



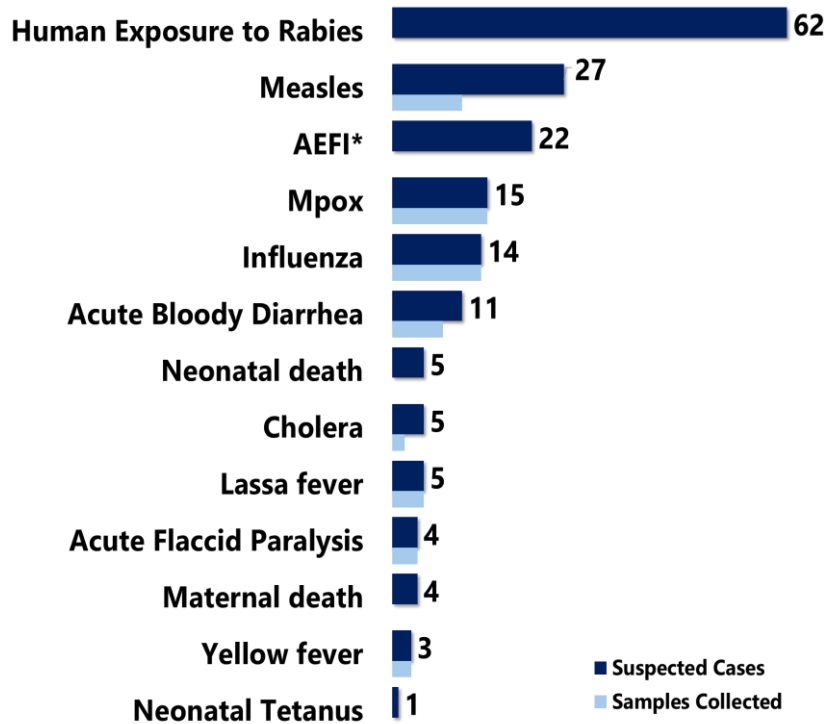
Liberia IDSR Epidemiology Bulletin

2024 Epi-week 41 (October 7 – 13, 2024)

Country Population: 5,406,374 || Volume 20 Issue 41 || October 7 – 13, 2024 || Data Source: CSOs from 15 Counties and Laboratory

Highlights

Figure 1. Public Health Events Reported



*Adverse Event Following Immunization

Keynotes and Events of Public Health Significance

- ◆ A total of 178 events of public health importance, including 11 deaths reported
- ◆ Completeness and Timeliness of health facility reports were 100% and 99%, respectively
- ◆ Ongoing Lassa fever outbreak in three counties
- ◆ Ongoing Measles outbreak in two counties
- ◆ Ongoing circulating vaccine derived Polio virus type 2 outbreak
- ◆ Ongoing Mpox outbreak in five counties

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 41, 2024

County	Expected Reports from Health Facility	Reports Received	Received on Time	Completeness (%)	Timeliness (%)
Bomi	29	29	29	100	100
Bong	64	64	64	100	100
Gbarpolu	18	18	18	100	100
Grand Bassa	38	38	38	100	100
Grand Cape Mount	36	36	36	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	25	25	25	100	100
Lofa	61	61	61	100	100
Margibi	64	64	64	100	100
Maryland	28	28	28	100	100
Montserrado	371	371	368	100	99
Nimba	102	102	102	100	100
Rivercess	21	21	21	100	100
River Gee	21	21	21	100	100
Sinoe	41	41	41	100	100
Liberia	943	943	940	100	99

943(100%)
Health facilities reported IDSR data

98(100%)
Health districts reported IDSR data

940(99%)
Health facilities reported timely IDSR data

Legend: ≥80 <80

- ◆ The national target for weekly IDSR reporting is 80%. All counties reported on time except for Bong and Maryland Counties reported late. Health facility timeliness is monitored at the health district level.

Vaccine-Preventable Diseases

Measles

Twenty-seven (27) suspected cases were reported from Nimba (16), River Gee (4), Grand Kru (2), Margibi (2), Montserrado (1), Sinoe (1), and Maryland (1) Counties

- Eleven (11) specimens were collected and pending testing at National Reference Laboratory
- Seventy percent (19/27) of the suspected cases were vaccinated for measles (see Table 2)

Cumulatively, 1,543 suspected cases have been reported since Epi-week 1 (see Table 3)

- Of the total reported 1,186 confirmed cases,
 - 50% were reported to have previously been vaccinated,
 - 38% were unvaccinated
 - 12% had unknown vaccination status

- Fifty-one percent (608/1186) of the confirmed cases are below 5 years
- Proportion of suspected cases with sample collected 46% (711/1543)
- Proportion of suspected cases with sample tested 77% (552/711) [negative – 353, positive – 195, indeterminate-4]
- Proportion of negative Measles cases tested for Rubella 90% (320/354) [negative – 292, positive – 28]

Liberia’s annualized non-measles febrile rash illness rate now stands at **8.3 per 100,000**. Montserrado and Margibi Counties are below the target (see Table 3)

Table 2. Distribution and Vaccination Status of Measles Cases, Liberia, Epi-week 41, 2024

County	Reported cases		Number of Doses Received		
	cases	Vaccinated	One Dose	Two Doses	Doses Not Indicated
Grand Kru	2	1	1	0	0
Margibi	2	1	1	0	0
Maryland	1	0	0	0	0
Montserrado	1	1	1	0	0
Nimba	16	14	12	2	0
River Gee	4	1	0	0	1
Sinoe	1	1	1	0	0
Total	27	19	16	2	1

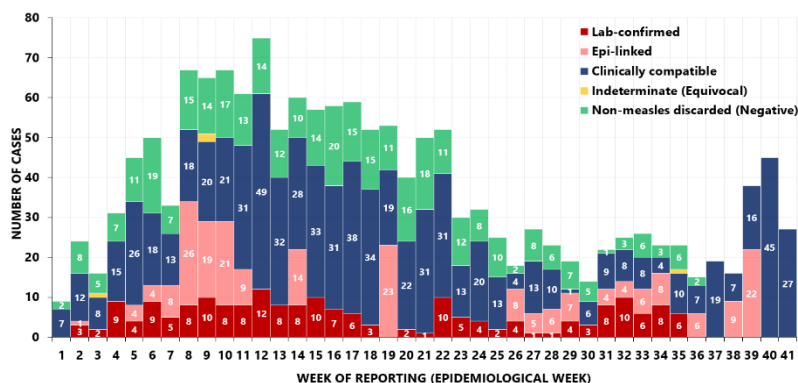


Figure 2. Distribution of Measles Cases by Reporting Week and Epi-classification, Liberia, Epi-week 1 – 41, 2024

Table 3. Classification of measles, reporting rate, and annualized non-measles rash illness rate per 100,000 population by County, Liberia, Epi-week 1 – 41, 2024

Reporting County	Epi-classification					Cumulative	Annualized Non Measles Febrile Rash Illness Rate
	Lab confirmed	Epi-linked	Clinically compatible	Indeterminate (Equivocal)	Discarded (Negative)		
Bomi	4	0	8	0	9	21	8.3
Bong	2	0	25	0	9	36	2.4
Gbarpolu	7	0	18	1	26	52	34.0
Grand Bassa	3	0	42	0	16	61	6.8
Grand Cape Mount	7	0	8	0	28	43	19.4
Grand Gedeh	37	28	70	0	39	174	21.9
Grand Kru	31	35	48	0	44	158	48.8
Lofa	5	0	21	0	15	41	5.1
Margibi	0	0	5	0	4	9	1.6
Maryland	21	13	168	0	8	210	5.8
Montserrado	4	0	34	0	21	59	1.3
Nimba	36	124	251	1	27	439	5.4
River Gee	23	13	50	1	39	126	39.0
Rivercess	1	0	4	0	6	11	8.0
Sinoe	14	1	25	1	62	103	50.9
Liberia	195	214	777	4	353	1543	8.3
Target Achieved	≥2		Below Target		<2		

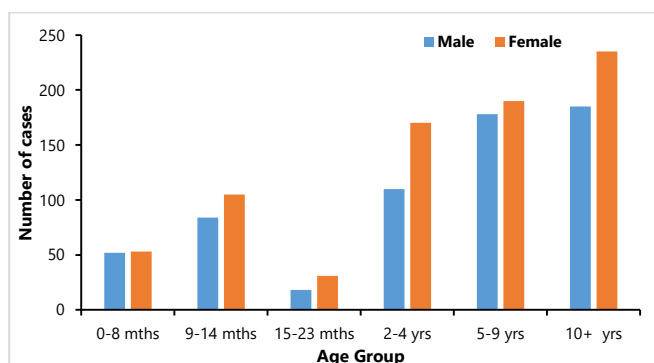


Figure 3. Suspected Measles Cases by Age-group and Sex, Liberia, Epi-week 1 – 41, 2024

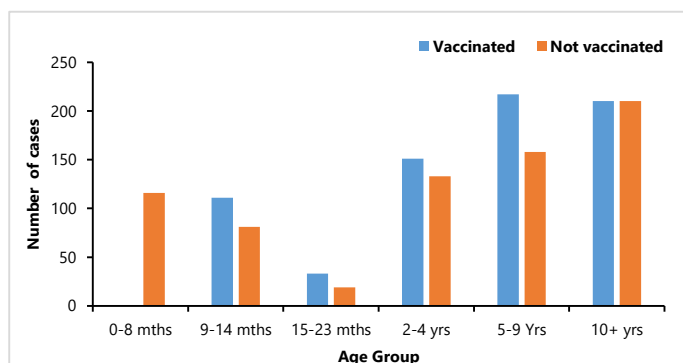


Figure 4. Vaccination status of Suspected Measles Cases by Age Group, Liberia, Epi-week 1 – 41, 2024

Table 4. Measles Outbreak by County and Case Status, Liberia, December 13, 2021 – October 16, 2024

County	Total Cases	Active	Recovery	Deaths	No. of Districts
Montserrado	5,373	0	5,304	69	0/7
Nimba	1393	6	1381	4	5/11
Grand Bassa	950	28	917	7	1/8
Margibi	803	0	802	1	0/4
Bong	578	0	575	3	0/9
Maryland	1,320	0	1320	0	0/6
Lofa	292	0	292	0	0/6
Grand Kru	1,100	0	1,098	2	0/5
Grand Cape Mount	187	0	184	3	0/5
Bomi	148	0	143	5	0/4
Rivercess	84	0	83	1	0/6
Gbarpolu	64	0	64	0	0/5
Grand Gedeh	604	0	604	0	0/6
River Gee	134	0	134	0	0/6
Sinoe	247	0	247	0	0/10
Total	13,277	34	13,148	95	6/98

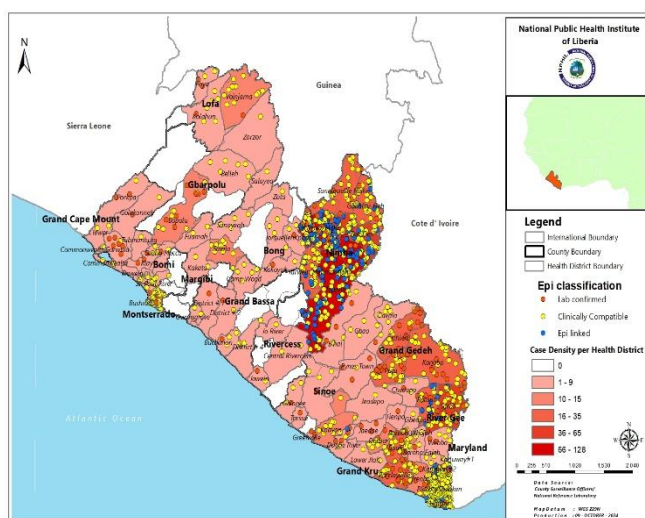


Figure 5. Measles outbreak by County and Case Status, Liberia. December 13, 2021 – October 16, 2024

PUBLIC HEALTH RESPONSE

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.
- IMS meetings are being held for coordination and mobilization of resources in Nimba and Grand Bassa Counties

II. Epidemiological Surveillance

- Active case search ongoing in the outbreak communities in Grand Bassa and Nimba Counties

III. Case management

- Case management ongoing in Nimba and Grand Bassa Counties

IV. Immunization

- Routine immunization ongoing across the country

V. Laboratory

- The National Public Health Reference Laboratory (NPHRL) continues testing of Measles samples

VI. Risk Communication & Community Engagement

- Awareness and health education on the spread and prevention of Measles in health facilities and communities ongoing in Nimba and Grand Bassa Counties.

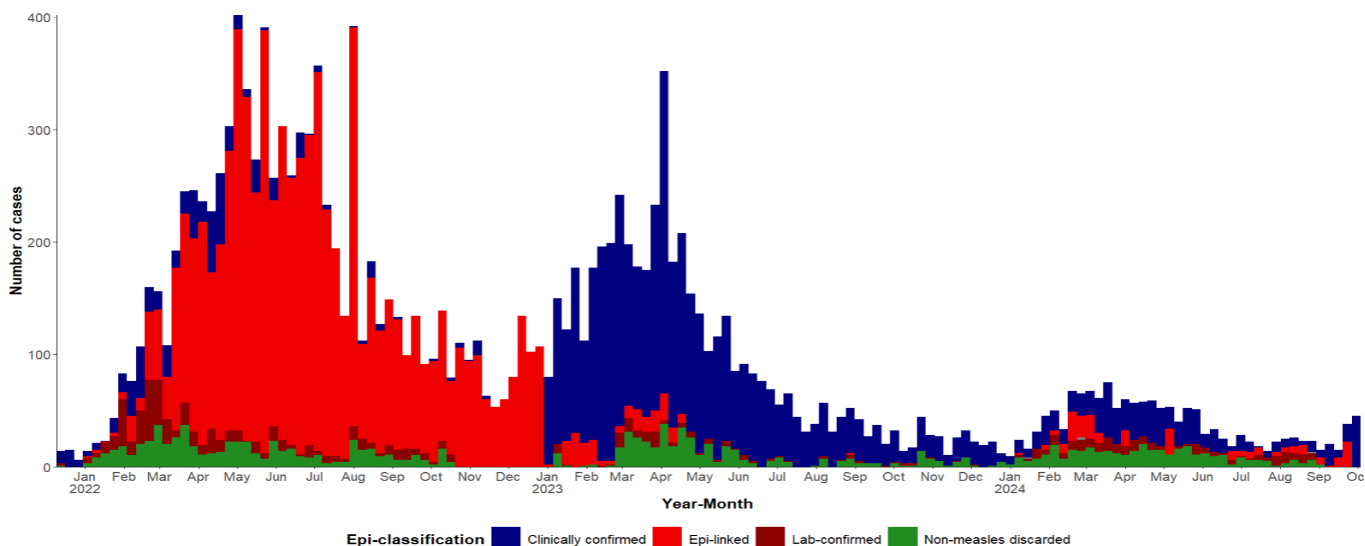


Figure 6: Epi-curve of Measles Cases by monthly classification, Liberia, December 13, 2021 - October 16, 2024

Acute Flaccid Paralysis (AFP)

- ☞ Four (4) cases were reported from Montserrado (2), Bomi (1), and Nimba (1) Counties
 - Specimens were collected and shipped for testing
- ☞ Cumulatively, eighty-eight (88) cases have been reported since Epi-week 1. One (1) cVDPV¹, 60 negative, 12 NPENT, and 15 AFP specimens pending testing at the laboratory
- ☞ As of week 41, the annualized non-polio AFP rate is at **4.6 per 100,000** population under 15 years of age.

Table 5. Non-Polio AFP Rate 3/100,000 <15 years by County, Liberia, Epi-week 1 – 41, 2024

County	< 15 years pop	# of AFP Cases Reported	# of Cases with Lab Result	Non-Polio AFP Rate	# of cases <14 days specimen collected	% of stool <14days	# of NPENTs	% of NPENT
Bomi	62196	3	2	6.1	3	100%	0	0%
Bong	215425	1	1	0.6	1	100%	0	0%
Gbarpolu	43630	4	2	11.6	4	100%	0	0%
Grand Bassa	134743	3	3	2.8	3	100%	0	0%
Grand Cape Mount	82471	8	7	12.3	8	100%	1	13%
Grand Gedeh	101412	6	5	7.5	6	100%	1	17%
Grand Kru	51467	3	2	7.4	3	100%	1	33%
Lofa	168626	9	8	6.8	9	100%	1	11%
Margibi	140931	1	1	0.9	1	100%	0	0%
Maryland	78808	3	3	4.8	3	100%	0	0%
Montserrado	898124	19	14	2.7	19	100%	3	16%
Nimba	285705	20	19	8.9	20	100%	4	20%
Rivercess	42729	2	1	5.9	2	100%	0	0%
River Gee	57047	1	1	2.2	1	100%	0	0%
Sinoe	69556	5	5	9.1	5	100%	1	20%
Liberia	2432868	88	74	4.6	88	100%	12	14%
Non-Polio AFP Rate	<3	Stool adequacy		<80%	Non-Polio Enterovirus	<10%	Silent	
	≥3			≥80%		≥10%		

Outbreak Section (February 23 – October 4, 2024)²

⇒ The outbreak of circulating type 2 poliovirus variant (cVDPV2) is currently ongoing

- **February 23, 2024:** 1st laboratory notification of cVDPV2 confirmation from an environmental surveillance (ES) site of Fiamah Treatment Plant (FTP)
- As of **October 4, 2024**, there are:
 - **17 cVDPV2s** isolations from **ES sites** in **Monrovia** with latest collected 07-MAY-24; nine (9) from Redemption Street Bridge (RSB), latest **ENV-LIB-MON-MON-RSB-24-012**; eight (8) from **FTP**, latest **ENV-LIB-MON-MON-FTP-24-011**.
 - **12 cVDPV2s** from healthy community children/contacts in **Monrovia**, latest reported **LIB-MON-MON-24-CC068** on **20-MAR-24**.
 - **1 cVDPV2** from an AFP case: **LIB-SIN-KPA-24-059**, a 1y7mo old boy from Kpanyan Town, **Sinoe County**; Date of Onset 8-JUN-24; cVDPV2 report on 07- AUG-2024; closest match ENV-LIB-MON-MON-FTP-24-005.

PUBLIC HEALTH RESPONSE

I. Coordination

- The GPEI coordination mechanism is operational with partner representations from WHO, UNICEF, CDC/US, BMGF, GAVI, Rotary Group, USAID, as well as Africa CDC, AFENET, MSF, and more
- Weekly sit-reps developed and disseminated to stakeholders

II. Epidemiological Surveillance

- Active case search ongoing in affected community
- Detailed investigation and risk analysis
- Routine Immunization intensification activities ongoing (Monthly outreaches, Quarterly Periodic Intensification of Routine Immunization (PIRI), Use of SIAs to improve RI)
- nOPV2 SIAs rounds 1, 2, and 3 implemented May 10-13, June 7-10, and September 27-30, 2024, each targeting 857,768 under-five children

III. Laboratory

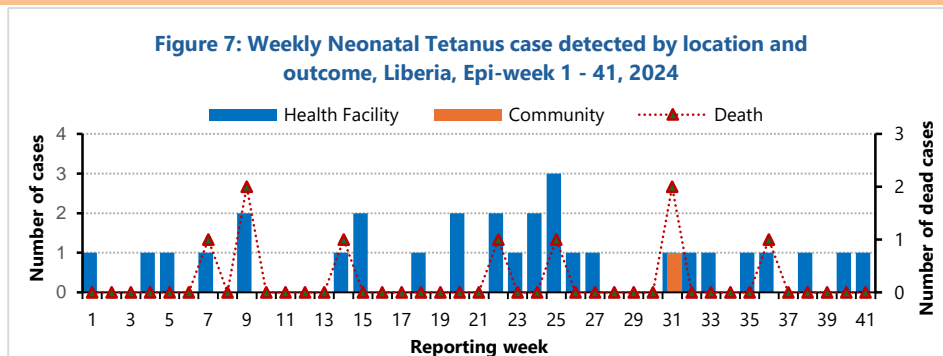
- ES sample is collected twice a month and tested by the Institute Pasteur Lab in Cote D'Ivoire

¹ circulating Vaccine-Derived Poliovirus type 2

² Liberia Polio Outbreak Response Situation Report as of October 4, 2024

Neonatal Tetanus

- One (1) clinically confirmed case was reported from Bong County
- Cumulatively, thirty (30) cases have been reported, including 10 deaths since Epi-week 1. Case Fatality Rate is 33%, and community detection is at 4%.



Influenza-Like Illnesses

Coronavirus Disease (COVID-19)

- Zero suspected cases were reported
- Cumulatively, three (3) cases have been reported since Epi-week 1, with two positive and one negative

Influenza

- Fourteen suspected cases were reported from Montserrado County
- Specimens were collected; 12 tested negative and 2 positive for SCV2
- Cumulatively, one hundred eighteen (118) suspected cases have been reported since Epi-week 1.
 - One hundred eighteen (118) specimens were collected: 110 tested negative, 4 specimens were discarded, and 4 positive

Viral Haemorrhagic Fever

Lassa fever

- Five (5) suspected cases were reported from Nimba (2), Bong (2), and Montserrado (1) Counties
 - Specimens were collected and tested negative
- Cumulatively, two hundred six (206) suspected cases have been reported since Epi-week 1.
 - Proportion of suspected cases with sample collected (206/206) 100%. Nine of the collected samples were discarded
 - Proportion of suspected cases with sample tested (197/206) 96%
 - Thirty-seven (37) positive, including 10 deaths, and 160 negative
 - Case fatality rate: (10/37) 27%
 - Nimba County accounts for 38% of the total confirmed cases.

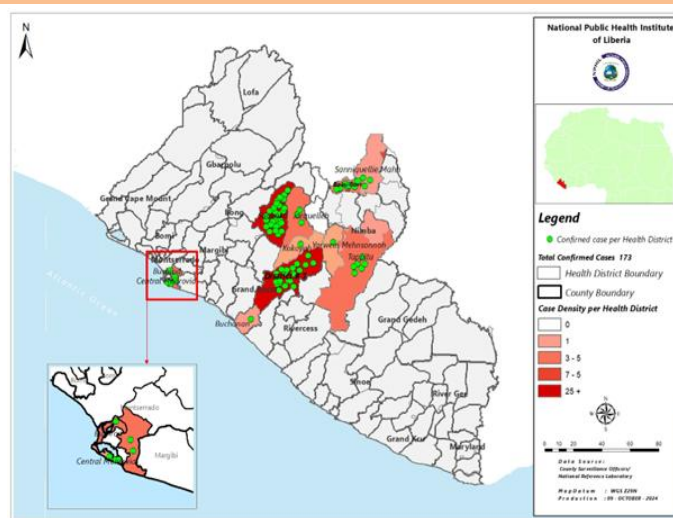
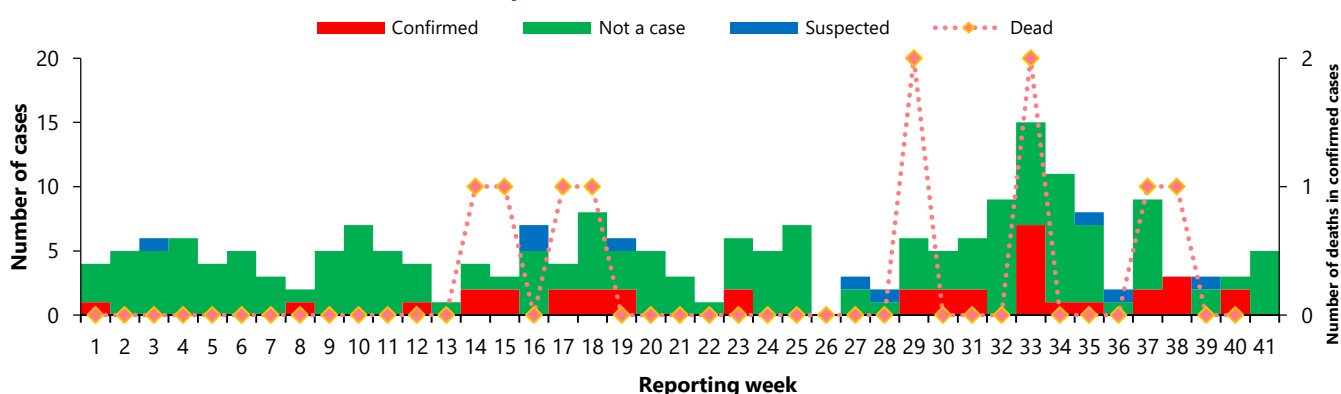


Figure 8. Geospatial distribution of confirmed Lassa fever by Health District, Liberia, Epi-week 1 – 41, 2024

Figure 9: Weekly distribution of Lassa fever cases by Epi-classification, Liberia, Epi-week 1 – 41, 2024



Outbreak Section (January 6, 2022 – October 16, 2024)

- ☞ No new confirmed cases reported
- ☞ Cumulative Case Fatality Rate (CFR): 29% (50/175)
- ☞ Three counties currently in outbreak

PUBLIC HEALTH RESPONSE

I. Coordination

- The National Public Health Institute of Liberia (NPHIL) and the Ministry of Health (MoH) are providing technical support to the affected counties with support from partners

II. Epidemiological Surveillance

- Active case search ongoing in affected communities
- Total of 23 contacts, including 9 HCWs undergoing 21 days follow-up

- Weekly sit-reps developed and disseminated to stakeholders

III. Case management

- Ribavirin distributed to affected counties
- Cases treated with ribavirin and discharged

IV. Dead Body Management

- Safe and dignified burial conducted for the deceased cases

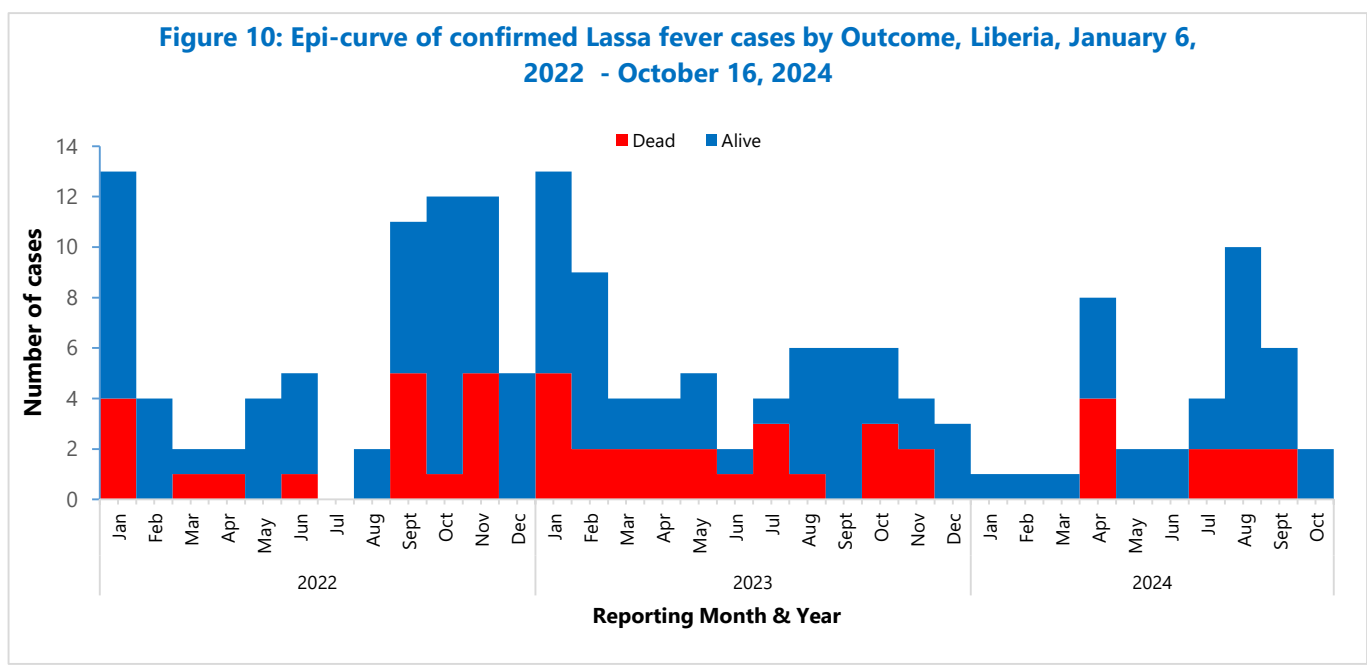
V. Laboratory

- The National Public Health Reference Laboratory continues testing of Lassa fever samples
- A total of 175 Lassa fever cases have been confirmed since this outbreak

Table 6. Summary of Lassa fever Outbreak, Liberia, January 6, 2022 – October 16, 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 Monrovia	27-Nov-23	1	2	0	1	0	50%	49	0	0	0	49	Completed	Ended
	Central Monrovia	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	37	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
Grand Bassa	Jorquelleh	11-Apr-24	3	2	0	1	0	0%	41	30	0	0	41	Completed	Ended
	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
Nimba	District 3A&B	3-Sep-24	6	6	0	1	0	17%	27	10	0	23	4	Active	Ongoing
	Saclepea-Mah	21-Nov-23	4	2	0	1	0	50%	5	0	0	0	5	Completed	Ended
	Sanniquellie-Mah	6-Feb-23	43	15	0	9	0	60%	43	35	8	0	43	Completed	Ended
	Tappita	29-Jul-24	5	2	0	1	0	50%	27	24	0	0	27	Completed	Ended
	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
River Gee	Bain-Garr	18-Jul-24	19	9	0	4	0	44%	163	91	1	0	163	6	Countdown
	Putupo	25-Nov-22	2	1	0	1	0	100%	14	0	0	0	14	Completed	Ended
Total			531	175	22	54	3	31%	1519	588	62	23	1406		

Legend: Outbreaks in countdown stage in reporting districts Active/ ongoing outbreaks not in countdown stage with active response interventions in reporting districts



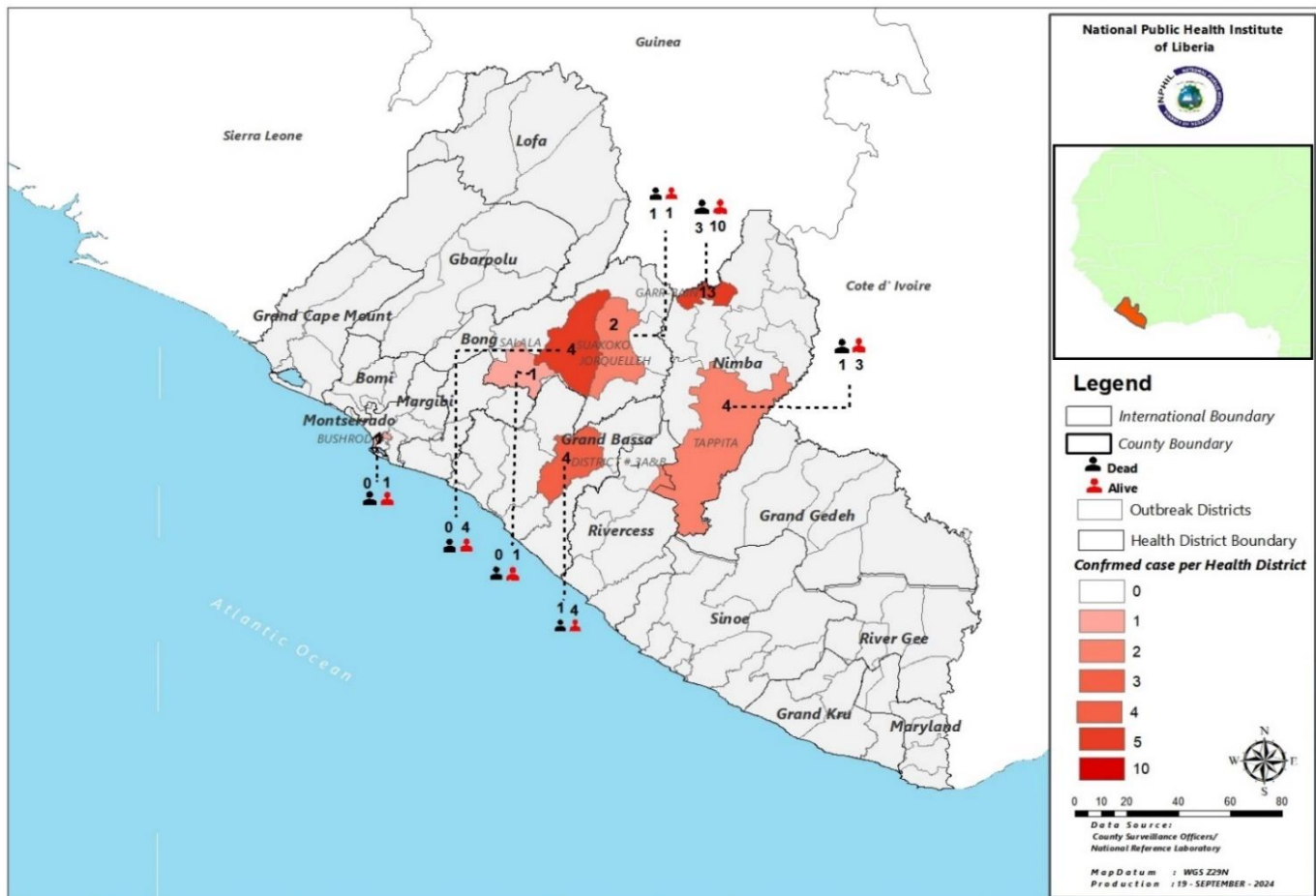


Figure 11. Geospatial distribution of outbreak district with number of confirmed Lassa fever cases, Liberia, Epi-week 1 – 41, 2024

Yellow Fever

- ☞ Three (3) suspected case was reported from Grand Bassa (2) and Maryland Counties
 - Specimens were collected and pending testing
- ☞ Cumulatively, eighty-seven (87) cases have been reported since Epi-week 1.
 - Proportion of suspected cases with samples collected (84/87) 97%; however, 1 was rejected
 - Proportion of suspected cases with samples tested (79/84) 94% [presumptive positive – 3, negative – 75, indeterminate – 1]

Dengue

- ☞ Zero suspected cases were reported
- ☞ Cumulatively, five (5) suspected cases were reported

Diarrheal Diseases

Acute Bloody Diarrhoea (Shigellosis)

- ☞ Eleven (11) cases were reported from Sinoe (3), Grand Gedeh (3), Nimba (1), Grand Kru (1), Montserrado (1), Gbarpolu (1), and River Gee (1) Counties
 - Eight (8) specimens were collected and pending testing
- ☞ Cumulatively, 317 cases have been reported since Epi-week 1.
 - 191 specimens were collected, with 145 received at the Lab. Of the 145 specimens, 117 tested negative, 13 confirmed (*S. flexneri*-4 & *S. sonnei*-9), 7 rejected, and 8 pending testing

Severe Acute Watery Diarrhoea (Cholera)

- ☞ Five (5) suspected cases were reported from Margibi (2), Maryland (2), and River Gee (1) Counties
- ☞ Two (2) specimens were collected: 1 pending testing and 1 pending arrival to the lab
- ☞ Cumulatively, 204 cases have been reported since Epi-week 1.
 - 131 specimens collected, 98 received at the Lab
 - 72 tested negative, 12 rejected, and 14 pending testing.

Other Reportable Diseases

Animal bite (Human Exposure to Rabies)

- ☞ Sixty-two (62) dog bite cases were reported from Montserrado (19), Maryland (8), Margibi (7), Bong (6), Nimba (5), Rivercess (3), River Gee (3), Grand Kru (3), Gbarpolu (3), Sinoe (2), Grand Bassa (2), and Lofa (1) Counties
- ☞ Proportion of cases investigated: 28/62 (45%)
- ☞ PEP was administered to three (16) persons (26%) in Montserrado (12) Rivercess (3) and Bong (1) Counties
- ☞ Cumulatively, 2,361 cases have been reported, including 2 deaths (*suspected human rabies*) since Epi-week 1.

Figure 12. Geospatial distribution of Human Exposure to Animal Bites Cases by County, Liberia, Epi-week 1 – 41, 2024

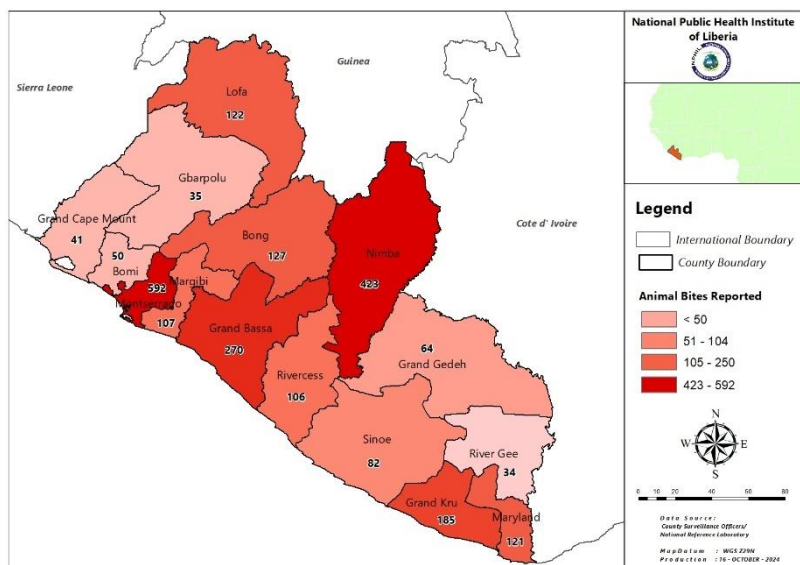


Figure 14: Human Exposure to Animal Bites by County & PEP Administration, Liberia Epi-week 41, 2024

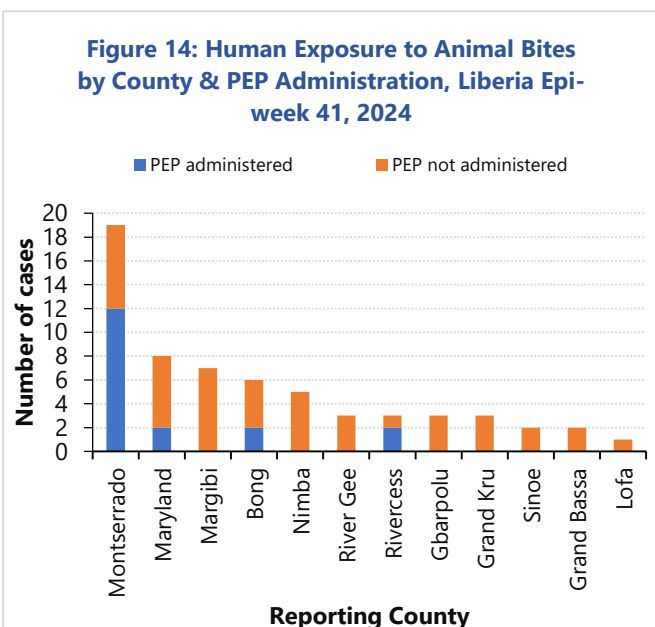
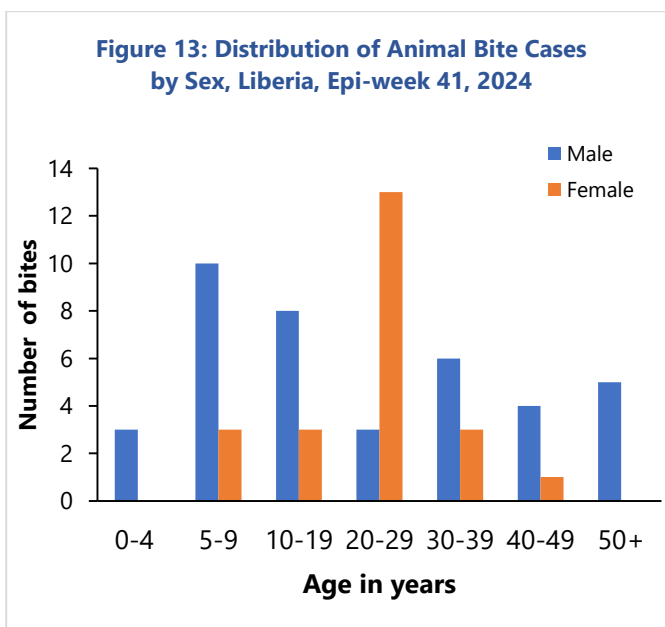


Figure 13: Distribution of Animal Bite Cases by Sex, Liberia, Epi-week 41, 2024



Meningitis

- ☞ Zero cases were reported
- ☞ Cumulatively, twenty-one (21) suspected cases have been reported
 - Proportion of specimen collected (18/21) 86%, 3 specimens not collected
 - Proportion of specimens tested (17/18) 94% (15 negative, 2 positive)

Mpox

- ☞ Fifteen (15) suspected cases were reported from Montserrado (3), Maryland (3), Grand Kru (2), Grand Bassa (2), Bong (2), Grand Cape Mount (1), Sinoe (1), and River Gee (1) Counties
 - Specimens were collected, 5 tested negative, 4 positive and 5 pending testing
- ☞ Cumulatively, 229 suspected cases have been reported, 221 samples collected with 1 rejected
 - One hundred ninety-six (196) tested: 18 positive, 178 negative and 2 indeterminate

- ☞ Four (4) new confirmed cases reported from Bong (2), Montserrado (1), and Grand Bassa (1) Counties
- ☞ Total of 18 contacts under follow-up (12-Bong, 2-Maryland, 4-Grand Bassa)

Table 7. Confirmed Cases Reported by Counties and Health Districts, Liberia, January – October 16, 2024

Reporting County	Reporting District	Active Cases	Recovered	Cumulative
Bong	Kokoyah	0	1	1
	Sanoyea	2	0	2
Grand Bassa	District #4	1	0	1
Grand Kru	Trehn	0	1	1
Lofa	Zorzor	1	1	2
Maryland	Harper	1	0	1
	Bushrod	0	1	1
Montserrado	Commonwealth	1	0	1
	Saclepea Mah	0	1	1
Nimba	Tappita	0	1	1
	Twah River	0	1	1
	Zoe Geh	0	1	1
	Webbo	0	1	1
River Gee	Jaedae	0	1	1
Sinoe	Jedepo	0	2	2
Total	15	6	12	18

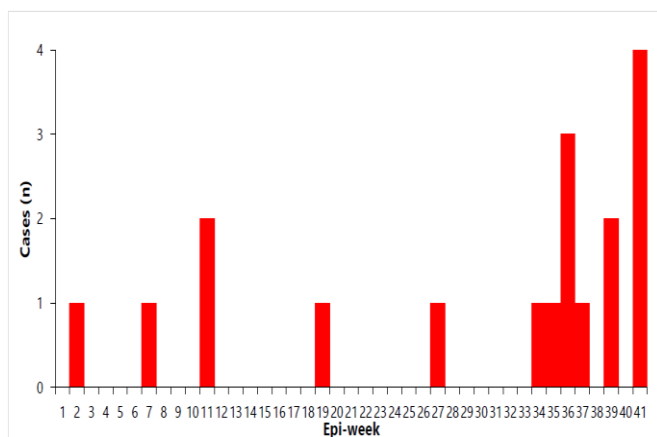


Figure 15. Weekly epi-curve of Mpox lab-confirmed cases detected in Liberia, Epi-week 1 - 41, 2024

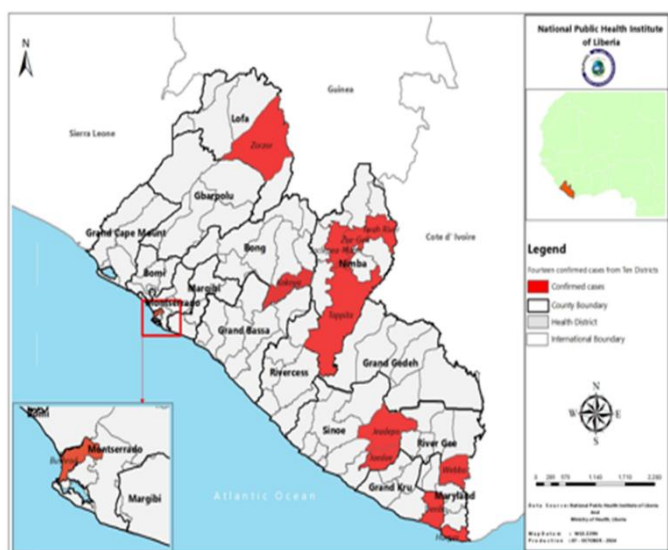


Figure 16. Distribution of Lab-confirmed Mpox cases by Health District, Liberia, January 1 – October 16, 2024

PUBLIC HEALTH RESPONSE

I. Coordination

- Mpox Incident Action Plan (IAP) reviewed and updated using the continental template from WHO and Africa CDC
- Resources (financial & logistical) are being mobilized to support the counties
- Production of regular Sitreps and dissemination

II. Epidemiological Surveillance

- Mpox training completed in the 15 Counties for healthcare workers, including animal surveillance officers; 849 health care workers trained
- Active media scanning and community case finding continue through EIOS platform
- Continue to follow up with response counties to obtain updates on the status of the Mpox outbreak
- Total of 18 contacts under follow-up (12-Bong, 2-Maryland, 4-Grand Bassa)

III. Case management

- Six (6) cases currently in isolation (Bong-2, Montserrado-1, Grand Bassa-1, Maryland-1, Lofa-1)

IV. Laboratory

- Sequencing results showed Clade IIa
- Specimen collection kits prepositioned in 7 Counties: Bong, Lofa, Sinoe, Bomi, Montserrado, Margibi, Grand Bassa
- The National Public Health Reference Laboratory continues the testing of Mpox samples
- Africa CDC supports the procurement of Mpox reagents

V. Risk Communication & Community Engagement

- Ongoing community engagement and awareness creation via a radio station in partnership between the RCCE team and affected County Health teams

VI. Infection Prevention and Control (IPC)

- Updated the Home-based care guidelines for Mpox and shared with MoH for review

NEXT STEPS

- Continue active case search in the affected communities

Other Events of Public Health Importance

Maternal Mortality

- Four (4) deaths were reported from Nimba (2), Montserrado (1), Grand Cape Mount (1) Counties
- Primary causes of death: PPH, Sepsis, Rena Failure, and Eclampsia
- All of the deaths occurred in public health facility
- Cumulatively, two hundred forty-seven (247) deaths have been reported since Epi-week 1, of which (226) 92% were reported from health facilities and (21) 8% from communities.
 - Proportion of deaths reviewed (124/247) 50%.

Table 8. Cumulative Maternal Mortality reporting rate and Annualized Maternal Mortality per 100,000 live births by County, Liberia, Week 1 – 41, 2024

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Montserrado	85821	1	127	51.4	188
Grand Bassa	12875	0	18	7.3	177
Nimba	27301	2	33	13.4	153
Margibi	13467	0	16	6.5	151
Grand Cape Mount	7881	1	9	3.6	145
Maryland	7531	0	7	2.8	118
Bomi	5943	0	5	2.0	107
Grand Gedeh	9690	0	6	2.4	79
Grand Kru	4918	0	3	1.2	77
Lofa	16113	0	9	3.6	71
Rivercess	4083	0	2	0.8	62
Bong	20585	0	9	3.6	55
River Gee	5451	0	2	0.8	47
Sinoe	6646	0	1	0.4	19
Gbarpolu	4169	0	0	0.0	0
Liberia	232474	4	247	100.0	135

- Annualized maternal mortality ratio is at **135 per 100,000 live births** (Table 8). The expected MMR based on 2019-20 Demographic Health Survey (DHS) is 742 deaths per 100,000 live births.

Neonatal Mortality

- Five (5) deaths were reported from Montserrado (2), Grand Kru (1), Margibi (1), and Bong (1) Counties
- Primary causes of death were birth asphyxia (4) and tetanus (1)
- All of the deaths occurred in health facility
- Cumulatively, six hundred fifty-six (656) deaths have been reported since Epi-week 1.
 - Proportion of deaths reviewed (305/656) 47%
- Annualized neonatal mortality rate is at **4.4 per 1,000 live births** (Table 9).

Table 9. Cumulative Neonatal Mortality reporting rate and Annualized Neonatal Mortality per 1,000 live births by County, Liberia, Week 1 – 41, 2024

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1,000
Maryland	7347	0	81	12.3	14.0
Grand Kru	3130	1	25	3.8	10.1
Montserrado	62479	2	396	60.4	8.0
Sinoe	5534	0	17	2.6	3.9
Gbarpolu	4507	0	13	2.0	3.7
Rivercess	3865	0	11	1.7	3.6
Grand Gedeh	6770	0	13	2.0	2.4
River Gee	3610	0	6	0.9	2.1
Margibi	11345	1	16	2.4	1.8
Lofa	14911	0	20	3.0	1.7
Bong	18775	1	24	3.7	1.6
Nimba	24970	0	27	4.1	1.4
Bomi	4546	0	2	0.3	0.6
Grand Bassa	11981	0	4	0.6	0.4
Grand Cape Mount	6868	0	1	0.2	0.2
Liberia	190636	5	656	100.0	4.4

Adverse Events Following Immunization (AEFI)/Adverse Drug Reaction (ADR)

- Twenty-two (22) events were reported from Lofa (6), Grand Gedeh (3), Grand Kru (3), River Gee (2), Maryland (2), Margibi (1), Grand Cape Mount (1), Bomi (1), Gbarpolu (1), Montserrado (1), and Bong (1) Counties
- All reported cases were investigated and classified as non-serious. Related vaccines included: Penta (11), Malaria (3), nOPV (2), Pneumo (2), Measles (2), TCV (1), Yellow fever (1),
- Cumulatively, eight hundred ninety-two (892) events were reported since Epi-week 1.

Neglected Tropical Diseases

Buruli Ulcer

- Zero cases were reported
- Cumulatively, two confirmed cases have been reported since Epi-week 1.

Border Surveillance Update

A total of 5,108 travellers' were screened from eight (8) designated out of Forty-five (45) official Points of Entry, with incoming travellers accounting for 52% (2652/5108) ([Table 10](#)).

Table 10. Cross-border activity at the POE for incoming and outgoing travelers, Liberia, Epi-week 41, 2024

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Total travelers with YB	Yellow Book Damage	Card Replaced	Travelers Vaccinated against YF & Issued book	Alerts detected/ Verified
Airport	James S. Paynes	54	30	24	0	0	0	0	0
	Robert Int'l Airport	3757	1964	1793	3679	2	78	0	0
Seaport	Freeport of Monrovia	98	49	49	0	0	0	0	0
	Buchanan Port	96	48	48	96	0	0	0	0
Ground Crossing	Bo Water Side	555	298	257	538	0	17	0	0
	Ganta	57	35	22	11	2	2	0	0
	Yekepa	188	113	40	37	0	0	0	0
	Loguatuo	303	115	188	271	0	0	0	0
Total		5,108	2652	2421	4632	4	97	0	0

Note: Yellow book (YB) issue for both arrival and departure; Vaccination coverage for both arrival and departure

Public Health Measures

National level

- ☞ The Senior Management Team of NPHIL met with the WHO Team for a laboratory assessment leadership scoping mission
- ☞ The Senior Management Team of NPHIL met with the Principal Investigator of the Death to Onchocerciasis and Lymphatic Filariasis (DOLF) Project
- ☞ The US Ambassador to Liberia visited the NPHIL on an important visit
- ☞ Ongoing IMS meeting for coordination and resource mobilization
- ☞ Sensitization activities for Mpox and Marburg continue across the various points of entry
- ☞ Ongoing awareness and community engagement at Points of Entry on Mpox
- ☞ Produced and disseminated situation reports (Lassa fever, Measles, etc...)
- ☞ Produced and disseminated weekly bulletin
- ☞ Ongoing reclassification of suspected cases (Lassa fever, Yellow fever, AFP, and Measles) based on laboratory result

County-level

☞ Surveillance

- Production of situational reports
- Active case search ongoing in affected and surrounding communities
- Multiple awareness on Mpox surveillance ongoing the 15 counties
- Maternal and new-born death review ongoing in counties

☞ Case Management

- Administration of PEP
- Isolation, management, treatment, and active case search for Lassa fever and Measles cases ongoing in affected counties

Appendix

Summary of Immediately Reportable Diseases, Conditions, and Events by County

Counties		Bomi	Bong	Gbarpolu	Grand Bassa	Grand Cape Mount	Grand Gedeh	Grand Kru	Lofa	Margibi	Maryland	Montserrado	Nimba	Rivercess	River Gee	Sinoe	Total Weekly	Cumulative Reported	Cumulative Lab-confirmed		
No. of Expected Health District		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98				
No. of Health District Reported		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98				
Vaccine Preventable Diseases	Acute Flaccid Paralysis (Suspected Polio)	A	1	0	0	0	0	0	0	0	0	2	1	0	0	0	4	88	1		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Measles	A	0	0	0	0	0	0	2	0	2	1	1	16	0	4	1	27	1543	195	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Neonatal Tetanus	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
		D	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0	
Yellow fever	A	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	3	86	3		
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
Viral Hemorrhagic Fever	Dengue fever	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Ebola Virus Disease	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Lassa fever	A	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	4	177	27	
		D	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	29	10	
Influenza-Like Illnesses	COVID-19	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Influenza	A	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	14	118	1	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrheal Diseases	Acute Bloody Diarrhoea (Shigellosis)	A	0	0	1	0	0	3	1	0	0	0	1	1	0	1	3	11	317	13	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Severe Acute Watery Diarrhoea (Cholera)	A	0	0	0	0	0	0	0	0	2	2	0	0	0	1	0	5	204	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Events of Public Health Importance	Maternal Mortality	D	0	0	0	0	1	0	0	0	1	2	0	0	0	0	4	247			
	Neonatal Mortality	D	0	1	0	0	0	1	0	1	0	2	0	0	0	0	5	656			
	Adverse Events Following Immunization (AEFI)	A	1	1	1	0	1	3	3	6	1	2	1	0	0	2	0	22	892	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Unexplained Cluster of Health Events/Disease	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Reportable Diseases	Mpox	A	0	2	0	2	1	0	2	0	0	3	3	0	0	1	1	15	229	18	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Tuberculosis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Human Exposure to Rabies (Suspected Human Rabies)	A	0	6	3	2	0	0	3	1	7	8	19	5	3	3	2	62	2359	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
	Meningitis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	2	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Unexplained Cluster of deaths	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Neglected Tropical Diseases	Buruli Ulcer	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123	2	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Yaws	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL		2	13	5	6	3	6	12	7	14	19	44	25	3	12	7	178	7130	273		

D = Dead A = Alive

- ☞ **Completeness** refers to the proportion of expected weekly IDSR reports received (target: ≥80%)
- ☞ **Timeliness** refers to the proportion of expected weekly IDSR reports received by the next level on time (target: ≥80%). The time requirement for weekly IDSR reports:
 - Health facility - required on or before 5:00 pm every Saturday to the district level
 - Health district - required on or before 5:00 pm every Sunday to the county level
 - County - required on or before 5:00 pm every Monday to the national level
- ☞ **Non-polio AFP rate** is the proportion of non-polio AFP cases per 100,000 among the estimated population under 15 years of age in 2024 (annual target: ≥2/100,000)
- ☞ **Non-measles febrile rash illness rate** refers to the proportion of Negative measles cases per 100,000 population
- ☞ **Annualized maternal mortality rate** refers to the maternal mortality rate of a given period of less than one year, and it is the number of maternal deaths per 100,000 live births
- ☞ **Annualized neonatal mortality rate** refers to the neonatal mortality ratio of a given period of less than one year, and it is the number of neonatal deaths per 1,000 live births
- ☞ **Epi-linked** refers to any suspected case that has not had a specimen taken for serologic confirmation but is linked to a laboratory-confirmed case
- ☞ **Confirmed case** refers to a case whose specimen has been tested positive or reactive upon laboratory testing, or has been classified as confirmed by either epidemiologic linkage with a confirmed case or clinical compatibility with the disease or condition

Epidemiological bulletin published with support from WHO and CDC

For comments or questions, please contact

Alberta B. Corvah
Acting Director

Infectious Disease and Epidemiology Division
 National Public Health Institute of Liberia
 Republic of Liberia

Email: charleneout2011@hotmail.com

Phone: +231.77.030.3702

Website: www.nphil.gov.lr

**National Public Health
 Institute of Liberia
 (NPHIL)**

MISSION

To prevent and control public health threats by promoting healthy outcomes and serving as a source of knowledge

VISION

A centre of excellence to create health outcomes for Liberians through a strong preventive health system and expertise

EDITORIAL TEAM

DIDE / NPHIL

- A. N. Mianah
- J. S. Kokro
- M.G. Jeuronlon
- E. Dwalu
- A.B. Corvah
- S. K. Zayzay
- T. L. Hall
- S. L. Flomo
- M. S. Quiah
- J. O. Abel
- P. J. Thomas
- H. M. Sherman
- M.D. Vaye
- N. K. Dovillie
- A. Coker
- S. Nuwolo
- M. Gbeyeah
- E. Junius
- H. Howard-Bridges

**Ministry of Health
 WHO Liberia Office
 US CDC Liberia Office
 Africa CDC-Liberia Office**

Data sources

Data and information is provided by the fifteen County Surveillance Officers and National Public Health Reference Laboratory via regular weekly reports, telephone calls and email exchanges. Situations are evolving and dynamic therefore numbers stated are subject to change.