



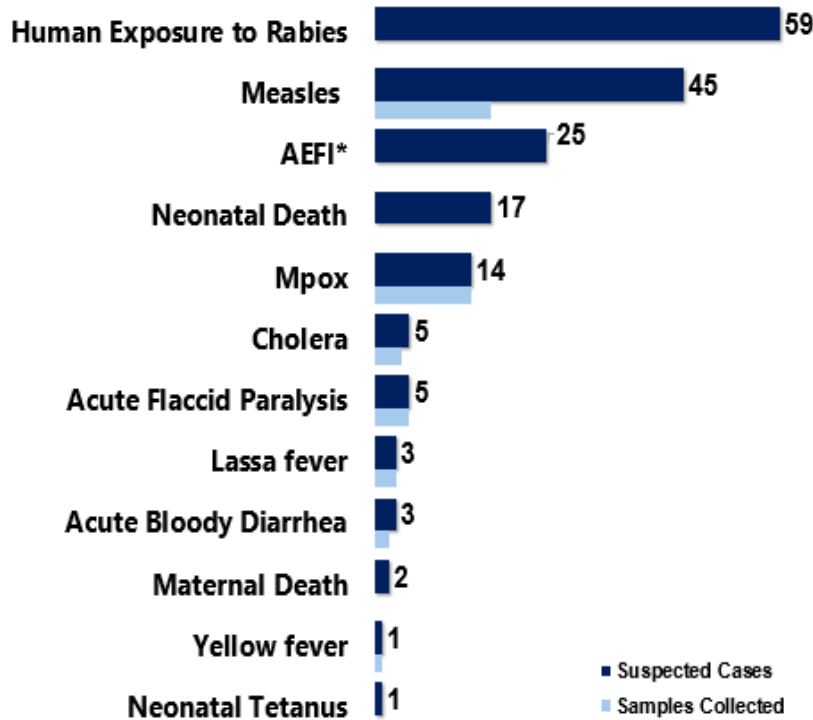
# Liberia IDSR Epidemiology Bulletin

2024 Epi-week 40 (September 30 – October 6, 2024)

Country Population: 5,406,374 || Volume 20 Issue 40 || September 30 – October 6, 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 180 events of public health importance, including 19 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 six counties

## Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 40, 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
<b>Liberia</b>	<b>943</b>	<b>943</b>	<b>940</b>	<b>100</b>	<b>99</b>

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 River Gee County reported late. Health facility timeliness is monitored at the health district level.

## Vaccine-Preventable Diseases

### Measles

Forty-five (45) suspected cases were reported from Grand Bassa (28), Nimba (6), Grand Gedeh (4), Gbarpolu (2), Margibi (1), Montserrado (1), Bong (1), Sinoe (1), and Grand Cape Mount (1) Counties

- Seventeen (17) specimens were collected, 11 received by the lab pending testing, while 6 pending arrival at NRL
- Forty-two percent (19/45) of the suspected cases were vaccinated for measles (*see Table 2*)

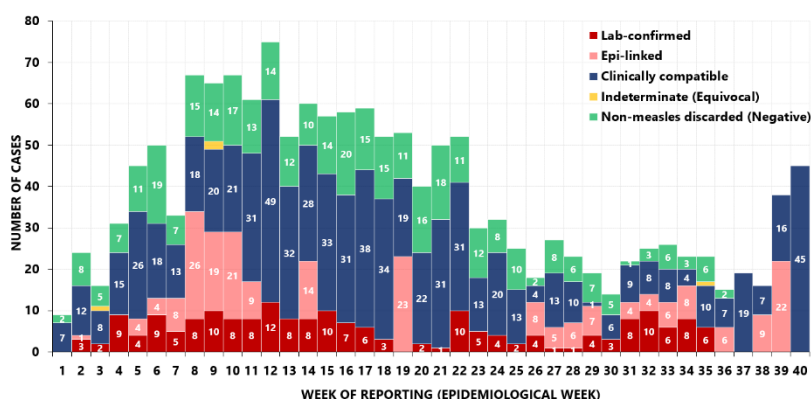
Cumulatively, 1,516 suspected cases have been reported since Epi-week 1 (*see Table 3*)

- Of the total reported 1,159 confirmed cases,
  - 50% were reported to have previously been vaccinated,
  - 39% were unvaccinated
  - 11% had unknown vaccination status
- Fifty-one percent (594/1159) of the confirmed cases are below 5 years
- Proportion of suspected cases with sample collected 46% (700/1516)
- Proportion of suspected cases with sample tested 79% (552/700) [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 **8.5 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 40, 2024**

County	Reported cases	Vaccinated	Number of Doses Received		
			One Dose	Two Doses	Doses Not Indicated
Bomi	1	1	1	0	0
Gbarpolu	2	1	0	0	1
Grand Bassa	28	8	7	1	0
Cape Mount	1	1	0	1	0
Grand Gedeh	4	4	3	1	0
Margibi	1	0	0	0	0
Montserrado	1	0	0	0	0
Nimba	6	4	3	0	1
Sinoe	1	0	0	0	0
<b>Total</b>	<b>45</b>	<b>19</b>	<b>14</b>	<b>3</b>	<b>2</b>

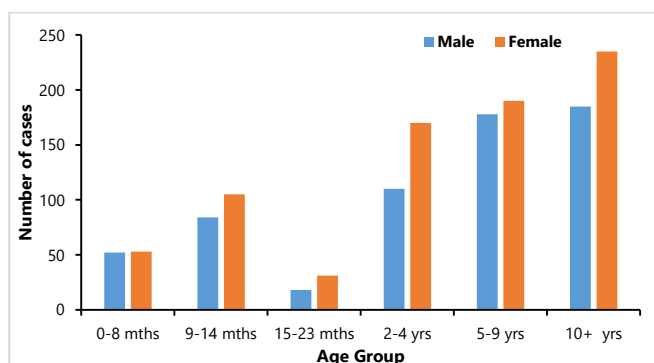


**Figure 2. Distribution of Measles Cases by Reporting Week and Epi-classification, Liberia, Epi-week 1 – 40, 2024**

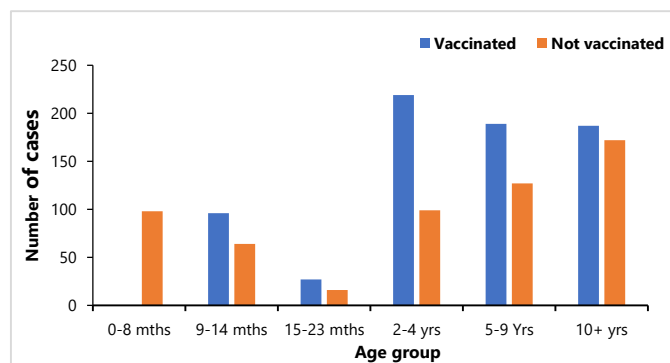
**Table 3. Classification of measles, reporting rate, and annualized non-measles rash illness rate per 100,000 population by County, Liberia, Epi-week 1 – 40, 2024**

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	8.5
Bong	2	0	25	0	9	36	2.4
Gbarpolu	7	0	18	1	26	52	34.9
Grand Bassa	3	0	42	0	16	61	6.9
Grand Cape Mount	7	0	8	0	28	43	19.9
Grand Gedeh	37	28	70	0	39	174	22.5
Grand Kru	31	35	46	0	44	156	50.0
Lofa	5	0	21	0	15	41	5.2
Margibi	0	0	3	0	4	7	1.7
Maryland	21	13	167	0	8	209	5.9
Montserrado	4	0	33	0	21	58	1.4
Nimba	36	124	235	1	27	423	5.5
River Gee	23	13	46	1	39	122	40.0
Rivercess	1	0	4	0	6	11	8.2
Sinoe	14	1	24	1	62	102	52.1
<b>Liberia</b>	<b>195</b>	<b>214</b>	<b>750</b>	<b>4</b>	<b>353</b>	<b>1516</b>	<b>8.5</b>

Target Achieved >=2 Below Target <2



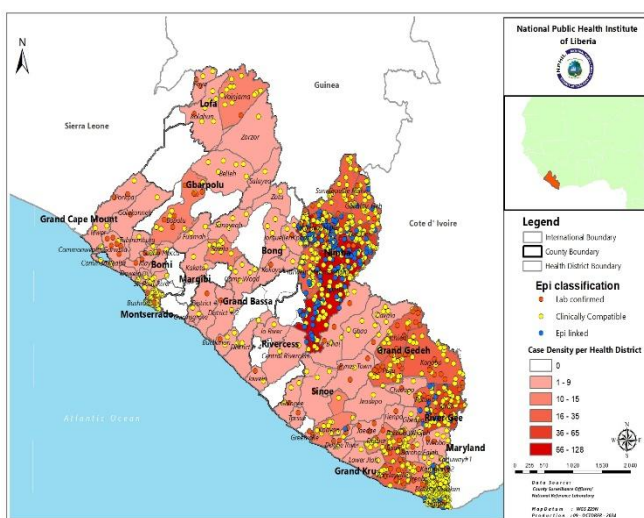
**Figure 3. Suspected Measles Cases by Age-group and Sex, Liberia, Epi-week 1 – 40, 2024**



**Figure 4. Vaccination status of Suspected Measles Cases by Age Group, Liberia, Epi-week 1 – 40, 2024**

**Table 4. Measles Outbreak by County and Case Status, Liberia, December 13, 2021 – October 9, 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
<b>Total</b>	<b>13,277</b>	<b>34</b>	<b>13,148</b>	<b>95</b>	<b>6/98</b>



**Figure 5. Measles outbreak by County and Case Status, Liberia, December 13, 2021 – October 9, 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 Gaugaye Community, Grand Bassa County

**III. Case management**

- Case management ongoing in Nimba and Grand Bassa Counties

**IV. Immunization**

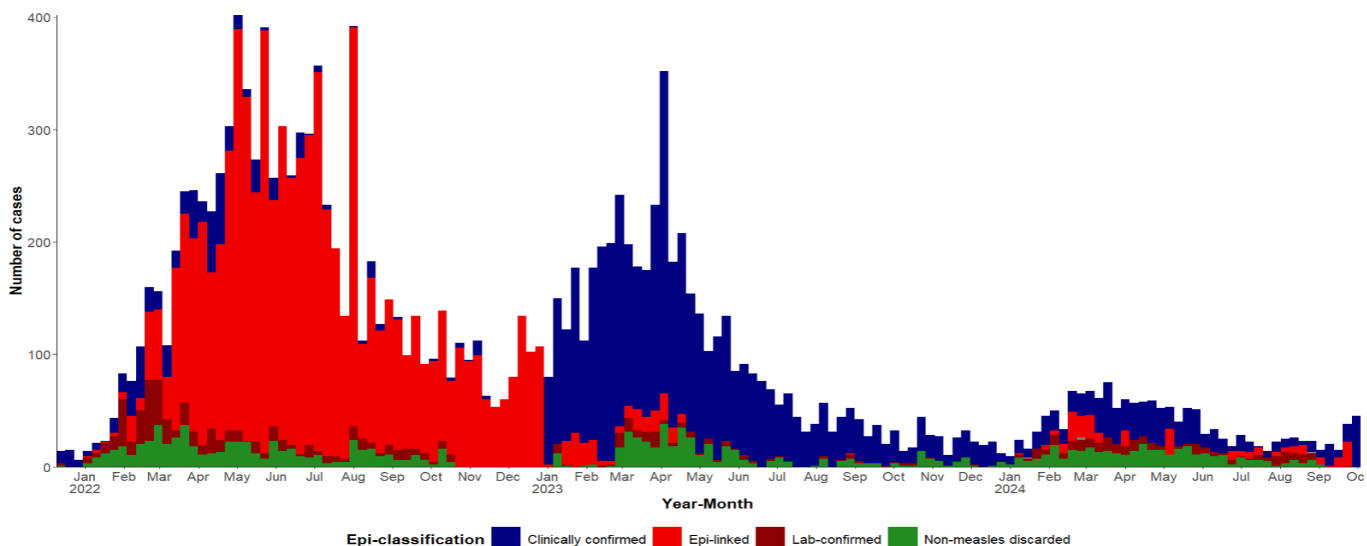
- Routine immunization ongoing across the country

**V. Laboratory**

- The National Public Health Reference Laboratory (NPHRL) continues testing of Measles samples
- 7 samples were collected from District #2 Grand Bassa County for confirmation of the outbreak

**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 9, 2024**

## Acute Flaccid Paralysis (AFP)

- ☞ Five (5) cases were reported from Grand Cape Mount (2), Gbarpolu (2), and Lofa (1) Counties
  - Specimens were collected and pending shipment
- ☞ Cumulatively, eighty-four (84) cases have been reported since Epi-week 1. One (1) cVDPV2<sup>1</sup>, 60 negative, 12 NPENT, and 11 AFP specimens pending testing at the laboratory
- ☞ As of week 40, the annualized non-polio AFP rate is at **4.5 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 – 40, 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	2	2	4.2	2	100%	0	0%
Bong	215425	1	1	0.6	1	100%	0	0%
Gbarpolu	43630	4	2	11.9	4	100%	0	0%
Grand Bassa	134743	3	3	2.9	3	100%	0	0%
Grand Cape Mount	82471	8	7	12.6	8	100%	1	13%
Grand Gedeh	101412	6	5	7.7	6	100%	1	17%
Grand Kru	51467	3	2	7.6	3	100%	1	33%
Lofa	168626	9	8	6.9	9	100%	1	11%
Margibi	140931	1	1	0.9	1	100%	0	0%
Maryland	78808	3	3	4.9	3	100%	0	0%
Montserrado	898124	17	14	2.5	17	100%	3	18%
Nimba	285705	19	18	8.6	19	100%	4	21%
Rivercess	42729	2	1	6.1	2	100%	0	0%
River Gee	57047	1	1	2.3	1	100%	0	0%
Sinoe	69556	5	5	9.3	5	100%	1	20%
<b>Liberia</b>	<b>2432868</b>	<b>84</b>	<b>73</b>	<b>4.5</b>	<b>84</b>	<b>100%</b>	<b>12</b>	<b>14%</b>
<b>Non-Polio AFP Rate</b>	<b>&lt;3</b>			<b>&lt;80%</b>	<b>Non-Polio Enterovirus</b>	<b>&lt;10%</b>		
	<b>≥3</b>	<b>Stool adequacy</b>		<b>≥80%</b>		<b>≥10%</b>	<b>Silent</b>	

## Outbreak Section (February 23 – October 4, 2024)<sup>2</sup>

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

- **February 23, 2024:** 1<sup>st</sup> 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

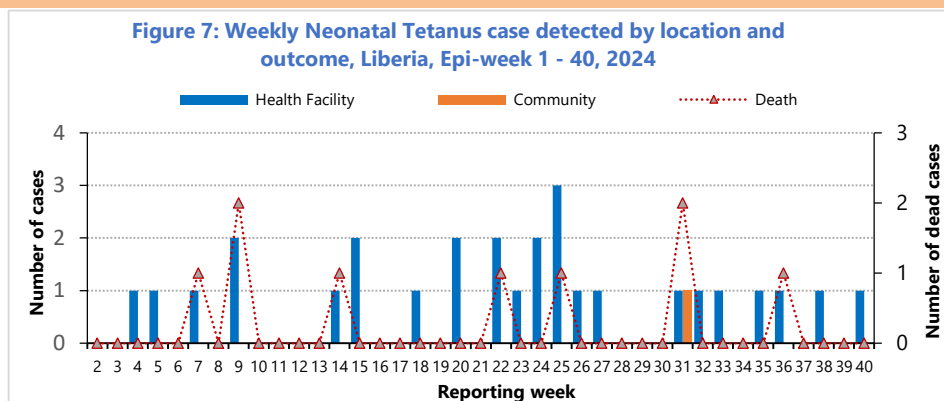
- ES sample is collected twice a month and tested by the Institute Pasteur Lab in Cote D'Ivoire

<sup>1</sup> circulating Vaccine-Derived Poliovirus type 2

<sup>2</sup> Liberia Polio Outbreak Response Situation Report as of October 4, 2024

## Neonatal Tetanus

- ☞ One (1) clinically confirmed case was reported from Grand Bassa County
- ☞ Cumulatively, twenty-nine (29) cases have been reported, including 9 deaths since Epi-week 1. Case Fatality Rate is 31%, 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

- ☞ Zero cases were reported
- ☞ Cumulatively, one hundred four (104) suspected cases reported since Epi-week 1.
  - One hundred four (104) specimens were collected: 96 tested negative, 4 specimens were discarded, and 4 positive

## Viral Haemorrhagic Fever

### Lassa fever

- ☞ Three (3) suspected cases were reported from Grand Bassa (2), and Nimba (1) Counties
  - Three (3) specimens were collected and tested 2 positive and 1 negative
- ☞ Cumulatively, two hundred one (201) suspected cases have been reported since Epi-week 1.
  - Proportion of suspected cases with sample collected (201/201) 100%. Six of the collected samples were discarded
  - Proportion of suspected cases with sample tested (192/201) 96%
    - Thirty-seven (37) positive, including 10 deaths, and 155 negative
  - Case fatality rate: (10/37) 27%
  - Nimba County accounts for 38% of the total confirmed cases.

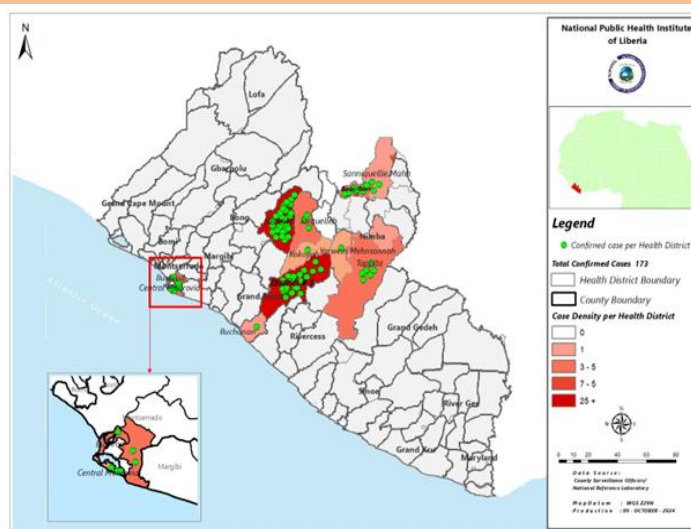
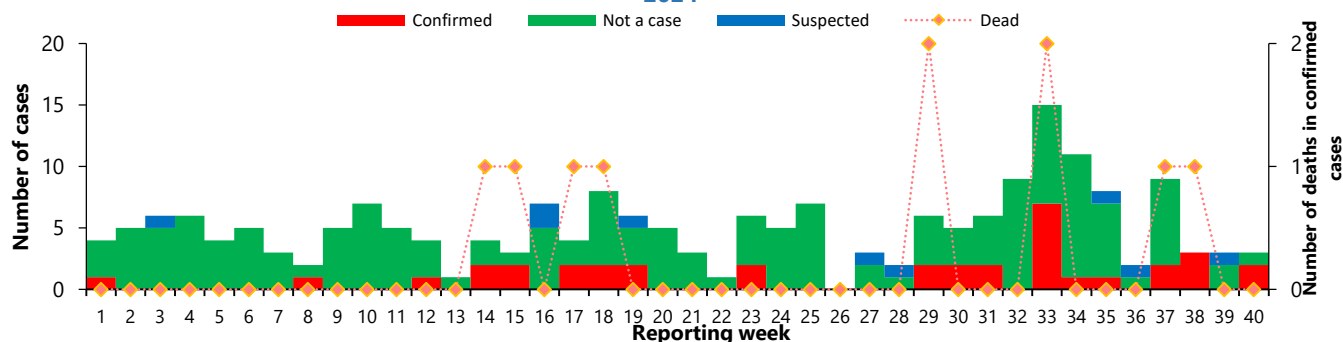


Figure 8. Geospatial distribution of confirmed Lassa fever by Health District, Liberia, Epi-week 1 - 40, 2024

Figure 9: Weekly distribution of Lassa fever cases by Epi-classification, Liberia, Epi-week 1- 40, 2024



- ☞ Two (2) new confirmed cases reported from Grand Bassa and Nimba (dead) Counties
- ☞ Seventeen (17) contacts, including 4 healthcare workers (HCWs), were line-listed
- ☞ Total of 52 contacts, including 19 HCWs undergoing 21 days of follow-up
- ☞ A total of 175 confirmed cases, including 50 deaths reported
- ☞ Cumulative Case Fatality Rate (CFR): 29% (50/175)
- ☞ Three counties currently in outbreak

- Seventeen (17) contacts, including 4 HCWs, were line-listed
- Total of 52 contacts, including 19 HCWs undergoing 21 days of follow-up
- Weekly sit-reps developed and disseminated to stakeholders

**III. Case management**

- Ribavirin distributed to affected counties
- Cases treated with ribavirin and discharged
- Two (2) confirmed case in isolation undergoing ribavirin treatment (Grand Bassa)

**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

**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**

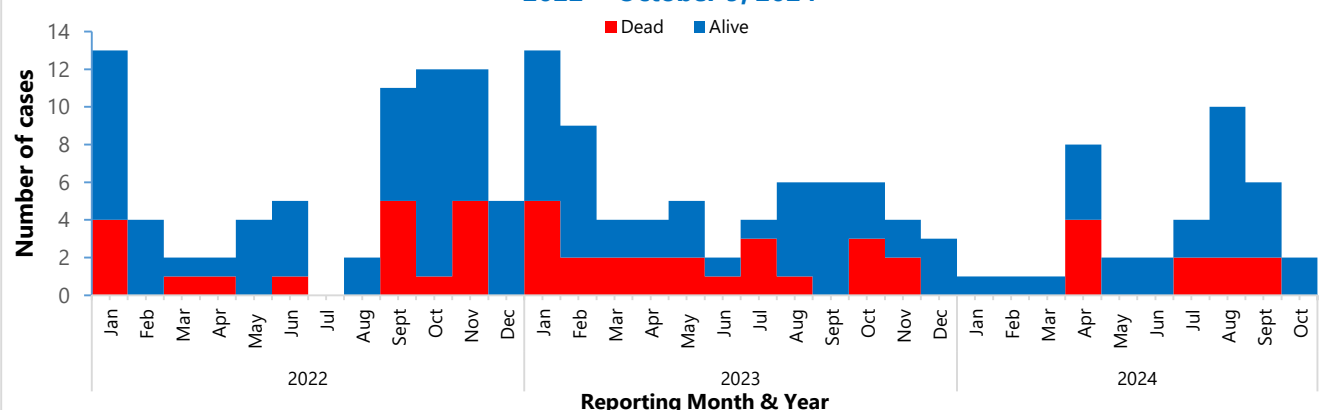
- Active case search ongoing in affected communities

**Table 6. Summary of Lassa fever Outbreak, Liberia, January 6, 2022 – October 9, 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	30	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	Ended
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	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	36	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
River Gee	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
Total			531	175	22	51	3	29%	1519	588	62	52	1377		

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

**Figure 10: Epi-curve of confirmed Lassa fever cases by Outcome, Liberia, January 6, 2022 - October 9, 2024**



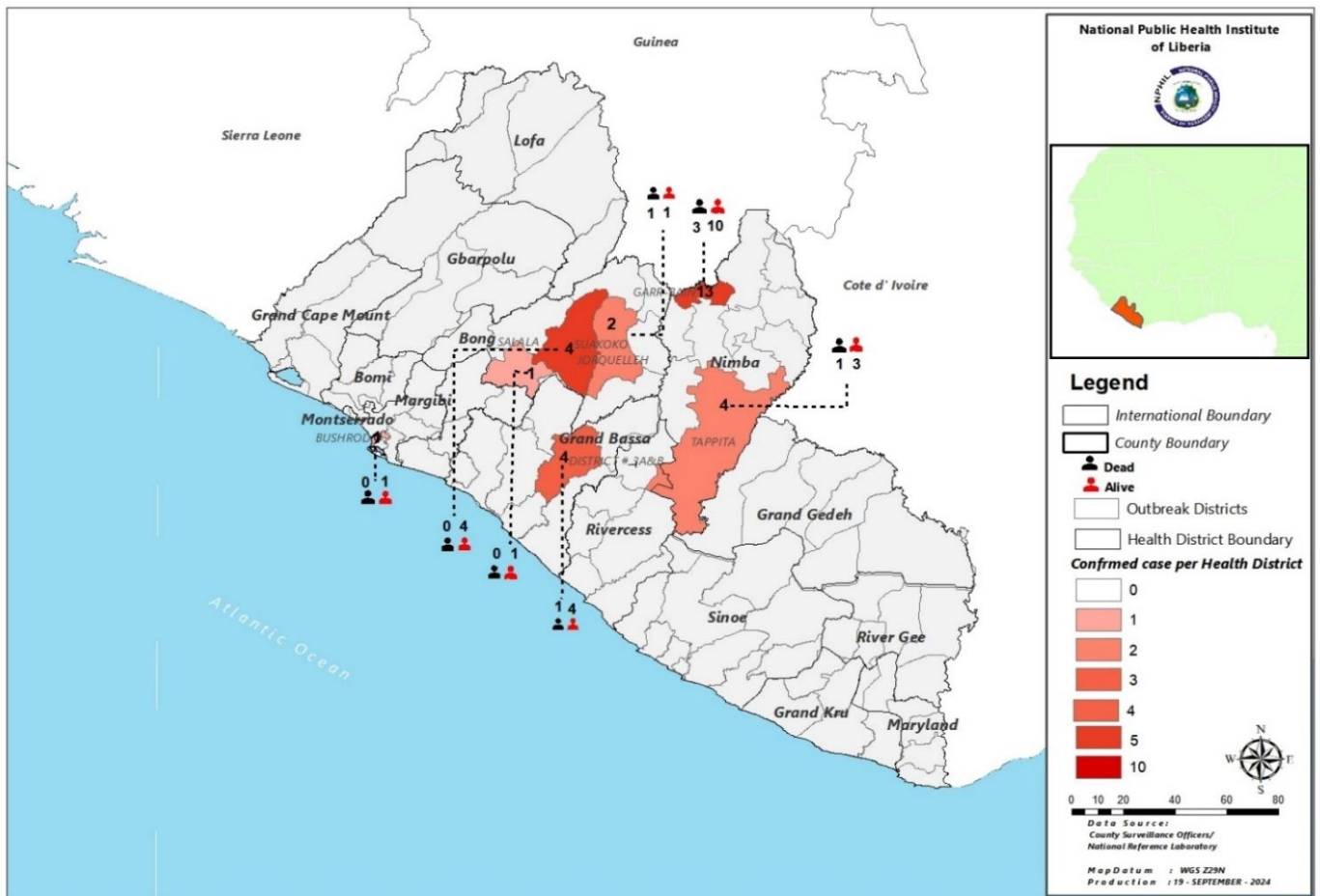


Figure 11. Geospatial distribution of outbreak district with number of confirmed Lassa fever cases, Liberia, Epi-week 1 – 40, 2024

### Yellow Fever

- ☞ One (1) suspected case was reported from Nimba County
  - Specimen was collected and tested negative
- ☞ Cumulatively, eighty-four (84) cases have been reported since Epi-week 1.
  - Proportion of suspected cases with samples collected (81/84) 96%; however, 1 was rejected
  - Proportion of suspected cases with samples tested (78/81) 96% [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)

- ☞ Three (3) cases were reported from Bong, Grand Cape Mount, and Nimba Counties
  - Two (2) specimens were collected and pending testing
- ☞ Cumulatively, 306 cases have been reported since Epi-week 1.
  - 180 specimens were collected, with 141 received at the Lab. Of the 127 specimens, 114 tested negative, 13 confirmed (*S. flexneri*-4 & *S. sonnei*-9), 7 rejected, and 7 pending testing

#### Severe Acute Watery Diarrhoea (Cholera)

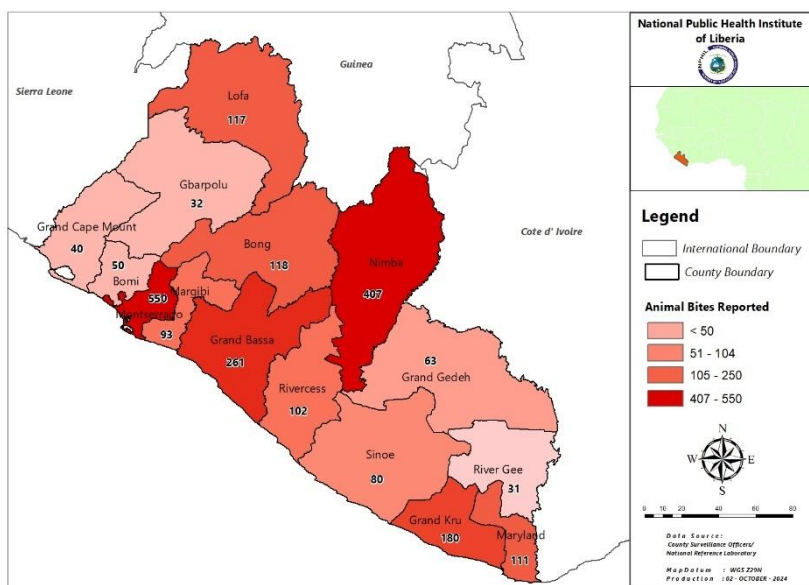
- ☞ Five (5) suspected cases were reported from Sinoe (3), Margibi (1), and River Gee (1) Counties
- ☞ Four (4) specimens were collected: 2 pending testing and 2 pending arrival to the lab
- ☞ Cumulatively, 199 cases have been reported since Epi-week 1.
  - 129 specimens collected, 97 received at the Lab
  - 70 tested negative, 12 rejected, and 15 pending testing.

## Other Reportable Diseases

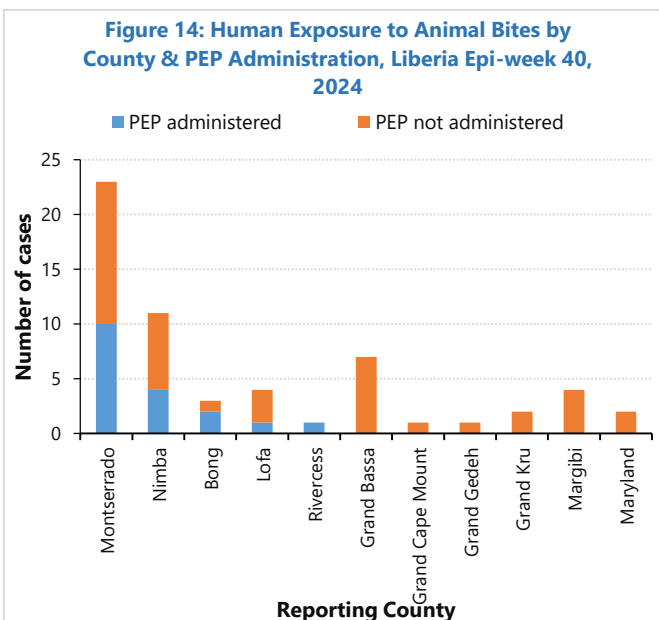
### Animal bite (Human Exposure to Rabies)

- ☞ Fifty-nine (59) dog bite cases were reported from Montserrado (23), Nimba (11), Grand Bassa (7), Lofa (4), Margibi (4), Bong (3), Grand Kru (2), Maryland (2), Rivercess (1), Grand Cape Mount (1), and Grand Gedeh (1) Counties
- ☞ Proportion of cases investigated: 21/43 (49%)
- ☞ PEP was administered to three (3) persons (5%) in Bong (2) and Rivercess (1) Counties
- ☞ Cumulatively, 2,299 cases have been reported, including 2 deaths (*suspected human rabies*) since Epi-week 1.

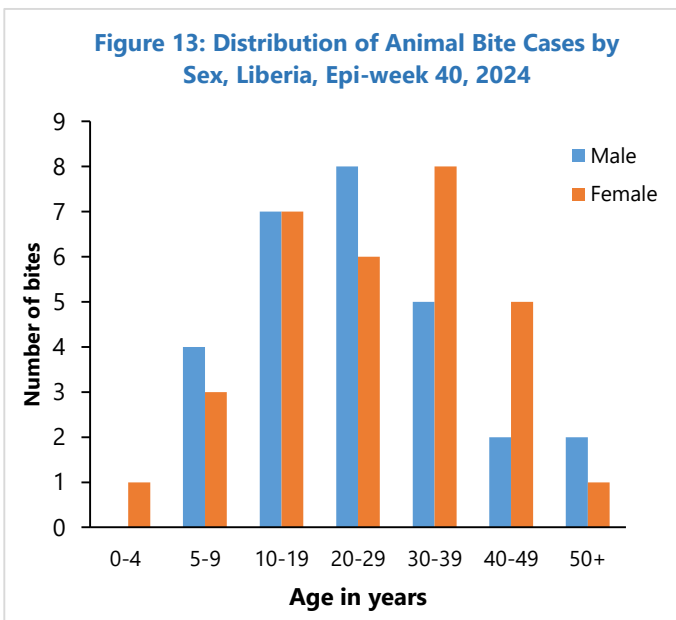
**Figure 12. Geospatial distribution of Human Exposure to Animal Bites Cases by County, Liberia, Epi-week 1 – 40, 2024**



**Figure 14: Human Exposure to Animal Bites by County & PEP Administration, Liberia Epi-week 40, 2024**



**Figure 13: Distribution of Animal Bite Cases by Sex, Liberia, Epi-week 40, 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

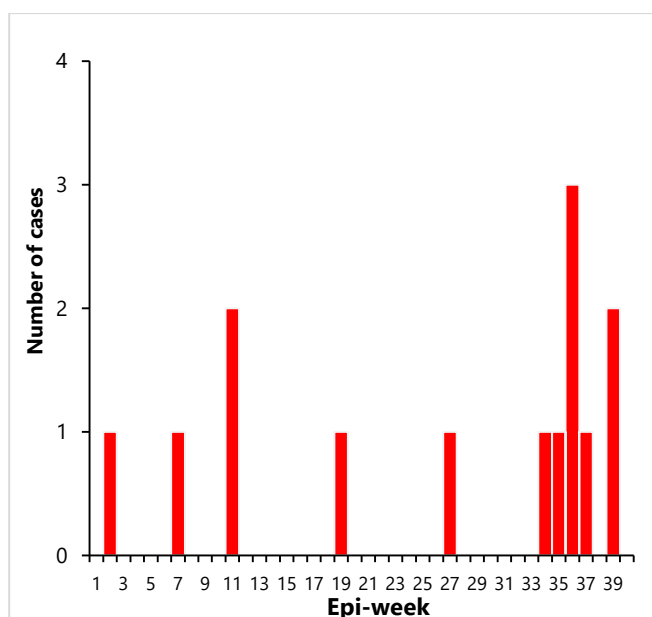
- ☞ Fourteen (14) suspected cases were reported from Maryland (4), Gbarpolu (3), Nimba (2), Grand Cape Mount (1), Lofa (1), Rivercess (1), River Gee (1), and Montserrado (1) Counties
  - Fourteen (14) specimens were collected: 11 tested negative, and 3 pending testing
- ☞ Cumulatively, 214 suspected cases have been reported, 206 samples collected with 1 rejected
  - One hundred eighty-eight (188) tested: 14 positive, 172 negative and 2 indeterminate



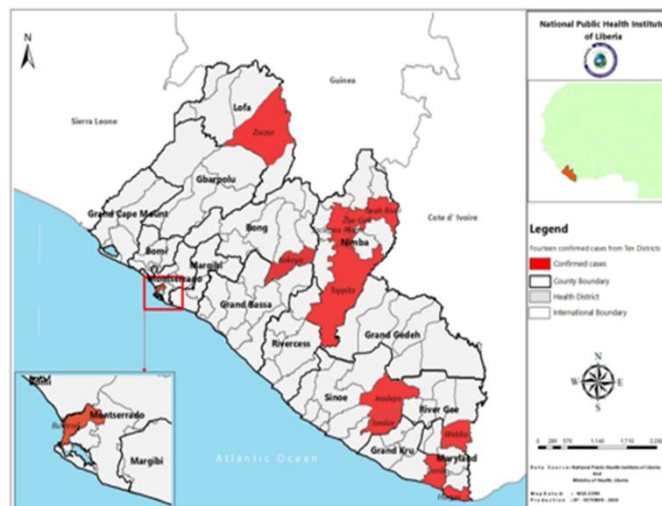
- ☞ One (1) confirmed case reported from Maryland County
- ☞ **Maryland:** A 40-year-old male resident of Hoffman Station, Harper Health District, Maryland County
  - presented with fever, rashes, muscles and chest pains on September 28, 2024
  - Symptoms onset was September 24, 2024
  - Tested positive on October 4, 2024, by NRL
  - Case is currently isolated in Treatment Unit
- ☞ Two (2) contacts, including one healthcare worker, line-listed under follow up

**Table 7. Confirmed Cases Reported by Counties and Health Districts, Liberia, January – October 9, 2024**

County	Reporting District	Cumulative
Bong	Kokoyah	1
Grand Kru	Trehn	1
Lofa	Zorzor	2
Maryland	Harper	1
Montserrado	Bushrod	1
	Saclepea Mah	1
Nimba	Tappita	1
	Twah River	1
	Zoe Geh	1
River Gee	Webbo	1
Sinoe	Jaedae	1
	Jedepo	2
<b>Overall Confirmed Cases</b>		<b>14</b>



**Figure 15. Weekly epi-curve of Mpox lab-confirmed cases detected in Liberia, Epi-week 1 - 40, 2024**



**Figure 16. Distribution of Lab-confirmed Mpox cases by Health District, Liberia, January 1 – October 9, 2024**

**PUBLIC HEALTH RESPONSE**

**I. Coordination**

- Ongoing coordination meetings at national and daily at sub-national levels in affected counties
- Resources (financial & logistical) are being mobilized to support the counties
- Production of regular Sitreps and dissemination
- Compiled pillar updates and organized IMS meeting
- Follow up on action points at meetings and recorded meeting minutes

**II. Epidemiological Surveillance**

- Mpox training Ongoing across the 15 Counties for healthcare workers, including animal surveillance officers
- Investigation on confirmed cases conducted in Maryland County
- 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 12 contacts under follow-up

**III. Case management**

- Four cases currently in isolation (Montserrado-1 Maryland-1, Lofa-2)

**IV. Laboratory**

- The National Public Health Reference Laboratory continues the testing of Mpox samples
- WHO supports genomic sequencing training ongoing at the National Reference Laboratory

**V. Risk Communication & Community Engagement**

- Jingles airing with support from WHO, UNICEF, Internews, Breakthrough Action, and Red Cross have started in various counties and national stations, including ELBC, OK FM, TRUTH FM, and Prime FM
- Ongoing community engagement and awareness creation via a radio station in partnership between the RCCE team in Lofa and partners
- Community engagement ongoing in Montserrado and Maryland Counties

## VI. Infection Prevention and Control (IPC)

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

### NEXT STEPS

- Print and distribute additional RCCE materials, including surveillance, IPC, and Case Management tools
- Continue active case search in the affected communities

## Other Events of Public Health Importance

### Maternal Mortality

- ☞ Two (2) deaths were reported from Montserrado and Nimba Counties
- ☞ Primary causes of death: PPH, and one pending review
- ☞ All of the deaths occurred in public health facility
- ☞ Cumulatively, two hundred forty-three (243) deaths have been reported since Epi-week 1, of which (222) 91% were reported from health facilities and (21) 8% from communities.
  - Proportion of deaths reviewed (116/243) 48%.
- ☞ Annualized maternal mortality ratio is at **136 per 100,000 live**

**Table 8. Cumulative Maternal Mortality reporting rate and Annualized Maternal Mortality per 100,000 live births by County, Liberia, Week 1 – 40, 2024**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Montserrado	85821	1	126	51.9	191
Grand Bassa	12875	0	18	7.4	182
Margibi	13467	0	16	6.6	154
Nimba	27301	1	31	12.8	148
Grand Cape Mount	7881	0	8	3.3	132
Maryland	7531	0	7	2.9	121
Bomi	5943	0	5	2.1	109
Grand Gedeh	9690	0	6	2.5	80
Grand Kru	4918	0	3	1.2	79
Lofa	16113	0	9	3.7	73
Rivercess	4083	0	2	0.8	64
Bong	20585	0	9	3.7	57
River Gee	5451	0	2	0.8	48
Sinoe	6646	0	1	0.4	20
Gbarpolu	4169	0	0	0.0	0
<b>Liberia</b>	<b>232474</b>	<b>2</b>	<b>243</b>	<b>100.0</b>	<b>136</b>

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

### Neonatal Mortality

- ☞ Seventeen (17) deaths were reported from Montserrado (11), Gbarpolu (3), Margibi (1), Bong (1), and Lofa (1) Counties
- ☞ Primary causes of death were birth asphyxia (8), sepsis (5), prematurity (2), jaundice (1) haemolytic ischemic encephalopathy (1)
- ☞ All of the deaths occurred in health facility
- ☞ Cumulatively, six hundred fifty-one (651) deaths have been reported since Epi-week 1.
  - Proportion of deaths reviewed (303/651) 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 – 40, 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	12.4	14.3
Grand Kru	3130	0	24	3.7	10.0
Montserrado	62479	11	394	60.5	8.2
Sinoe	5534	0	17	2.6	4.0
Gbarpolu	4507	3	13	2.0	3.7
Rivercess	3865	0	11	1.7	3.7
Grand Gedeh	6770	0	13	2.0	2.5
Bong	18775	1	23	3.5	1.6
River Gee	3610	0	6	0.9	2.2
Lofa	14911	1	20	3.1	1.7
Margibi	11345	1	15	2.3	1.7
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
<b>Liberia</b>	<b>190636</b>	<b>17</b>	<b>651</b>	<b>100.0</b>	<b>4.4</b>

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

- Twenty-five (25) events were reported from Montserrado (7), Bong (5), River Gee (3), Sinoe (3), Margibi (1), Grand Gedeh (1), Bomi (1), Grand Bassa (1), Lofa (1), Rivercess (1), and Grand Cape Mount (1) Counties
- All reported cases were investigated and classified as non-serious. Related vaccines included: Penta (8), nOPV (7), Pneumo (4), TT (3), BCG (2), Malaria (1)
- Cumulatively, eight hundred seventy (870) 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 4,595 travellers' were screened from eight (8) designated out of Forty-five (45) official Points of Entry, with incoming travellers accounting for 49% (2266/4595) ([Table 10](#)).

**Table 10. Cross-border activity at the POE for incoming and outgoing travelers, Liberia, Epi-week 40, 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	38	20	18	0	0	0	0	0
	Robert Int'l Airport	3330	1568	1762	3259	0	71	6	0
Seaport	Freeport of Monrovia	126	63	63	126	0	0	0	0
	Buchanan Port	56	28	28	56	0	0	0	0
Ground Crossing	Bo Water Side	455	288	167	447	0	0	0	0
	Ganta	34	20	14	13	0	0	0	0
	Yekepa	149	105	44	30	0	0	0	0
	Loguatu	407	174	233	372	0	0	0	0
<b>Total</b>		<b>4,595</b>	<b>2266</b>	<b>2329</b>	<b>4303</b>	<b>0</b>	<b>71</b>	<b>6</b>	<b>0</b>

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

## Public Health Measures

### National level

- Genomics sequencing training for technical laboratory staff commenced at the NRL
- Revised, Reviewed, and Updated the Mpox Incident Action Plan (IAP) to align with the Continental (Africa, CDC, and WHO) template
- Mpox training ongoing around the Country (11 counties completed), with a total of 650 healthcare workers trained
- Sensitization activities for Mpox and Marburg continue at Pedebo border and Harper port
- Produced and disseminated weekly Epi bulletins
- 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
- IPC supplies (1 ctn hand sanitizers and 4pks nose masks) to Board Waterside PoE
- 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

		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	A	0	0	2	0	2	0	0	1	0	0	0	0	0	0	0	5	71	1
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	A	0	1	2	28	1	4	0	0	1	0	1	6	0	0	1	45	1358	187
		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	1	0	0	0	0	0	0	0	0	0	0	0	1	18	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
	Yellow fever	A	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	67	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	2	0	0	0	0	0	0	1	0	0	0	0	3	150	21	
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	8	
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	0	0	0	0	0	0	0	71	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	A	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	3	269	8
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Severe Acute Watery	A	0	0	0	0	0	0	0	1	0	0	0	0	1	3	5	189	0	
		D	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	0	0	0	0	0	1	1	0	0	0	2	214		
	Neonatal Mortality	D	0	1	3	0	0	0	1	1	0	11	0	0	0	0	17	564		
	Adverse Events	A	1	5	0	1	1	1	1	1	0	7	0	1	3	3	25	728	0	
	Follow-up Unexplained Cluster of Health	D	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	
Other Reportable Diseases	Mpox	A	0	0	3	0	1	0	1	0	4	1	2	1	1	0	14	62	6	
		D	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	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Human Exposure to Rabies	A	0	3	0	7	1	1	2	4	4	2	23	11	1	0	59	1944	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
	Meningitis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	2
		D	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		
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Neglected Reportable Diseases	Buruli Ulcer	A	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	
	Yaws	A	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		
TOTAL		1	11	10	39	7	6	2	8	8	6	44	23	3	5	7	180	5890	237	

D = Dead A = Alive

- ☞ **Completeness** refers to the proportion of expected weekly IDSR reports received (target:  $\geq 80\%$ )
- ☞ **Timeliness** refers to the proportion of expected weekly IDSR reports received by the next level on time (target:  $\geq 80\%$ ). 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:  $\geq 2/100,000$ )
- ☞ **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](mailto:charleneout2011@hotmail.com)  
 Phone: +231.77.030.3702  
 Website: [www.nphil.gov.lr](http://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.