Sierra Leone Supporting Evidence for Lassa Fever case studies

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Case study manuscripts

Kpaka R., Babawo L, PARES Research Group, Mayhew S.H., Vandi A., Relational Mechanisms of Community Engagement in Endemic Disease Control: A Realist Analysis of the Lassa Fever Response in Sierra Leone. *In preparation*

Kpaka R., Vandi A., PARES Research Group, Mayhew S.H., Babawo L. Embedding Community Engagement and involvement in Lassa Fever Response: Evidence from Sierra Leone. *In preparation*

Data Collected

Data were collected between January and December 2025 in three chiefdoms (Nongowa, Small Bo and Lower Bambara) in Kenema District, Eastern Sierra Leone, using multiple qualitative methods to exmaine the Lassa fever (LF) response.

The data comprised of 50 purposively sampled stakeholders (policy, clinical and community representatives: 20 key informant interviews (KIIs) and 30 in-depth interviews (IDIs)) as well as six focus group discussions (FGDs), participant observation, document review and reflexive field journals.

Analysis combined inductive and deductive coding to construct and validate CMOC configurations; findings were verified through stakeholder validation workshops.

Identified mechanisms by which community engagement & involvement can build resilience

Seven mechanisms explained how CEI shifted communication from a top-down biomedical model to a participatory, trust-based approach: recognition of local knowledge; dialogic communication; consistent engagement and feedback; empowerment of trusted messengers; institutional reflexivity; integration of community insights into operational decisions; and visibility of positive outcomes.

Case study 1: Sierra Leone, Lassa Fever, Legitimate, trusted leaders and intermediaries

Legitimate and trusted leaders and intermediaries enabled culturally validated health communication and improved confidence in messages. This increased credibility of health communication, strengthened community ownership, reduced stigma toward survivors, stimulated demand for early testing and improved willingness to engage with formal care.

Case study 2: Sierra Leone, Lassa Fever, Knowledge Systems Alignment (Co-production and incorporation of local knowledge)

Co-produced knowledge and embedded trust enabling early reporting and preventive action: Deliberate dialogue that values local expertise creates relationships of mutual respect, generating community ownership of disease response and sustained engagement with surveillance and prevention.

Case study 3: Sierra Leone, Lassa Fever, Information & Communication Systems

Two-way communication promotes mutual learning and sustained trust: Participatory dialogue platforms that allow communities to articulate fears and experiences while health workers respond in real time, generate reciprocal sense-making, reduce misinformation and sustain collaboration with disease surveillance and care.

Case study 4: Sierra Leone, Lassa Fever, Multi-stakeholder collaboration & coordination platforms

Multi-stakeholder coordination platforms enable operational coherence and system responsiveness: The establishment of coordination platforms involving village members, clinic staff and district health teams enabled rapid operational adjustments, sustained coordination, improved surveillance responsiveness.

Case study 5: Sierra Leone, Lassa Fever, Social Learning

Visibility of positive outcomes reinforcing engagement and institutional trust: Observable benefits from improved care, survivor recovery and institutional responsiveness validate community engagement, reduce fatalism and stigma, and sustain collaboration for endemic disease management.

Case study 6: Sierra Leone, Lassa Fever, Institutional Learning

As reflexive learning (regular meetings with nurses, surveillance officers, researchers and district officials to review community feedback and testimonies) became embedded, community feedback informed coordination meetings and operational planning, creating iterative feedback loops. This adaptive process strengthened perceptions of responsiveness and accountability, enhancing trust, institutional legitimacy and the overall flexibility of the Lassa fever response.

Vignettes Case Evidence

Vignette #1

Before CEI, most Lassa fever messages were delivered by hospital staff or external partners. A young man described this distance: *"When the hospital people talk, we hear danger first, not help."* Recognising this gap, CEI shifted who carried the message. Religious leaders, chiefs, ward committee members, survivors and community health workers communicated prevention through familiar social spaces—sermons, mosque announcements, family meetings and informal conversations. A local imam explained: *"I spoke about protecting life as our duty, and then I explained why early reporting helps us do that."* Survivors' testimonies were particularly influential. In Small Bo, a recovered man spoke about his fear of isolation and eventual recovery. A woman later reflected: *"When he said he went there and came back alive, it removed something from our hearts."* Health workers noted that post-testimony questions became more practical than fearful. A community health worker observed: *"When the chief or pastor has already spoken, my work becomes easier. People say, 'we have heard it already.'"* Preventive behaviours became socially reinforced rather than contested. Early reporting, dialogue participation and surveillance cooperation were no longer seen as compliance with external authority but as actions endorsed by the community itself. Through culturally legitimate messengers, biomedical authority was reframed as locally grounded guidance, strengthening trust, credibility and collective ownership.

As CEI expanded, visible involvement of religious and traditional authorities marked departure from earlier responses relying on external health workers.

Imams, pastors, chiefs and ward committee members participated directly in CEI dialogues, shaping prevention discussions through local moral and social norms. In Small Bo, an imam used Friday sermons to link prevention to religious obligations: *"If I tell them this sickness can harm your household and your neighbour, they listen more than when it is only hospital talk."* Traditional leaders reinforced messages during village meetings. In Bayama, a section chief incorporated Lassa fever into routine gatherings: *"When I speak, I remind them this is our village problem. If one person hides sickness, it affects all of us."* Community members described the difference. A woman explained: *"When the imam and chief talk about it, it is not fear again. It is about protecting each other."* Health workers observed higher attendance following sermons and chief-led meetings. Reporting suspected cases became publicly encouraged rather than privately negotiated. An elder noted: *"When the chief reports a case in his own family, others know they can too. It is no longer shameful. It is responsible."* Through embedding biomedical guidance within existing moral and leadership structures, local leaders transformed Lassa fever prevention from individual compliance into shared community responsibility, sustaining engagement and integrating CEI principles into everyday social life.

Vignette #2

In Nongowa, Small Bo and Lower Bambara chiefdoms, CEI dialogue sessions deliberately broke with earlier approaches that prioritised instruction over exchange. Facilitators invited community members to explain what "fever" meant to them, how they understood Mastomys rats, and why people delayed presenting at health facilities. Storytelling and careful comparison of local and biomedical explanations surfaced existing knowledge without immediate correction.

In Panguma, an elderly man described fever as "a sickness that comes when you get malaria or when your blood becomes hot," while women spoke of rats as unavoidable household companions. Facilitators probed further, gradually linking these accounts to Lassa transmission pathways. This marked a visible departure from past encounters. As one elder reflected: *"Before, they came and told us what to do. This time they asked us what we know. That made us speak freely."* Another noted: *"This is the first time the doctors came to listen, not to tell us we are*

*wrong."*A surveillance officer described the shift: *"When we stopped arguing and started listening, people relaxed. They did not see us as forcing them anymore."* Feeling recognised as contributors, community members extended engagement beyond sessions. Ward committees organised household discussions, while youth volunteers monitored rodent activity. As one chair explained: *"Because they involved us from the beginning, we felt it was our work too, not only hospital work."* Health workers reported reduced resistance during surveillance and earlier illness disclosure. A nurse summarised: *"People still fear isolation, but now they talk about it instead of hiding. That is a big change."*

As CEI dialogue matured, community fears about isolation—rumours that patients "do not come back"—recurred consistently. The research technical team brought these concerns to internal reflection meetings, playing recordings from community dialogues to nurses and surveillance staff. A nurse reflected: *"We realised that people were not refusing because they did not know about Lassa. They were refusing because they were afraid of being left alone."* This recognition prompted practical adjustments. Referral conversations were re-sequenced so explanations preceded transfer requests, with staff clarifying what would happen during isolation, who could visit, and how families would receive updates. A ward committee member observed the difference: *"Now, when they come, they explain where the person will go, who will talk to the family, and when we will hear back. Before, they just said 'let us go.'"* As responsiveness became apparent, community leaders increasingly reinforced messages within their networks. A community health worker noted: *"Now they don't wait until the sickness is bad. They will say, 'this is the kind of fever we talked about,' and they report early."* A community leader summarised: *"When we saw that what we said changed how they behave, we knew this response also belongs to us."*

Vignette #3

Historically, Lassa fever communication was didactic: health talks were delivered during outbreaks, messages were brief and directive, with little space for questions. A young man recalled: *"They talked, we listened. If you asked too much, they said time is finished."* The introduction of village forums and radio call-in programmes changed this dynamic. In one broadcast, a woman asked why *"people are taken away and families don't hear anything again."* The clinician explained isolation

procedures and invited her to describe what information families felt was missing. A radio producer described this as *"the first time people heard doctors answering fear, not just teaching disease."* Health workers gained new insights. A surveillance officer noted: *"On the radio, you hear the same fear from different villages. That is when you realise it is not one stubborn person; it is a shared worry."* Communities began testing their understanding. During a Bayama forum, residents debated whether vomiting alone warranted reporting, referencing a previous radio discussion. A woman concluded: *"So now we know which signs we should not wait with. That one we must report."* A community health worker observed: *"Before, if someone said 'the hospital will kill you,' nobody argued. Now another person will say, 'no, they explained that on the radio.'"*

As participatory platforms became established, communities observed whether concerns raised were visibly acted upon. In Nongowa, families had complained about hearing nothing after referral; within weeks, facilitators addressed this explicitly during forums. A community member remarked: *"Last time we complained that nobody tells us anything. This time you came back with answers."* A religious leader who regularly listened to radio programmes explained: *"When they correct themselves on the radio, you know they are serious. They are not pretending."* Health workers described how responding openly altered community behaviour. A nurse recalled: *"Before, they would say, 'you people never listen.' This time they said, 'we talked about this in the meeting and you changed it.' That changed the whole mood."* Attendance at dialogue sessions stabilised rather than declining. A ward committee member explained: *"If we talk and nothing changes, people stop coming. But now we see changes, so we keep coming."* This sustained engagement translated into behavioural shifts: more voluntary presentations at peripheral facilities following radio discussions, and fewer confrontations during surveillance visits in previously resistant communities. Responsiveness generated trust, trust sustained participation, and participation supported earlier care-seeking and improved cooperation.

Vignette #4

Before CEI, Lassa fever response operated through fragmented vertical structures. A DHMT surveillance officer described this isolation: *"The data shows us cases and deaths, but it doesn't explain why people hide, why families resist, or why rumours spread*

faster than our messages." Recognizing this gap, CEI established embedded facilitation teams at chiefdom level. A PARES facilitator explained their positioning: "*We did not come to command. We came to understand, to listen, and to connect what we heard with those who could act."* These teams documented concerns using standardized templates, feeding into monthly DHMT reflection meetings. A surveillance officer noted the shift: "*Reports started coming with context—not just 'someone is sick,' but why the family was afraid and what support they needed. That made our response faster and calmer."*

Feedback loops created predictable rhythms of response. When community resistance to referral was documented, joint reflection sessions led to operational adjustment, pre-referral family engagement mediated by CHWs. A clinician reflected: "*Instead of blaming people, we started asking what we could change on our side. That was new for us*." Communities noticed this responsiveness. A CHW observed: "*Now when we talk, something comes back. That is why people listen to us more.*" Village alert teams spontaneously formed, with youth leaders explaining: "*Nobody paid us to do this. We agreed that if sickness comes and we keep quiet, it will affect all of us." Chiefs began calling DHMT directly*. A supervisor noted: "*Before, everything had to pass through projects. Now chiefs call us directly…we take them seriously because we know the system they are using."* Through structured coordination platforms and embedded feedback mechanisms, operational coherence was achieved across district, chiefdom, and community levels, transforming fragmented response into integrated system action.

As CEI matured, visible institutional integration marked departure from earlier parallel project approaches. DHMT review meetings incorporated CEI as standing agenda items, with community representatives participating directly in coordination platforms. In reflection sessions, contested issues such as role boundaries between chiefs and CHWs were negotiated openly. A CHW described this clarification: "*At first, we were confused about who reports to who. But once we agreed that facilitators help us talk with people, not replace us, the work became easier.*" Health professionals initially concerned that community voice might delay response gradually accepted operational synergy. A clinician acknowledged: "*We realised we were answering questions people were not asking. The science was correct, but it did not touch their experience*." Through embedding community engagement within existing coordination structures; DHMT meetings, surveillance workflows, and governance forums, operational platforms transformed Lassa fever response from vertically

isolated intervention to horizontally integrated system practice, sustaining coordination and responsiveness beyond external facilitation.

Vignette #5

In months following CEI-informed changes at Kenema Government Hospital and surrounding chiefdoms, community narratives about the Lassa ward shifted. Historically, referral was spoken of in fearful terms—*"going and not coming back"*—with families reporting little information once patients crossed the hospital gate. During dialogues in Nongowa and Small Bo, participants recalled earlier experiences where relatives were taken away with no explanation. A woman explained: *"When they take you there, the family just waits. You don't hear anything, so you think the worst."* As CEI-supported adaptations were implemented, these experiences changed. Health workers reported deliberate efforts to explain referral processes more clearly, allow brief structured family interactions before isolation, and provide updates through designated contacts. In Panguma, a man whose brother was admitted described how a nurse called the family: *"They told us what they were doing and how he was responding. That phone call reduced our fear."* Visible recovery played powerful role. Survivors returning to communities were living evidence that early care could lead to survival. In Lower Bambara, a recently discharged survivor attended a community meeting. A youth leader recalled: *"When we saw him walking and talking with us, people said, 'So you can go there and come back well.'"* Health workers observed changes in engagement. A nurse reflected: *"Before, families would argue or delay when we mentioned referral. Now they ask questions, but they agree faster because they have seen people survive."* Communities framed improved outcomes as linked to their own participation in dialogue, reporting and cooperation. A ward committee chair explained: *"Because we talked, because we asked and they changed some things, now we are seeing the results. That is why we continue to work with them."* Visible improvements in care and communication functioned as concrete proof that engagement was meaningful, reducing fear and fatalism, reframing the health system as responsive and trustworthy, and sustaining earlier reporting, referral acceptance and proactive community involvement.

As CEI progressed and recovery became more visible, survivors were deliberately invited to participate in community outreach across Nongowa, Lower Bambara and Small Bo. Rather than positioned as symbolic figures, survivors spoke in their own words during village meetings, mosque gatherings and radio discussions, describing how they recognised illness, what happened during admission, and how they returned home. In a Kenema radio phone-in, one survivor described his isolation experience: *"When they told me I would be separated, I was afraid. But inside the ward they explained everything, and they treated me well. I came out alive and strong."* Listeners later referenced this broadcast during dialogues, noting that hearing a survivor speak publicly challenged the idea that admission meant certain death. At a Lower Bambara Mosque gathering, a male survivor stood beside the imam explaining how early reporting contributed to his recovery. According to facilitator field notes, the atmosphere shifted from silence to open questioning, with several men asking how quickly one should go to health facility after noticing fever. A community elder later reflected: *"Before, we hid these sicknesses. When someone who passed through it stands before us, the fear reduces."* Survivor visibility altered household-level decision-making. In Nongowa, a woman explained that when her niece developed persistent fever, the family debated referral but ultimately agreed after recalling a survivor's story: *"We remembered how he said he delayed and nearly died. That made us decide quickly."* Health workers corroborated this shift, reporting fewer refusals when referral was discussed and more families asking practical questions rather than expressing outright fear. Survivors themselves described feeling accepted rather than marginalised. One survivor who regularly attended community meetings noted: *"At first people avoided me. Now they call me to explain to others. I feel useful again."* This reintegration reinforced that survival did not carry lasting social penalty. Survivor testimony transformed abstract recovery messages into lived local examples, reducing stigma, reframing hospital admission as route to survival, and supporting earlier and more voluntary engagement with testing, referral and care pathways.

Vignette #6

During early CEI months, clinical and surveillance teams at Kenema Government Hospital and the district health management team began structured reflection sessions reviewing community dialogue summaries, radio excerpts and

anonymised testimonies. For many, this was first systematic exposure to community voices. One session focused on repeated references to "fear of isolation" and rumours that patients were not seen again. A senior nurse reflected: *"We always said people were hiding sickness because they don't understand. But when I listened, I realised they were afraid because of how things were done before."* Surveillance officers acknowledged that labelled "non-cooperation" was often uncertainty and lack of explanation. A district health management team officer admitted: *"We focused on speed, not on what the family was hearing."* This recognition marked shift from viewing community reactions as obstacles to seeing them as feedback on institutional behaviour. These conversations translated into concrete changes. Nurses collaborated with facilitators to revise isolation explanations, emphasising what families could expect, how communication would be maintained and what support was available. Surveillance teams adjusted household visit approaches, allowing more time for questions. A surveillance officer described the change: *"Now we don't just deliver the message and go. We explain, we listen, and we come back."* Staff described gradual reorientation in professional reasoning, becoming more attentive to tone, timing and relational cues—signalling institutional move away from rigid, top-down messaging towards more context-sensitive and relational engagement.

As CEI progressed, community feedback moved beyond engagement session margins into formal response structures. Dialogue notes, radio summaries and ward committee concerns were routinely compiled and presented at district health management team meetings and Kenema Government Hospital briefings. What had been dismissed as anecdotal complaint became information with operational value. During one meeting, facilitators presented repeated concerns about delayed follow-up after suspected case reporting. Surveillance officers acknowledged that while reports were logged, community feedback was inconsistent. A district official reflected: *"We thought the job finished once the form was filled. Hearing this made us realise that silence creates more fear."* This marked shift in feedback interpretation—from criticism to signal for system adjustment. The district health management team agreed concrete changes: surveillance teams instructed to return to reporting households within defined timeframes to explain outcomes, even with negative test results. Kenema Government Hospital

staff incorporated brief feedback briefings into outreach schedules. A surveillance supervisor noted: *"When we started going back to explain, people were surprised. They said no one had ever come back before."* Communities noticed; in Lower Bambara, ward committee members referenced previous feedback visits when encouraging household reporting: *"Now when we tell people to report, we can say, 'they will come back and explain.' That makes people less afraid."* Reporting was no longer seen as information disappearing into the system, but as exchange generating response and recognition. These informal feedback loops contributed to more adaptive response culture, with health workers adjusting communication based on recurring concerns, and district officials describing greater confidence in community cooperation—improving capacity to manage endemic transmission dynamics rather than episodic crises.