WEST AFRICAN HEALTH ORGANIZATION
ORGANISATION OUEST AFRICAINE DE LA SANTE
ORGANIZAÇÃO OESTE AFRICANA DA SAÚDE

38 YEARS ANS ANOS

TECHNICAL BRIEF

LASSA FEVER VACCINE COALITION

MAY 2025

EXECUTIVE SUMMARY

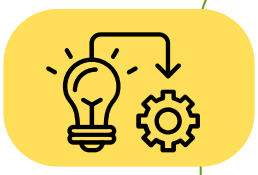
Lassa fever is a life-threatening viral hemorrhagic illness endemic in West Africa, with an estimated 300,000–500,000 infections and approximately 5,000 deaths reported annually within the region.[1] The most significant outbreaks have been reported in Nigeria, Sierra Leone, Guinea, and Liberia, with cases in other West African countries, including Benin, Ghana, Mali, and Togo.

Despite challenges such as limited surveillance and diagnostic capacity and tools, misinformation and limited healthcare infrastructure, vaccine research has made significant progress. In 2024, the first-ever Lassa fever vaccine candidate developed by IAVI entered Phase 2a trials in Nigeria, Liberia and Ghana.[2] This candidate is funded by the Coalition for Epidemic Preparedness Innovations (CEPI), which has invested over $250 million in Lassa fever vaccine development, supporting six candidates to date, with three currently active.[3] Beyond CEPI's investments, there are about 20 Lassa fever vaccine candidates at various stages of development, including an NIH-funded candidate which began Phase 1 trial enrollment in March 2025.[4,5]

Progress has also been recorded in other areas. The ReLASV Pan-Lassa Rapid Diagnostic Test was evaluated in a clinical setting and showed promising results and has the potential to expand access to timely and accurate Lassa fever diagnosis, particularly in resource-limited settings.[6] Forty years after the last Lassa fever treatment trial was conducted, a trial for Lassa fever therapeutics began enrolment in Nigeria in May 2025.[7] There have also been advancements in epidemiological research, with the largest ever study to estimate the burden of Lassa fever carried out in Benin Republic, Guinea, Liberia, Nigeria, and Sierra Leone between 2019 and 2024.[8]

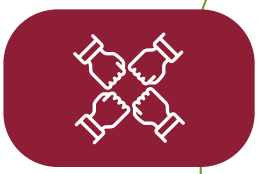
1. Africa CDC. Lassa Fever. https://africacdc.org/disease/lassa-fever/
2. IAVI (2024) https://www.iavi.org/features/iavi-c105-lassa-vaccine-clinical-trial-fully-active/
3. CEPI (2025) Lassa Fever. https://cepi.net/lassa-fever
4. Sulis et al (2023). Lassa Fever Vaccine Candidates: a scoping review of clinical trials. Trop Med Int Health. https://doi.org/10.1111/tmi.13876
5. National Institutes of Health (2025). https://www.nih.gov/news-events/news-releases/nih-sponsored-trial-lassa-vaccine-opens
6. Chi et al (2025). Evaluation of the diagnostic accuracy of the ReLASV Pan-Lassa Antigen Rapid Test for Lassa Fever in Nigeria. PLOS Global Public Health, 21,5(4). https://doi.org/10.1371/journal.pgph.0004405
7. Relief Web (2025). Lassa Fever: ALIMA Strengthens Response in Nigeria with New Treatments. https://reliefweb.int/report/nigeria/lassa-fever-alima-strengthens-response-nigeria-new-treatments
8. CEPI (2021). Largest ever Lassa fever study expands to more countries in West Africa. https://cepi.net/largest-ever-lassa-fever-study-expands-more-countries-west-africa

Support ongoing research and late stage vaccine trials aligned with local needs



Develop and implement a policy research agenda to guide future vaccine-related decision making

Validate an end to end access strategy to ensure equitable vaccine availability and demand forecasting



Strengthen regional ownership through capacity building, inclusive governance and knowledge sharing

Lassa fever presents a strategic opportunity for West African leaders and health experts to lead the development of locally driven solutions to a disease that disproportionately impacts the region. In January 2024, the West African Health Organization (WAHO) and partners launched the Lassa fever Vaccine Coalition to promote regional leadership, country-led research and coordinated policy development. Within its first year, the coalition has contributed to critical decision-making, supported Lassa fever vaccine research across the region and strengthened both country-level and regional ownership of the Lassa fever response while supporting the development of research capacity in countries. This experience offers a model for how regional and national public health institutions can lead in addressing endemic threats while also building the capabilities needed for broader pandemic preparedness. Sustained investment, political will and cross-sectoral collaboration are now essential to ensure that progress made through the Lassa Fever Vaccine Coalition translates into long-term regional resilience and serves as a blueprint for future epidemic threats

STRATEGIC RECOMMENDATIONS

01 Lassa fever is a regional health challenge, and successful vaccine development requires a collective effort. Governments should reaffirm and strengthen their commitment by increasing domestic financing and advocating for global financing, and by ensuring Lassa fever control efforts are effectively integrated into national health security and preparedness strategies.

02 The success of Lassa fever vaccine, therapeutic, and diagnostic development, and broader control efforts, will depend on a strong enabling system. Health Ministers should prioritize the strengthening of disease surveillance systems, regulatory capacity, cross-border coordination, health workforce readiness, community engagement, and support for local manufacturing to ensure timely detection, equitable access, and effective response.

03 Investments in Lassa fever offer West African countries an opportunity to catalyze broader epidemic and pandemic preparedness. Governments and regional bodies should provide leadership for Lassa fever control efforts, ensuring coordinated action across sectors, and leverage lessons learned from Lassa fever research, preparedness, and response to strengthen strategies against other emerging and re-emerging infectious diseases.

BACKGROUND AND CONTEXT

For over 50 years, Lassa fever has been a significant public health challenge across West African countries. The most significant outbreaks have been reported in Nigeria, Sierra Leone, Guinea, and Liberia, and other West African countries including Benin, Ghana, Mali, and Togo. The disease primarily affects communities with limited access to healthcare and sanitation, contributing to the strain on already fragile health systems and economies. Despite the impact of this disease, there are no licensed vaccines and therapeutics, and diagnostics are largely expensive and inaccessible.

In 2016, the World Health Organization designated Lassa fever as a priority disease, advocating for increased investment in research and development for vaccines, diagnostics, and therapeutics. Since then, there has been progress with disease control. There are over 20 Lassa vaccine candidates in development, with the most advanced currently at Phase 2a in Nigeria, Liberia and Ghana. There are ongoing Lassa therapeutics trials and field testing for Lassa fever rapid diagnostic tests. Countries have also invested in stronger surveillance and response capabilities. Additionally, community-level research has deepened insights into behavioral and socio-cultural factors influencing disease transmission and response, leading to more effective community engagement strategies. This year, WAHO has recognized the need for the Assembly of Health Ministers to have a focused session on Lassa fever vaccine development, given the impact of the disease in the region and the potential to enable stronger pandemic preparedness.

THE OBJECTIVE OF THE TECHNICAL BRIEF IS TO:

Provide Health Ministers, experts, partners and other stakeholders with an update on the progress, emerging opportunities and strategic priorities for Lassa fever control. We highlight recent advances in vaccine development and outline how these efforts can strengthen broader pandemic preparedness across West Africa.

STATUS OF LASSA FEVER VACCINE DEVELOPMENT

There are around 20 Lassa fever vaccine candidates in development globally. The Coalition for Epidemic Preparedness and Innovation (CEPI) is the largest funder of Lassa fever vaccine development, with approximately $250 million contracted to date. In April 2024, CEPI-funded developer IAVI launched the first Phase 2a clinical trial in Nigeria, followed by Ghana and Liberia. This study aims to assess safety and immunogenicity in diverse populations. The IAVI rVSV-based vaccine, which is based on the Merck Ebola vaccine technology, showed protective effects in animal models for up to 12 months. Furthermore, Phase 1 studies in the US and Liberia confirmed its safety, tolerability, and immunogenicity.

vaccine development carries some risks, while offering important opportunities to learn and strengthen regional preparedness, research and innovation.

The University of Oxford is developing a vaccine using the ChAdOx1 vaccine platform, with Phase 1 trials set to begin in the UK and Ghana in 2025. CEPI has also invested in epidemiological studies, regulatory system strengthening, clinical trial readiness and other efforts in the region, working closely with relevant government institutions and partners.

Beyond CEPI-funded Lassa fever vaccine candidates, there are other Lassa fever vaccine candidates at varying stages of development, including an NIH-funded Phase 1 trial which began enrolment in March 2025. It is important to highlight that vaccine development carries some risks, while offering important opportunities to learn and strengthen regional preparedness, research and innovation.

LASSA FEVER VACCINE COALITION

Recognizing the need for stronger regional and national leadership, the Lassa fever vaccine coalition was established by WAHO in 2024, working closely with Member States and partners such as CEPI and WHO and with a flexible model to include other partners.

This collaborative model is based on lessons from previous vaccine development efforts, which call for a more locally anchored and regionally led approach. The coalition is a collaborative partnership model that puts local ownership at the center and advocates that vaccine development and related policies should be co-led by the most affected countries, with early and consistent community engagement at various stages. This approach will help ensure strong local support for vaccine use cases and vaccination strategies, guide the design and implementation of clinical trials, drive demand forecasting, strengthen advocacy for enabling policies and promote sustainable and equitable access to the vaccine. It also provides an opportunity to develop capacities and capabilities that can be used for future epidemics and pandemics.

The coalition includes the Lassa Fever Governing Entity (LGE) which is led by Health Ministers from the most affected West African countries which met in January 2025, WAHO which serves as the Secretariat, country-level coalitions which have now been set up by the Governments of Liberia, Nigeria and Sierra Leone, and technical working groups which create a structure for technical experts including vaccine developers and country health experts to work together. The goal is to enable the development of a safe and effective Lassa fever vaccine that is accessible and embraced by countries, while ensuring effective coordination and communication among country, regional, and global stakeholders.

PROGRESS OF THE LASSA FEVER VACCINE COALITION

Over the last one year, the Lassa Fever Vaccine Coalition has achieved progress, including:

01

Developed a Lassa fever vaccine policy research agenda through a working group, chaired by WAHO, with membership comprising experts from Member States (Nigeria, Liberia, Sierra Leone, Ghana, and Mali), WHO's RITAG, WHO headquarters, and Gavi

02

Co-hosted a workshop with Africa CDC and partners in Accra with 120 participants, including representatives from West African countries and other stakeholders relevant to discuss opportunities for strengthening clinical trial and research preparedness in West Africa

03

Developed use case scenarios for Lassa fever vaccine through a workshop with global, regional and national experts.

04

Supported ongoing Lassa fever vaccine research and development, including the start of a Lassa Ph2a trial.

05

Engaged health ministers and leaders from multiple West African countries to strengthen national and regional coordination

06

Established mechanisms for improved cross-country information and lesson-sharing through quarterly newsletters and webinars, country visits among others

PRIORITIES FOR THE LASSA FEVER VACCINE COALITION IN 2025

01 REVIEW AND VALIDATE AN END-TO-END ACCESS PLAN TO SUPPORT THE LASSA VACCINE PROGRAM:

In collaboration with partners and countries, the Coalition is developing an end-to-end (E2E) access plan to guide equitable access to Lassa fever vaccines. The plan will address stages of the vaccine value chain, from research and development to manufacturing, policy, delivery, and community engagement. This will clarify the roles and responsibilities of global, regional, and national partners in vaccine development and introduction. As part of the E2E process, the Coalition, with its partners and countries, will also review and validate the initial Lassa fever vaccine demand forecast to support planning for commercial-scale manufacturing.

02 DEVELOP AND DISSEMINATE A PRIORITIZED LASSA FEVER POLICY RESEARCH AGENDA:

The goal of the policy research agenda is to identify priority research questions needed to support evidence-based policy and vaccine introduction decisions for Lassa fever vaccines. This agenda will guide policy makers, researchers and other experts in designing appropriate studies and allocating resources that will support Lassa fever vaccine development in alignment with public health priorities and local contexts.

03 CONTINUE SUPPORT TO ONGOING LASSA R&D PROJECTS ACROSS THE REGION:

The coalition, through its entities including the country-level structures, will continue to ensure support to ongoing Lassa fever vaccine R&D projects, such as the successful completion of ENABLE 1.5, planning for late-stage trials, among others. Emphasis will be placed on ensuring that R&D efforts are aligned with public health needs and contribute to broader system strengthening in the region.

04 STRENGTHEN COUNTRY AND REGIONAL OWNERSHIP:

Strengthening country and regional ownership is critical to the success and sustainability of Lassa fever vaccine development. Efforts will focus on empowering Member States and regional entities to lead and manage key aspects of the coalition's activities. This will involve capacity-building initiatives, knowledge-sharing platforms, and inclusive decision-making processes. In September 2025, WAHO will host a Lassa fever international conference, convening participants from the region and beyond.

KEY ACTIONS AND RECOMMENDATIONS

1. Lassa fever is a regional health challenge, and successful vaccine development requires a collective effort. Governments should reaffirm and strengthen their commitment by increasing domestic financing and advocating or global financing, and by ensuring Lassa fever control efforts are consistently and effectively integrated into national health security and preparedness strategies.

2. The success of Lassa fever vaccine, therapeutic, and diagnostic development, as well as broader control efforts, will depend on a strong enabling system. Health Ministers should prioritize the strengthening of disease surveillance systems, regulatory capacity, cross-border coordination, health workforce readiness, community engagement, and support for local manufacturing to ensure timely detection, equitable access, and effective response.

3. Investments in Lassa fever offer West African countries and opportunity to catalyze broader epidemic and pandemic preparedness. Governments and regional bodies should provide leadership for Lassa fever control efforts, ensuring coordinated action across sectors, and leverage lessons learned from Lassa fever research, preparedness, and response to strengthen strategies against other emerging and re-emerging infectious diseases.

4. With sustained political commitment, strengthened surveillance, equitable vaccine access when available, and coordinated regional efforts, West Africa has the potential to reduce the burden of Lassa fever in the coming years and build capacity for stronger pandemic preparedness.