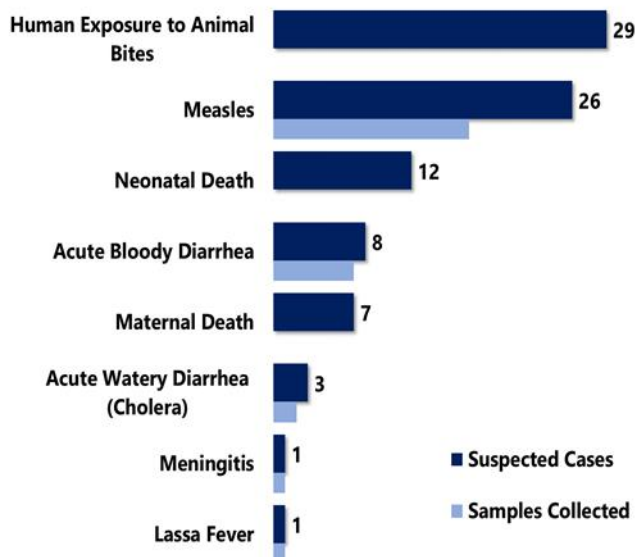


Country Population: 4,433,398 Volume 11, Issue 19 May 6–12, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported during this week



Keynotes and Events of Public Health Significance

- **A total of 87** events of public health importance including **21** deaths were reported
- **Completeness and timeliness** of health facility reports were both **97%**
- **Ongoing suspected Measles outbreaks** in three counties
- **Ongoing Lassa fever outbreaks** in Grand Bassa county

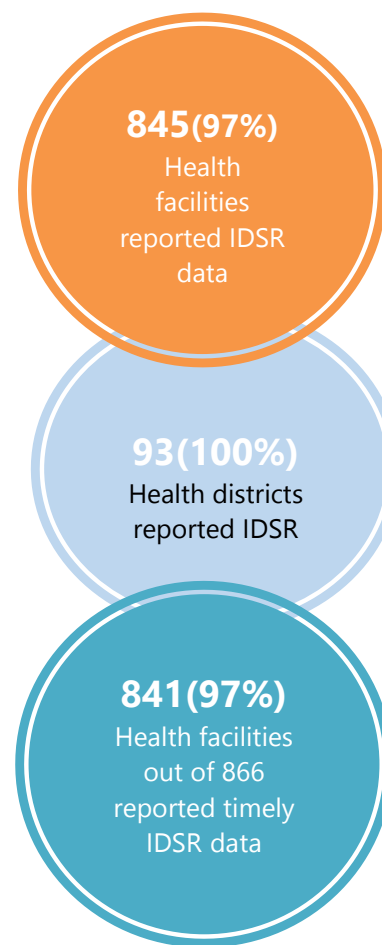
Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 19, 2019

County	Number of Expected Report from Health Facility	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	26	26	100	100
Bong	57	52	52	91	91
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	58	58	98	98
Maryland	26	26	26	100	100
Montserrado	351	339	335	97	95
Nimba	84	84	84	100	100
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	34	34	92	92
Liberia	866	845	841	97	97

Legend: ≥80 <80

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



Vaccine Preventable Diseases

Measles

- Twenty-six (26) suspected cases were reported from Lofa (6) Rivercess (5) River Gee (4) Grand Kru (3), Montserrado (2), Grand Bassa (2), Nimba (2), Grand Gedeh (1), and Bong (1), Counties
 - Seventeen specimens were collected pending laboratory confirmation
- Fuamah District, Bong County, Firestone District, Margibi County and Kolahun and Voinjama Districts, Lofa County are currently in outbreak phase
- Vaccination status:
 - Among suspected cases: 17 (65.4%) vaccinated, 3 (11.5%) not vaccinated and 6(23%) unknown
- Age distribution
 - Among suspected cases: <1 year: 0 (0%), 1 – 4 years: 7 (27%), ≥5 years: 19 (73%)
- Cumulatively, since Epi-week one, 876 suspected cases have been recorded; Of these, 293 have been tested by the laboratory and results showed 65 positive, 222 negative and 6 indeterminate
- Epi-classification is as follows: 648 (74%) confirmed (65 lab confirmed, 514 clinically confirmed, 69 epi-linked), 222 (25.3%) negative and 6 (0.7%) indeterminate (*See Table 2*)
 - Of the 222 specimens tested negative for measles, 173 specimens were tested for Rubella; 83 positive, 80 negative and 10 indeterminate for rubella

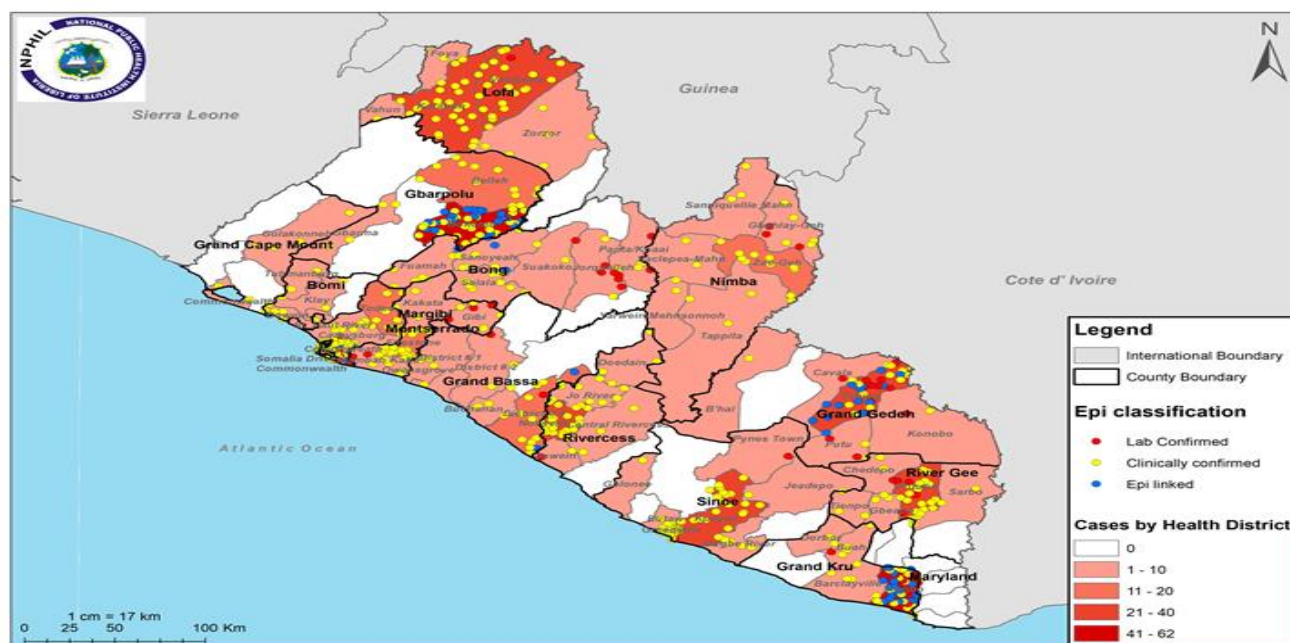
Public Health Action

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

Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 19, 2019

County	Confirmed	Epi-linked	Clinical confirmed	Indeterminate	Discarded	Grand Total
Bomi	0	0	10	0	4	14
Bong	9	2	28	1	11	51
Gbarpolu	4	27	46	0	5	82
Grand Bassa	2	2	22	1	15	42
Grand Cape Mount	0	0	6	0	8	14
Grand Gedeh	13	14	18	0	14	59
Grand Kru	8	20	34	0	9	71
Lofa	1	0	62	0	6	69
Margibi	6	0	34	1	20	61
Maryland	0	0	0	0	1	1
Montserrado	9	4	71	1	55	140
Nimba	3	0	28	1	27	59
Rivercess	1	0	46	0	20	67
River Gee	5	0	34	0	21	60
Sinoe	4	0	72	1	6	83
Grand Total	65	69	514	6	222	876

Confirmed Measles Cases Reported by Health District, Liberia Epi-week 1 - 19, 2019



Acute Flaccid Paralysis (Suspected Polio)

- Zero case reported
- Cumulatively, since Epi week one, 26 cases have been recorded, 22 tested negative and 4 pending laboratory confirmation (See Table 3)

Neonatal Tetanus

- Zero case reported
- Cumulatively, since Epi-week one, 16 clinically diagnosed cases have been recorded of which six were dead

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- Zero alert reported
- Cumulatively, since Epi-week one, 7 EVD alerts have been recorded with negative results

Lassa fever

- One (1) suspected cases were reported from Grand Bassa County
 - Specimens was collected and tested positive
- Cumulatively, since Epi week one, 62 suspected cases have been recorded including thirteen deaths
- Epi-classification is as follows: 22 positive, 39 negative and one pending laboratory confirmation

Yellow fever

- Zero suspected cases reported
- Cumulatively, since Epi-week one, 39 suspected cases have been recorded. Of these, 35 have been tested negative, specimens were not collected for three while one pending laboratory confirmation

Monkeypox

- Zero suspected case reported
- Cumulatively, since Epi week one, 49 suspected cases have been reported and no specimen has been shipped

Meningitis

- One (1) suspected case was reported from Montserrado County
 - Specimen was collected and tested negative
- Cumulatively, since Epi-week one, 24 suspected cases have been recorded with one death, 21 tested negative, two specimens not collected due to lack of specimen collection kits and one pending laboratory confirmation

Events of Public Health Importance

Maternal Mortality

- Seven (7) deaths reported from Nimba (3), Montserrado (2), Bong (1) and Grand Bassa (1) Counties
- Reported causes: postpartum hemorrhage (3), sepsis (1), while the remaining three are pending investigation
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 90 maternal deaths have been recorded (*See Table 4*)

Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 19, 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	6	7	243
Margibi	11345	0	9	10	217
Maryland	7347	0	6	7	224
Bong	18775	1	13	14	190
Nimba	24970	3	17	19	186
Gbarpolu	4507	0	2	2	121
Sinoe	5534	0	2	2	99
Grand Bassa	11981	1	5	6	114
Grand Cape Mount	6868	0	2	2	80
River Gee	3610	0	1	1	76
Montserrado	62479	2	21	23	92
Rivercess	3865	0	2	2	142
Bomi	4546	0	2	2	120
Lofa	14911	0	2	2	37
Grand Kru	3130	0	0	0	0
Liberia (National)	190636	7	90	100	129

Neonatal Mortality

- Twelve (12) deaths were reported from Nimba (3), Grand Kru (2), Maryland (2), Bong (1), Margibi (1), Grand Gedeh (1), Montserrado (1) and Rivercess (1) Counties
- Reported causes of deaths: sepsis (5), asphyxia (4), and preterm (3)
- Nine deaths were reported to have occurred in health facilities while three occurred in community
- Cumulatively, since Epi-week one, 243 neonatal deaths have been reported (*See Table 5*)

Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 19, 2019

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	2	18	7	15.7
Grand Gedeh	6770	1	20	8	8.1
Margibi	11345	1	23	9	5.5
Bong	18775	1	32	13	4.7
Montserrado	62479	1	87	36	3.8
Rivercess	3865	1	6	2	4.2
Maryland	7347	2	10	4	3.7
Sinoe	5534	0	5	2	2.5
River Gee	3610	0	3	1	2.3
Lofa	14911	0	14	6	2.6
Bomi	4546	0	3	1	1.8
Nimba	24970	3	14	6	1.5
Gbarpolu	4507	0	4	2	2.4
Grand Bassa	11981	0	3	1	0.7
Grand Cape Mount	6868	0	1	0	0.4
Liberia (National)	190636	12	243	100	3.5

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- Twenty-nine (29) cases were reported from Montserrado (13), Nimba (4), Margibi (4), Bong (3), Grand Kru (2), River Gee (2) and Lofa (1,) Counties
- Cumulatively, since Epi-week one, 729 cases of animal bites have been recorded including one death

Acute Bloody Diarrhea (Suspected Shigellosis)

- Eight (8) cases were reported from Sinoe (2), River Gee (2), Lofa (1), Maryland (1), Montserrado (1) and Rivercess (1) Counties
 - Eight (8) specimens collected; seven tested negative and one pending laboratory confirmation
- Cumulatively, since Epi-week one, 111 acute bloody diarrhea cases have been recorded with 68 stool specimens collected and tested. Result: 9 positive, 55 negative and four pending

Severe Acute Watery Diarrhea (Cholera)

- Three (3) suspected cases reported from Nimba (2) and Sinoe (1) Counties
 - Two specimens were collected tested negative
- Cumulatively, since Epi-week one, 51 suspected cases have been recorded with 38 specimens collected out of which; 34 negative, four rejected by laboratory, while thirteen specimens were not collected

***The two pending cases fall in week 12 and week 14

Unexplained Cluster of Health Events

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

Points of Entry

- Zero IDSR alert detected and verified
- A total of 4935 travelers were recorded for the week (See Table 6)

Table 6. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 19, 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	109	69	40	0	0	0	0	0
	Robert International Airport	3233	1657	1576	42	30	12	0	0
Seaport	Freeport of Monrovia	230	115	115	0	0	0	0	0
	Buchanan Port	0	0	0	0	0	0	0	0
Ground Crossing	Bo Water Side	582	164	418	50	15	35	0	0
	Ganta	462	240	222	34	10	24	0	0
	Yekepa	67	36	31	0	0	0	0	0
	Loguatu	121	76	45	0	0	0	0	0
Nursing Division		131	109	22	131	65	66	0	0
Total Traveler for the Week		4935	2466	2469	257	120	137	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, 68 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Cyclone in Zimbabwe, Malawi and Mozambique
- Ebola virus disease in the Democratic Republic of the Congo
- Dengue fever in Mauritius
- Measles in Chad
- Humanitarian crisis in Ethiopia



Outbreaks

Measles:

Fuamah Districts, Bong County

- No new suspected case reported
- Conducted mini vaccination campaign and vaccinated 248 children 6-59 months
- Active case search and contact tracing ongoing

Firestone, Margibi County

- No new suspected case reported
- Community engagement and health education ongoing in affected and surrounding communities

Kolahun and Voinjama Districts, Lofa County

- Community engagement and health education ongoing in affected and surrounding communities
- Reported 10 new suspected cases Kolahun-7, Voinjama-3
- Treated and discharged
- Plan to conduct a mini campaign in Kolahun District
- Active case search and health education ongoing

- Community engagement ongoing

Lassa fever

Grand Bassa District # 3 A&B

- The last contact graduated May 13, 2019
- Mother is gradually improving at Redemption hospital
- One new confirmed case was reported from District #3A&B.
- Age 29 years male from Kpandy town in Buchanan city
- The case was managed with Ribivirin protocol immediately but later expired May 10, 2019
- Safe and dignified burial was conducted on May 11, 2019 under the supervision of the District Health Team

Public Health Measures

National level

- Providing technical remote support to Counties
 - Heighten surveillance in affected and surrounding communities

County level

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



Liberia IDSR Epidemiology Bulletin

2019 Epi-week 19 (May 6-12, 2019)



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



Liberia IDSR Epidemiology Bulletin

2019 Epi-week 19 (May 6 –12, 2019)



Counties	No. of Expected Health District	No. of Health District Reported	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		
			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	A	D	A	D	
Bomi	4	4	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	0	0	0	0		
Bong	8	8	0	0	0	0	0	0	3	0	0	0	1	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	
Gbarpolu	5	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	0	0	0	0	0	0	0	0	0	0	0	
Grand Bassa	8	8	0	0	0	0	0	0	0	0	1	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	
Grand Cape Mount	5	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	0	0	0	0	0	0	0	0	0	0	0	
Grand Gedeh	6	6	0	0	0	0	0	0	0	0	0	1	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	0	0	2	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	
Lofa	6	6	0	0	1	0	0	0	1	0	0	0	6	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	3	3	0	0	0	0	0	0	4	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	
Maryland	6	6	0	0	1	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	0	0	0	0	0	0	0	
Montserrado	7	7	0	0	1	0	0	0	13	0	0	0	2	0	1	2	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	
Nimba	6	6	0	0	0	0	2	0	4	0	0	0	2	0	0	3	3	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	
Rivercess	6	5	0	0	1	0	0	0	0	0	0	0	5	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	
River Gee	6	6	0	0	2	0	0	0	2	0	0	0	4	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	
Sinoe	10	10	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	0	0	0	0	0	0	0	0	
Total Weekly	91	90	0	0	8	0	3	0	29	0	0	1	26	0	0	1	7	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cumulative Reported			25	0	111	0	51	0	729	0	49	13	876	0	23	1	90	243	10	6	5	2	39	0	49	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0		
Cumulative Laboratory Confirmed			0	0	9	0	0	0	0	0	16	6	65	0	0	0	24	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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For comments or questions, please contact

Thomas K. Nagbe, MPH

Director, Infectious Disease and Epidemiology Division
National IHR Focal Person
National Public Health Institute of Liberia
Republic of Liberia

Email: tnkue31112@gmail.com

Phone: +231 886 937386/777442444

Website: www.nationalphil.org

Ralph W. Jetoh, MD

Deputy Director

Infectious Disease and Epidemiology Division
National Public Health Institute of Liberia
Republic of Liberia

Email: ralphica2000@gmail.com

Phone: +231 886526388/777372655

Website: www.nationalphil.org

EDITORIAL TEAM

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