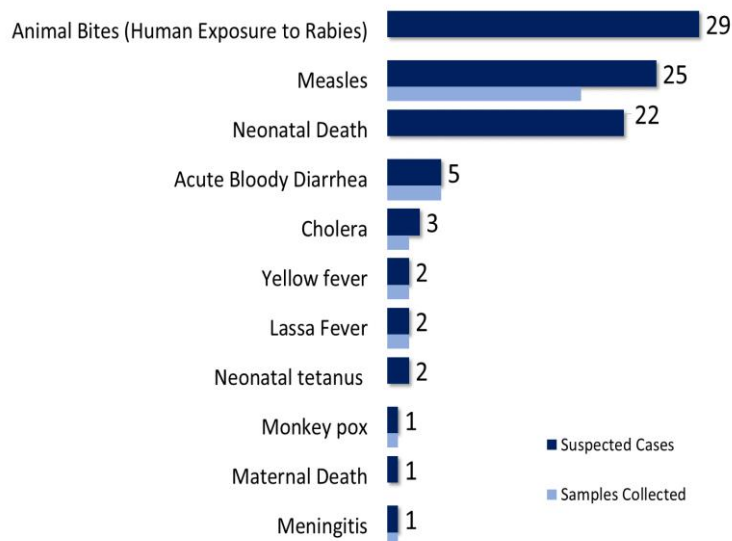


Country Population: 4,433,398 Volume 12, Issue 26 June 24 – 30, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1: Public Health Events reported during this week



Keynotes and Events of Public Health Significance

- ◆ **A total of 93** events of public health importance including **24** 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 26, 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
Liberia	866	844	844	97	97

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

- ◆ Twenty-five (25) suspected cases were reported from Sinoe (5), Lofa (5), Margibi (3), Montserrado (3), Grand Cape Mount (2), Grand Kru (2), River Gee (1), Rivercess (1), Grand Gedeh (1), Grand Bassa (1), and Bong (1) Counties
 - Sixteen (16) specimens were collected, 11 tested, and 5 pending arrival at Laboratory
 - 5 positive, 5 negative and 1 equivocal
- ◆ Vaccination status:
 - Among suspected cases: 11(44%) vaccinated, 4 (16%) not vaccinated and 10 (40%) unknown
- ◆ Age distribution
 - Among suspected cases: <1 year: 2 (8%), 1 – 4 years: 9(36%), ≥5 years: 14 (56%)
- ◆ Cumulatively, since Epi-week one, 1099 suspected cases have been recorded; Of these, 394 have been tested by the laboratory and results showed 103 positive, 284 negative and 7 indeterminate
- ◆ *Epi-classification is as follows: 806 (73.3%) confirmed (103 lab-confirmed, 624 clinically confirmed, 79 epi-linked), 284 (25.8%) negative, 6 (0.6%) indeterminate, and 2 (0.2%) pending (See Table 2, Figure 2)*
 - Cumulative vaccination status among lab confirmed: 30 (29.1%) vaccinated, 39 (7.9%) not vaccinated, 34 (33%) unknown
 - Age distribution among lab confirmed: <1 year: 9 (8.7%), 1 – 4 years: 14 (13.6%), ≥5 years: 80 (77.7%)
 - Of the 279 specimens tested negative for measles, 199 specimens were tested for rubella, as follows: 98 positive, 92 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 - 26, 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	18.9
Bong	10	2	30	1	15	0	58	6.9
Gbarpolu	4	27	48	0	5	0	84	9.5
Grand Bassa	2	2	30	1	17	0	52	12.2
Grand Cape Mount	1	0	7	0	11	0	19	13.8
Grand Gedeh	18	14	17	0	13	0	62	16.5
Grand Kru	12	20	35	0	10	0	77	27.5
Lofa	7	0	85	0	16	0	108	9.2
Margibi	10	0	36	2	28	0	76	21.2
Maryland	0	0	0	0	1	0	1	1.2
Montserrado	11	4	82	1	64	1	163	8.8
Nimba	7	10	34	1	27	0	79	9.3
River Gee	11	0	59	0	25	0	95	59.6
Rivercess	3	0	47	0	34	1	85	75.7
Sinoe	6	0	102	1	8	0	117	12.4
Liberia	103	79	624	7	284	2	1099	12.8
Target Achieved	≥2		Below Target				<2	

Figure 2. Cumulative Epi-classification Measles Cases by Reporting weeks, Liberia, Epi-week 1 - 26, 2019

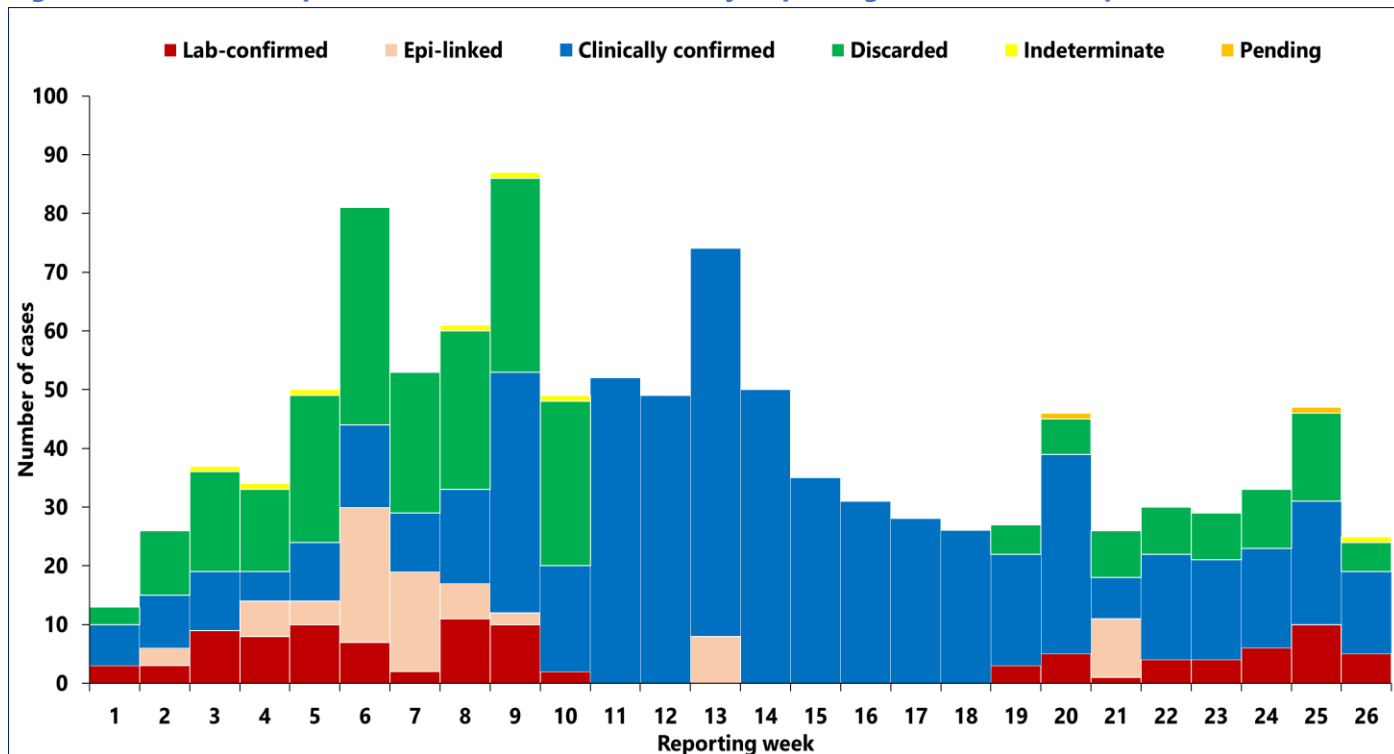
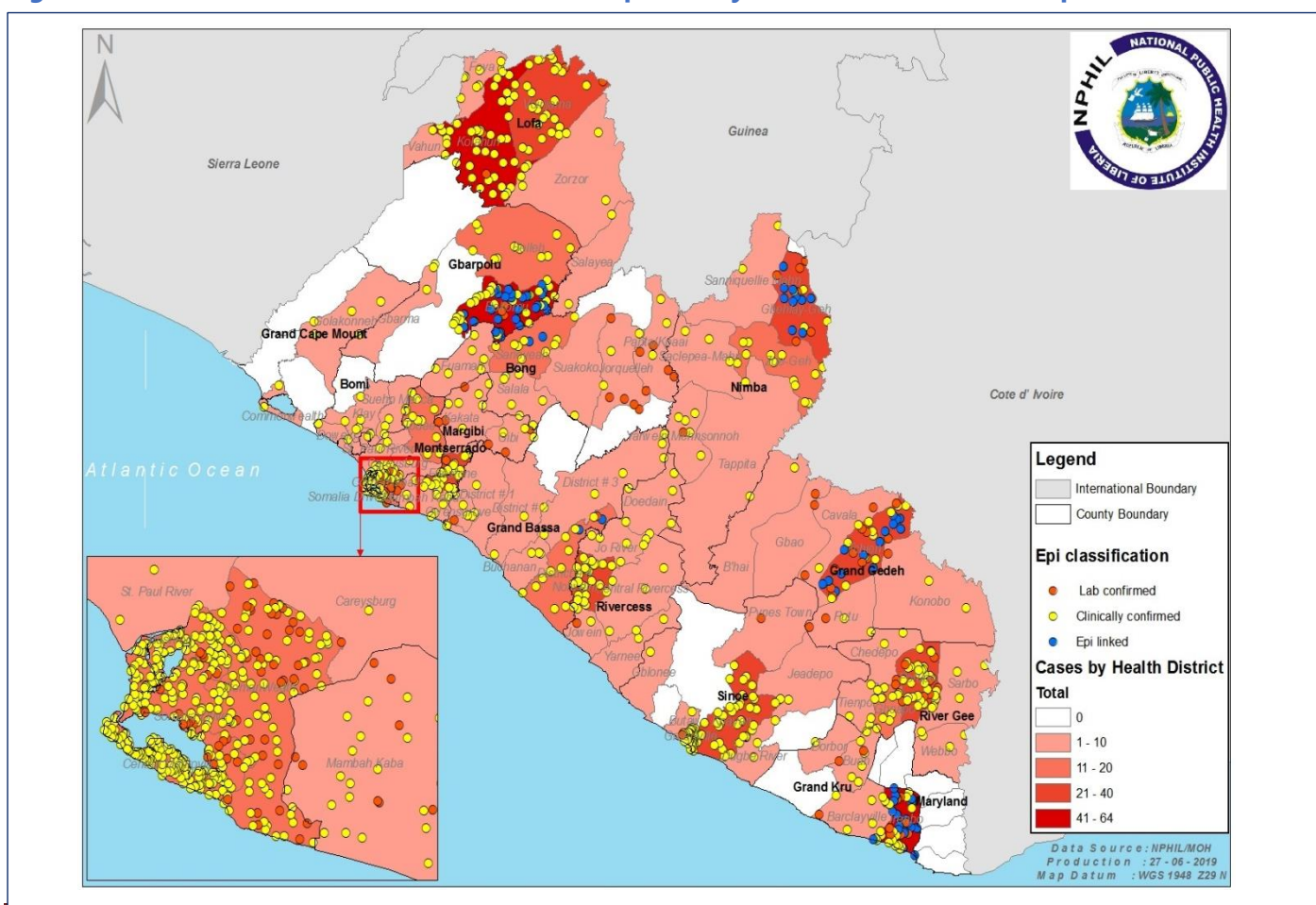


Figure 3. Cumulative Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 26, 2019





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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

- ◆ One case was diagnosed from Montserrado County
- ◆ 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

- ◆ Two (2) suspected cases were reported from Nimba County
 - Specimens were collected and pending laboratory confirmation
- ◆ Cumulatively, since Epi week one, 73 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 12 pending laboratory confirmation

Yellow fever

- ◆ Two (2) suspected cases were reported from Grand Cape Mount and Rivercess Counties
 - Specimens were collected and all tested negative
- ◆ Cumulatively, since Epi-week one, 58 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

- ◆ One suspected case was reported from River Gee County
 - Specimen was collected pending shipment
- ◆ Cumulatively, since Epi week one, 50 suspected cases have been reported and 12 specimens have been shipped to Atlanta for confirmation

Meningitis

- ◆ One suspected case was reported from Grand Kru County
 - Specimen was collected and tested negative
- ◆ 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

- ◆ One death was reported from Nimba County
- ◆ Causes of death: Eclampsia
- ◆ Reporting sites: health facilities 1(100%)
- ◆ Cumulatively, since Epi-week one, 146 maternal deaths have been recorded and the top three causes are: 70 (47.9%) postpartum hemorrhage, 20 (13.7%) eclampsia, and 13 (8.9%) anemia (*See Table 3*)

Table 3. Annualized and Cumulative Maternal Death Reported by County, Liberia, Epi-week 1 - 26, 2019

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Grand Gedeh	6770	0	10	7	295
Maryland	7347	0	9	6	245
Bong	18775	0	20	14	213
Margibi	11345	0	11	8	194
Gbarpolu	4507	0	4	3	178
Nimba	24970	1	21	14	168
Rivercess	3865	0	3	2	155
Sinoe	5534	0	4	3	145
Montserrado	62479	0	45	31	144
Grand Bassa	11981	0	7	5	117
Grand Cape Mount	6868	0	4	3	116
Bomi	4546	0	2	1	88
Grand Kru	3130	0	1	1	64
River Gee	3610	0	1	1	55
Lofa	14911	0	4	3	54
Liberia (National)	190636	1	146	100	153

Neonatal Mortality

- ◆ Twenty-two (22) deaths were reported from Montserrado (15), Nimba (2), and one each from Grand Gedeh, Margibi, Maryland, Bomi, Bong (1) Counties
- ◆ Causes of deaths: asphyxia (12), sepsis (9), and pneumonia (1)
- ◆ Reported sites: health facilities 19 (86%) and community 3 (14%)
- ◆ Cumulatively, since Epi-week one, 389 neonatal deaths have been reported (*See Table 4*) and the top three causes are: asphyxia 187 (40%), sepsis 142 (36.5%) and preterm 29 (7.5%)

Table 4. Annualized and Cumulative Neonatal Death Reported by County, Liberia, Epi-week 1 - 26, 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	15.3
Grand Gedeh	6770	1	27	7	8.0
Rivercess	3865	15	168	43	5.4
Margibi	11345	0	10	3	5.2
Bong	18775	1	28	7	4.9
Montserrado	62479	1	45	12	4.8
Maryland	7347	1	15	4	4.1
River Gee	3610	0	7	2	3.9
Sinoe	5534	0	9	2	3.3
Lofa	14911	0	6	2	2.7
Gbarpolu	4507	1	6	2	2.6
Bomi	4546	0	17	4	2.3
Nimba	24970	2	22	6	1.8
Grand Cape Mount	6868	0	2	1	0.6
Grand Bassa	11981	0	3	1	0.5
Liberia (National)	190636	22	389	100	4.1

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- ◆ Twenty-nine (29) cases were reported from Margibi (6), Nimba (6), Montserrado (3), River Gee (3), two each from Bong, Sinoe, Lofa, Grand Bassa, Rivercess and one from Grand Gedeh County
- ◆ Cumulatively, since Epi-week one, 945 cases of animal bites have been recorded including five deaths

Acute Bloody Diarrhea (Suspected Shigellosis)

- ◆ Five (5) suspected cases were reported from Grand Gedeh, Bong, Grand Bassa, Nimba, and River Gee Counties
 - Specimens were collected and pending laboratory confirmation
- ◆ Cumulatively, since Epi-week one, 142 acute bloody diarrhea cases have been recorded with 82 stool specimens collected and tested. Result: 11 positive, 66 negative and 5 pending laboratory confirmation

Severe Acute Watery Diarrhea (Cholera)

- ◆ Three (3) cases were reported from Bong, Gbarpolu and Nimba Counties
 - Two specimens were collected and pending laboratory confirmation
- ◆ Cumulatively, since Epi-week one, 70 suspected cases have been recorded with 55 specimens collected out of which; 46 negative, while 14 specimens were not collected

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 5433 travelers were recorded for the week (*See Table 5*)

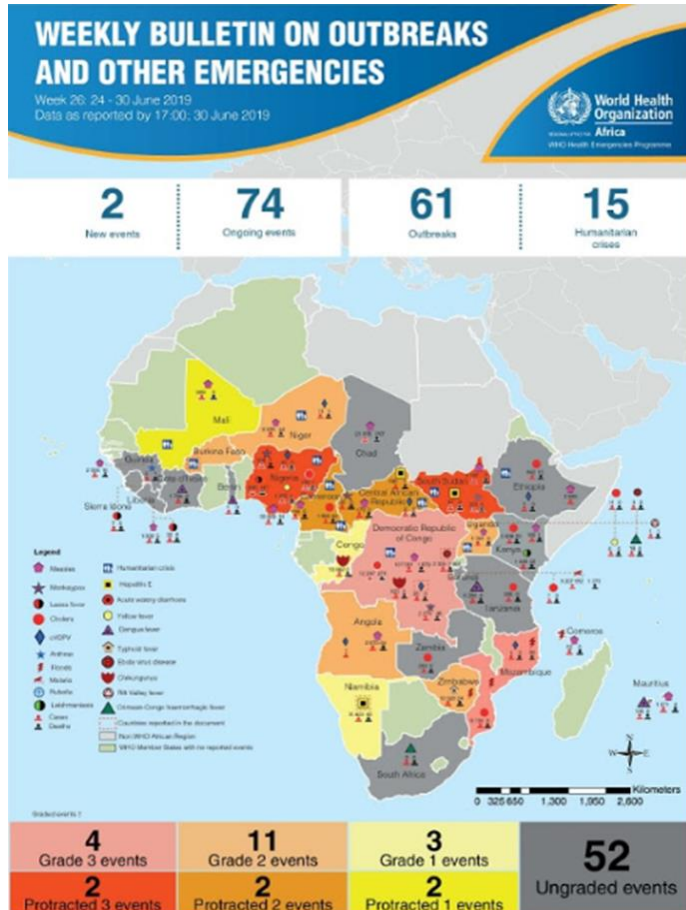
Table 5. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 25, 2019

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Yellow Book Issued	Yellow Book Damage/Card Replaced	Travelers Vaccinated	IDSR Alerts	Alerts Verified
Airport	James S. Paynes	106	61	45	0	0	0	0	0
	Robert International Airport	3281	1668	1613	47	32	15	0	0
Seaport	Freeport of Monrovia	138	69	69	0	0	0	0	0
	Buchanan Port	46	23	23	0	0	0	0	0
Ground Crossing	Bo Water Side	546	200	346	24	24	0	0	0
	Ganta	342	138	204	0	0	0	0	0
	Yekepa	69	43	26	0	0	0	0	0
	Loguatu	117	76	41	0	0	0	0	0
Total Traveler for the Week		4645	2278	2367	71	56	15	0	0

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, 74 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 Democratic Republic of the Congo
- Ebola virus disease in Democratic Republic of the Congo
- Hepatitis E in Ethiopia
- Humanitarian Crisis in Burkina Faso

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 2019
 - There is no human rabies vaccine in country to provide post exposure prophylaxis
 - **ACTION! ACTION! ACTION!**
 - NPHIL requested WHO since April, 2019 for ribavirin;
 - 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



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Appendix 1: Summary of immediately reportable diseases, conditions, and events by County during Epi week 26 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	D	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	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	
Bong	9	9	0	0	1	0	1	0	2	0	0	0	1	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	
Gbarpolu	5	5	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	0	0	0	0	0	0	0	0	0	0
Grand Bassa	8	8	0	0	1	0	0	0	2	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
Grand Cape Mount	5	5	0	0	0	0	0	0	0	0	0	0	2	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
Grand Gedeh	6	6	0	0	1	0	0	0	1	0	0	0	1	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	
Grand Kru	5	5	0	0	0	0	0	0	0	0	0	0	2	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
Lofa	6	6	0	0	0	0	0	0	1	1	0	0	5	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
Margibi	4	4	0	0	0	0	0	0	6	0	0	0	3	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	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
Montserrado	7	7	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	15	2	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	1	0	6	0	2	0	0	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	0
Rivercess	6	6	0	0	0	0	0	0	2	0	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
River Gee	6	6	0	0	1	0	0	0	3	0	0	0	1	0	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	
Sinoe	10	10	0	0	0	0	0	0	2	0	0	0	5	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	
Total Weekly	93	93	0	0	5	0	3	0	28	1	2	0	25	0	1	22	2	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cumulative Reported			32	0	132	0	70	0	943	1	33	10	1048	0	30	0	146	389	20	0	11	0	58	0	50	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	
Cumulative Lab-confirmed			0	0	10	0	0	0	0	0	22	8	98	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	

D = Dead

A = Alive

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