandemic preparedness worldwide.

**References**

1. Arruda LB, Haider N, Olayemi A, et al. The niche of One Health approaches in Lassa fever surveillance and control. *Ann Clin Microbiol Antimicrob.* 2021. 20:29.
2. Asogun D, Arogundade B, Unuabonah F, Olugbenro O, Asogun J, et al. A review of the epidemiology of Lassa fever in Nigeria. *Microorganisms.* 2025. 13: 1419.
3. Bécharde B, Gramaccia JA, Gagnon D, Laouan-Sidi EA, Dubé É, et al. The resilience of attitude toward vaccination: Web-based randomized controlled trial on the processing of misinformation. *JMIR Formative Research.* 2024. 8: e52871.

4. Dalhat MM, Olayinka A, Meremikwu MM, Dan-Nwafor C, Iniobong A, et al. Epidemiological trends of Lassa fever in Nigeria, 2018–2021. *PLoS One*. 2022. 17: e0279467.
5. Foronty P. Infectious hazard management health emergency program. Geneva: World Health Organization; Available from: <http://nhp.gov.in/outbreak-investigation>
6. Caceres MM, Sosa JP, Lawrence JA, Sestacovschi C, Tidd-Johnson A, Rasool MH, Gadamidi VK, Ozair S, Pandav K, Cuevas-Lou C, Parrish M. The impact of misinformation on the COVID-19 pandemic. *AIMS public health*. 2022. 9: 262.
7. Abdullah IN, Anka AU, Ghamba PE. Need for preventive and control measures for Lassa fever through One Health strategic approach. *Infect Dis (Auckl)*. doi:10.1177/2010105820932616.
8. GAVI. Vaccine hesitancy: an overview. 2022. Available from: <https://www.gavi.org>
9. Agboeze J, Nwali MI, Ajayi N, Chika-Igwenyi NM. An epidemiological investigation of Lassa fever outbreak in Ebonyi State, South Eastern Nigeria: lessons learnt. 2018.
10. Nigeria Centre for Disease Control (NCDC). Lassa fever situation report, Nigeria. 2023. Available from: <https://ncdc.gov.ng>.
11. Nguyen T, Cecchini S. Countering misinformation in Africa's COVID-19 response. *Afr J Health Commun*. 2021. 3: 15-24.
12. UNICEF. Available from: <https://clearinghouse.unicef.org/download-ch-media/4607f61d-41f3-429a-bd6e-8c4c588c53de>.
13. World Health Organization (WHO). Lassa fever – Nigeria. 2018. Available from: <https://www.who.int/emergencies/disease-outbreak-news/item/lassa-fever-nigeria>. World Health Organization (WHO). Report of the SAGE working group on vaccine hesitancy. 2014. Available from: [https://www.who.int/immunization/sage/meetings/2014/october/1\\_Report\\_WORKING\\_GROUP\\_vaccine\\_hesitancy\\_final.pdf](https://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf).
14. World Health Organization (WHO). Immunization agenda 2030: a global strategy to leave no one behind. 2021. Available from: <https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030>.