



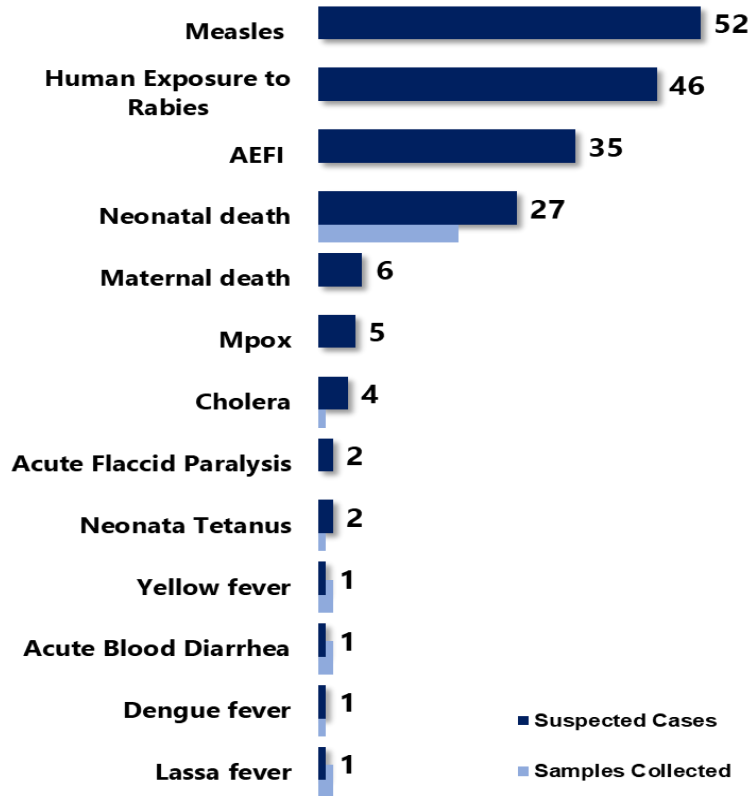
# Liberia IDSR Epidemiology Bulletin

Epi-week 22 (May 27- June 2, 2024)

Country Population: 5,104,413 || Volume 20 Issue 22 || May 27-June 2, 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 183 events of public health importance including 33 deaths reported
- ◆ Completeness and Timeliness of health facility reports were both 98%
- ◆ Ongoing Lassa fever outbreak in four Counties
- ◆ Ongoing Measles outbreak in eight Counties
- ◆ Ongoing Mpox outbreak in Grand Kru County

## Reporting Coverage

Table 1: Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 22, 2024

| County           | Expected Reports from HF* | Reports Received | Received on Time | Completeness (%) | Timeliness (%) |
|------------------|---------------------------|------------------|------------------|------------------|----------------|
| Bomi             | 29                        | 29               | 29               | 100              | 100            |
| Bong             | 66                        | 66               | 66               | 98               | 98             |
| Gbarpolu         | 18                        | 18               | 18               | 100              | 100            |
| Grand Bassa      | 38                        | 38               | 38               | 100              | 100            |
| Grand Cape Mount | 36                        | 36               | 36               | 100              | 100            |
| Grand Gedeh      | 25                        | 25               | 25               | 100              | 100            |
| Grand Kru        | 25                        | 25               | 25               | 100              | 100            |
| Lofa             | 60                        | 60               | 60               | 100              | 100            |
| Margibi          | 62                        | 62               | 62               | 100              | 100            |
| Maryland         | 27                        | 27               | 27               | 100              | 100            |
| Montserrado      | 391                       | 368              | 365              | 100              | 100            |
| Nimba            | 102                       | 102              | 102              | 98               | 98             |
| Rivercess        | 21                        | 21               | 21               | 100              | 100            |
| River Gee        | 21                        | 21               | 21               | 100              | 100            |
| Sinoe            | 41                        | 41               | 41               | 100              | 88             |
| <b>Liberia</b>   | <b>962</b>                | <b>944</b>       | <b>955</b>       | <b>98</b>        | <b>98</b>      |

944 (98%) Health facilities reported IDSR data

98(98%) Health districts reported IDSR data

955(98%) Health facilities reported timely IDSR data

◆ The national target for weekly IDSR reporting is 80%. Health facility timeliness is monitored at the health district level

Legend:



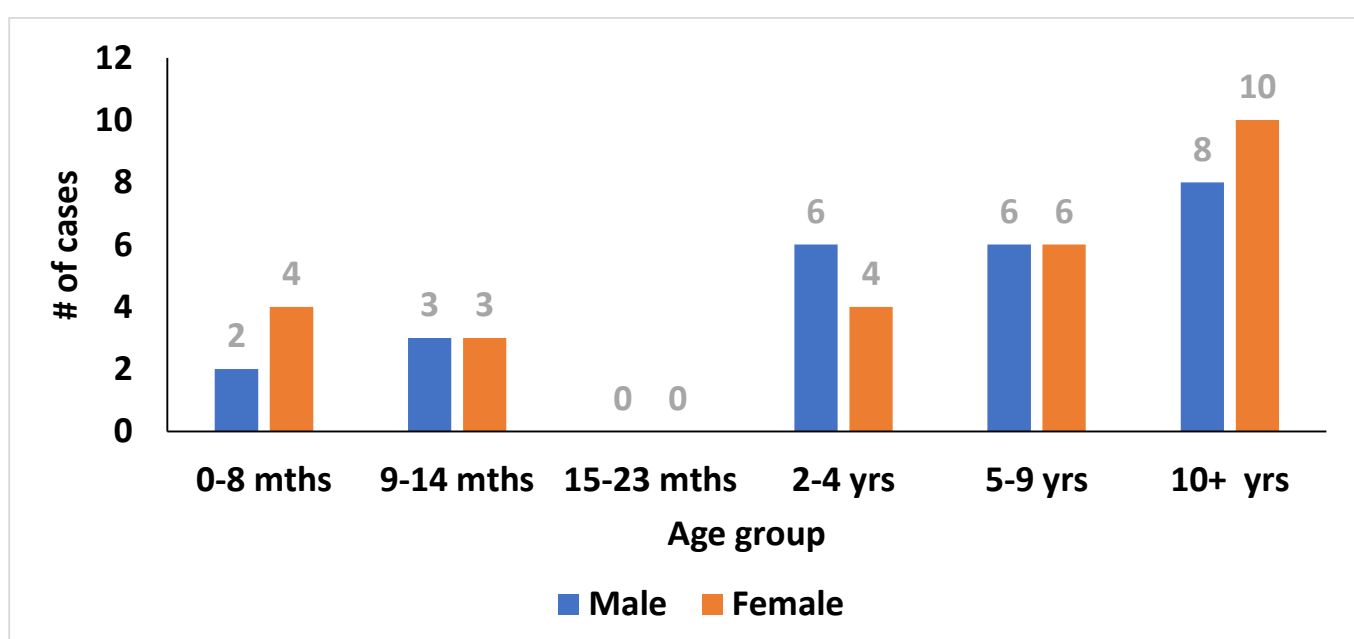
## Vaccine-Preventable Diseases

### Measles

- Fifty-two (52) suspected cases were reported (see table below)
- Twenty (20) specimens were collected 1 confirmed, 2 tested negative 14 pending , and 3 still in county
- The proportion of suspected cases vaccinated (28/52) 54%
- Cumulatively, one thousand eighty-one (1080) cases reported
- Proportion of suspected cases with sample collected (475/1080) 44%
- Proportion of suspected cases with sample tested (369/475) 78% (negative 251, confirmed 118)
- Proportion of negative Measles cases tested for Rubella (237/251) 94% (negative 216, confirmed 21)

**Table 2: Distribution and Vaccination Status of Measles Cases, Liberia, Epi-week 22, 2024**

| County           | # of cases | Vaccinated | Number of Doses Received |           |                     |
|------------------|------------|------------|--------------------------|-----------|---------------------|
|                  |            |            | One Dose                 | Two Doses | Doses Not Indicated |
| Gbarpolu         | 1          | 1          | 1                        | 0         | 0                   |
| Grand Bassa      | 2          | 1          | 0                        | 1         | 0                   |
| Grand Cape Mount | 1          | 2          | 1                        | 0         | 1                   |
| Grand Gedeh      | 10         | 0          | 0                        | 0         | 0                   |
| Grand Kru        | 4          | 2          | 2                        | 0         | 0                   |
| Margibi          | 1          | 0          | 0                        | 0         | 0                   |
| Maryland         | 4          | 1          | 1                        | 0         | 0                   |
| Montserrado      | 1          | 0          | 0                        | 0         | 0                   |
| Nimba            | 16         | 10         | 8                        | 1         | 1                   |
| River Gee        | 7          | 6          | 0                        | 0         | 6                   |
| Sinoe            | 5          | 5          | 4                        | 1         | 0                   |
| <b>Total</b>     | <b>52</b>  | <b>28</b>  | <b>17</b>                | <b>3</b>  | <b>8</b>            |



**Figure 2: Suspected Measles Cases by Age group and Sex, Liberia Epi week 22, 2024**

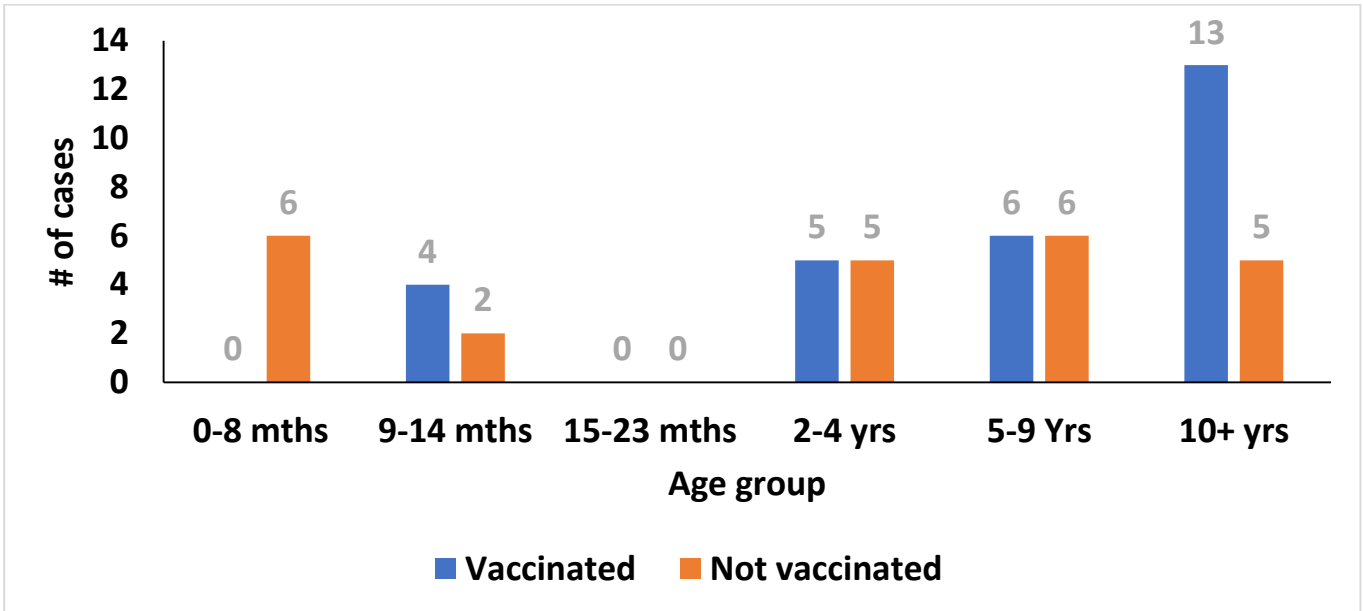


Figure 3: Suspected Measles Cases by Age Group and Vaccination Status, Liberia, Epi-Week 22, 2024

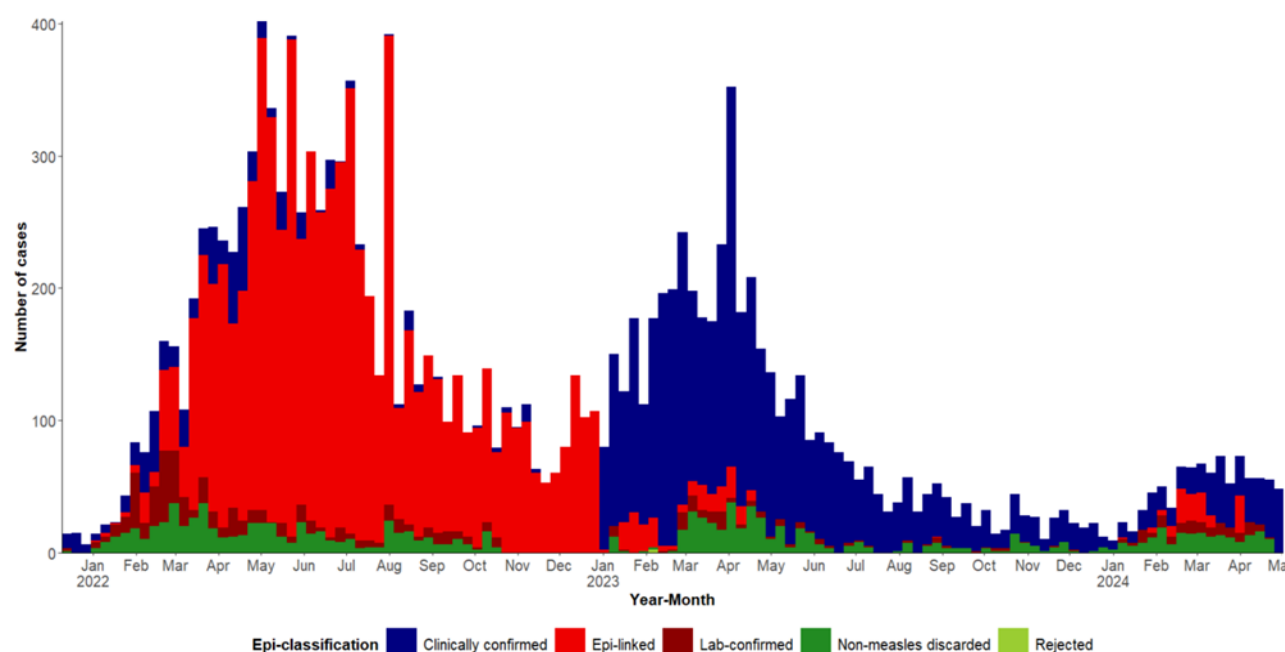
Table 3: Status of Confirmed (lab, clinically confirmed, and epi-linked) Measles Cases by County, Liberia, December 13, 2021- June 2, 2024

Table 1: Cumulative Distribution of Measles Cases and Deaths, December 13, 2021- June 2, 2024

| COUNTY       | CUMULATIVE SUSPECTED CASES | CUMULATIVE CONFIRMED CASES | CLASSIFICATION OF CONFIRMED CASES |              |                       | CLASSIFICATION OF CONFIRMED DEATHS |            |                       | CUMULATIVE DEATHS | CFR (%)    | # CONFIRMED CASES WEEK 21 | # CONFIRMED CASES WEEK 22 | Outbreak Status |
|--------------|----------------------------|----------------------------|-----------------------------------|--------------|-----------------------|------------------------------------|------------|-----------------------|-------------------|------------|---------------------------|---------------------------|-----------------|
|              |                            |                            | Lab confirmed                     | Epi Linked   | Clinically Compatible | Lab confirmed                      | Epi Linked | Clinically Compatible |                   |            |                           |                           |                 |
| Montserrado  | 5,456                      | 5,373                      | 148                               | 1658         | 3,567                 | 3                                  | 61         | 5                     | 69                | 1.3        | 0                         | 0                         | Ended           |
| Nimba        | 1,299                      | 1,274                      | 59                                | 291          | 924                   | 0                                  | 1          | 3                     | 4                 | 0.4        | 14                        | 13                        | Ongoing         |
| Margibi      | 827                        | 803                        | 37                                | 136          | 630                   | 0                                  | 0          | 1                     | 1                 | 0.1        | 0                         | 0                         | Ended           |
| Grand Bassa  | 962                        | 924                        | 41                                | 212          | 671                   | 1                                  | 0          | 6                     | 7                 | 0.9        | 0                         | 0                         | Ended           |
| Lofa         | 361                        | 292                        | 35                                | 66           | 191                   | 0                                  | 0          | 0                     | 0                 | 0          | 0                         | 0                         | Ongoing         |
| Bong         | 603                        | 578                        | 25                                | 21           | 532                   | 0                                  | 1          | 2                     | 3                 | 0.5        | 0                         | 0                         | Ended           |
| Maryland     | 1301                       | 1291                       | 33                                | 368          | 890                   | 0                                  | 0          | 0                     | 0                 | 0          | 0                         | 4                         | Ongoing         |
| Grand Gedeh  | 739                        | 589                        | 65                                | 124          | 400                   | 0                                  | 0          | 0                     | 0                 | 0          | 0                         | 7                         | Ongoing         |
| Sinoe        | 302                        | 247                        | 48                                | 88           | 111                   | 0                                  | 0          | 0                     | 0                 | 0          | 1                         | 3                         | Ongoing         |
| Bomi         | 183                        | 147                        | 37                                | 27           | 83                    | 1                                  | 2          | 2                     | 5                 | 3          | 0                         | 0                         | Ended           |
| Grd Cape Mt  | 215                        | 187                        | 23                                | 18           | 146                   | 0                                  | 2          | 1                     | 3                 | 1.6        | 0                         | 0                         | Ended           |
| Grand Kru    | 1120                       | 1,089                      | 50                                | 199          | 840                   | 0                                  | 0          | 2                     | 2                 | 0.2        | 0                         | 4                         | Ongoing         |
| Gbarpolu     | 73                         | 53                         | 5                                 | 2            | 46                    | 0                                  | 0          | 0                     | 0                 | 0          | 2                         | 0                         | Ongoing         |
| Rivercess    | 112                        | 84                         | 26                                | 54           | 4                     | 0                                  | 1          | 0                     | 1                 | 1.1        | 0                         | 0                         | Ended           |
| River Gee    | 158                        | 125                        | 30                                | 45           | 50                    | 0                                  | 0          | 0                     | 0                 | 0          | 3                         | 4                         | Ongoing         |
| <b>Total</b> | <b>13,711</b>              | <b>13,056</b>              | <b>662</b>                        | <b>3,309</b> | <b>9,085</b>          | <b>5</b>                           | <b>68</b>  | <b>22</b>             | <b>95</b>         | <b>7.8</b> | <b>20</b>                 | <b>35</b>                 |                 |

**Table 4: Status of Confirmed Measles Cases by County, Liberia, December 13, 2021 – June 2, 2024**

| County           | Total Cases   | Active    | Recovery      | Deaths    | # of Districts |
|------------------|---------------|-----------|---------------|-----------|----------------|
| Montserrado      | 5,373         | 0         | 5,304         | 69        | 0/7            |
| Nimba            | 1,274         | 13        | 1,257         | 4         | 4/6            |
| Grand Bassa      | 924           | 0         | 917           | 7         | 0/8            |
| Margibi          | 803           | 0         | 802           | 1         | 0/4            |
| Bong             | 578           | 0         | 575           | 3         | 0/9            |
| Maryland         | 1,291         | 4         | 1287          | 0         | 3/6            |
| Lofa             | 292           | 0         | 292           | 0         | 1/6            |
| Grand Kru        | 1,089         | 4         | 1083          | 2         | 3/5            |
| Grand Cape Mount | 187           | 0         | 184           | 3         | 0/5            |
| Bomi             | 147           | 0         | 142           | 5         | 0/4            |
| Rivercess        | 84            | 0         | 83            | 1         | 0/6            |
| Gbpolu           | 53            | 0         | 53            | 0         | 1/5            |
| Grand Gedeh      | 589           | 7         | 582           | 0         | 1/6            |
| River Gee        | 125           | 4         | 121           | 0         | 1/6            |
| Sinoe            | 247           | 3         | 244           | 0         | 2/10           |
| <b>Total</b>     | <b>13,056</b> | <b>35</b> | <b>12,926</b> | <b>95</b> | <b>16/98</b>   |



**Figure 4: Epi-curve of Measles Cases by Epi-classification, Liberia, 13 December 2021–2 June 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 affected Counties.

### II. Epidemiological Surveillance

- Active case search in affected and surrounding communities ongoing in Grand Kru County.
- Situational reports have been developed and disseminated to stakeholders
- Investigation of all rumors and alerts reported from the community ongoing in Grand Kru County

### III. Case management

- Case management ongoing in affected counties

### IV. Immunization

- Routine immunization ongoing across the country

### V. Infection Prevention and Control (IPC)

- Reinforcing hand washing especially in the affected communities (Grand Kru)
- Distribution of IPC supplies such as gloves, nose masks, and sanitizers to responders (Grand Gru)

### VI. Laboratory

- The National Public Health Reference Laboratory continues testing of Measles samples
- A total of Six hundred six-two (662) cases have been confirmed by the NPHRL from December 13, 2021 – June 5, 2024.

### VII. Risk Communication and Community Engagement

- Continual community advocacy meetings with local leaders and family members in the affected communities (Grand Kru)
- Awareness and health education are ongoing on the spread and prevention of Measles at health facility and community levels in Grand Kru County
- Community engagement meetings in the affected communities ongoing in Grand Kru County

### Challenges

- Limited supply of essential medications and medical supplies for case management in affected counties
- No DSA for responders (Grand Kru)
- No gasoline support (Grand Kru)

### Acute Flaccid Paralysis (AFP)

- ☞ Two (2) cases were reported from Montserrado County
  - All specimens were collected: and shipped
- ☞ Cumulatively, forty-eight (48) cases have been reported
  - Twenty-six (26) tested negative, 2 (NPENT), 20 pending testing

### Neonatal Tetanus

- ☞ Two (2) cases including one (1) attributable death were reported from Grand Kru (1), and Bong Counties

Cumulatively, fourteen (14) cases have been reported including five (5) deaths

## Influenza-Like Illnesses

### Coronavirus Disease (COVID-19)

- ☞ Zero suspected cases reported
- ☞ Cumulatively, two (2) confirmed cases have been reported

### Influenza

- ☞ Zero cases reported
- ☞ Cumulatively, seventy (70) suspected cases reported
  - Seventy (70) specimens were collected: 65 tested negative, 5 specimens were discarded

## Viral Hemorrhagic Fever

### Lassa fever

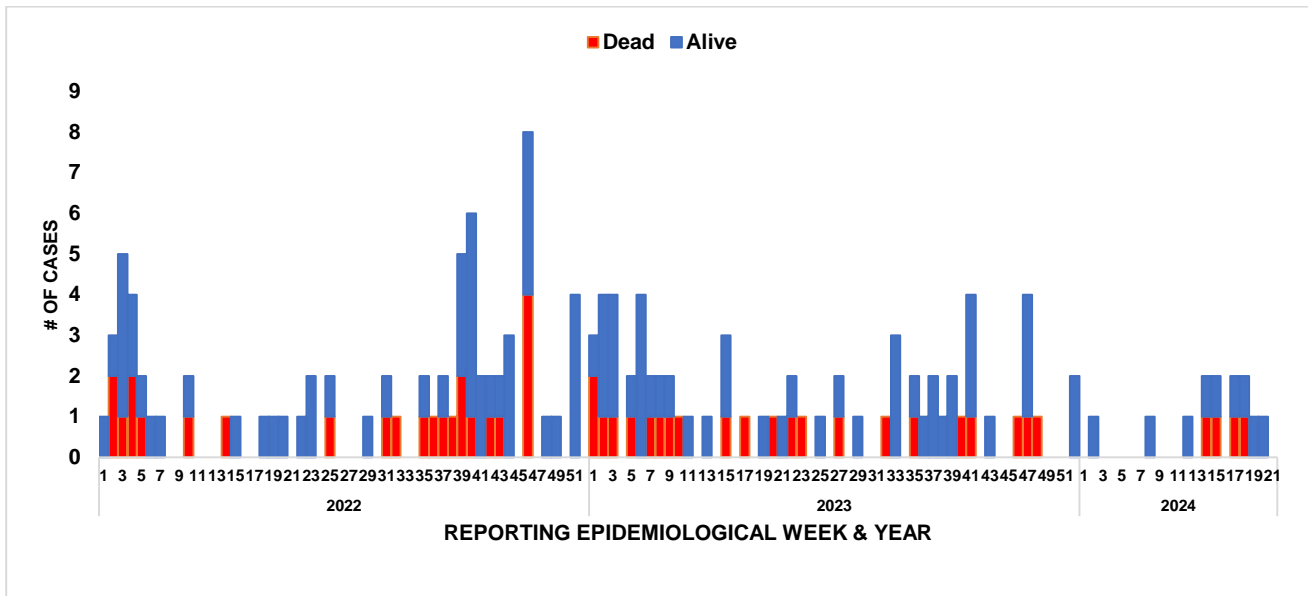
- One (1) suspected case was reported from Grand Bassa County
- Specimen was collected and tested negative
- Cumulatively, ninety-eight (98) suspected cases have been reported
- Proportion of suspected cases with the sample collected (98/98) 100%
- Proportion of suspected cases with sample tested (94/98) 96%
  - Confirmed 13 including 4 deaths, negative 81, and discarded 4
  - Case fatality rate: (4/13) 31%

### Outbreak: January 6, 2022- May 29, 2024

- No new confirmed case reported
- Twelve (12) contacts under 21 days of follow-up
- Total of 114 contacts including 26 HCWs line-listed
- A total of 151 confirmed cases including 45 deaths reported
- Cumulative Case Fatality Rate (CFR): 30% (45/151)
- Four counties are currently in outbreak

**Table 5: Summary of Lassa fever Outbreak, Liberia, January 6, 2022-June 5, 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 Morro      | 27-Nov-23           | 1               | 2               | 0              | 1            | 0              | 50%        | 49             | 0              | 0                     | 0                        | 49                 | Completed         | Ended           |
|              | Central Morro      | 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                 | 15                | Countdown       |
| 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           |
|              | Suakoko            | 23-Feb-24           | 19              | 3               | 0              | 0            | 0              | 0%         | 29             | 14             | 0                     | 0                        | 24                 | 15                | Countdown       |
|              | Salala             | 8-Mar-24            | 2               | 2               | 0              | 1            | 0              | 50%        | 21             | 0              | 0                     | 0                        | 21                 | Completed         | Ended           |
|              | Jorquelleh         | 11-Apr-24           | 2               | 1               | 0              | 1            | 0              | 0%         | 22             | 17             | 0                     | 0                        | 22                 | 41                | Countdown       |
| Grand Bassa  | District 3A&B      | 21-Aug-23           | 87              | 44              | 0              | 10           | 0              | 23%        | 177            | 40             | 40                    | 0                        | 159                | Completed         | Ended           |
|              | Buchanan           | 11-Aug-23           | 2               | 1               | 0              | 1            | 0              | 100%       | 4              | 2              | 0                     | 0                        | 4                  | Completed         | Ended           |
|              | District 3A&B      | 30-Apr-24           | 5               | 3               | 0              | 1            | 0              | 33%        | 12             | 3              | 0                     | 12                       | 0                  | Active            | Ongoing         |
| Nimba        | Sadepea-Mah        | 21-Nov-23           | 4               | 2               | 0              | 1            | 0              | 50%        | 5              | 0              | 0                     | 0                        | 5                  | Completed         | Ended           |
|              | Sarriquellie-Mah   | 6-Feb-23            | 42              | 15              | 0              | 6            | 0              | 40%        | 43             | 35             | 8                     | 0                        | 43                 | Completed         | Ended           |
|              | Tappita            | 20-Nov-23           | 12              | 5               | 0              | 3            | 0              | 60%        | 88             | 39             | 4                     | 0                        | 77                 | Completed         | Ended           |
|              | Bain-Garr          | 1-Jun-23            | 24              | 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                 | 9                 | Countdown       |
| River Gee    | Putupo             | 25-Nov-22           | 2               | 1               | 0              | 1            | 0              | 100%       | 14             | 0              | 0                     | 0                        | 14                 | Completed         | Ended           |
| <b>Total</b> |                    |                     | <b>470</b>      | <b>151</b>      | <b>21</b>      | <b>45</b>    | <b>3</b>       | <b>30%</b> | <b>1238</b>    | <b>436</b>     | <b>61</b>             | <b>12</b>                | <b>1131</b>        |                   |                 |



**Figure 5: Epi-curve of Confirmed Lassa fever cases, Liberia, January 6, 2022- June 5, 2024**

**Public Health Measures**

**I. Coordination**

- The National Public Health Institute of Liberia (NPHIL) and the Ministry of Health (MOH) are providing technical support to the surveillance team with support from partners.

**II. Surveillance**

- Active case search ongoing in affected communities and districts
- Twelve (12) contacts under 21 days follow up
- Weekly sit-reps developed and disseminated to stakeholders

**III. Laboratory**

- The National Public Health Reference Laboratory continues testing of Lassa fever samples
- A total of 151 Lassa fever cases have been confirmed since this outbreak

**IV. Case management and IPC**

- Ribavirin supply in the country is being distributed for treatment of Lf cases to affected counties
- All cases treated with Ribavirin and discharged
- There is no confirmed case currently in isolation

**Challenges**

- Limited supply of IPC materials in affected counties
- Limited logistics (gasoline, communication cards, fuel, etc) to support active case search and contact tracing in the affected county

**Yellow Fever**

- One (1) suspected case reported from Nimba County
- Specimen collected, and pending testing
- Cumulatively, forty-six (46) cases have been reported
- Proportion of suspected cases with samples collected (43/46) 93%, however, 1 sample pending testing, and 1 sample is to be investigated
- Proportion of suspected cases with samples tested (40/43) 93% (negative 39) (1 indeterminate)

**Dengue**

- ☞ One (1) suspected case reported from Maryland County
- ☞ Specimen collected, and pending testing
- ☞ Cumulatively, four (4) suspected cases were reported

## Ebola Virus Disease

- Zero cases reported

## Diarrheal Diseases

### Acute Bloody Diarrhea (Suspected Shigellosis)

- One (1) case was reported from Lofa County
- Specimens was collected and pending testing
- Cumulatively, one hundred ninety-five (195) cases have been reported
  - 105 specimens were collected, 81 reached the Lab
  - 73 tested negative, 5 rejected
  - 1 confirmed ( *S. flexneri* )
  - 1 pending testing

### Severe Acute Watery Diarrhea (Suspected Cholera)

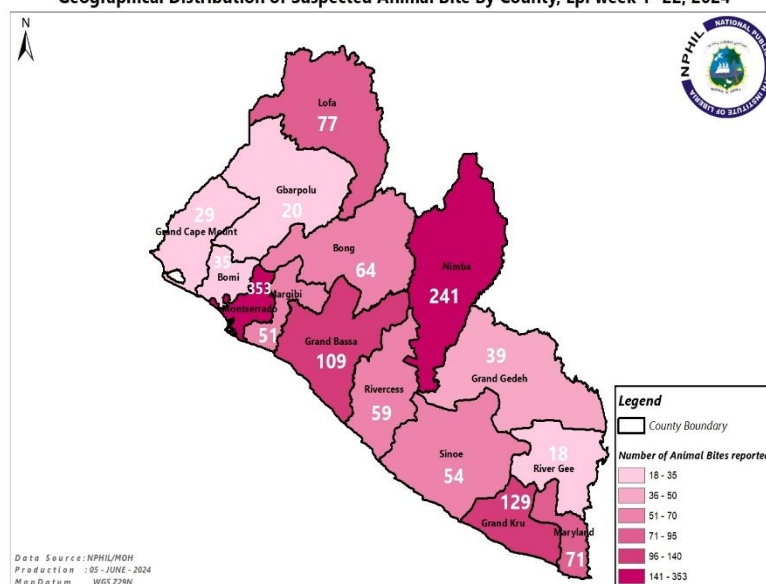
- ☞ Four (4) cases were reported from Margibi (1), Grand Gedeh (1), Nimba (1), and River Gee (1) Counties
  - Three specimens were collected and 2 rejected due to inadequacy , 1 pending investigation
- ☞ Cumulatively, one hundred thirty-seven (137) cases have been reported
  - 78 specimens collected, 50 reached the Lab
  - 42 tested negative, 8 rejected

## Other Reportable Diseases

### Animal bite (Human Exposure to Rabies)

- ☞ Forty-nine (49) animal bite cases including one (1) death in human were reported from Montserrado (20), Nimba (8), Rivercess (4), Grand Bassa (2), Bomi (3), Bong (2), Grand Kru (3), Lofa (2), River Gee (2), Margibi (1), Maryland (1), and Sinoe (1) Counties
- ☞ All bites were attributed to dog
- ☞ Proportion of cases investigated: 4/46 (9%)
- ☞ Proportion of dogs vaccinated: 0/46 (0%)
- ☞ Cumulatively, 1,368 cases have been reported

Geographical Distribution of Suspected Animal Bite By County, Epi week 1- 22, 2024



### Public Health Actions

- PEP Administered to 12 persons (26%): Montserrado (11), and Bong (1) Counties
- Provided health awareness on rabies signs and symptoms and encouraged community members to seek early care at the health facility
- Conducted safe and dignified burial

## Meningitis

- Zero suspected case reported
- Specimen was collected tested negative
- Cumulatively, sixteen (16) suspected cases have been reported
  - Proportion of specimen collected (14/16) 88%, 2 specimens not collected
  - Proportion of specimens tested (13/14) 93% (12 negative, 1 positive) and one did not reach the lab



## Mpox

- Five (5) cases reported from Bomi (3), and Sinoe (2) counties
- Specimens were collected and all tested negative
- Cumulatively, forty-four (44) suspected cases have been reported with 37 samples collected, of which, 5 tested positive, 29 negative, and 1 rejected, 2 pending investigation

## **Outbreak**

- One new confirmed case reported from Trehn District, Grand Kru County
- A total of 20 contacts have been line-listed and being followed up for 21 days
- Cumulatively 2 cases (1 positive, 1 suspected) have been reported since the beginning of the outbreak

### **Situational Context of the Index case**

On May 6, 2024, a 24-year-old female patient (referred to as HH) from Behwan Community in Trehn Health District, Grand Kru County, visited Behwan Health Center. She complained of headache, fever, lack of appetite, generalized body pain, and a rash that began on May 2, 2024, after returning from the farm. The clinician suspected Monkeypox and promptly informed the District Surveillance Officer (DSO). Simultaneously, a whole blood sample was collected and sent to the National Public Health Reference Laboratory (NPHRL) for investigation. The patient received treatment, including Ceftriaxone (1g intravenously twice a day for 3 days), Erythromycin (500mg orally twice a day for 5 days), Paracetamol (1g orally twice a day for 3 days), and a daily multivitamin for 10 days.

On May 10, 2024, the NPHRL confirmed the positive result. The DSO-led team was dispatched to the patient's community on May 13, 2024, to investigate, identify additional cases, compile a list of potential contacts, and implement public health control measures (including IPC and risk assessment). As of May 15, 2024, twenty (20) contacts are under monitoring for signs or symptoms of the disease

### **Public Health Measures**

#### **I. Coordination**

- The district rapid response team has been activated
- Investigation is currently ongoing in the field
- Coordination is ongoing at county and district levels
- First county coordination meeting has been scheduled for Friday, May 17, 2024

#### **II. Epi-surveillance**

- Contact tracing and line listing are ongoing in the affected community and its surroundings
- Twenty (20) contacts have been line-listed undergoing daily monitoring as of May 14, 2024
- Active case search is ongoing in the affected communities and its surroundings

#### **III. Risk Communication & Community Engagement**

- Community engagement meetings with local authorities in the affected communities are ongoing
- Awareness and health education on the spread and prevention of the disease in the affected communities and its surroundings are ongoing

#### **IV. Infection Prevention and Control (IPC)**

- Reinforced hand washing in the affected community
- Inventory on IPC materials are being conducted at the various health facility

## V. Case Management

- Ensured isolations of suspected, probable, and confirmed cases
- Treatment of confirmed case is in progress

## VI. Planned Activities

- Conduct regular radio talk shows to create awareness and health education on the prevention and spread of the disease
- Intensify active case search in the affected communities and their surroundings
- Continue community engagement activities in the affected communities
- Monitor contacts daily for signs and symptoms of Mpox
- Conduct IMS meeting every week

## Challenges

- No gasoline support to intensify response activities
- No feeding support for patients at the treatment units
- No internet and communication support for the response team
- No DSA for responders

### Unexplained cluster of deaths

- Zero cases reported

### An Unexplained Cluster of Health Events

- Zero cases reported

## Other Events of Public Health Importance

### Maternal Mortality

- Six (6) deaths were reported from Montserrado (3), Nimba (2), and Grand Bassa (1) Counties
- Reported causes: Sepsis (2), pending investigation (2), Eclampsia (1), and PPH (1)
- Reporting sites:
  - Health facility (5/6) 83%
  - Community (1/6) 17%
- Cumulatively, one hundred twenty-eight (128) deaths reported
  - Proportion of deaths reviewed (43/128) 34%

### Neonatal Mortality

- Twenty-six (26) deaths were reported from Montserrado (14), Maryland (7), Nimba (2), Grand Kru (1), Grand Gedeh (1), and Grand Bassa (1) Counties
- Reported causes: Birth Asphyxia (16), Sepsis (5), Neonatal tetanus (1) and 3 pending investigation Hypoxic Ischemic (1)
- Reported sites:
  - Health facility (26/26) 100%
- Cumulatively, three hundred and sixty-three (363) deaths reported
  - Proportion of deaths reviewed (94/363) 26%

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

- Thirty-five (35) cases were reported from Sinoe (16), Grand Kru (5), Gbarpolu (2), Nimba (2), Lofa (2), Grand Cape Mount (2), Margibi (1), Maryland (1), Grand Bassa (1), Montserrado (1), River Gee (1), and Bomi (1) Counties
- 32 were classified as non-serious and 3 as serious

- Related vaccine:
  - Penta (17/35) 49%
  - Malaria (10/35) 29%
  - Others (8/35) 23%
- Cumulatively, five hundred twenty-seven (527) events were reported and all were classified as non-serious.

## Neglected Tropical Diseases

### YAWS

- Zero cases were reported

### Buruli Ulcer

- Zero cases were reported

## Border Surveillance Update

A total of 5167 travelers were recorded from eight (8) designated out of Forty-five (45) official POEs with incoming travelers accounting for 52% (2667/5167)

**Table 6: Border activity at the PoE for incoming and outgoing travelers, Liberia, Epi week 22**

| Type of Ports   | Point of Entry       | Weekly total | Arrival      | Departure    | Total travelers with YB | Yellow Book Damage | Card Replaced | Vaccinated against YF & Issued | Alerts detected/ Verified |
|-----------------|----------------------|--------------|--------------|--------------|-------------------------|--------------------|---------------|--------------------------------|---------------------------|
| Airport         | James S. Paynes      | 47           | 16           | 31           | 5                       | 0                  | 0             | 0                              | 0                         |
|                 | Robert Int'l Airport | 4023         | 2050         | 1973         | 3961                    | 0                  | 62            | 0                              | 0                         |
| Seaport         | Freeport of Monrovia | 244          | 122          | 122          | 244                     | 0                  | 0             | 0                              | 0                         |
|                 | Buchanan Port        | 90           | 45           | 45           | 90                      | 0                  | 0             | 0                              | 0                         |
| Ground Crossing | Bo Water Side        | 376          | 218          | 158          | 359                     | 0                  | 0             | 17                             | 0                         |
|                 | Ganta                | 70           | 45           | 25           | 51                      | 0                  | 0             | 0                              | 0                         |
|                 | Yekepa               | 54           | 29           | 25           | 8                       | 0                  | 0             | 0                              | 0                         |
|                 | Loguatu              | 263          | 142          | 121          | 213                     | 0                  | 0             | 0                              | 0                         |
| <b>Total</b>    |                      | <b>5,167</b> | <b>2,667</b> | <b>2,500</b> | <b>4,931</b>            | <b>0</b>           | <b>62</b>     | <b>17</b>                      | <b>0</b>                  |

*Note: Yellow book issue for both arrival and departure; Vaccination coverage for both arrival and departure*

## Public Health Measures

### National level

- Providing remote technical and operational support to counties
- Produced and disseminated situation reports (Lassa fever, Measles, and Mpox outbreaks)
- Produced and disseminated weekly bulletin

### County-level

#### Surveillance

- Publication of situational reports
- Active case search ongoing in affected and surrounding communities

#### Case Management

- Administration of PEP
- Management of measles and Lassa fever 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 |    |
|--|--|----------|----------|----------|-------------|------------------|-------------|-----------|----------|----------|-----------|-------------|-----------|-----------|-----------|-----------|--------------|---------------------|--------------------------|----|
| <b>No. of Expected Health District</b> |  | 4        | 9        | 5        | 8           | 5                | 6           | 5         | 6        | 4        | 6         | 7           | 11        | 6         | 6         | 10        | 98           |                     |                          |    |
| <b>No. of Health District Reported</b> |  | 4        | 9        | 5        | 8           | 5                | 6           | 5         | 6        | 4        | 6         | 7           | 11        | 6         | 6         | 10        | 98           |                     |                          |    |
| <b>Vaccine Preventable Diseases</b>    | Acute Flaccid Paralysis (Suspected Polio)    | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 2           | 0         | 0         | 0         | 0         | 0            | 2                   | 48                       | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
|  | Measles                                      | A        | 0        | 0        | 1           | 2                | 1           | 10        | 4        | 0        | 1         | 4           | 1         | 16        | 0         | 7         | 5            | 52                  | 1,080                    | 50 |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
|  | Neonatal Tetanus                             | A        | 0        | 1        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 1                   | 14                       | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 1        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 1                   | 5                        | 0  |
|  | Yellow fever                                 | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 1         | 0         | 0         | 0            | 1                   | 46                       | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
| <b>Viral Hemorrhagic Fe</b>            | Dengue fever                                 | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 1         | 0           | 0         | 0         | 0         | 0         | 0            | 1                   | 3                        | 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           | 1                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 1                   | 98                       | 2  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 4                        | 0  |
| <b>Influenza-Like</b>                  | COVID-19                                     | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 2                        | 2  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
|  | Influenza Like Illnesses                     | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 40                       | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
| <b>Diarrheal Disease</b>               | Acute Bloody Diarrhoea (Shigellosis)         | A        | 0        | 0        | 0           | 0                | 1           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 1                   | 46                       | 0  |
|  |  | 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           | 1         | 0        | 0        | 1         | 0           | 1         | 0         | 1         | 0         | 0            | 4                   | 137                      | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 0                        | 0  |
| <b>Events of Public Health In</b>      | Maternal Mortality                           | D        | 0        | 0        | 1           | 0                | 0           | 0         | 0        | 0        | 0         | 3           | 2         | 0         | 0         | 0         | 0            | 6                   | 128                      |    |
|  | Neonatal Mortality                           | D        | 0        | 0        | 1           | 0                | 1           | 1         | 0        | 0        | 8         | 14          | 2         | 0         | 0         | 0         | 0            | 27                  | 363                      |    |
|  | AEFI   | A        | 1        | 0        | 2           | 1                | 2           | 0         | 5        | 2        | 1         | 1           | 1         | 2         | 0         | 1         | 16           | 35                  | 527                      | 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                   | 0                        |    |
| <b>Other Reportable Diseases</b>       | Mpox   | A        | 3        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 2         | 5            | 44                  | 2                        |    |
|  |  | 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                   | 20                       | 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)   | A        | 2        | 2        | 0           | 2                | 0           | 0         | 2        | 2        | 1         | 1           | 20        | 7         | 4         | 2         | 1            | 46                  | 1,368                    | 0  |
|  |  | D        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 1                        | 0  |
|  | Meningitis                                   | A        | 0        | 0        | 0           | 0                | 0           | 0         | 0        | 0        | 0         | 0           | 0         | 0         | 0         | 0         | 0            | 0                   | 16                       | 1  |
|  |  | 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                        |    |
| <b>Neglected Tr</b>                    | Buruli Ulcer                                 | 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  |
|  | 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  |
| <b>TOTAL</b>                           |  | <b>6</b> | <b>3</b> | <b>3</b> | <b>8</b>    | <b>0</b>         | <b>13</b>   | <b>0</b>  | <b>4</b> | <b>0</b> | <b>15</b> | <b>0</b>    | <b>31</b> | <b>0</b>  | <b>11</b> | <b>24</b> | <b>183</b>   | <b>3990</b>         | <b>7</b>                 |    |

D = Dead A = Alive

## Notes

- ☞ **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 2017 (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

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### For comments or questions, please contact

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## National Public Health Institute of Liberia (NPHIL)

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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.