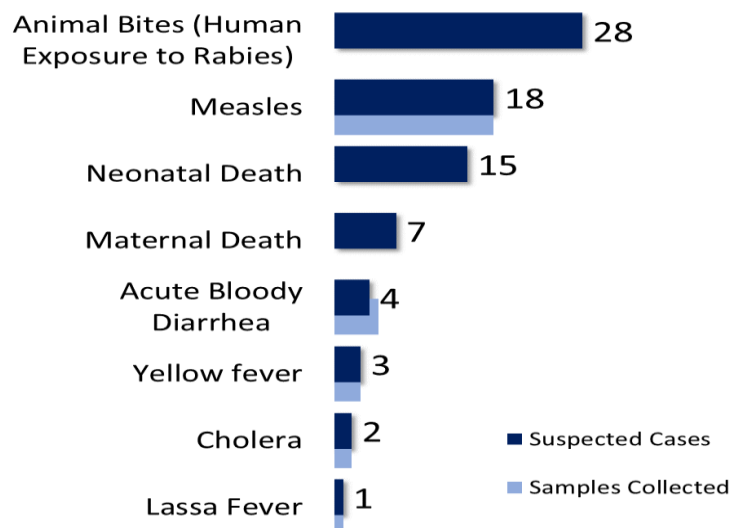


Country Population: 4,433,398 Volume 12, Issue 27 July 1– 7, 2019 Data Source: CSOs from 15 Counties and Lab

## Highlights

**Figure 1: Public Health Events reported during this week**



## Keynotes and Events of Public Health Significance

- ◆ **A total of 78** events of public health importance including **23** deaths were reported
- ◆ **Completeness and timeliness** of health facility reports were both **97%**

## Reporting Coverage

**Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 27, 2019**

County	Number of Expected Report	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	26	26	100	100
Bong	57	57	57	100	100
Gbarpolu	16	16	16	100	100
Grand Bassa	34	34	34	100	100
Grand Cape Mount	34	34	34	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	19	19	19	100	100
Lofa	59	59	59	100	100
Margibi	59	55	55	93	93
Maryland	26	26	26	100	100
Montserrado	351	330	330	94	94
Nimba	84	83	83	99	99
Rivercess	20	18	18	90	90
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
<b>Liberia</b>	<b>866</b>	<b>844</b>	<b>844</b>	<b>97</b>	<b>97</b>

**844(97%)**  
Health facilities reported IDSR data

**93(100%)**  
Health districts reported IDSR data

**844 (97%)**  
Health facilities out of 866 reported timely IDSR data

**Legend:** ≥80 <80

- ◆ The national target for weekly IDSR reporting is 80%
- ◆ Health facility timeliness is monitored at County level
- ◆ All counties submitted their weekly IDSR report on time to the national level

## Vaccine Preventable Diseases

### Measles

- ◆ Eighteen (18) suspected cases were reported from Grand Bassa (6), Nimba (3), Grand Gedeh (2), Gbarpolu (2), Montserrado (2), Lofa (1), Bong (1) and River Gee (1) Counties
  - Ten specimens were collected and tested, and the results show 6 positive, 3 negative, and 1 equivocal
- ◆ Vaccination status:
  - Among suspected cases: 11 (61%) vaccinated, 2 (11%) not vaccinated and 5 (28%) unknown
- ◆ Age distribution
  - Among suspected cases: <1 year: 2 (11%), 1 – 4 years: 6 (33%), ≥5 years: 10 (56%)
- ◆ Cumulatively, since Epi-week one, 1120 suspected cases have been recorded; Of these, 408 have been tested by the laboratory and results showed 110 positive, 290 negative and 8 indeterminate
- ◆ Epi-classification is as follows: 822 (73.4%) confirmed (110 lab confirmed, 633 clinically confirmed, 79 epi-linked), 290 (25.9%) negative, 8 (0.7%) indeterminate (See Table 2, Figure 2)
  - Cumulative vaccination status among lab confirmed: 31 (28.1%) vaccinated, 41 (37.3%) not vaccinated, 38 (34.6%) unknown
  - Age distribution among lab confirmed: <1 year: 10 (9.1%), 1 – 4 years: 15 (13.6%), ≥5 years: 85 (77.3%)
  - Of the 290 specimens tested negative for measles, 210 specimens were tested for rubella, as follows: 102 positive, 99 negative, and 9 indeterminate

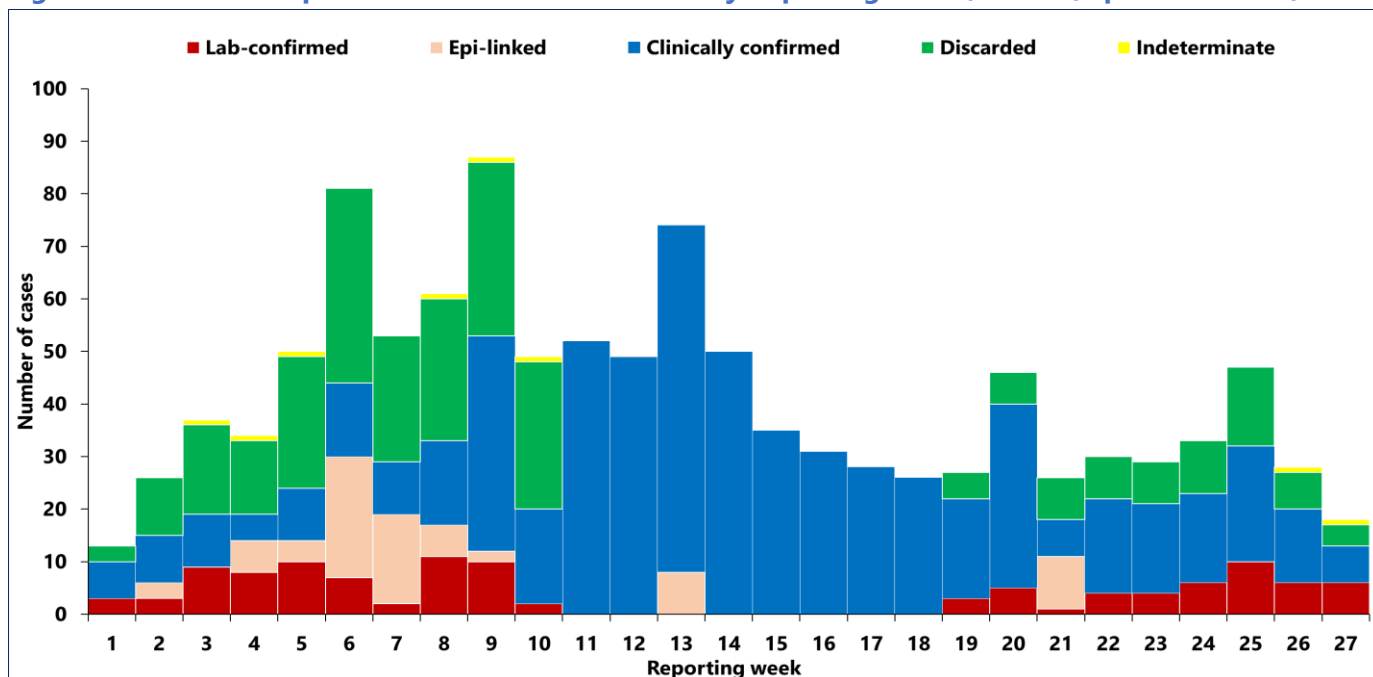
### Public Health Action

- ◆ Case Management, active case search, health education, and community engagement are ongoing in districts that

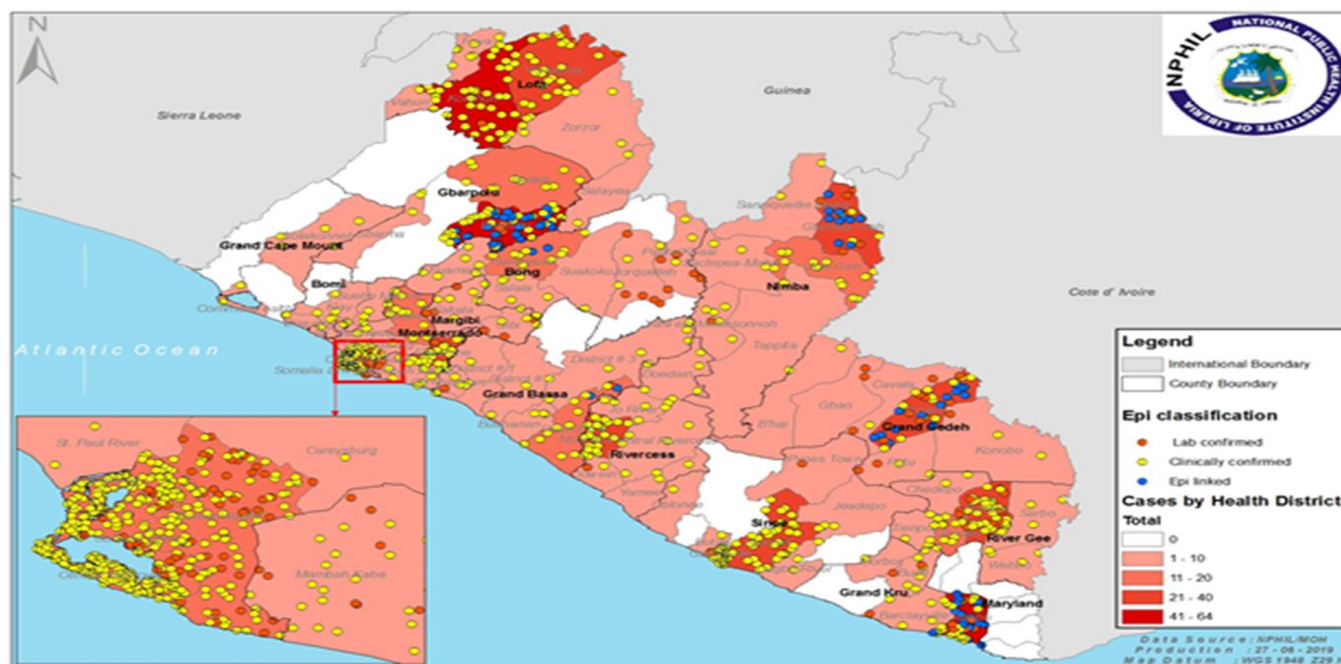
**Table 2. Annualized Non-Measles Febrile Rash Illness Rate by Counties, Liberia, Epi-week 1 - 27, 2019**

Reporting County	Epi-classification						Total	Annualized Non-Measles Febrile Rash Illness Rate
	Lab confirmed	Epi-linked	Clinically confirmed	Indeterminate (Equivocal)	Discarded (Negative)	Pending		
Bomi	1	0	12	0	10	0	23	18.2
Bong	11	2	30	1	16	0	60	7.1
Gbarpolu	5	27	48	0	6	0	86	11.0
Grand Bassa	2	2	35	2	17	0	58	11.8
Grand Cape Mount	1	0	7	0	11	0	19	13.3
Grand Gedeh	21	14	17	0	13	0	65	15.9
Grand Kru	12	20	35	0	10	0	77	26.5
Lofa	7	0	85	0	17	0	109	9.4
Margibi	10	0	35	2	29	0	76	21.2
Maryland	0	0	0	0	1	0	1	1.1
Montserrado	12	4	83	1	65	0	165	8.6
Nimba	7	10	36	1	28	0	82	9.3
River Gee	12	0	59	0	25	0	96	57.4
Rivercess	3	0	48	0	34	0	85	72.9
Sinoe	6	0	103	1	8	0	118	12.0
<b>Liberia</b>	<b>110</b>	<b>79</b>	<b>633</b>	<b>8</b>	<b>290</b>	<b>0</b>	<b>1120</b>	<b>12.6</b>
Target Achieved	>=2		Below Target			<2		

**Figure 2. Cumulative Epi-classification Measles Cases by Reporting weeks, Liberia, Epi-week 1 - 27, 2019**



**Figure 3. Cumulative Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 27, 2019**



### Acute Flaccid Paralysis (Suspected Polio)

- ◆ Zero cases reported this week
- ◆ Cumulatively, since Epi week one, 32 cases have been recorded:
  - Proportion of suspected cases reported with sample collected and tested is 100%
  - Laboratory confirmed (+) zero

### Neonatal Tetanus

- ◆ Zero case was reported



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- ◆ Cumulatively, since Epi-week one, 19 clinically diagnosed cases have been recorded:
  - Attributable clinically confirmed death 33% (n=6)

## Viral Hemorrhagic Diseases

### Ebola Virus Disease (EVD)

- ◆ Zero alert was reported
- ◆ Cumulatively, since Epi-week one, 11 EVD alerts have been recorded with 11 negative results

### Lassa fever

- ◆ One suspected case was reported from Grand Bassa County
  - Specimen was collected and pending laboratory confirmation
  - The suspected case was admitted at Catholic health center and expired the next day. Seven contacts was generated
- ◆ Cumulatively, since Epi week one, 74 suspected cases have been recorded:
  - Proportion of suspected cases reported with sample collected and tested is 100%
  - Laboratory confirmed 30% (n=22)
  - Case fatality in confirmed cases is 36% (n=8)
  - Epi-classification is as follows: 22 positive, 39 negative and 13 pending laboratory confirmation

### Yellow fever

- ◆ Three (3) suspected cases were reported from Grand Kru (2) and Grand Bassa Counties
  - Specimens were collected and pending testing
- ◆ Cumulatively, since Epi-week one, 61 suspected cases have been recorded:
  - Zero laboratory confirmed
  - Proportion of suspected cases reported with sample collected and tested is 86% (n=50)
  - Zero attributable death

### Monkeypox

- ◆ Zero suspected case was reported
- ◆ Cumulatively, since Epi week one, 50 suspected cases have been reported and 12 specimens have been shipped to Atlanta for confirmation

### Meningitis

- ◆ Zero suspected case was reported
- ◆ Cumulatively, since Epi-week one, 30 suspected cases have been recorded, 28 tested negative, and 2 specimens were not collected from Lofa and Maryland

## Events of Public Health Importance

### Maternal Mortality

- ◆ Seven (7) deaths were reported from Maryland (2), one each from Grand Cape Mount, Lofa, Montserrado, River Gee, and Bong Counties
- ◆ Causes of death: Postpartum Hemorrhage (5), Eclampsia (1), Sepsis (1)
- ◆ Reporting sites: health facilities 7 (100%)
- ◆ Cumulatively, since Epi-week one, 153 maternal deaths have been recorded and the top three causes are: 75 (49%) postpartum hemorrhage, 21 (13.7%) eclampsia, and 13 (8.5%) anemia (*See Table 3*)

**Table 3. Annualized and Cumulative Maternal Death Reported by County, Liberia, Epi-week 1 - 27, 2019**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Maryland	7347	2	11	7	288
Grand Gedeh	6770	0	10	7	284
Bong	18775	1	21	14	215
Margibi	11345	0	11	7	187
Gbarpolu	4507	0	4	3	171
Nimba	24970	0	21	14	162
Rivercess	3865	0	3	2	149
Montserrado	62479	1	46	30	142
Grand Cape Mount	6868	1	5	3	140
Sinoe	5534	0	4	3	139
Grand Bassa	11981	0	7	5	113
River Gee	3610	1	2	1	107
Bomi	4546	0	2	1	85
Lofa	14911	1	5	3	65
Grand Kru	3130	0	1	1	62
<b>Liberia (National)</b>	<b>190636</b>	<b>7</b>	<b>153</b>	<b>100</b>	<b>155</b>

### Neonatal Mortality

- ◆ Fifteen (15) deaths were reported from Montserrado (7), Bong (2), Nimba (2), one each from Gbarpolu, Grand Gedeh, Lofa, and Margibi Counties
- ◆ Causes of deaths: Asphyxia (11), Sepsis (2), and Preterm (2)
- ◆ Reported sites: health facilities 15 (100%)
- ◆ Cumulatively, since Epi-week one, 404 neonatal deaths have been reported (*See Table 4*) and the top three causes are: asphyxia 198 (48.8%), sepsis 144 (35.5%) and preterm 31 (7.6%)

**Table 4. Annualized and Cumulative Neonatal Death Reported by County, Liberia, Epi-week 1 - 27, 2019**

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	0	24	6	14.8
Grand Gedeh	6770	1	28	7	8.0
Rivercess	3865	0	10	2	5.0
Margibi	11345	1	29	7	4.9
Bong	18775	2	47	12	4.8
Montserrado	62479	7	175	43	5.4
Maryland	7347	0	15	4	3.9
River Gee	3610	0	7	2	3.7
Sinoe	5534	0	9	2	3.1
Lofa	14911	1	18	4	2.3
Gbarpolu	4507	1	7	2	3.0
Bomi	4546	0	6	1	2.5
Nimba	24970	2	24	6	1.9
Grand Cape Mount	6868	0	2	0	0.6
Grand Bassa	11981	0	3	1	0.5
<b>Liberia (National)</b>	<b>190636</b>	<b>15</b>	<b>404</b>	<b>100</b>	<b>4.1</b>

## Other Reportable Diseases

### Animal Bites (Human Exposure to Rabies)

- ◆ Twenty-eight (28) cases were reported from Montserrado (10), Margibi (4), Bong (3), Nimba (3), Bomi (2), Sinoe (2), one each from Rivercess, River Gee, Maryland, and Grand Kru Counties
- ◆ Cumulatively, since Epi-week one, 973 cases of animal bites have been recorded including five deaths

### Acute Bloody Diarrhea (Suspected Shigellosis)

- ◆ Four (4) cases were reported from Grand Cape Mount, Montserrado, Rivercess and Nimba Counties
  - Three specimens were collected and tested; two positive and one negative
- ◆ Cumulatively, since Epi-week one, 146 acute bloody diarrhea cases have been recorded with 111 stool specimens collected and 82 tested. Result: 13 positive and 69 negative

### Severe Watery Diarrhea (Cholera)

- ◆ Two (2) cases were reported from Grand Bassa and Grand Kru Counties
  - Two specimens were collected and pending laboratory confirmation
- ◆ Cumulatively, since Epi-week one, 72 suspected cases have been recorded with 57 specimens collected out of which; 48 negative and 0 positive

### Unexplained Cluster of Health Events

- ◆ Zero case reported
- ◆ Cumulatively, since Epi-week one, 11 cases of unexplained death has been reported

## Points of Entry

- ◆ Zero IDSR alert detected and verified
- ◆ A total of 4860 travelers were recorded for the week (*See Table 5*)

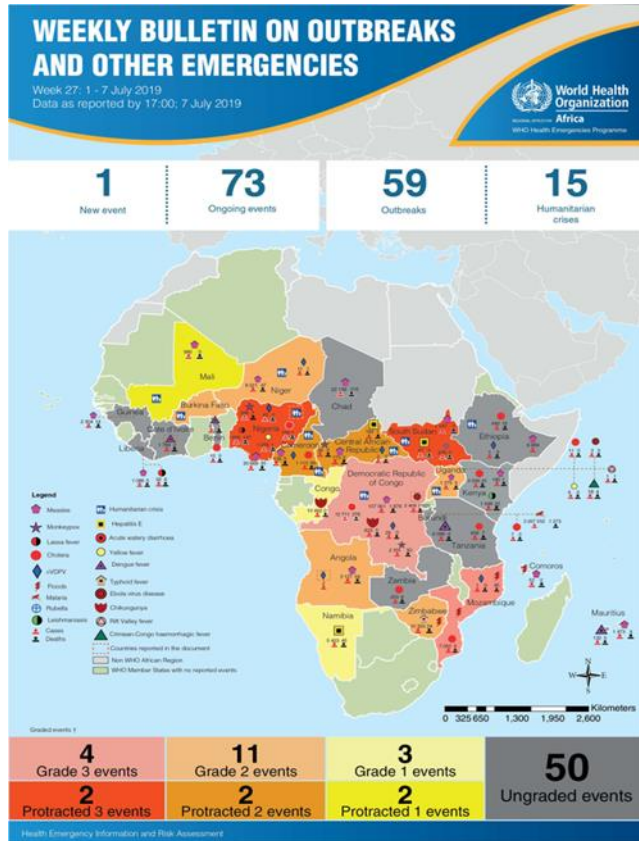
**Table 5. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 27, 2019**

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Yellow Book Issued	Yellow Book Damage/Card Replaced	Travelers Vaccinated	IDSR Alerts	Alerts Verified
<b>Airport</b>	James S. Paynes	105	56	49	0	0	0	0	0
	Robert International Airport	3331	1656	1675	51	30	21	0	0
<b>Seaport</b>	Freeport of Monrovia	158	79	79	0	0	0	0	0
	Buchanan Port	82	41	41	0	0	0	0	0
<b>Ground Crossing</b>	Bo Water Side	477	139	338	35	35	0	0	0
	Ganta	536	244	292	20	20	0	0	0
	Yekepa	57	23	34	0	0	0	0	0
	Loguatu	114	75	39	8	8	0	0	0
<b>Total Traveler for the Week</b>		<b>4860</b>	<b>2313</b>	<b>2547</b>	<b>114</b>	<b>93</b>	<b>21</b>	<b>0</b>	<b>0</b>

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

## AFRO Public Health Events

The National Public Health Institute of Liberia continues to monitor acute public health emergencies and outbreaks occurring in the African Region in order to ensure preparedness and preventive measures are implemented



During this week, 73 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Circulating vaccine-derived polio virus type 2 in Angola
- Ebola virus disease in Democratic Republic of the Congo
- Dengue fever in Cote d'voire
- Humanitarian Crisis in North-east Nigeria

## Public Health Measures

### National level

- ◆ Providing technical remote support to Counties
  - Heighten surveillance in affected and surrounding communities
  - **URGENCY! URGENCY! URGENCY!**
    - There is no ribavirin to treat Lassa fever patients in Liberia as of June 30, 2019
    - There is no human rabies vaccine in country to provide post exposure prophylaxis
  - **ACTION! ACTION! ACTION!**
    - NPHIL requested WHO since April, 2019 for ribivarin;
    - NPHIL is sourcing money from Finance Ministry to procure rabies vaccine

### County level

- ◆ Case management for all reported cases ongoing
- ◆ Active case searches ongoing in affected communities for Measles and Lassa fever



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## 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
- ◆ *Case Fatality Rate (CFR)* is the proportion of deaths among confirmed cases



Appendix 1: Summary of immediately reportable diseases, conditions, and events by County during Epi week 27 and cumulative report, Liberia, 2019

Counties	No. of Expected Health District		Acute Flaccid Paralysis (Suspected Polio)		Acute Bloody Diarrhoea (Shigellosis)		Severe Acute Watery Diarrhoea (Cholera)		Human Exposure to Animal bites (Suspected Rabies)		Lassa fever		Measles		Meningitis		Maternal Mortality		Neonatal Mortality		Neonatal Tetanus		Ebola Virus Disease		Yellow fever		Monkeypox		Dengue fever		Buruli Ulcer		MDR Tuberculosis		Yaws		Unexplained Cluster of deaths		Unexplained Cluster of Health Events/Disease		Other Diseases/Events	
	No. of Health District	Reported	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D				
Bomi	4	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bong	9	9	0	0	0	0	0	0	3	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gbarpolu	5	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Bassa	8	8	0	0	0	0	1	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Cape Mount	5	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Gedeh	6	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Kru	5	5	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lofa	6	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margibi	4	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maryland	6	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monterrado	7	7	0	0	1	0	0	0	10	0	0	0	2	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nimba	6	6	0	0	1	0	0	0	3	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rivercess	6	6	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
River Gee	6	6	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sinoe	10	10	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Weekly</b>	<b>93</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Cumulative Reported</b>			<b>32</b>	<b>0</b>	<b>146</b>	<b>0</b>	<b>72</b>	<b>0</b>	<b>973</b>	<b>0</b>	<b>63</b>	<b>11</b>	<b>1120</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>153</b>	<b>404</b>	<b>19</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Cumulative Lab-confirmed</b>			<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>8</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

D = Dead  
A = Alive

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