



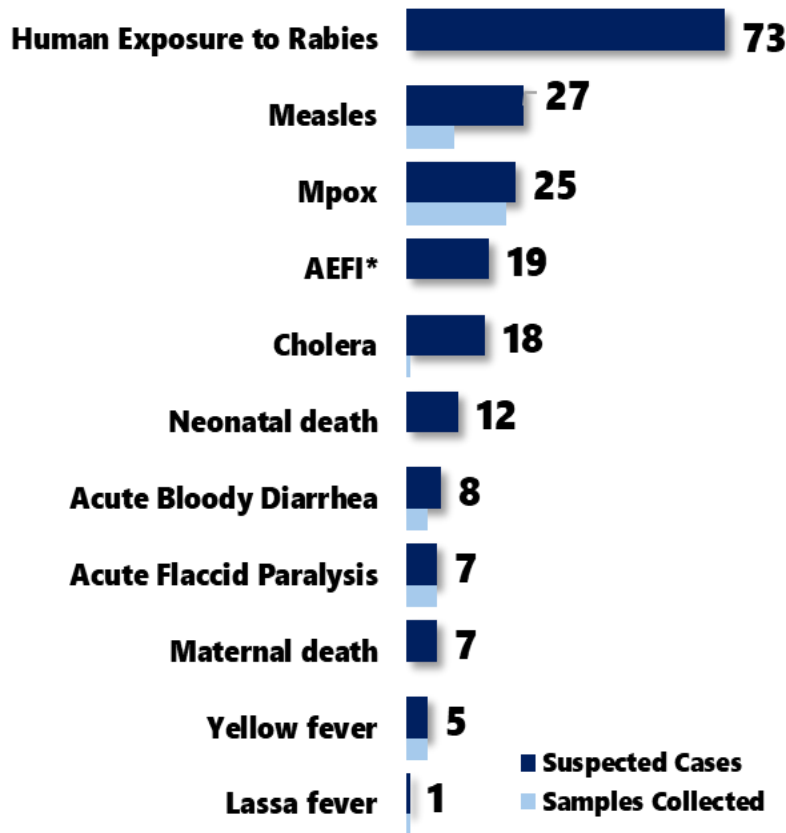
# Liberia IDSR Epidemiology Bulletin

2024 Epi-week 42 (October 14 – 20, 2024)

Country Population: 5,406,374 || Volume 20 Issue 42 || October 14 – 20, 2024 || Data Source: CSOs from 15 Counties and Laboratory

## Highlights

Figure 1. Public Health Events Reported



## Keynotes and Events of Public Health Significance

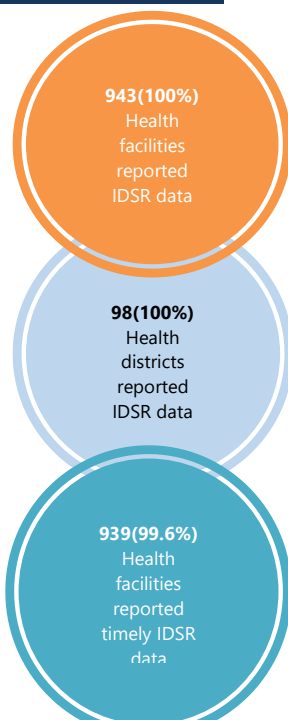
- ◆ A total of 202 events of public health importance, including 19 deaths reported
- ◆ Completeness and Timeliness of health facility reports were 100% and 99.6%, respectively
- ◆ Ongoing Lassa fever outbreak in two counties
- ◆ Ongoing Measles outbreak in two counties
- ◆ Ongoing circulating vaccine derived Polio virus type 2 outbreak
- ◆ Ongoing Mpox outbreak in six counties

\*Adverse Event Following Immunization

## Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 42, 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	367	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>939</b>	<b>100</b>	<b>99.6</b>



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 (12), River Gee (4), Bomi (3), Grand Gedeh (3), Montserrado (2), Lofa (2), and Sinoe (1) Counties

- Eleven (11) specimens were collected and pending testing at National Reference Laboratory
- Seventy-eight percent (21/27) of the suspected cases were vaccinated for measles (see Table 2)

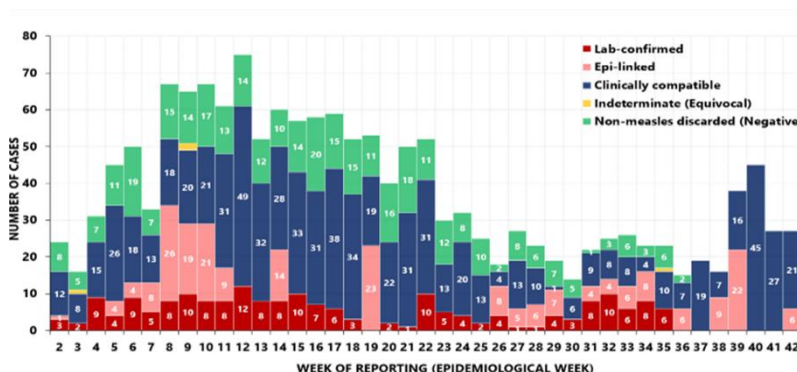
Cumulatively, 1,570 suspected cases have been reported since Epi-week 1 (see Table 3)

- Of the total reported 1,213 confirmed cases,
  - 51% were reported to have previously been vaccinated,
  - 38% were unvaccinated
  - 11% had unknown vaccination status
- Fifty-one percent (620/1,213) of the confirmed cases are below 5 years
- Proportion of suspected cases with sample collected 46% (722/1,570)
- Proportion of suspected cases with sample tested 77% (552/722) [negative – 353, positive – 195, indeterminate-4]
- Proportion of negative Measles cases tested for Rubella 90% (320/353) [negative – 292, positive – 28]

Liberia’s annualized non-measles febrile rash illness rate now stands at **8.1 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 42, 2024**

County	Reported cases		Number of Doses Received		
	cases	Vaccinated	One Dose	Two Doses	Doses Not Indicated
Bomi	3	3	0	3	0
Grand Gedeh	3	2	2	0	0
Lofa	2	1	1	0	0
Montserrado	2	2	1	1	0
Nimba	12	8	5	2	1
River Gee	4	4	0	0	4
Sinoe	1	1	1	0	0
<b>Total</b>	<b>27</b>	<b>21</b>	<b>10</b>	<b>6</b>	<b>5</b>

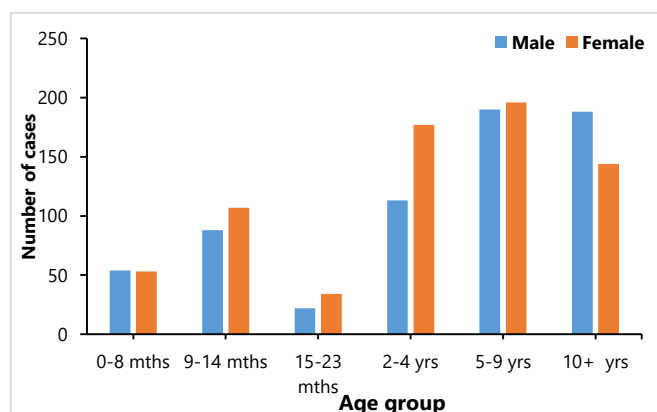


**Figure 2. Distribution of Measles Cases by Reporting Week and Epi-classification, Liberia, Epi-week 1 – 42, 2024**

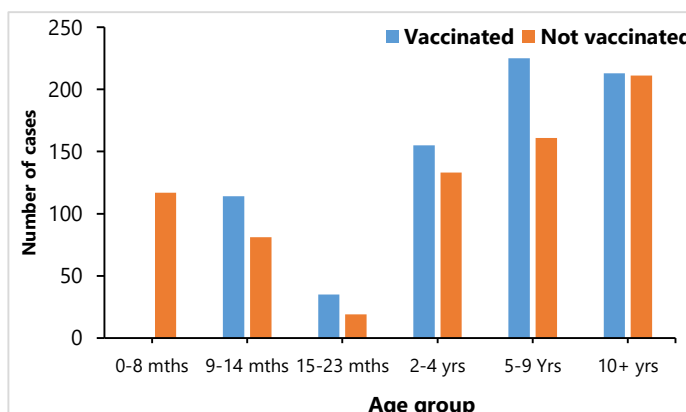
**Table 3. Classification of measles, reporting rate, and annualized non-measles rash illness rate per 100,000 population by County, Liberia, Epi-week 1 – 42, 2024**

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	11	0	9	24	8.1
Bong	2	0	25	0	9	36	2.3
Cbarpolu	7	0	18	1	26	52	33.2
Grand Bassa	3	0	42	0	16	61	6.6
Grand Cape Mount	7	0	8	0	28	43	18.9
Grand Gedeh	37	28	73	0	39	177	21.4
Grand Kru	31	35	48	0	44	158	47.6
Lofa	5	0	23	0	15	43	5.0
Margibi	0	0	5	0	4	9	1.6
Maryland	21	13	168	0	8	210	5.7
Montserrado	4	0	36	0	21	61	1.3
Nimba	36	130	257	1	27	451	5.3
River Gee	23	13	54	1	39	130	38.1
Rivercess	1	0	4	0	6	11	7.8
Sinoe	14	1	26	1	62	104	49.7
<b>Liberia</b>	<b>195</b>	<b>220</b>	<b>798</b>	<b>4</b>	<b>353</b>	<b>1570</b>	<b>8.1</b>

Target Achieved >=2 Below Target <2



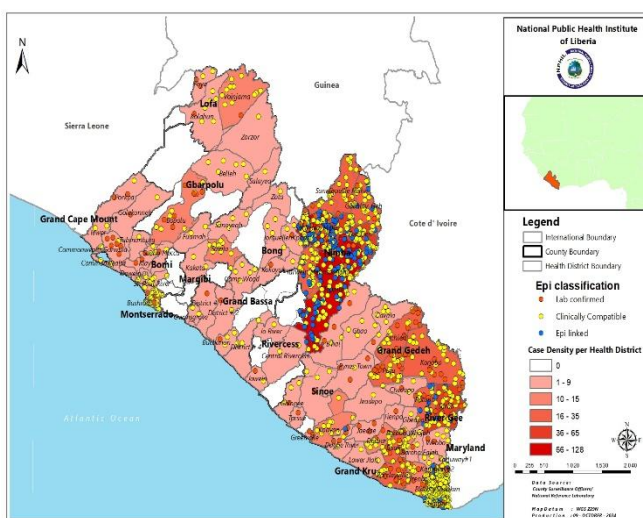
**Figure 3. Suspected Measles Cases by Age-group and Sex, Liberia, Epi-week 1 – 42, 2024**



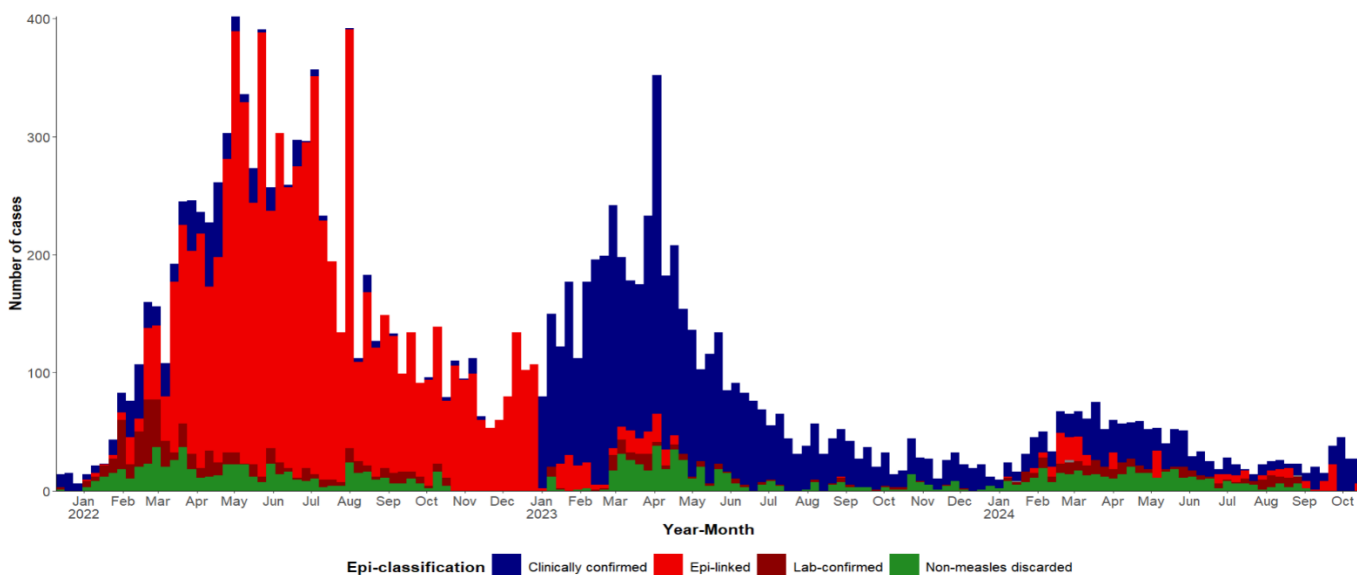
**Figure 4. Vaccination status of Suspected Measles Cases by Age Group, Liberia, Epi-week 1 – 42, 2024**

**Table 4. Measles Outbreak by County and Case Status, Liberia, December 13, 2021 – October 23, 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 23, 2024**



**Figure 6: Epi-curve of Measles Cases by monthly classification, Liberia, December 13, 2021 - October 20, 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.

## Acute Flaccid Paralysis (AFP)

- ☞ Seven (7) cases were reported from Montserrado (3), Nimba (2), Lofa (1), and Bomi (1) Counties
  - Specimens were collected, and six were shipped and rejected
- ☞ Cumulatively, ninety-two (92) cases have been reported since Epi-week 1. One (1) cVDPV2<sup>1</sup>, 1 Poliovirus-2, 70 negative, 12 NPENT, and 8 AFP specimens pending testing at the laboratory
- ☞ As of week 42, the annualized non-polio AFP rate is at **4.7 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 – 42, 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	5	3	10.0	5	100%	0	0%
Bong	215425	1	1	0.6	1	100%	0	0%
Gbarpolu	43630	4	4	11.4	4	100%	0	0%
Grand Bassa	134743	3	3	2.8	3	100%	0	0%
Grand Cape Mount	82471	8	7	12.0	8	100%	1	13%
Grand Gedeh	101412	6	6	7.3	6	100%	1	17%
Grand Kru	51467	3	3	7.2	3	100%	1	33%
Lofa	168626	10	9	7.3	10	100%	1	10%
Margibi	140931	1	1	0.9	1	100%	0	0%
Maryland	78808	3	3	4.7	3	100%	0	0%
Montserrado	898124	19	17	2.6	19	100%	4	21%
Nimba	285705	21	19	9.1	21	100%	4	19%
Rivercess	42729	2	2	5.8	2	100%	0	0%
River Gee	57047	1	1	2.2	1	100%	0	0%
Sinoe	69556	5	5	8.9	5	100%	0	0%
<b>Liberia</b>	<b>2432868</b>	<b>92</b>	<b>84</b>	<b>4.7</b>	<b>92</b>	<b>100%</b>	<b>12</b>	<b>13%</b>
<i>Non-Polio AFP Rate</i>	<3			<80%	<i>Non-Polio Enterovirus</i>	<10%		
	≥3	<i>Stool adequacy</i>		≥80%		≥10%	<i>Silent</i>	

## Outbreak Section (February 23 – October 22, 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 20, 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.
  - **1 Poliovirus-2** from an AFP case: **LIB-GCM-GOK-24-079**, a 2-years old female from Managorduah, **Grand Cape Mount County**; Date of Onset 17-AUG-24.

### 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 is being conducted by the national team comprising EPI-MoH, NPHIL, and WHO
- Routine Immunization intensification activities ongoing (Monthly outreaches, Quarterly Periodic Intensification of Routine Immunization (PIRI), Use of SIAs to improve RI)

#### III. Laboratory

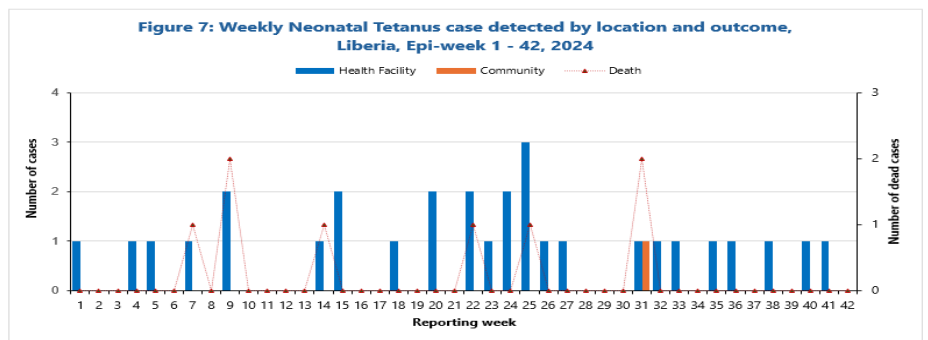
- ES sample is collected twice a month and tested by the Institute Pasteur Lab in Cote D'Ivoire

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

<sup>2</sup> Liberia Polio Outbreak Response Situation Report as of October 22, 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 (14) 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

- One (1) suspected case was reported from Montserrado (1) County
  - Specimens were collected and tested negative
- Cumulatively, two hundred seven (207) suspected cases have been reported since Epi-week 1.
  - Proportion of suspected cases with sample collected (207/207) 100%. Nine of the collected samples were discarded
  - Proportion of suspected cases with sample tested (198/207) 96%
    - Thirty-seven (37) positive, including 10 deaths, and 161 negative
  - Case fatality rate: (10/37) 27%
  - Nimba County accounts for 38% of the total confirmed cases.

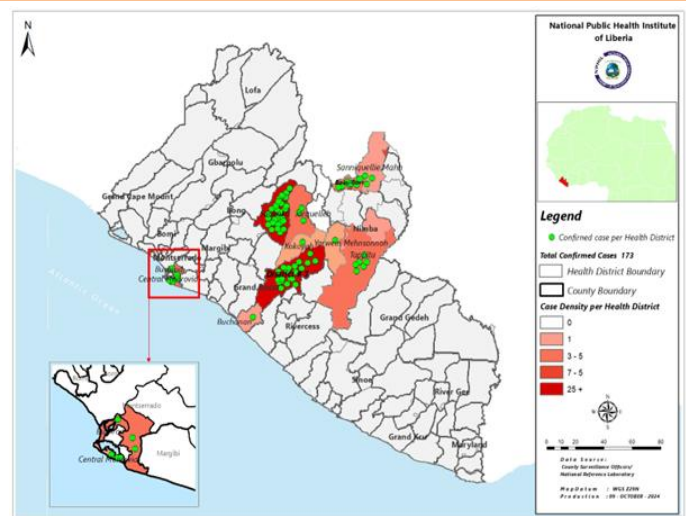
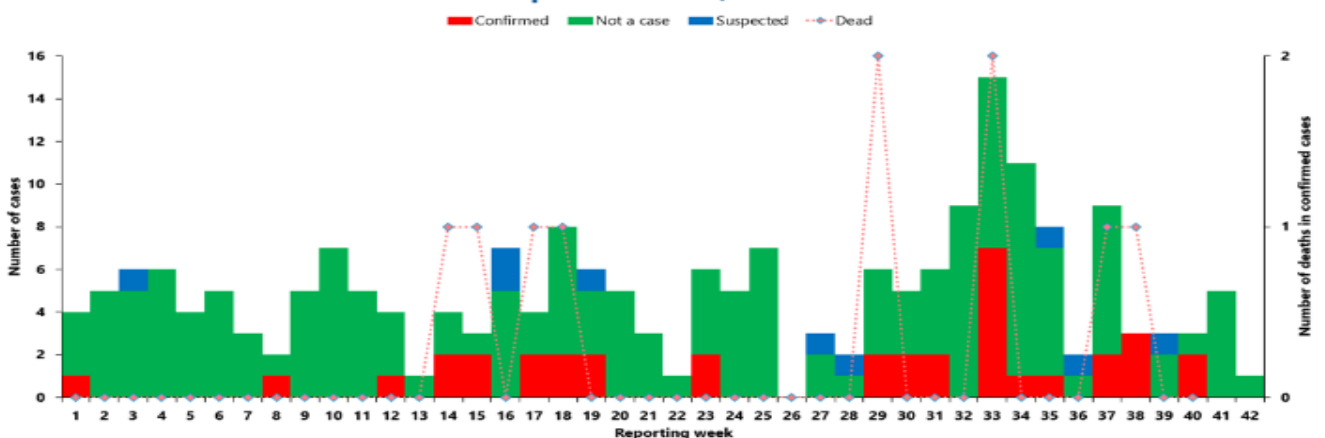


Figure 8. Geospatial distribution of confirmed Lassa fever by Health District, Liberia, Epi-week 1 – 42, 2024

Figure 9: Weekly distribution of Lassa fever cases by Epi-classification, Liberia, Epi-week 1 – 42, 2024





- ☞ No new confirmed cases reported
- ☞ Cumulative Case Fatality Rate (CFR): 29% (50/175)
- ☞ Two 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 of follow-up

- Weekly sit-reps developed and disseminated to stakeholders

**III. Case management**

- Ribavirin distributed to affected counties
- Two (2) confirmed cases in isolation were treated and discharged (Grand Bassa)

**IV. Dead Body Management**

- Safe and dignified burial conducted for the deceased cases

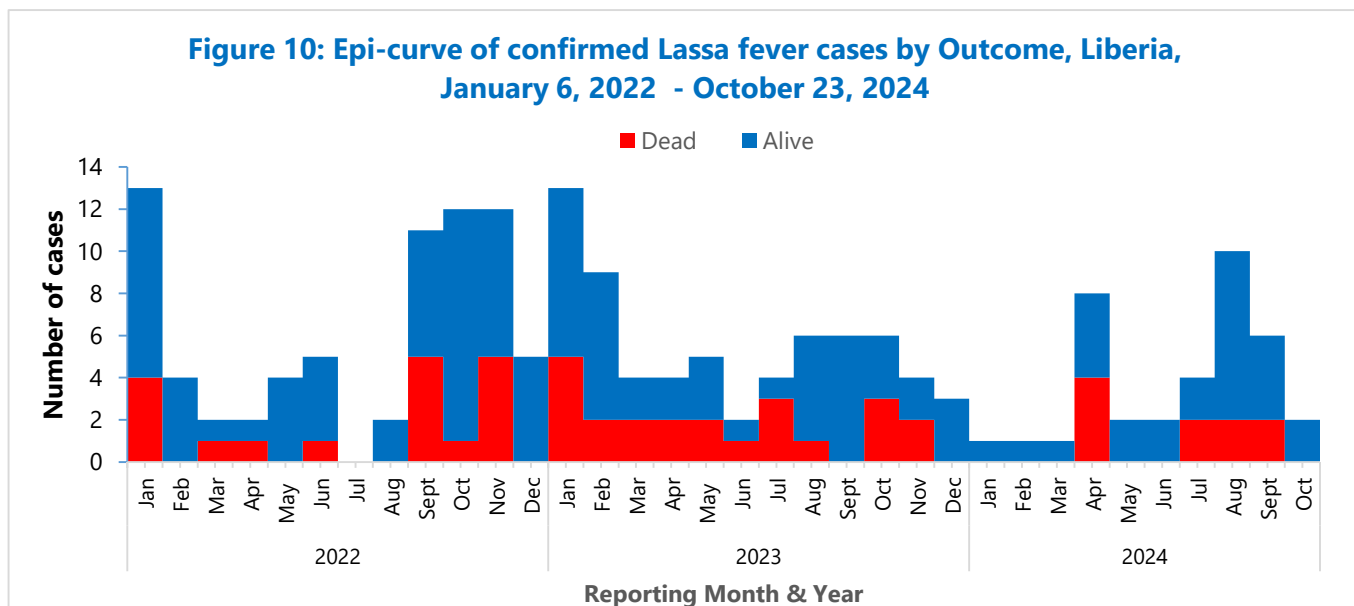
**V. Laboratory**

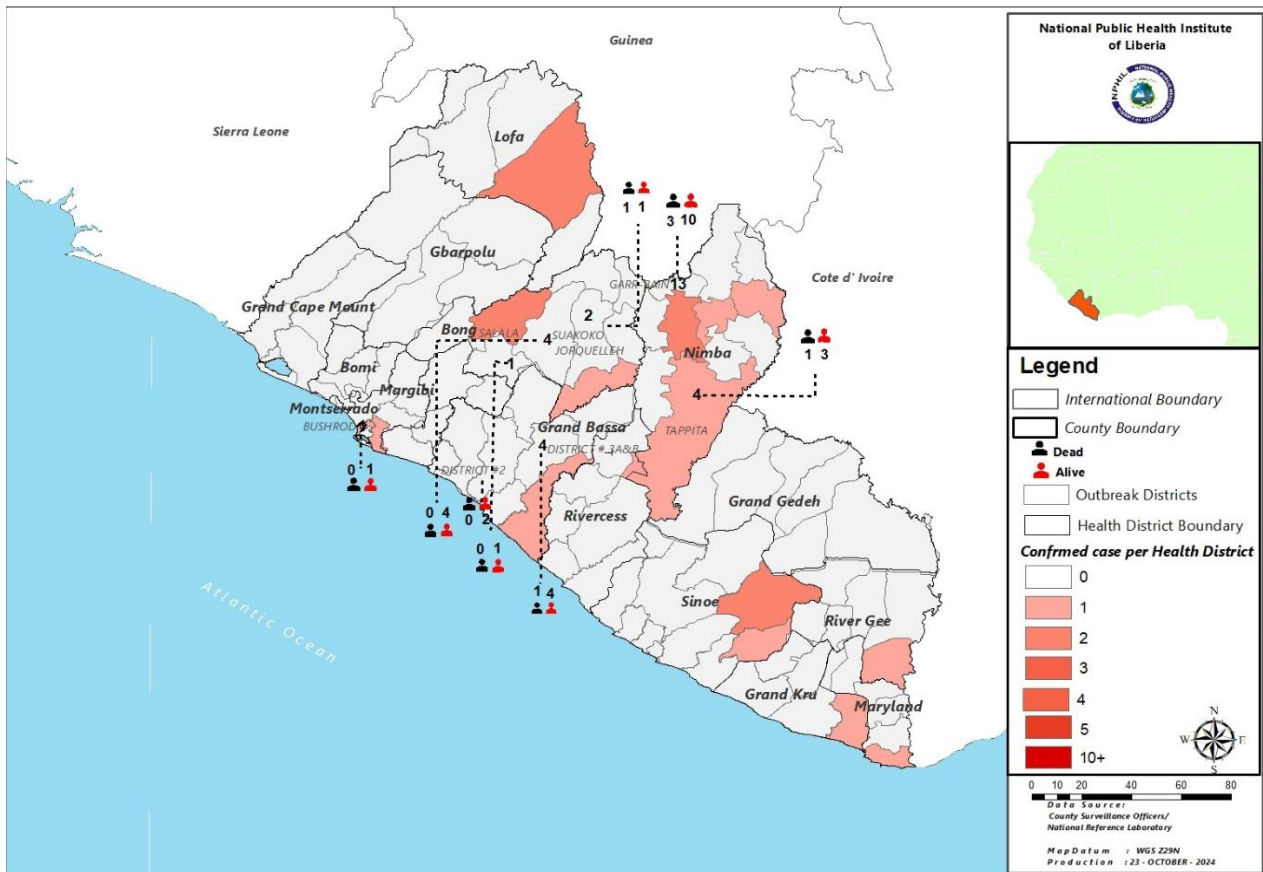
- The National Public Health Reference Laboratory continues testing of Lassa fever samples
- A total of 175 Lassa fever cases have been confirmed since this outbreak

**Table 6. Summary of Lassa fever Outbreak, Liberia, January 6, 2022 – October 23, 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	Completed	Ended
	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	9	0	16	11	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	12	Countdown
	Putupo	25-Nov-22	2	1	0	1	0	100%	14	0	0	0	14	Completed	Ended
<b>Total</b>			<b>531</b>	<b>175</b>	<b>22</b>	<b>54</b>	<b>3</b>	<b>31%</b>	<b>1519</b>	<b>587</b>	<b>62</b>	<b>16</b>	<b>1413</b>		

**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 – 42, 2024**

### Yellow Fever

- ☞ Five (5) suspected cases were reported from Nimba (1), Rivercess (1), Sinoe (1), Grand Kru (1), and Bomi (1) Counties
  - Specimens were collected, 4 received by the Lab and pending testing
- ☞ Cumulatively, ninety-two (92) cases have been reported since Epi-week 1.
  - Proportion of suspected cases with samples collected (89/92) 97%; however, 1 was rejected
  - Proportion of suspected cases with samples tested (86/89) 97% [presumptive positive – 4, negative – 81, indeterminate – 1]

### Dengue

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

### Diarrheal Diseases

#### Acute Bloody Diarrhoea (Shigellosis)

- ☞ Eight (8) cases were reported from Lofa (2), Margibi (2), Sinoe (1), Grand Gedeh (1), Rivercess (1), and River Gee (1) Counties
  - Four (4) specimens were collected and pending testing
- ☞ Cumulatively, three hundred twenty-five (325) cases have been reported since Epi-week 1.
  - 193 specimens were collected, with 149 received at the Lab. Of the 149 specimens, 118 tested negative, 14 Lab-confirmed (*S. flexneri*-4, *S. sonnei*-9, *others*-1), 7 rejected, and 10 pending testing

#### Severe Acute Watery Diarrhoea (Cholera)

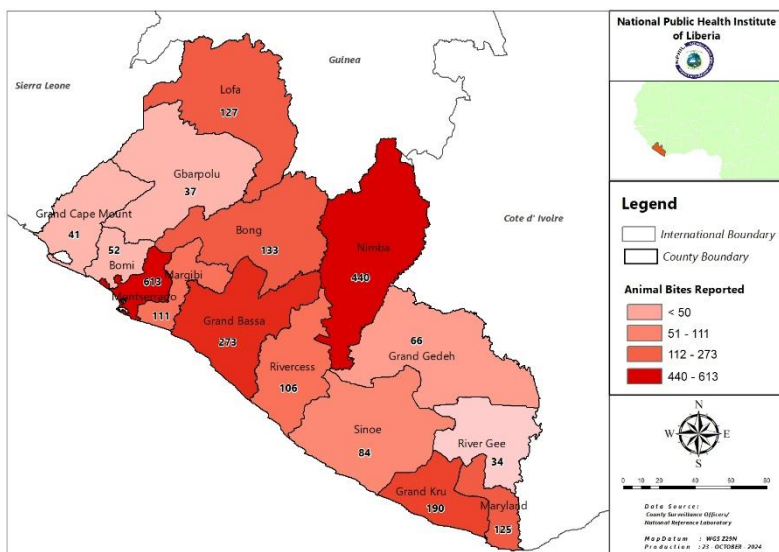
- ☞ Eighteen (18) suspected cases were reported from Lofa (13), Margibi (4), and Rivercess (1) Counties
- ☞ One (1) specimen was collected and pending testing
- ☞ Cumulatively, 222 cases have been reported since Epi-week 1.
  - 132 specimens collected, 99 received at the Lab
  - 74 tested negative, 12 rejected, and 13 pending testing.

## Other Reportable Diseases

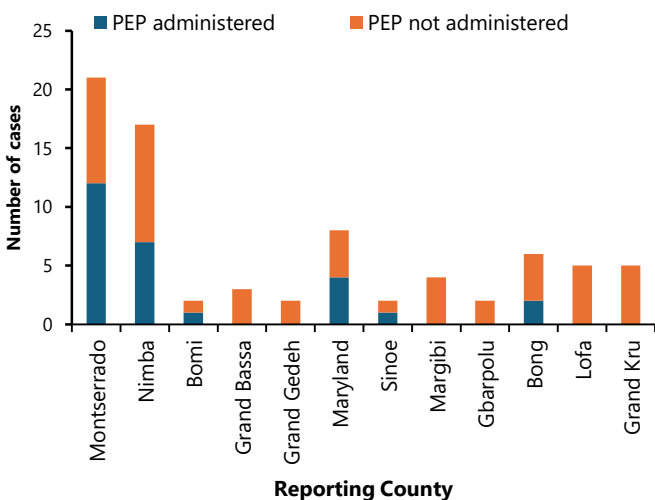
### Animal bite (Human Exposure to Rabies)

- Seventy-three (73) dog bite cases were reported from Montserrado (21), Nimba (17), Bong (6), Lofa (5), Grand Kru (5), Margibi (4), Maryland (4), Grand Bassa (3), Grand Gedeh (2), Sinoe (2), Bomi (2), and Gbarpolu (2) Counties
- Proportion of cases investigated: 29/73 (40%)
- PEP was administered to twenty-seven (27) persons (37%) in Montserrado (12), Nimba (7), Maryland (4), Bong (2), Bomi (1), and Sinoe (1) Counties
- Cumulatively, 2,434 cases have been reported, including 2 deaths (*suspected human rabies*) since Epi-week 1.

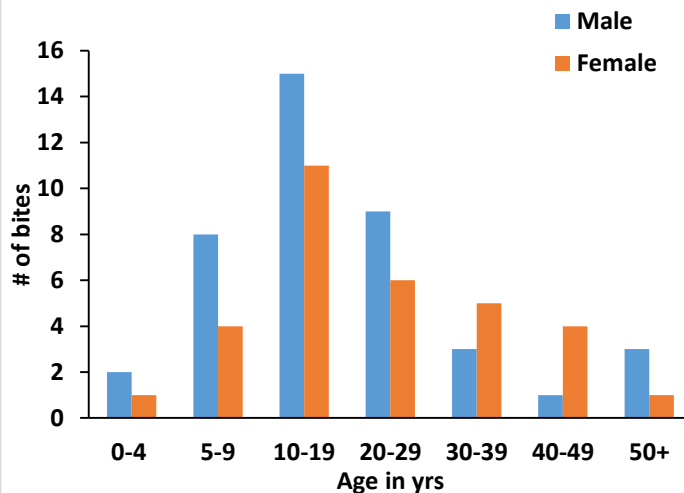
**Figure 12. Geospatial distribution of Human Exposure to Animal Bites Cases by County, Liberia, Epi-week 1 – 42, 2024**



**Figure 14: Human Exposure to Animal Bites (Dog) by County & PEP Administration, Liberia Epi-week 42, 2024**



**Figure 13: Distribution of Animal Bite Cases by Sex, Liberia, Epi-week 42, 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

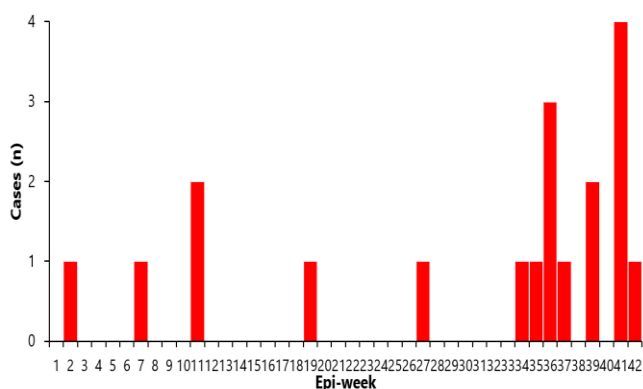
- Twenty-five (25) suspected cases were reported from Maryland (6), Grand Gedeh (4), Grand Kru (3), Lofa (3), River Gee (3), Nimba (3), Montserrado (2), and Gbarpolu (1) Counties
  - Specimens were collected, 5 tested negative, 1 positive and 15 pending testing
- Cumulatively, 254 suspected cases have been reported, 242 samples collected
  - Two hundred four (204) tested: 19 positive, 183 negative and 2 indeterminate



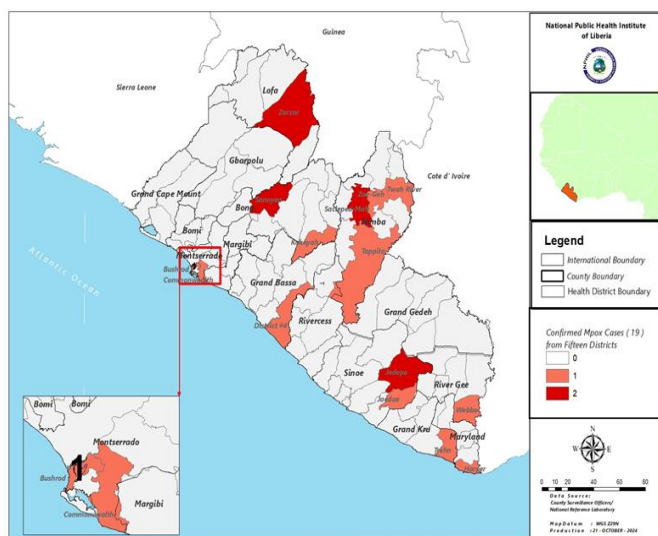
- One (1) new confirmed case reported from Nimba
- Total of 31 contacts under follow-up (12-Bong, 2-Maryland, 10-Grand Bassa, Montserrado-3, Nimba-4)

**Table 7. Confirmed Cases Reported by Counties and Health Districts, Liberia, January – October 23, 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	0	1	1
Montserrado	Bushrod	0	1	1
	Commonwealth	1	0	1
	Saclepea Mah	1	1	2
Nimba	Tappita	0	1	1
	Twah River	0	1	1
	Zoe Geh	0	1	1
River Gee	Webbo	0	1	1
Sinoe	Jaedae	0	1	1
	Jedepo	0	2	2
<b>Total</b>	<b>15</b>	<b>6</b>	<b>13</b>	<b>19</b>



**Figure 15. Weekly epi-curve of Mpox lab-confirmed cases detected in Liberia, Epi-week 1 - 42, 2024**



**Figure 16. Distribution of Lab-confirmed Mpox cases by Health District, Liberia, January 1 – October 23, 2024**

**PUBLIC HEALTH RESPONSE**

**I. Coordination**

- Conduct regular IMS meetings at national and subnational levels in affected counties to direct response efforts
- Production of regular Sitreps and dissemination

**II. Epidemiological Surveillance**

- 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 31 contacts under follow-up (12-Bong, 2-Maryland, 10-Grand Bassa, Montserrado-3, Nimba-4)

**III. Case management**

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

**IV. Laboratory**

- Sequencing results showed Clade IIa
- 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)**

- Ongoing distribution of IPC supplies to the 15 Counties; 2/15 received supplies

**NEXT STEPS**

- Continue active case search in the affected communities

## Other Events of Public Health Importance

### Maternal Mortality

- ☞ Seven (7) deaths were reported from Montserrado (4), Grand Bassa (1), Bong (1), and Lofa (1) Counties
- ☞ Primary causes of death: PPH (3), Sepsis (2), Eclampsia (1), and 1 pending review
- ☞ All of the deaths occurred in public health facility
- ☞ Cumulatively, two hundred fifty-four (254) deaths have been reported since Epi-week 1, of which (233) 92% were reported from health facilities and (21) 8% from communities.

**Table 8. Cumulative Maternal Mortality reporting rate and Annualized Maternal Mortality per 100,000 live births by County, Liberia, Week 1 – 42, 2024**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Montserrado	85821	4	131	51.6	189
Grand Bassa	12875	1	19	7.5	183
Nimba	27301	0	33	13.0	150
Margibi	13467	0	16	6.3	147
Grand Cape Mount	7881	0	9	3.5	141
Maryland	7531	0	7	2.8	115
Bomi	5943	0	5	2.0	104
Grand Gedeh	9690	0	6	2.4	77
Grand Kru	4918	0	3	1.2	76
Lofa	16113	1	10	3.9	77
Rivercess	4083	0	2	0.8	61
Bong	20585	1	10	3.9	60
River Gee	5451	0	2	0.8	45
Sinoe	6646	0	1	0.4	19
Gbarpolu	4169	0	0	0.0	0
<b>Liberia</b>	<b>232474</b>	<b>7</b>	<b>254</b>	<b>100.0</b>	<b>135</b>

- Proportion of deaths reviewed (116/254) 46%.

- ☞ 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

- ☞ Twelve (12) deaths were reported from Montserrado (7), Maryland (2), Grand Kru (1), River Gee (1), and Grand Bassa (1) Counties
- ☞ Primary causes of death were birth asphyxia (6), prematurity (3), sepsis (2), and jaundice (1)
- ☞ All of the deaths occurred in health facility
- ☞ Cumulatively, six hundred sixty-eight (668) deaths have been reported since Epi-week 1.
  - Proportion of deaths reviewed (284/668) 43%
- ☞ 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	2	83	12.4	14.0
Grand Kru	3130	1	26	3.9	10.3
Montserrado	62479	7	403	60.3	8.0
Sinoe	5534	0	17	2.5	3.8
Gbarpolu	4507	0	13	1.9	3.6
Rivercess	3865	0	11	1.6	3.5
Grand Gedeh	6770	0	13	1.9	2.4
River Gee	3610	1	7	1.0	2.4
Margibi	11345	0	16	2.4	1.7
Lofa	14911	0	20	3.0	1.7
Bong	18775	0	24	3.6	1.6
Nimba	24970	0	27	4.0	1.3
Bomi	4546	0	2	0.3	0.5
Grand Bassa	11981	1	5	0.7	0.5
Grand Cape Mount	6868	0	1	0.1	0.2
<b>Liberia</b>	<b>190636</b>	<b>12</b>	<b>668</b>	<b>100.0</b>	<b>4.3</b>

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

- ☞ Nineteen (19) events were reported from Sinoe (4), Lofa (3), Grand Cape Mount (2), Grand Bassa (2), Margibi (2), Rivercess (2), Grand Kru (1), River Gee (1), Bomi (1), and Gbarpolu (1) Counties
- ☞ All reported cases were investigated and classified as non-serious. Related vaccines included: Penta (10), BCG (2), Malaria (1), Pneumo (1), Measles (1), HPV (1), Yellow fever (1)
- ☞ Cumulatively, nine hundred eleven (911) 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 4,753 travelers' were screened from eight (8) designated out of Forty-five (45) official Points of Entry, with incoming travellers accounting for 50% (2385/4,753) (Table 10).

**Table 10. Cross-border activity at the POE for incoming and outgoing travelers, Liberia, Epi-week 42, 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	64	30	34	3	0	0	0	0
	Robert Int'l Airport	3614	1774	1840	3497	0	62	6	0
Seaport	Freeport of Monrovia	84	42	42	84	0	0	0	0
	Buchanan Port	88	44	44	88	0	0	0	0
Ground Crossing	Bo Water Side	447	258	189	441	0	6	0	0
	Ganta	62	30	32	30	0	0	0	0
	Yekepa	165	104	61	23	0	0	0	0
	Loguatu	229	103	126	166	0	0	0	0
<b>Total</b>		<b>4,753</b>	<b>2385</b>	<b>2368</b>	<b>4332</b>	<b>0</b>	<b>68</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

- Disseminated IEC materials to eight designated POE
- Completed genomic sequencing training for nine NRL Lab Staff
- Incidence Action Plan updated in line continental plan
- 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

		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	1	0	0	0	0	0	1	0	0	3	2	0	0	0	7	71	1	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Measles	A	3	0	0	0	3	2	0	0	0	2	12	0	4	1	27	1358	187	
		D	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	18	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
	Yellow fever	A	1	0	0	0	0	1	0	0	0	0	1	1	0	1	5	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	5	0	
		D	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	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Lassa fever	A	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	150	21	
		D	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	3	1	
		D	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	71	1	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrheal Diseases	Acute Bloody Diarrhoea	A	0	0	0	0	1	0	2	2	0	0	0	1	1	1	8	269	8	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Acute Watery Diarrhoea	A	0	0	0	0	0	0	13	4	0	0	0	1	0	0	18	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	Waterborne Mortality	D	0	1	0	1	0	0	1	0	0	4	0	0	0	0	7	214		
	Neonatal Mortality	D	0	0	0	1	0	1	0	0	2	7	0	0	1	0	12	564		
	Adverse Events	A	1	0	1	2	2	0	1	3	2	0	0	2	1	4	19	728	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Unexplained Cluster of Health	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	
Other Reportable Diseases	Mpox	A	0	0	1	0	4	3	3	0	6	2	3	0	3	0	25	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	2	6	2	3	0	2	5	5	4	4	21	17	0	2	73	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	20	2	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Neglected Tropical Diseases	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	
	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	
	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	
<b>TOTAL</b>		<b>8</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>10</b>	<b>11</b>	<b>30</b>	<b>12</b>	<b>12</b>	<b>40</b>	<b>35</b>	<b>5</b>	<b>10</b>	<b>9</b>	<b>202</b>	<b>5890</b>	<b>237</b>	

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

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### 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.