

# Strategies to Prevent (STOP) Spillover

## Impact Brief

### Liberia

#### Transforming Communities by Mitigating Lassa Fever Risks in Lassa Fever-Endemic Communities in Liberia

Activity 2.2.2.2: Promote proper food and water storage and waste management in the home and community.

### INTRODUCTION

STOP Spillover is implementing an intervention to mitigate human exposure to rodents by promoting proper food and water storage and Waste Management at households and community Levels. To understand the root causes of the problems, STOP spillover conducted a Behavior, Practices, and Exposure study (Activity 2.2.2.1 in 12 communities across Nimba, Grand Bassa and Bong counties). The study provided a clear understanding of community members' knowledge of various aspects of Lassa virus: its signs, symptoms, causes, and how to prevent it. The study also delved into farming, hunting, food and water storage practices, health-seeking behaviors, traditional customs, beliefs, and environmental conditions at both household and community levels that put community members at risk to Lassa Fever. The generated insights allowed us to identify specific risks related to gender, age, and geographic differences.

These findings have served as the foundation for the intervention strategy, ensuring that it addresses the unique challenges and factors contributing to spreading Lassa Fever in these diverse settings.



Community-level co-design participants in Compound 3, Grand Bassa County. Photo credit: STOP Spillover Liberia

### Strategy

In Year 3, STOP Spillover Liberia undertook co-design workshops to present and discuss the findings from the study. In collaboration with national and subnational stakeholders through the One Health Platform, we engaged stakeholders at both national and community levels in a co-design workshop, focusing on identifying local solutions. The goal was to design and implement innovative physical barriers and storage solutions to reduce rodent contamination of food, water, and homes with their excreta (e.g. urine, feces, saliva) as a proxy for reducing human exposure to Lassa virus.

In September 2023, we collaborated closely with community chairpersons, selected carpenters, and household heads to implement various rodent-proofing measures for proper food and water storage and Waste Management. These measures included the creation of elevated tables wrapped with metal zinc, food boxes made of wood and metal zinc, and GB/Fufu covers made of mesh wires. Communities utilized their local materials in crafting these measures.



Above: Close up photo of GB cover.  
Right: Table lined with metal zinc and Fufu / Gb covers in use.





*Picture of household interview ongoing in compound-3 community*

In addition, from October 3 to 14, 2023, in-person monitoring was conducted to assess interventions in two communities, aiming to identify challenges, areas for improvement, and refine interventions based on feedback from household participants and identified gaps. Assessment tools were developed to evaluate the effectiveness of Rodent-Proofing and Waste Management interventions in the pilot communities. Subsequently, field monitoring activities related to these interventions took place in the Blegay-Pa and Compound 3 communities from December 4 to 14, 2023. The good practices highlighted proper food and water storage using food boxes and tables with metal legs, as well as good sanitation within homes. Additionally, some issues were identified, such as small entry points on food boxes due to the shrinking of wood, suboptimal waste disposal due to a lack of land space for a designated waste site, and limited household space to ensure good placement of tables. To address these concerns, actions were taken, including the repair of broken food boxes and engagement with city governance to resolve the issue of land space for a designated dump site. Overall, these findings emphasized commendable practices in households but also identified challenges that required prompt and collaborative solutions to ensure the effectiveness and sustainability of the interventions.

By innovatively addressing the interface between humans and rodents, the project makes a direct contribution to the prevention and control of zoonotic diseases, with a particular focus on Lassa Fever. This aligns with JEE Indicator 9, which emphasizes Zoonotic Disease Prevention and Control. Additionally, the project plays a role in supporting GHSA and JEE Indicator 10, Emergency Operations Coordination, through a collaborative approach that involves national and subnational stakeholders, as well as community members. This demonstrates effective coordination in addressing Lassa Fever.

## **Achievements**

**Rodent-Proofing Measures:** As a pilot phase, we deployed rat-proofing measures in 30 selected homes across 2 communities (in Nimba and Grand Bassa Counties). Elevated tables wrapped with metal zinc to prevent rodents from climbing the legs, retrofit wooden sliding food boxes lined with metal zinc on the top and at the back to store different types of food (e.g., rice, potatoes, grains), and GB covers made of wood, mesh wires and floor mats to allow air while protecting food from rodents.

**Waste Management Campaign:** Revitalized general cleaning campaigns in October 2023 across the pilot communities to encourage proper waste segregation, with a particular focus on plastic waste to reduce waste within and around the homes.

**Community Engagement:** Demonstrated robust community involvement, with residents actively contributing tables, showcasing resilience, and taking ownership of the initiative.

**Enhanced Awareness:** Strengthened the Social Behavior Change (SBC) component through the production and distribution of Lassa Fever SBC materials (posters-200, flyers-200, stickers-500) with the invaluable support of Community Health Volunteers (CHVs) in both communities.



*Photo of rat proofing measure in use at household level*

## **Next Steps**

Scale up successful interventions into four additional communities based on the impact observed in the pilot communities.