



SITUATION: LASSA FEVER OUTBREAK	LOCATION: LIBERIA
DATE OF REPORT: SEPTEMBER 27, 2024	OUTBREAK START DATE: JAN 6, 2022
REPORTING PERIOD: SEPT 21-27, 2024	SITREP NO: 120

HIGHLIGHTS

- **Three (3) new confirmed cases reported: Nimba (1) and Grand Bassa (2 including 1 death)**
- Total of 44 contacts including 16 health care workers (HCWs) undergoing 21 days follow up
- A total of 173 confirmed cases including 51 deaths reported
- **Cumulative Case Fatality Rate (CFR): 29% (51/173)**
- Three counties are currently in outbreak

SITUATIONAL CONTEXT

Lassa fever (LF) is an acute viral hemorrhagic illness that is endemic in West Africa, including Benin, Ghana, Guinea, Liberia, Mali, Sierra Leone, and Nigeria. The incubation period ranges from 2-21 days and transmitted to humans via contact with food or household items contaminated with infected rodent urine or feces. The signs and symptoms are usually gradual, but start with fever, general weakness, malaise, and later headache, sore throat, muscle pain, chest pain, nausea, vomiting, diarrhea, cough, and abdominal pain or facial swelling, and bleeding.

LF is an immediately reportable disease and major public health concern in Liberia. To date, eight (8) out of the fifteen (15) counties (Bong, Grand Bassa, Nimba, Margibi, Lofa, Montserrado, Grand Kru, and River Gee) have reported confirmed cases. Bong, Grand Bassa, and Nimba counties are endemic, while Margibi, Lofa, Montserrado, Grand Kru, and River Gee have reported sporadic cases. In 2021, the country recorded 12 outbreaks including 25 laboratory-confirmed cases with 15 deaths accounting for 60% case fatality rate (CFR). These outbreaks generated 325 contacts including 196 were healthcare workers (HCWs). From January 6, 2022 to present, Liberia has recorded 23 outbreaks. This ongoing outbreak, which started January 6, 2022 in Bong County, has recorded 173 laboratory-confirmed cases including 51 deaths (CRF 29%). A total of 1,507 contacts have been recorded including 585 healthcare workers.

Table 1: Summary of Lassa fever Outbreak, Liberia, January 6, 2022 – September 27, 2024

County	Outbreak Districts	Outbreak Start Date	Total suspected	Total confirmed	HCWs confirmed	Total Deaths	Deaths in HCWs	CFR %	Total Contacts	# HCW contacts	Contacts_ became cases	Contacts under follow up	Contacts completed	Days in countdown	Outbreak Status
Montserrado	Bushrod	13-Feb-23	17	1	0	0	0	0%	29	21	0	0	29	Completed	Ended
	Central Monro	27-Nov-23	1	2	0	1	0	50%	49	0	0	0	49	Completed	Ended
	Central Monro	3-Mar-23	38	2	0	1	0	50%	28	27	0	0	28	Completed	Ended
	Bushrod	30-Apr-24	2	1	0	0	0	0%	14	6	0	0	14	Completed	Ended
Bong	Suakoko	21-Apr-23	192	54	18	13	2	24%	496	114	6	0	417	Completed	Ended
	Jorquelleh	15-Oct-23	14	6	3	1	1	17%	121	86	3	0	169	Completed	Ended
	Kokoyah	6-Jun-24	3	1	0	0	0	0%	8	0	0	0	8	Completed	Ended
	Suakoko	29-Jul-24	11	5	1	0	0	0%	37	14	0	0	37	18	Countdown
	Suakoko	23-Feb-24	31	3	0	0	0	0%	29	14	0	0	29	Completed	Ended
	Salala	8-Mar-24	2	2	0	1	0	50%	21	0	0	0	21	Completed	Ended
	Jorquelleh	11-Apr-24	3	2	0	1	0	0%	41	30	0	0	41	Completed	Ended
Grand Bassa	District 3A&B	21-Aug-23	87	44	0	10	0	23%	177	40	40	0	159	Completed	Ended
	Buchanan	11-Aug-23	2	1	0	1	0	100%	4	2	0	0	4	Completed	Ended
	District 3A&B	30-Apr-24	7	3	0	1	0	33%	12	3	0	0	12	Completed	Countdown
	District 3A&B	3-Sep-24	4	4	0	1	0	25%	15	7	0	15	4	Active	Ongoing
Nimba	Saclepea-Mah	21-Nov-23	4	2	0	1	0	50%	5	0	0	0	5	Completed	Ended
	Sannique-lie-Mah	6-Feb-23	43	15	0	6	0	40%	43	35	8	0	43	Completed	Ended
	Tappita	29-Jul-24	5	2	0	1	0	50%	27	24	0	0	27	24	Countdown
	Tappita	20-Nov-23	12	5	0	3	0	60%	88	39	4	0	77	Completed	Ended
	Bain-Garr	1-Jun-23	25	6	0	3	0	50%	61	25	0	0	31	Completed	Ended
	Bain-Garr	15-Apr-24	5	2	0	1	0	50%	25	7	0	0	25	Completed	Ended
Bain-Garr	18-Jul-24	19	9	0	4	0	44%	163	91	1	29	134	Active	Ongoing	
River Gee	Putupo	25-Nov-22	2	1	0	1	0	100%	14	0	0	0	14	Completed	Ended
Total			529	173	22	51	3	29%	1507	585	62	44	1377		

Event Description:

Grand Bassa County: District 3 A&B

Two new confirmed cases reported from District 3 A&B

- **Case 1: MK**, a 40-year-old female resident of Wruah Town, District #4, had onset of illness on September 9, 2024 and sought medical care at the Liberia Agriculture Company Hospital on September 16, 2024, presenting with high fever ($>37.9^{\circ}\text{C}$), bleeding from the mouth, vomiting, and running stomach. Based on the history, she was suspected of Lassa fever and isolated on the same day (September 16, 2024). Specimen was collected on September 17, 2024, sent to the National Public Health Reference Laboratory (NPHRL), and ribavirin treatment initiated on the same day. The patient expired after the specimen was collected (September 17, 2024) while undergoing treatment in isolation. Safe and dignified burial was conducted on September 18, 2024. RT-PCR positive Lassa virus infection result was sent to the county on September 20, 2024. Five (5) contacts were identified (all family members). Investigation established that the case was not epidemiologically linked to any confirmed case.
 - **Case 2: SY**, is a 10-year-old male, resident of Food Crops Camp, District #3 A&B. He had onset of illness on September 11, 2024 and was taken to the Liberia Agriculture Company Hospital on September 19, 2024 by his parents. He presented with high fever ($>38.5^{\circ}\text{C}$), red eyes, sore mouth, coughing, weakness, and generalized body pain. Based on the history, he was suspected of Lassa fever and isolated immediately (September 19, 2024), whole blood specimen collected, sent to the NPHRL and ribavirin treatment initiated on the same day. The NPHRL released RT-PCR positive Lassa virus infection result to the county on September 23, 2024. Three (3) contacts were identified (all family members). The case was not linked to any confirmed case. The case is currently undergoing ribavirin treatment in isolation at the Liberia Agriculture Company's Hospital.
- ☞ Cumulative confirmed cases for the current outbreak: 4
 - ☞ CFR (1/4): 25%
 - ☞ Total of 15 contacts including 7 HCWs were line listed
 - Four (4) contacts including 3 HCWs have completed 21 days follow up
 - Eleven (11) contacts including 4 HCWs are undergoing 21 days follow up
 - ☞ One confirmed case is currently in isolation undergoing ribavirin treatment

Bong County: Jorquelleh, Suakoko and Kokoyah Districts

No new confirmed case reported

- ☞ Cumulative confirmed cases for the current outbreak: 13
 - Suakoko District: 8
 - Salala District: 2
 - Jorquelleh District: 2
 - Kokoyah: 1
- ☞ CFR (3/13): 23%
- ☞ The confirmed cases in isolation were treated with ribavirin and discharged
- ☞ Safe and dignified burials conducted for deceased cases
- ☞ Total of 137 contacts including 53 HCWs line listed
 - All contacts have completed 21 days follow up
- ☞ The county has gone 18 days in countdown since the last contact completed follow up (Sept 9, 2024)

Nimba County: Bain-Garr & Tappita Districts

One new confirmed case reported Bain-Garr District

- **The case patient, JF**, is a 42-year-old female, resident of the Glenylue Community, Bain Garr District, Nimba County. She presented at the E & J Medical Health Center on September 16, 2024 with headache, cough, abdominal pain, generalized body pains, weakness and fever $>38.5^{\circ}\text{C}$, with symptom onset on September 14, 2024. On arrival, the clinician diagnosed malaria and typhoid fever which

were treated with anti-malaria and antibiotic drugs for two days but fever could not break. The patient was suspected of Lassa fever on September 18, 2024, immediately isolated, specimen collected and sent to the NPHRL on the same day. Ribavirin drug was initiated while in isolation and waiting lab result. About 15 contacts were line listed including eight (8) healthcare workers. On September 20, 2024, the NPHRL tested RT-PCR positive of Lassa fever and immediately provided feedback to the County. Upon receipt of the Lab result, the county immediately informed the district and the health facility as well as the family of the patient status. Active case search has been intensified in the affected community while the contacts are being monitored.

- ☞ Cumulative confirmed cases for the current outbreak: 11
 - Tappita District: 2
 - Bain Garr District: 9
- ☞ CFR (5/11): 45%
- ☞ Total of 191 contacts including 110 HCWs line listed
 - Total of 29 contacts including 12 HCWs undergoing 21 days' follow up
- ☞ The confirmed cases were treated and discharged
- ☞ Safe and dignified burials were conducted for the deceased cases
- ☞ One confirmed case is currently in isolation undergoing ribavirin treatment

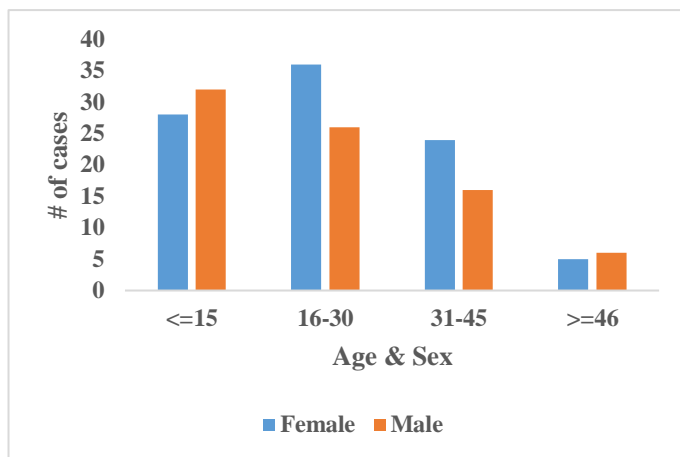


Figure 1: Confirmed Lassa fever cases by age & sex, Liberia, Jan. 6, 2022-Sept 27, 2024

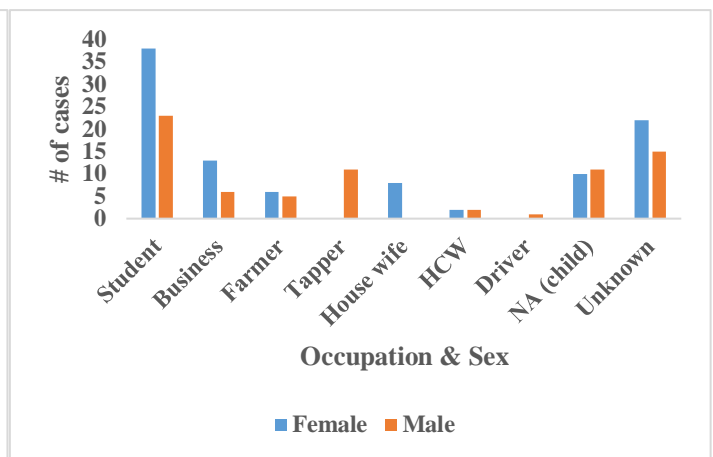


Figure 2: Confirmed Lassa fever cases by age & sex, Liberia, Jan. 6, 2022-Sept 27, 2024

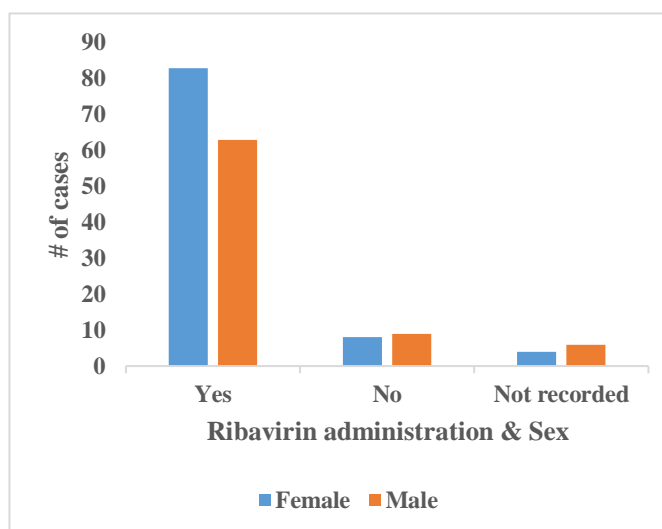


Figure 3: Confirmed Lassa fever cases by ribavirin treatment & sex, Liberia, Jan. 6, 2022-Sept 27, 2024

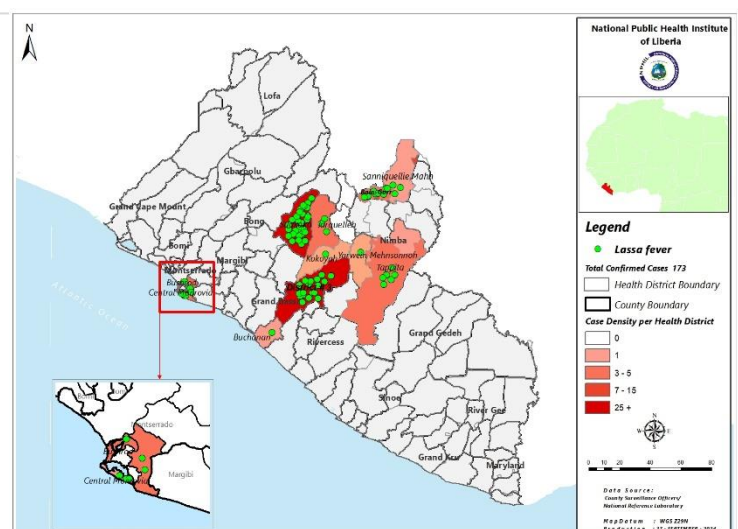


Figure 4: Distribution of confirmed Lassa fever cases by health district, Liberia, Jan. 6, 2022-Sept 27, 2024

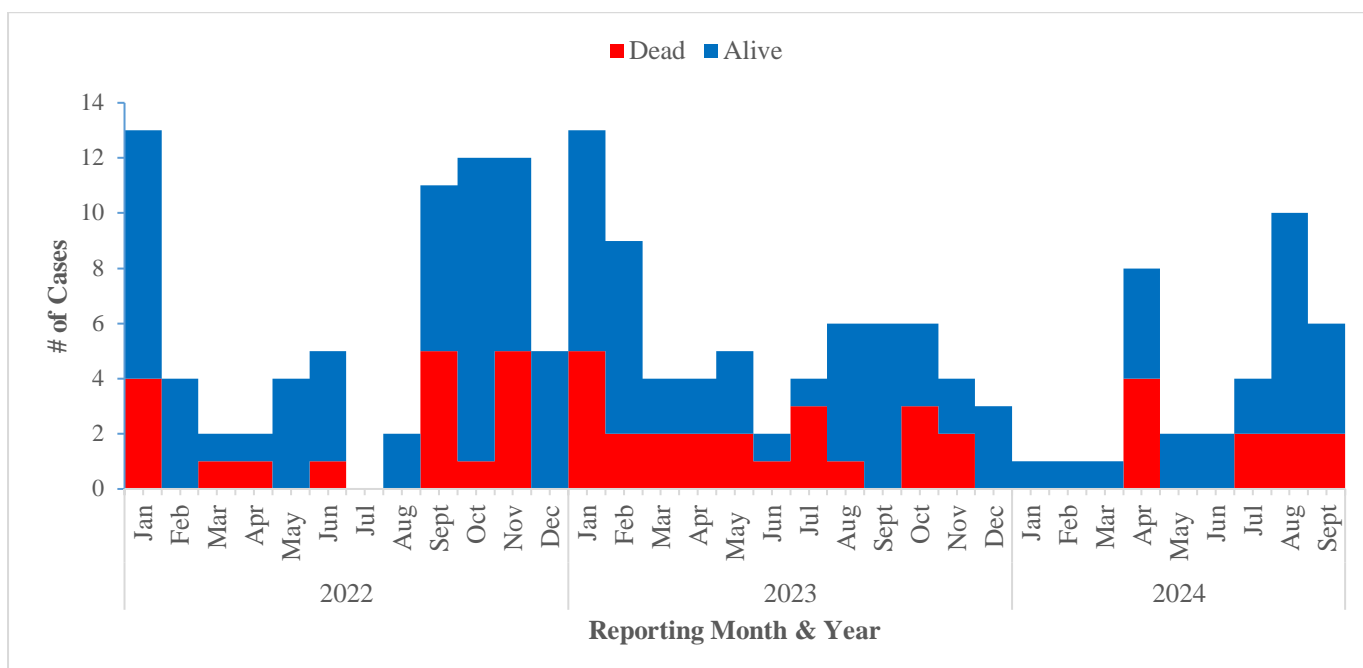


Figure 5: Epi-curve of confirmed Lassa fever cases and deaths by reporting month & year, Lib, Jan 6, 2022–Sept 27, 2024

Table 2: Summary of Lassa fever cases and samples, Liberia, Jan 6, 2022–Sept 27, 2024

Variables	2022 & 2023	2024	Total
	Epi wk 1-52	Epi wk 1-38	
Total suspected cases reported to the national level	439	195	634
Total samples collected	437	195	632
Total samples tested	416	187	603
Total samples not collected OR samples collected but not sent to NRL	20	6	26
Total samples pending testing	0	0	0
Total samples collected & rejected by the Laboratory	3	0	3
Total Laboratory confirmed	138	35	173
Total confirmed cases alive	97	25	122
Total deaths among confirmed cases	41	10	51
Overall case fatality rate (CFR)	30%	29%	29%
Total confirmed cases currently in isolation	0	2	2
Total suspected cases in isolation	0	0	0

PUBLIC HEALTH INTERVENTIONS

Since the inception of the 2022 outbreak, several measures including response initiatives have been instituted including surveillance and laboratory testing, vector surveillance and control, case management, etc. These interventions aim to protect at-risk populations; prevent international spread; containing outbreaks rapidly. Below are details of the measures taken in the ongoing outbreak:

I. Coordination

- The response has been led by the County Health Teams with technical support from the National Public Health Institute of Liberia (NPHIL), the Ministry of Health (MOH) and partners
 - The Incident Management Systems (IMSs) have been activated in the affected counties
 - The PHEOCs in the response counties are in response mode coordinating the response

II. Surveillance

- Active case search ongoing in affected communities
- Total of forty-four (44) contacts including 16 HCWs line listed undergoing 21 days' follow-up
- Weekly sit-reps developed and disseminated to stakeholders

III. Case management and IPC

- Ribavirin distributed to affected counties
- Cases treated with ribavirin and discharged
- Two (2) confirmed cases are currently in isolation undergoing treatment (Bassa & Nimba)

IV. Laboratory

- The National Public Health Reference Laboratory continues testing of Lassa fever samples
- A total of 173 Lassa fever cases have been confirmed since this outbreak

V. Risk Communication and Community Engagement

- Risk communication and community engagement ongoing in affected and surrounding communities

VI. Dead Body Management

- A total of 51 confirmed deaths recorded and were buried under safe and dignified conditions

Key Challenges

- Limited ribavirin supply in country
- Limited supply of IPC materials in affected counties
- Lack of logistics (gasoline, communication cards, fuel, etc) to support active case search and contact tracing in affected counties
- Limited stationeries in the EOCs to produce contact tracing form and other tools for investigation
- Limited computers for District and County Surveillance Officers (Bong & Nimba)

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