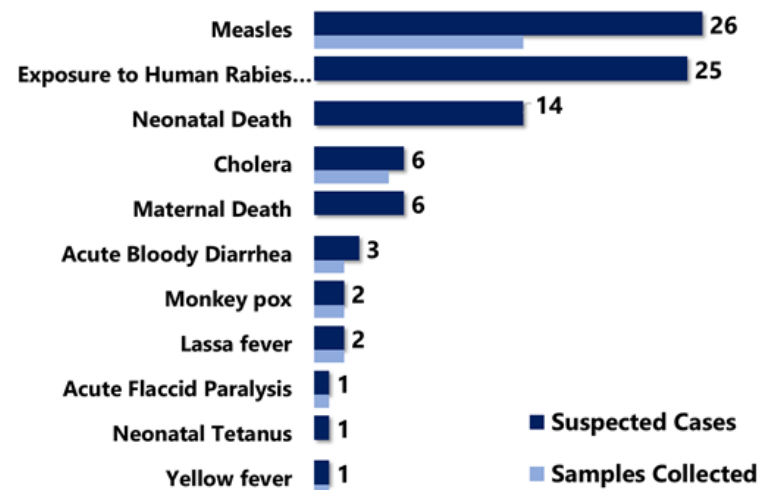


Country Population: 4,433,398 Volume 11, Issue 2, January 7 – 13, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported in Epi week 2



Keynotes and Events of Public Health Significance

- A total of **87** events of public health importance including **20** deaths were reported
- Completeness and timeliness of health facility reports were both **97%**
- **One confirmed** case of shigellosis reported from Grand Cape Mount County
- **Pertussis outbreaks** in Sinoe and Grand Bassa Counties

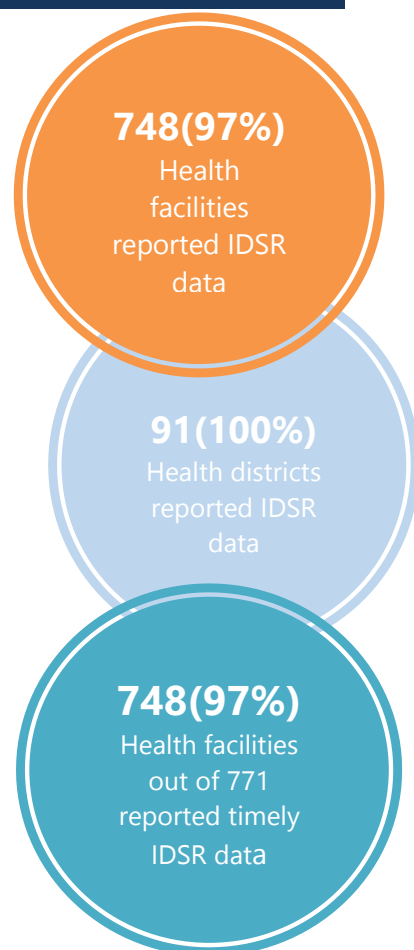
Reporting Coverage

Table 1. Weekly IDSR Reporting Coverage, Liberia, Epi week 2, 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	55	50	50	91	91
Gbarpolu	16	16	16	100	100
Grand Bassa	33	33	33	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	50	49	49	98	98
Maryland	25	25	25	100	100
Montserrado	283	266	266	94	94
Nimba	74	74	74	100	100
Rivercess	19	19	19	100	100
River Gee	19	19	19	100	100
Sinoe	35	35	35	100	100
Liberia	771	748	748	97	97

Legend: ≥80 <80

- All fifteen counties submitted weekly IDSR report on time to national level
- The national target for weekly IDSR reporting is 80



Vaccine Preventable Diseases

Measles

- Twenty-six (26) suspected cases were reported from Grand Gedeh (5), Grand Bassa (5), Grand Kru (4), Sinoe (4), Montserrado (3), Bong (2), Grand Cape Mount (1), Nimba (1), and River Gee (1) Counties
- Fourteen specimens were collected and sent to the National Public Health Reference Laboratory
- Three confirmed cases were reported from Putu, Cavalla and Tchien Districts, Grand Gedeh County
- Vaccination status among suspected cases are as follow: vaccinated 12 (46.1%), unknown 4 (15.3%) and not vaccinated 10 (38.4%)
- Age distribution among suspected cases are as follow: <1: 3 (11.5%), 1 – 4 years: 2 (7.6%) and ≥5 years: 21 (80.7%)
- Cumulatively, since Epi-week one, 49 suspected cases including zero deaths have been reported. Of these, 23 have been tested by the laboratory (positive 6, discarded 17)
- Epi-classification are as follows: lab confirmed 6 (12.2%), epi-linked 4 (8.2%), clinically confirmed 22 (44.9%), and discarded 17 (34.7%)

Public Health Action

- Active case search is ongoing in districts that reported cases
- Health education and community engagement are ongoing
- End of outbreak reports are being written from previously ended outbreaks

Confirmed Measles cases reported by Health District, Liberia, Epi-week 1, 2019



Acute Flaccid Paralysis (Suspected Polio)

- One case was reported from Margibi County
- Cumulatively, since Epi week one, one case has been reported and pending laboratory confirmation

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	47576	0	0	0.0	0	0%	0	0%
Bong	196480	0	0	0.0	0	0%	0	0%
Gbarpolu	47163	0	0	0.0	0	0%	0	0%
Grand Bassa	125386	0	0	0.0	0	0%	0	0%
Grand Cape Mount	71872	0	0	0.0	0	0%	0	0%
Grand Gedeh	70844	0	0	0.0	0	0%	0	0%
Grand Kru	32755	0	0	0.0	0	0%	0	0%
Lofa	156050	0	0	0.0	0	0%	0	0%
Margibi	118729	1	0	21.9	1	100%	0	0%
Maryland	76884	0	0	0.0	0	0%	0	0%
Montserrado	653849	0	0	0.0	0	0%	0	0%
Nimba	261314	0	0	0.0	0	0%	0	0%
Rivercess	40444	0	0	0.0	0	0%	0	0%
River Gee	37775	0	0	0.0	0	0%	0	0%
Sinoe	57910	0	0	0.0	0	0%	0	0%
Liberia	1995031	1	0	1.3	1	100%	0	0%
Non-Polio AFP Rate	<2	Stool adequacy		<80%	Non-Polio Enterovirus	<10%	Silent	
	≥ 2			≥80%		≥10%		

Neonatal Tetanus

- One case was reported from Grand Kru County
- Cumulatively, since Epi-week one, one clinically diagnosed case has been reported

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- Zero alert was reported this week
- Cumulatively, since Epi-week one, one EVD alerts has been reported

Lassa fever

- Two (2) suspected cases were reported from Nimba and Bong Counties
 - Specimens were collected and tested negative
- Cumulatively, since Epi week one, five suspected cases have been reported
 - Of these, three have been tested by the laboratory. Epi-classification are as follows: lab confirmed (0) and not a case (5)

Yellow fever

- One (1) suspected case was reported from Bomi County
 - Specimen was collected, and result showed negative
- Cumulatively, since Epi-week one, two suspected cases have been reported and tested negative

Monkeypox

- Two cases were reported from Rivercess County
 - Specimens were collected
- Cumulatively, since Epi-week one, two suspected cases has been reported pending shipment

Meningitis

- Three suspected cases were reported from Nimba County
 - All three specimens were collected and tested negative
- Cumulatively, since Epi-week one, three suspected cases have been reported and all tested negative

Events of Public Health Importance

Maternal Mortality

- Six (6) deaths were reported from Montserrado (3), Maryland, Grand Gedeh and Grand Bassa one each
- Reported causes of deaths were:
 - Postpartum hemorrhage (4)
 - Congested heart failure (1)
 - Eclampsia (1)
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 11 maternal deaths have been reported

Table 3. Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 2, 2019

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Bomi	4546	0	0	0	0
Bong	18775	0	2	18	277
Gbarpolu	4507	0	0	0	0
Grand Bassa	11981	1	1	9	217
Grand Cape Mount	6868	0	0	0	0
Grand Gedeh	6770	1	1	9	384
Grand Kru	3130	0	0	0	0
Lofa	14911	0	0	0	0
Margibi	11345	0	1	9	229
Maryland	7347	1	1	9	354
Montserrado	62479	3	4	36	166
Nimba	24970	0	1	9	104
River Gee	3610	0	0	0	0
Rivercess	3865	0	0	0	0
Sinoe	5534	0	0	0	0
Liberia (National)	190636	6	11	100	150

Neonatal Mortality

- Fourteen (14) deaths were reported from Montserrado (8), Bomi, Margibi, Lofa, Grand Gedeh, Bong and Maryland one each
- Reported causes of deaths were
 - Asphyxia (8)
 - Sepsis (5)
 - Neonatal tetanus (1)
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 23 neonatal deaths have been reported

Table 4. Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 2, 2019

County	Annual Live birth 4.3% (EPI 2018)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Bomi	4546	1	1	4	5.7
Bong	18775	1	1	4	1.4
Gbarpolu	4507	0	0	0	0.0
Grand Bassa	11981	0	1	4	2.2
Grand Cape Mount	6868	0	0	0	0.0
Grand Gedeh	6770	1	1	4	3.8
Grand Kru	3130	0	0	0	0.0
Lofa	14911	1	3	13	5.2
Margibi	11345	1	1	4	2.3
Maryland	7347	1	3	13	10.6
Montserrado	62479	8	12	52	5.0
Nimba	24970	0	0	0	0.0
River Gee	3610	0	0	0	0.0
Rivercess	3865	0	0	0	0.0
Sinoe	5534	0	0	0	0.0
Liberia (National)	190636	14	23	100	3.1

Other Reportable Disease

Exposure to Human Rabies (Animal Bites)

- Twenty-five (25) cases were reported from Montserrado (5), Bong (4), Maryland (4), Rivercess (4), Nimba (3), Margibi (2), Lofa (2) and Grand Bassa (1) Counties
- Cumulatively, since Epi-week one, 58 suspected cases of animal bites have been reported in human

Acute Bloody Diarrhea (Suspected Shigellosis)

- Three (3) suspected cases were reported from Grand Cape Mount, Bomi and Rivercess Counties
 - Two specimens were collected and result showed: One positive from Grand Cape Mount, one negative from Bomi
 - Rivercess County did not collect specimen
- Cumulatively, since Epi-week one, 4 acute bloody diarrhea cases were reported with two stool specimens collected

Severe Acute Watery Diarrhea (Cholera)

- Six (6) cases were reported from Rivercess (5) and Grand Bassa (1) Counties
 - Five specimens were collected and pending testing
- Cumulatively, since Epi-week one, six suspected cases has been reported

Points of Entry

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Yellow Book Issued	Yellow Book/Card Replaced	Travelers Vaccinated	IDSR Alerts	Alerts Verified
Airport	James S. Paynes	84	44	40	0	0	0	0	0
	Robert International Airport	3757	1787	1970	26	26	0	0	0
Seaport	Freeport of Monrovia	224	112	122	0	0	0	0	0
	Buchanan Port	128	64	64	0	0	0	0	0
Ground Crossing	Bo Water Side	708	244	464	0	0	0	0	0
	Ganta	134	66	68	42	42	0	0	0
	Yekepa	63	35	28	0	0	0	0	0
	Loguatu	333	199	134	24	24	0	0	0
	Nursing Division	182	167	15	182	72	110	0	0
Total Traveler for the Week		5613	2718	2895	274	164	110	0	0

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

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 to preparedness and preventive measures are implemented .



During this week, 58 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Humanitarian crisis in Central African Republic
- Lassa fever in Togo
- Hepatitis E in Central African Republic
- Ebola Virus Disease in Democratic Republic Central

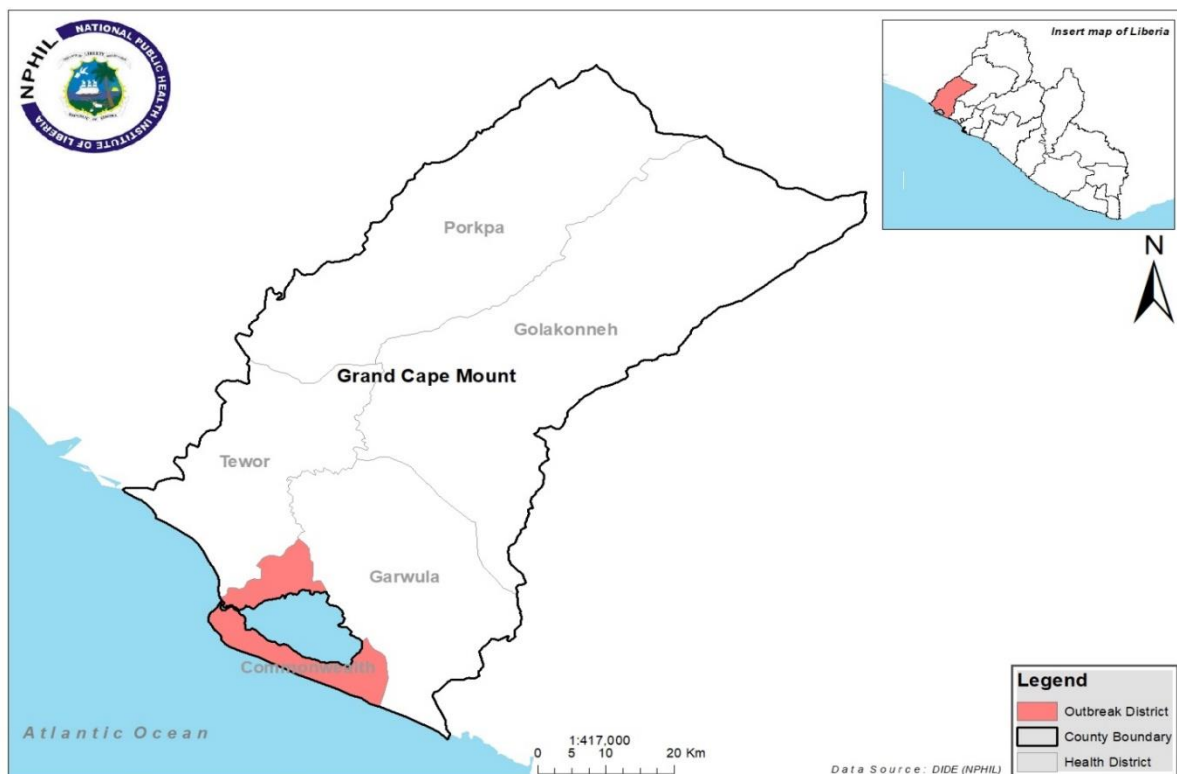
Source: WHO Week 2 Bulletin on Outbreaks and Other Emergencies

Outbreaks

Grand Cape Mount : Acute Bloody Diarrhea

- On 10 January 2019, the Grand Cape Mount County Health Team was informed through the County Surveillance Officer (CSO) of a confirmed case of Acute Bloody Diarrhea detected in Commonwealth District, Grand Cape Mount County.
- On 6 January 2019, this 16years old female living in Grass Field Community, Commonwealth District presented with symptoms of abdominal pain, visual evidence of blood seen in stool at the St. Timothy Government Hospital, Grand Cape Mount County, and was treated and discharged on the next day.
- On 7 January 2019, specimen was collected and sent to the National Public Health Reference Laboratory (NPHRL) and was tested positive for ***Shigella flexneri***.
- Seven (7) contacts were line listed and are being followed up from the Grass Field Community
- The travelling history record showed that case and mother travelled to Bong and back to Grand Cape Mount on January 5, 2019 before showing signs and symptoms.

Confirmed Acute Bloody Diarrhea (Shigellosis) case reported in Commonwealth district, Grand Cape Mount County, January 2019



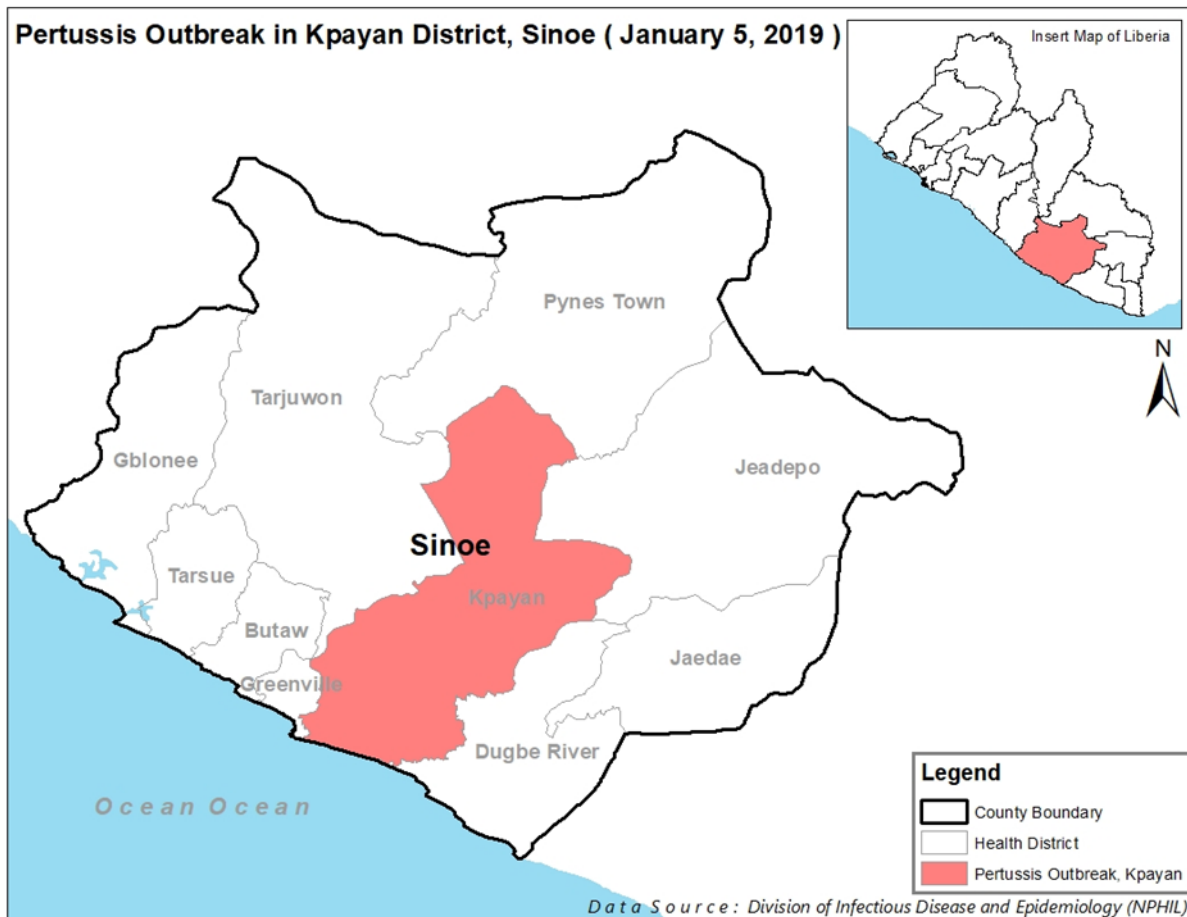
Sinoe: Pertusis

- On 5 January 2019, the Sinoe County Health Team was informed through the District Surveillance Officer (DSO) of confirmed cases of pertussis detected in Kpanyan District, Sinoe County.
- The District Health Team reported 40 cases affecting children ages ≥ 5 yrs in Kayeeda community with coughing for more than two weeks plus one of the following symptoms:

Paroxysm, whooping, vomiting after coughing, apnea (in under one year of age).

- During the response, the team visited the Kayeeda community to investigate the outbreak base on clinical findings and physical examinations.

Confirmed Pertussis cases reported in Kpanyan district, Sinoe County, January 2019





Liberia IDSR Epidemiology Bulletin

2019 Epi Week 2 (January 7– 13, 2019)



Public Health Measures

National level:

- Providing technical remote support to Counties to:
 - Heighten surveillance in affected and surrounding communities
 - Occupants of seven people living in two rooms at the home of the case
 - There is a toilet and designated place for proper waste disposal at the home of the case patient
 - Source of drinking water for case patient is via hand pump that is a distance from her house
 - The source of drinking water in Fuamah district, Bong County is via a creek

County level:

- The patient's presumptive positive case was managed at hospital and discharge home
- Active case search is ongoing in affected communities for Measles, Yellow fever and Monkey pox
- All cases are clinically managed
- Mini vaccination campaign was conducted in three counties (Bong, Margibi and Nimba)
- Follow up with CHAs and CHVs in the community to heighten surveillance activities including health education



Liberia IDSR Epidemiology Bulletin

2019 Epi Week 2 (January 7– 13, 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 discarded 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

Immediately reportable diseases, conditions, and events by County during Epi week 2 and cumulative reports, Liberia, 2019

Counties	No. of Health Districts reported		Acute Flaccid Paralysis (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		VHF (including EVD)		Yellow Fever		Other Diseases/ Events		
	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	D	D	A	D	A	D	A	D	A	D	
Bomi	4	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Bong	9	9	0	0	0	0	0	0	4	0	1	0	2	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
Grand Bassa	8	8	0	0	0	0	1	0	1	0	0	0	5	0	0	0	1	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	1	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	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Grand Kru	5	5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Lofa	6	5	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
Margibi	4	4	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Maryland	6	6	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Montserrado	7	7	0	0	0	0	0	0	5	0	0	0	3	0	0	0	3	8	0	0	0	0	0	0	0	0	0
Nimba	6	6	0	0	0	0	0	0	3	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Rivercess	6	6	0	0	1	0	5	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
River Gee	4	4	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
Sinoe	10	10	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Weekly	91	91	1	0	3	0	6	0	25	0	2	0	26	0	3	0	6	14	1	0	0	0	1	0	0	0	0
Cumulative Reported			1	0	4	0	6	0	58	0	3	2	49	0	3	0	11	23	1	0	0	1	2	0	0	0	0
Cumulative Laboratory Confirmed			0	0	1	0	0	0	0	0	0	0	6	0	0	0			0	0	0	0	0	0	0	0	0

D = Dead
A = Alive

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Partners: WHO – Kwaku D.M. Yealue, Dr. Julius Mondav & CDC

National Public Health Institute of Liberia (NPHIL)

PURPOSE

In collaboration with the Ministry of Health, NPHIL strengthens existing infection prevention and control efforts, laboratories, surveillance, infectious disease control, public health capacity building, response to outbreaks, and monitoring of diseases with epidemic potential.

OUR MISSION

To prevent and control public health threats by promoting healthy outcomes and serving as a source of knowledge and expertise.

GOALS

Contribute to the development and sustainability of the public health workforce

Develop, enhance, and expand the surveillance and response platform

Develop and strengthen the laboratory system and public health diagnostics

Develop, enhance, and expand process and structures to protect environmental and occupation health

Expand, conduct, and coordinate public health and medical research to inform Liberian public health policies

Ensure sustainable financing and operations of the NPHIL

Epidemiological bulletin published with support of WHO and CDC

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