Strategies to Prevent (STOP) Spillover

Impact Brief

Liberia

Collaborative Rodent Tracking: Engaging Community Health Structures and Residents to combat Lassa Fever

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

INTRODUCTION

Scale up of interventions in Gokai, Bong County

STOP Spillover is implementing an intervention to mitigate human exposure to rodents by promoting proper food and water storage and waste management at both household and community levels. A key aspect of this initiative is the use of a co-design approach, engaging national and subnational stakeholders across the One Health Platform to collaboratively address gaps identified from Year 3 research on knowledge, attitudes, practices, and beliefs that put people at risk of Lassa fever, and to identify and implement local solutions. This approach included engaging national and community-level stakeholders through workshops to develop innovative, locally- designed and constructed physical barriers and storage solutions. The goal was to reduce rodent presence in homes, shops, and storage areas, thereby minimizing rodent contamination of food, water, and surfaces. The co-design workshops led to the creation of action plans centered on rodent-proofing and waste management interventions, piloted in two communities: Blegay Pa in Nimba County, and Compound 3 Christian Community in Grand Bassa County. Community involvement was crucial to these plans, emphasizing the importance of safeguarding food and water storage, and proper waste management. Innovations such as elevated tables with zinc-wrapped legs, food boxes, GB and fufu covers, and floor mats were introduced to prevent rodent access. Additionally, general cleaning campaigns were launched in October 2023 to promote proper waste segregation, particularly of plastic waste.

Orientation of household members on ultrasonic repellent in Nuopea, Nimba county

At the beginning of Year 4, the interventions were monitored, revealing that communities were implementing commendable practices in proper food and water storage. However, challenges were noted such as (1) entry points in food boxes due to raw wood usage and structural changes that occurred when the wood dried; and (2) inadequate space within households preventing placement of tables away from walls and structures which might provide rodent access to the tables. Waste disposal issues, compounded by the lack of available land and market influences, were also significant which highlighted the need for continuous community engagement and education. Collaborative efforts to address these challenges included procuring materials to repair food boxes and establishing committees to oversee sanitation and waste management activities. Guidance on proper food box usage was also provided. Building on the success of these pilot interventions, the program scaled up to four additional Lassa-positive communities: Goka and Phebe in Bong county, and Nuopea,

and Gbarpa in Nimba county. To date, structural rodent-proofing and waste management interventions are implemented in 90 homes across six communities in Bong, Nimba, and Grand Bassa Counties.

Monitoring of rodent trackpad in Blegay-pa, Nimba

In May 2024, the Liberia STOP Spillover team, in collaboration with representatives from the National Public Health Institute of Liberia and the County Health Services supervisors (CHSS), conducted rodent monitoring in homes in the six intervention communities across Nimba, Bong, and Grand Bassa Counties. This rodent monitoring activity involves using rodent track pads to assess the abundance of rodents in a household. The CHSS and community health volunteers (CHVs) were oriented on the preparation, deployment, and monitoring of the trackpads in homes. Under direct supervision from the STOP team, trackpads were placed in 81 intervention and 30 non-intervention homes, and the number of footprints was measured using mesh grids to indicate rodent presence. Data was documented using Kobo Collect. Four homes in each community with a high intensity of rodent footprints - two intervention homes and two non-intervention homes - were selected for further intervention, i.e. placement of ultrasonic repellents.

These quantitative data will provide critical information on the abundance of rats and their access to both domestic and public water and food storage in selected communities. Rodent monitoring will occur over multiple time points in order to assess intervention efficacy in reducing rodent abundance.

Expected Outcomes

Early morning retrieval of trackpads in collaboration with the CHVs in Blegay-pa, Nimba county

Monitoring of Trackpads:

- Baseline data on rodent abundance in homes established through trackpad monitoring, enabling informed decision-making and targeted interventions to reduce rodent infestation and mitigate the risk of Lassa fever transmission.

Placement of Ultrasonic Repellents:

- Reduced rodent infestation in households, contributing to decreased human exposure to rodents and mitigating the risk of Lassa fever transmission.

Achievements

Collaborative Monitoring Efforts:

- Successfully partnered with CHSS, CHVs, and community members to monitor rodent presence using trackpads, which provided accurate data for informed decision-making and further interventions.
- Effectively trained CHSS and CHVs on trackpad preparation, deployment, and monitoring, ensuring sustainability and local capacity building.
- Collected comprehensive data through Kobo Collect, enabling precise tracking of rodent activity and effective response planning.

Ultrasonic Repellent Placement:

- Identified homes with high rodent activity and successfully deployed ultrasonic repellents, demonstrating a proactive approach to reducing rodent infestations.
- Enhanced community trust and participation through visible and immediate actions, reinforcing the importance of local engagement in intervention success.

Next Steps

Continue following up with other communities to provide updates on SBC activities and ensure continued progress.

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