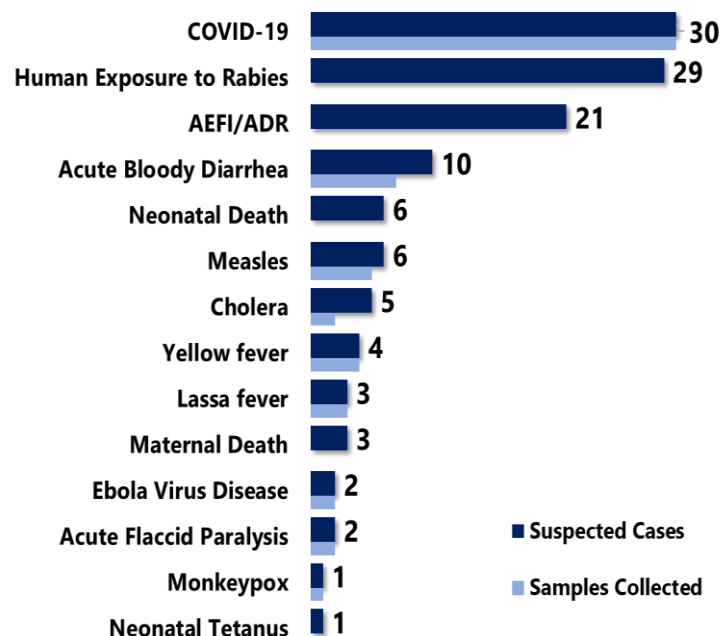


## Highlights

Figure 1: Public Health Events Reported during this week



## Keynotes and Events of Public Health Significance

- ♦ A total of **123** events of public health importance including **11** deaths were reported
- ♦ Completeness and timeliness of health facility reports were both **99% respectively**
- ♦ **Adverse Events Following Immunization** surveillance heightened at all level
- ♦ **Ongoing Lassa fever** outbreak in two counties
- ♦ **Thirty** new confirmed COVID-19 cases recorded from three counties
- ♦ **Ongoing EVD preparedness** initiated at all level

## Reporting Coverage

Table 1: Health Facility Weekly DSR Reporting Coverage, Liberia, Epi week 21, 2021

County	Expected Report	Reports Received	Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	26	26	100	100
Bong	57	57	57	100	100
Gbarpolu	15	15	15	100	100
Grand Bassa	36	36	36	100	100
Grand Cape Mount	34	34	34	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	22	22	22	100	100
Lofa	61	61	61	100	100
Margibi	55	55	55	100	100
Maryland	27	27	27	100	100
Montserrado	367	367	367	100	100
Nimba	91	87	87	96	96
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
<b>Liberia</b>	<b>892</b>	<b>888</b>	<b>888</b>	<b>99</b>	<b>99</b>

888(99%)  
Health facilities reported IDSR data

92(99%)  
Health districts reported IDSR data

888(99%)  
Health facilities reported timely IDSR data

- ♦ The national target for weekly IDSR reporting is 80%. Health facility timeliness is monitored at health district level
- ♦ All counties submitted weekly IDSR reports to national on time

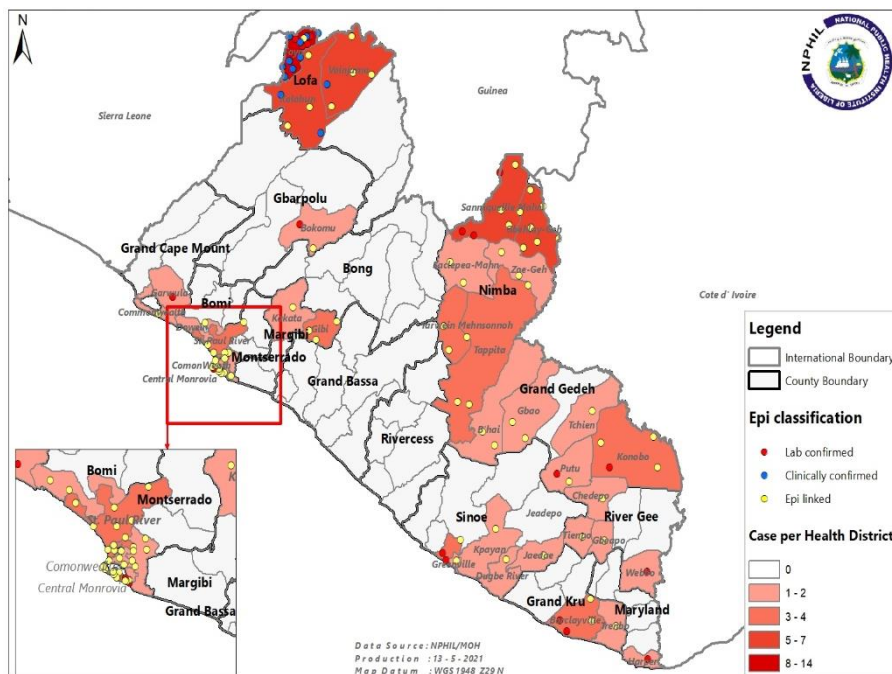
Legend: ≥80 <80

## Vaccine Preventable Diseases

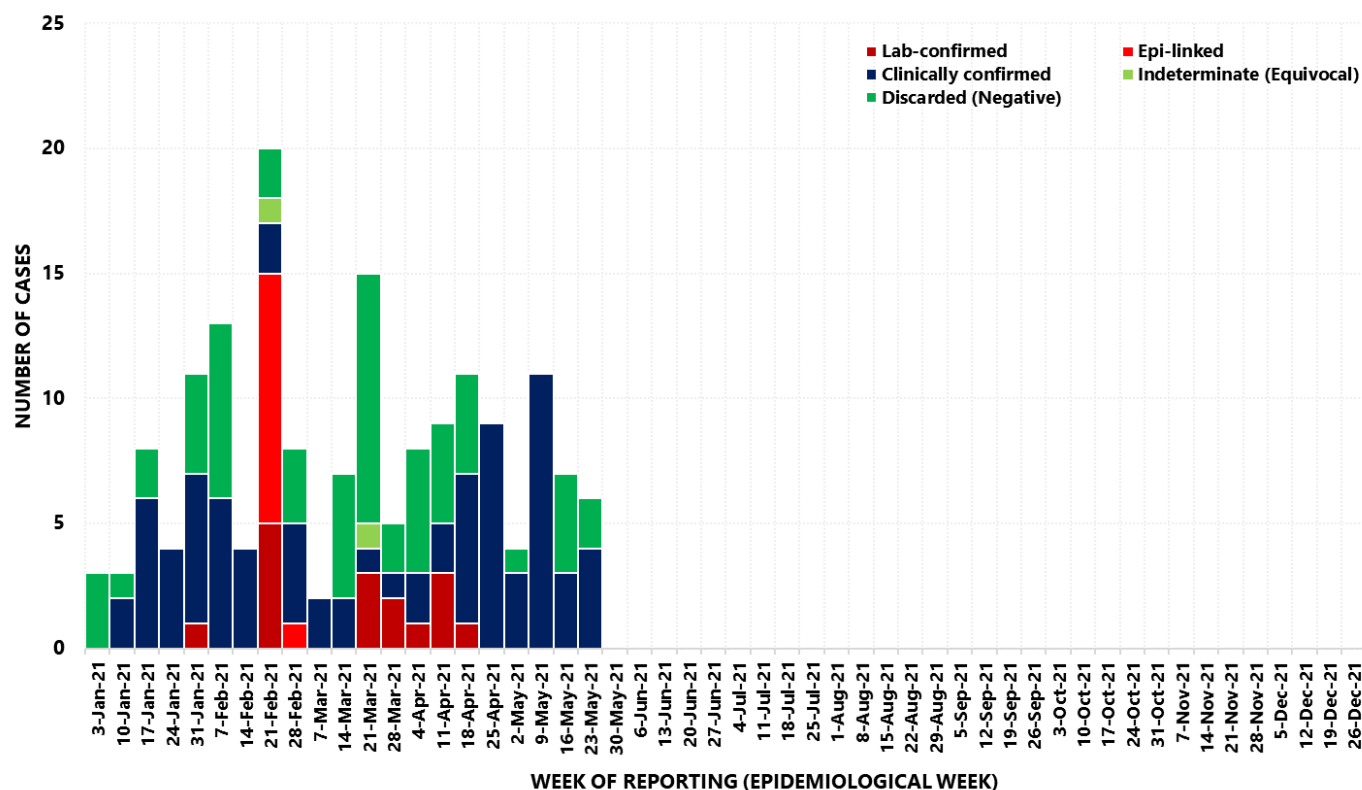
### Measles

- ☞ Six (6) suspected cases were reported from Montserrado (5) and Bong (1) Counties
  - Five (5) specimens were collected, two tested negative and three pending laboratory confirmation
- ☞ Vaccination status among suspected cases
  - Vaccinated: 6 (100%)
  - Not vaccinated: 0 (0%)
- ☞ Age distribution among suspected cases
  - <5 years: 5 (83%)
  - ≥5 years: 1 (17%)
- ☞ Cumulatively, since Epi week one, one hundred sixty-eight (168) suspected cases have been reported
- ☞ Epi-classification is as follows: 107 confirmed (16 lab-confirmed, 80 clinically confirmed, 11 epi-linked), 59 negatives and 2 indeterminate (equivocal)

**Figure 2: Geographical Distribution of Reported Measles Cases by Health Districts, Liberia, Epi week 1 – 21, 2021**



**Figure 3: Measles Cases by Week of Reporting and Epi-classification, Liberia, Epi week 1 - 21, 2021**



## Acute Flaccid Paralysis

- Two (2) cases were reported from Montserrado (1) and Grand Gedeh (1) Counties
- Specimens were collected, shipped and pending testing
- Cumulatively, since Epi week one, 64 Acute Flaccid Paralysis cases have been reported
  - Of the total, 54 specimens have reached the national level and onward shipment process completed (see Table 2)
- Epi-classification is as follows: 34 clinically confirmed, 15 discarded (negative), 4 NPENT and 1 confirmed (cVDPV2)
- As of this week, non-polio AFP rate is at 6.4 per 100,000 population in less than 15 years of age

**Table 2: Non-polio Acute Flaccid Paralysis Rate per 100,000 <15yrs, Liberia, Epi week 1 - 21, 2021**

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	49595	2	0	10.0	2	100%	0	0.0%
Bong	204820	8	3	9.7	8	100%	2	25.0%
Gbarpolu	49162	4	1	20.1	4	100%	0	0.0%
Grand Bassa	130703	5	1	9.5	5	100%	1	20.0%
Grand Cape Mount	74927	2	0	6.6	2	100%	0	0.0%
Grand Gedeh	73848	0	0	0.0	0	0%	0	0.0%
Grand Kru	34151	2	0	14.5	2	100%	0	0.0%
Lofa	162671	8	3	12.2	8	100%	0	0.0%
Margibi	123772	5	3	10.0	5	100%	0	0.0%
Maryland	80145	1	1	3.1	1	100%	0	0.0%
Montserrado	681600	13	6	4.7	13	100%	1	7.7%
Nimba	272406	3	1	2.7	3	100%	0	0.0%
Rivercess	42160	0	0	0.0	0	0%	0	0.0%
River Gee	39381	1	0	6.3	1	100%	0	0.0%
Sinoe	60373	0	0	0.0	0	0%	0	0.0%
<b>Liberia</b>	<b>2079713</b>	<b>54</b>	<b>19</b>	<b>6.4</b>	<b>54</b>	<b>100%</b>	<b>4</b>	<b>7.4%</b>
<b>Non-Polio AFP Rate</b>		<b>&lt;2</b>		<b>≥ 2</b>		<b>Stool adequacy</b>		<b>&lt;80%</b>
								<b>≥80%</b>
						<b>Non-Polio Enterovirus</b>		<b>&lt;10%</b>
								<b>≥10%</b>
								<b>Silent</b>

**Note:** Further investigation of ten AFP cases of the cumulative cases is ongoing to ascertain the status of these cases. Additionally, there is an ongoing outbreak of circulating Vaccine-Derived Poliovirus type 2 (cVDPV2) since December 2020. Round 2 of the nOPV2 immunization to be started at May 28, 2021.

## Neonatal Tetanus

- One case was reported from Montserrado
- Cumulatively, since Epi week one, twelve (12) clinically diagnosed cases have been reported

## Influenza-Like Illnesses

### Coronavirus Disease (COVID-19)

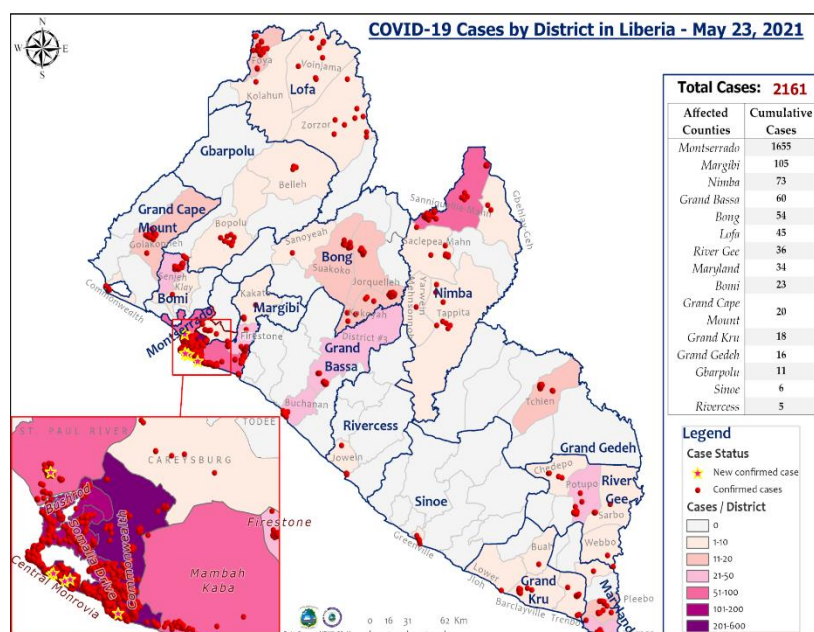
#### Outbreak

- Thirty (30) new confirmed cases were reported from Montserrado (27), Margibi (2) and Nimba (1) Counties with male accounting for 63%
- Since Epi week one, a total of three hundred forty-three (343) confirmed cases have been reported
- Cumulatively, two thousand one hundred sixty-one (2,161) confirmed cases recorded including 86 deaths

## Public Health Actions

- Daily IMS coordination meeting on-going
- Surveillance activities including active case search, contact tracing and case investigation on-going in affected counties using WHO interim guidelines
- Reinforcing hand washing in all public areas (markets, health facilities, public offices, checkpoints etc.)
- Case management ongoing for confirmed cases
- Compulsory testing among outgoing and incoming travelers ongoing

**Figure 3: Geographical Distribution of Laboratory Confirmed COVID-19 Cases by Health Districts, Liberia, Epi week 1 – 21, 2021**



## Viral Hemorrhagic Diseases

### Lassa fever

- 👉 Three (3) suspected case was reported from Montserrado (dead), Bomi and Nimba (dead) Counties
  - Specimens were collected, one tested positive, and two negative
- 👉 Cumulatively, since Epi week one, forty-five (45) suspected cases have been reported including eleven (11) deaths
  - 8 positive, 31 negative and 6 specimens not collected
  - Proportion of suspected cases with sample collected 87% (39/45)
  - Proportion of suspected cases with sample collected and tested 100% (39/39)

*\* Six suspected cases have been delisted due to lack of specimen collection: Bong (5) and Grand Bassa (1) Counties*

### Outbreak

#### Saclepea Mah District, Nimba County

- One new confirmed case
  - A 33-year-old female resident of Saclepea City, Saclepea-Mah District, Nimba County
  - Onset of illness was May 13, presented with fever, abdominal pain, generalized body pain, vomiting and diarrhea
  - She sought medical care at Ganta United Methodist Hospital on May 19, 2021
  - On May 20, the case was isolated and blood specimen collected sent to the National Reference Laboratory
  - Case expired on the same May 20, 2021; lab result came positive on May 24, 2021
  - Fifteen (15) contacts including 5 health workers have been identified and line listed

#### District #3A&B, Grand Bassa County

- No new confirmed case
  - Eleven (11) contacts line listed (3 family members and 8 health worker) have completed 21 days follow up
  - From January to May 18, 2021, a total of 17 suspected cases have been reported with four (4) confirmed cases and one (1) death – CFR = 25%

### Public Health Actions

- 👉 Active case search and community engagement ongoing
- 👉 Continue to air messages on prevention of Lassa fever and rodents control measures in the affected district in Grand Bassa and Nimba Counties

### Yellow fever

- 👉 Four (4) suspected case reported from Grand Bassa, Rivercess, River Gee, and Nimba Counties
  - Specimens were collected and pending testing
- 👉 Cumulatively since Epi week one, forty-six (46) suspected cases have been reported with 21 negative, 20 pending testing and 5 specimens were not collected
  - Proportion of suspected case with sample collected 91% (42/46)
  - Proportion of suspected case with sample collected and tested 50% (21/42)

### Monkeypox

- 👉 One suspected case was reported from Rivercess County
  - Specimen was collected and pending testing
- 👉 Cumulatively since Epi week one, two (2) suspected case reported

### Ebola Virus Disease

- 👉 Two (2) new alerts were reported from Lofa County
  - Specimens were collected and tested negative
- 👉 Cumulatively since Epi week one, fifty-four (54) alerts have been reported with 48 tested negative, 5 not a case and 1 specimen not collected

**Note:** All viral hemorrhagic diseases detected and reported are considered an alert for Ebola Virus Disease since the confirmation of the EVD in Guinea.

## Diarrheal Diseases

### Acute Bloody Diarrhea (Suspected Shigellosis)

- 👉 Ten (10) cases were reported from Grand Gedeh (2), Rivercess (2), Sinoe (2), River Gee (1), Maryland (1), Grand Bassa (1), and Margibi (1) Counties
  - Seven specimens were collected and pending testing
- 👉 Cumulatively, since Epi week one, one hundred ninety-four (194) suspected shigellosis cases have been reported with 83 specimens collected, 29 tested negative and 54 pending laboratory testing

### Severe Acute Watery Diarrhea (Suspected Cholera)

- 👉 Five (5) suspected cases were reported from Maryland (2), Grand Kru (1), River Gee (1), and Lofa (1) Counties
  - Two specimens were collected and pending testing
- 👉 Cumulatively, since Epi week one, sixty-eight (68) suspected cholera cases have been reported

## Other Reportable Diseases

### Animal Bites (Human Exposure to Rabies)

- 👉 Twenty-nine (29) animal bite cases were reported from Montserrado (8), Nimba (5), Grand Bassa (3), Maryland (3), River Gee (3), Lofa (2), Margibi (2), Bong (1), Sinoe (1), and Grand Cape Mount (1) Counties
  - No prophylaxis administered at health facilities
- 👉 Cumulatively, since Epi week one, six hundred sixty (660) animal bite cases have been reported

### Meningitis

- 👉 Zero suspected cases reported
- 👉 Cumulatively, since Epi week one, eighteen (18) suspected cases have been reported

## Events of Public Health Importance

### Maternal Mortality

- 👉 Three (3) deaths were reported from Nimba County

- 👉 Causes of death: Postpartum hemorrhage (3)

- 👉 Health facility accounted for 67% (2) and community 33% (1)

- 👉 Cumulatively, since Epi week one, ninety-one (91) deaths have been reported with the MMR of 113 deaths by 100,000 livebirths and Montserrado accounting for the highest percentage of death (see Table 3)

**Table 3: Cumulative Maternal Deaths Reported and Annualized Maternal Mortality Ratio by Counties, Liberia, Epi week 1 - 21, 2021**

Reporting Counties	Current Week	Cumulative Maternal Death	% of Cumulative Maternal Death	Annualized Maternal Mortality Ratio
Bomi	0	3	3	157
Bong	0	9	10	114
Gbarpolu	0	0	0	0
Grand Bassa	0	5	5	99
Grand Cape Mount	0	1	1	35
Grand Gedeh	0	2	2	70
Grand Kru	0	0	0	0
Lofa	0	4	4	64
Margibi	0	5	5	105
Maryland	0	2	2	65
Montserrado	0	37	41	141
Nimba	3	17	19	162
Rivercess	0	1	1	61
River Gee	0	0	0	0
Sinoe	0	5	5	215
<b>Liberia</b>	<b>3</b>	<b>91</b>	<b>100</b>	<b>113</b>

**Note:** The estimated maternal mortality ratio for 2019-20 LDHS is 742 maternal deaths per 100,000 live births. 4.3% of the overall population



## Neonatal Mortality

- ✎ Six (6) deaths were reported from Margibi (2), Montserrado (1), Grand Bassa (1), Grand Kru (1), and Bong (1) Counties
- ✎ Causes of deaths: Birth asphyxia (3), Neonatal sepsis (2) and Preterm (1)
- ✎ Health facility accounted for 83% (5) while community accounted for 17% (1)
- ✎ Cumulatively, since Epi week one, three hundred twenty-three (323) deaths have been reported

## Unexplained Death

- ✎ Zero (0) deaths were reported
- ✎ Cumulatively, since Epi week one, one (1) death has been reported

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

- ✎ Twenty-one (21) events were reported from Grand Kru (13), Montserrado (7) and Lofa (1)
- ✎ Cumulatively, since Epi week one, seventy-six (76) events have been reported with Lofa County accounting for 33%
  - 34% (26) of the events related to nOPV2
  - 20% (15) of the events related to TCV
  - 29% (22) of the events related to COVID-19
  - 1% (1) of the events related to Hepatitis B
  - 8% (6) of the events related to ADR
  - 8% (6) of the events related to others (BCG, PENTA, Measles)

**Figure 4: Geographical Distribution of Reported AEFI/ADR Events, Liberia, Epi week 1 – 21, 2021**



## Public Health Actions

- ✎ All events for this week were investigated and categorized as non-serious *AEFI* and treated *symptomatically*
- ✎ Active case search for AFP and community engagement ongoing

## Cross Border Surveillance Update

- ✎ A total of 3,948 travelers recorded for the week with incoming travelers accounting for 49% and outgoing travelers 48%
- ✎ Thirty (30) of the travelers were reactive for COVID-19 during this reporting week

**Table 4: Cross border activity at the PoE for Incoming and Outgoing Travelers, Liberia, Epi week 21, 2021**

Type of PoE	Point of Entry	Weekly Total	Arrival	Departure	Yellow Book Issued	Yellow Book Damaged	Card Replaced	Travelers Vaccinated	Alerts Verified	COVID-19 Reactive
Airport	James S. Paynes	46	29	17	0	0	0	0	0	0
	Robert International Airport	1785	1005	780	24	24	0	0	0	30
Seaport	Freeport of Monrovia	180	90	90	0	0	0	0	0	0
	Harper	0	0	0	0	0	0	0	0	0
	Buchanan Port	88	44	44	0	0	0	0	0	0
	Bo Water Side	759	456	303	20	20	0	0	0	0
	Ganta	454	255	199	19	19	0	0	0	0
Land Crossing	Yekepa	65	36	29	5	5	0	0	0	0
	Longuatu	55	27	28	4	4	0	0	0	0
	Wehypo	70	56	14	0	0	0	0	0	0
	Lehgain	68	20	48	0	0	0	0	0	0
	Gahnpa	63	41	22	0	0	0	0	0	0
<b>Total travelers</b>		<b>3,633</b>	<b>2,059</b>	<b>1,574</b>	<b>72</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>

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



# Liberia IDSR Epidemiology Bulletin

2021 Epi-week 21 (May 17 – 23, 2021)



## Public Health Measures

### National level

- ✎ Providing technical, logistical and financial support to counties
- ✎ Heighten surveillance in affected and surrounding communities
- ✎ Publishing situational reports to inform stakeholders

### County level

- ✎ Publication of situational reports to inform stakeholders
- ✎ Active case search ongoing in affected and surrounding communities
- ✎ Contact tracing, health education, and community engagement ongoing in affected communities
- ✎ Case management ongoing for isolated cases

# Appendix

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

Counties			Bomi	Bong	Gbarpolu	Grand Bassa	Grand Cape Mount	Grand Gedeh	Grand Kru	Lofa	Margibi	Maryland	Montserrado	Nimba	Rivercess	River Gee	Sinoe	Total Weekly	Cumulative Reported	Cumulative Lab-confirmed
No. of Expected Health District			4	9	5	8	5	6	5	6	4	6	7	6	6	6	10	93		
No. of Health District Reported			4	9	5	8	5	6	5	6	4	6	7	6	6	6	10	93		
Vaccine Preventable Diseases	Acute Flaccid Paralysis (Suspected Polio)	A	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	64	1
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	A	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	6	168	16
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Neonatal Tetanus	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	12	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
	Yellow fever	A	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	4	46	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	0	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	2	0	0	0	0	0	0	0	2	54	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lassa fever	A	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	34	5
		D	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	11	3
Influenza-Like Illnesses	COVID-19	A	0	0	0	0	0	0	0	0	2	0	27	1	0	0	0	30	343	343
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrheal Diseases	Acute Bloody Diarrhoea (Shigellosis)	A	0	0	0	1	0	2	0	0	1	1	0	0	2	1	2	10	194	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	0	1	1	0	2	0	0	0	1	0	5	68	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Events of Public Health Importance	Maternal Mortality	D	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	91	
	Neonatal Mortality	D	0	1	0	1	0	0	1	0	0	0	1	2	0	0	0	6	323	
	Adverse Events Following Immunization (AEFI)	A	0	0	0	0	0	0	13	1	0	0	7	0	0	0	0	21	75	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	Unexplained Cluster of Health Events/Disease	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Reportable Diseases	Monkeypox	A	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tuberculosis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Human Exposure to Animal bites (Suspected Rabies)	A	0	1	0	3	1	0	0	2	2	3	8	5	0	3	1	29	660	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Meningitis	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	0	0
Unexplained Cluster of Death	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Neglected Tropical Diseases	Buruli Ulcer	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
TOTAL			1	3	0	6	1	4	15	6	5	6	50	13	4	6	3	123	2175	368

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:  $\geq 80\%$ ). Time requirement for weekly IDSR reports:
  - Health facility - required on or before 5:00pm every Saturday to the district level
  - Health district - required on or before 5:00pm every Sunday to the county level
  - County - required on or before 5:00pm 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 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 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 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
- 👉 **Non-serious AEFI** refers to an event that is not 'serious' and does not pose a potential risk to the health of the recipient and should be carefully monitored because they may signal a potentially larger problem with the vaccine or immunization or have an impact on the acceptability of immunization in general.
- 👉 **Serious AEFI** refers to an event that results in death, is life-threatening, requires in-patient hospitalization or prolongation of existing hospitalization, results in persistent or significant disability/incapacity, or is a congenital anomaly/birth defect.

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M. G. Jeuronlon

M.D. Vaye

N. K. Dovillie

### Ministry of Health

### WHO – 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.