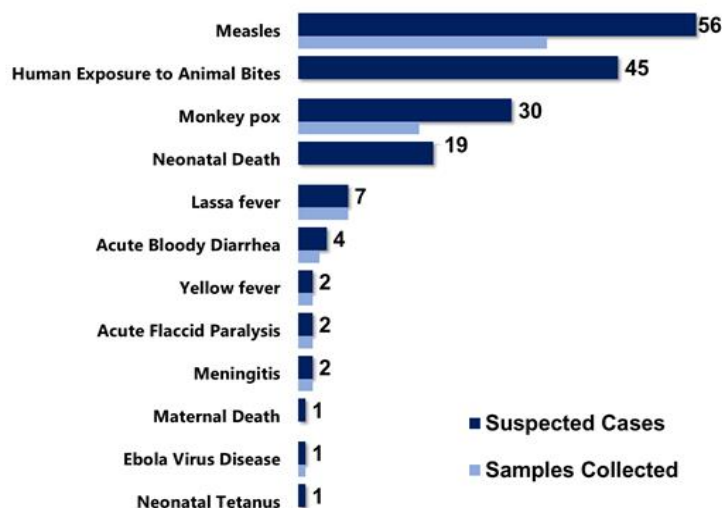


Country Population: 4,433,398 Volume 11, Issue 8, February 18 – 24, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported in Epi week 8



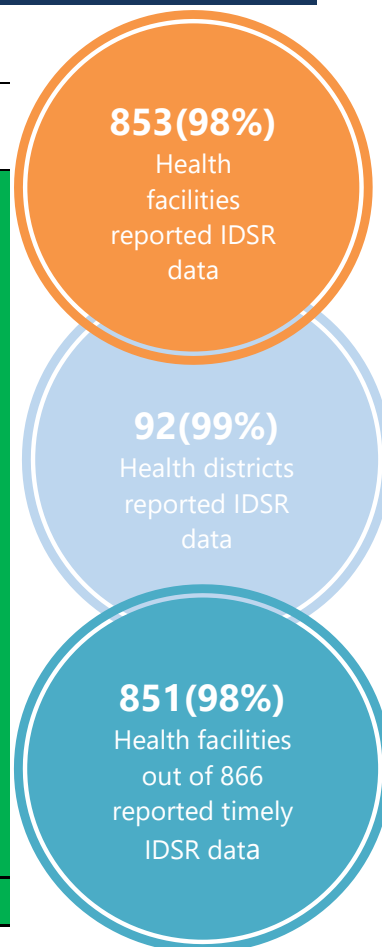
Keynotes and Events of Public Health Significance

- A total of **170** events of public health importance including **22** deaths were reported
- **Completeness and timeliness** of health facility reports were **both 98%**
- **Ongoing Measles outbreaks** in four counties

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 8, 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	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	56	55	95	93
Maryland	26	26	26	100	100
Montserrado	351	341	340	97	97
Nimba	84	84	84	100	100
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
Liberia	866	853	851	98	98



Legend: ≥80 <80

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

Vaccine Preventable Diseases

Measles

- Fifty-six (56) suspected cases were reported from Gbarpolu (11), Montserrado (10), Nimba (7), (Grand Kru (6), Grand Gedeh (5), Sinoe (5), Margibi (5), Bong (2), Grand Bassa (2), River Gee (2) and Rivercess (1) Counties
- Thirty-one (31) specimens were collected; nineteen tested by the National Public Health Reference Laboratory
 - Two (2) lab-confirmed (positive): Nimba and Bong Counties; 16 negative, 1 indeterminate and 12 pending laboratory confirmation
- Commonwealth District (Montserrado), Trehn District (Grand Kru), Jorquelleh District (Bong) and Belleh District (Gbarpolu) Counties are currently in outbreak phase
- Vaccination status:
 - Among suspected cases: 22 (39.2%) vaccinated, 12 (21.4%) not vaccinated and 22 (39.2%) unknown
 - Among confirmed cases: 1 (50%) not vaccinated 1(50%) Unknown
- Age distribution
 - Among suspected cases: <1 year: 3 (5.3%), 1 – 4 years: 20 (35.7%) and ≥5 years: 33(58.9%)
 - Among confirmed cases: < 1year: 1 (50%) ≥5 years: 1 (50%)
- Cumulatively, since Epi-week one, 360 suspected cases have been reported; Of these, 196 have been tested by the laboratory and results showed 43 positive, 148 tested negative and 5 indeterminate
- Epi-classification is as follows: 207 (57.5%) confirmed cases (lab confirmed 43, clinically confirmed 104, epi-linked 60), 148 (41.1%) negative indeterminate 5 (1.3%). *See table 2*
- Of the 148 specimen tested negative for Measles, 133 specimens were tested for Rubella; 64 tested positive, 61 negative and 8 indeterminate for Rubella

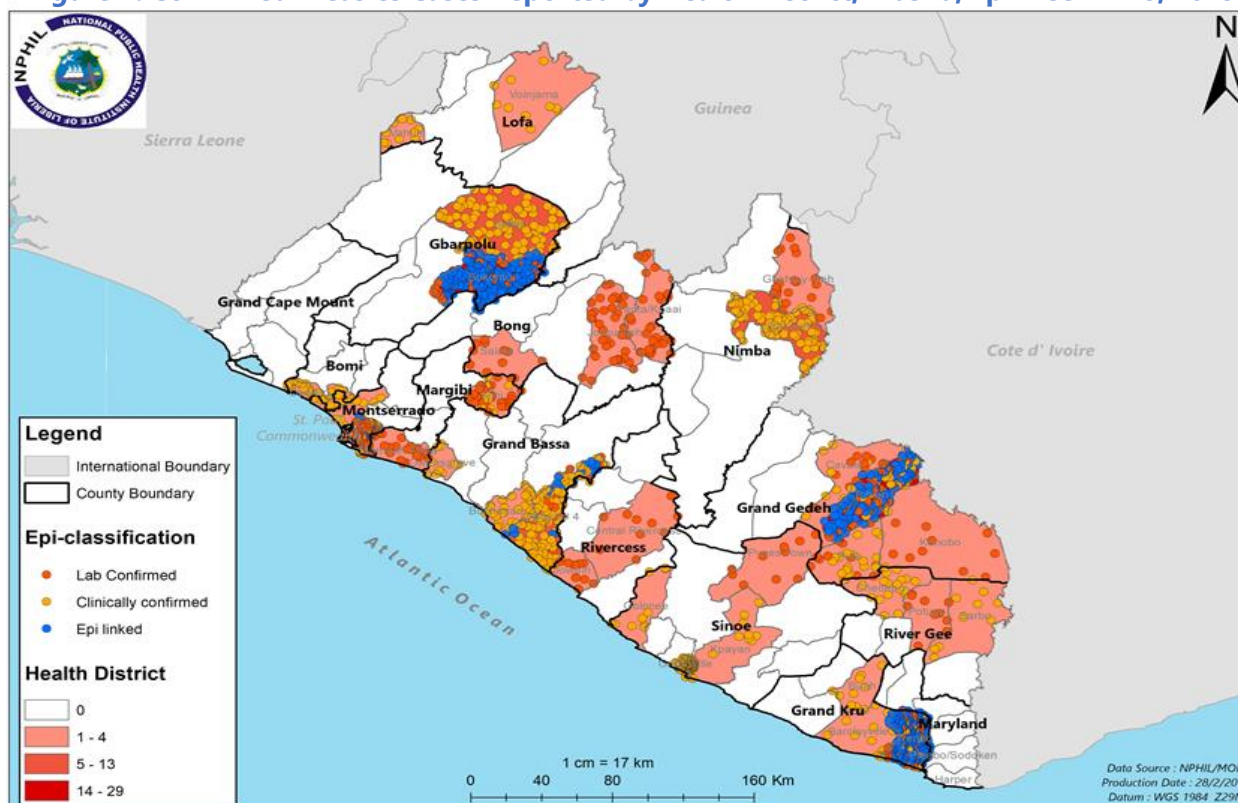
Public Health Action

- Active case search, health education, and community engagement are ongoing in districts that reported

Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 8, 2019

Reporting County	Epi-classification					Total	Annualized Non-Measles Febrile Rash Illness Rate
	Lab confirmed	Epi-linked	Clinically confirmed	Indeterminate (Equivocal)	Discarded (Negative)		
Bomi	0	0	3	0	3	6	18.4
Bong	7	0	1	1	12	21	17.9
Gbarpolu	4	21	10	0	1	36	6.2
Grand Bassa	2	2	13	0	12	29	28.0
Grand Cape Mount	0	0	0	0	4	4	16.3
Grand Gedeh	8	14	6	0	11	39	45.4
Grand Kru	5	21	5	0	7	38	62.5
Lofa	0	0	3	1	1	5	1.9
Margibi	5	0	1	1	11	18	27.1
Maryland	0	0	0	0	0	0	0.0
Montserrado	7	2	6	1	43	59	19.2
Nimba	2	0	12	1	14	29	15.7
River Gee	1	0	3	0	14	18	108.4
Rivercess	1	0	1	0	11	13	79.6
Sinoe	1	0	40	0	4	45	20.2
Liberia	43	60	104	5	148	360	21.7
Target Achieved	>=2		Below Target	<2			

Figure 2. Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 8, 2019



Acute Flaccid Paralysis (Suspected Polio)

- Two cases reported from Montserrado and Maryland Counties
 - Two specimens were collected and shipped
- Cumulatively, since Epi week one, 10 cases have been reported, 3 tested negative and 7 pending laboratory confirmation

Table 3. Non-polio AFP rate per 100,000 population less than 15 years, Liberia, Epi-week 1 - 8, 2019

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	1	0	5.2	1	100%	0	0%
Grand Cape Mount	71872	1	1	9.0	1	100%	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	1	5.5	1	100%	0	0%
Maryland	76884	1	0	8.5	1	100%	0	0%
Montserrado	653849	3	0	3.0	3	100%	0	0%
Nimba	261314	1	1	2.5	1	100%	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	1	1	11.2	1	100%	0	0%
Liberia	1995031	9	4	2.9	9	100%	0	0%
Non-Polio AFP Rate	<2	Stool adequacy		<80%	Non-Polio Enterovirus	<10%	Silent	
	≥ 2			≥80%		≥10%		



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Neonatal Tetanus

- One case (dead) reported from Montserrado County
- Cumulatively, since Epi-week one, 2 clinically diagnosed cases have been reported

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- One (1) dead alert reported from Nimba County
 - Specimen was collected and tested negative
- Cumulatively, since Epi-week one, 8 EVD alerts have been reported and tested negative

Lassa fever

- Seven (7) suspected cases reported from Nimba (4), Grand Bassa (2) and Bong (1) Counties
 - Seven specimens were collected pending laboratory testing
- Cumulatively, since Epi week one, 25 suspected cases have been reported
 - Of these, eight have been tested by the laboratory. Epi-classification is as follows: 2 lab-confirmed, 6 not a case and 17 pending laboratory confirmation

Yellow fever

- Two (2) suspected cases were reported from Gbarpolu and River Gee Counties
 - Two specimens were collected and pending laboratory confirmation
- Cumulatively, since Epi-week one, 16 suspected cases have been reported; 14 tested negative and 2 pending laboratory confirmation

Monkeypox

- Thirty (30) suspected cases were reported from Bong (23), Lofa (6), and Maryland (1) Counties
 - Seventeen specimens were collected pending shipment
- Cumulatively, since Epi-week one, 39 suspected cases have been reported, shipment pending sample completion

Meningitis

- Two (2) suspected cases were reported from Margibi and Lofa Counties
 - One specimen was collected from Margibi County pending laboratory confirmation
 - Lofa county did not collect specimen
- Cumulatively, since Epi-week one, 10 suspected cases have been reported, 9 tested negative and 1 pending laboratory confirmation.

Events of Public Health Importance

Maternal Mortality

- One (1) death was reported from Nimba County
- Reported cause of death is anesthetic complication
- The reported death occurred in the health facility
- Cumulatively, since Epi-week one, 32 maternal deaths have been reported (*See Table 4*)

Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 8, 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	3	9	288
Maryland	7347	0	3	9	265
Margibi	11345	0	3	9	172
Rivercess	3865	0	1	3	168
Grand Bassa	11981	0	3	9	163
Gbarpolu	4507	0	1	3	144
Nimba	24970	1	5	16	130
Bong	18775	0	3	9	104
Montserrado	62479	0	9	28	94
Lofa	14911	0	1	3	44
Bomi	4546	0	0	0	0
Grand Cape Mount	6868	0	0	0	0
Grand Kru	3130	0	0	0	0
River Gee	3610	0	0	0	0
Sinoe	5534	0	0	0	0
Liberia (National)	190636	1	32	100	109

Neonatal Mortality

- Nineteen (19) deaths were reported from Montserrado (14), Grand Kru (3), Bomi (1) and Grand Gedeh (1) Counties
- Reported causes of deaths: Asphyxia (8), Sepsis (7), Preterm (3), and Neonatal Tetanus (1)
- All deaths were reported to have occurred in health facility
- Cumulatively, since Epi-week one, 91 neonatal deaths have been reported (*See Table 5*)

Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 8, 2019

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	3	7	8	14.5
Montserrado	62479	14	46	51	4.8
Maryland	7347	0	5	5	4.4
Lofa	14911	0	9	10	3.9
Grand Gedeh	6770	1	4	4	3.8
River Gee	3610	0	2	2	3.6
Margibi	11345	0	6	7	3.4
Bomi	4546	1	2	2	2.9
Bong	18775	0	8	9	2.8
Grand Bassa	11981	0	2	2	1.1
Gbarpolu	4507	0	0	0	0.0
Grand Cape Mount	6868	0	0	0	0.0
Nimba	24970	0	0	0	0.0
Rivercess	3865	0	0	0	0.0
Sinoe	5534	0	0	0	0.0
Liberia (National)	190636	19	91	100	3.1

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- Forty-five (45) cases were reported from Montserrado (27), Nimba (9), Bong (2), Maryland (2), Margibi (1) Gbarpolu (1), Grand Kru (1), Grand Bassa (1) and Rivercess (1) Counties
- Cumulatively, since Epi-week one, 274 suspected cases of animal bites have been reported in human

Acute Bloody Diarrhea (Suspected Shigellosis)

- Four (4) suspected cases were reported from River Gee (2) Grand Bassa (1) and Rivercess (1) Counties
- Specimens were collected and tested; 1 positive, 2 negative and 1 rejected by the laboratory
- Cumulatively, since Epi-week one, 33 acute bloody diarrhea cases have been reported with 24 stool specimens collected; 24 reached NPHRL, of these, 3 tested positive, 18 negative and 3 rejected. Nine specimens were not collected

Severe Acute Watery Diarrhea (Cholera)

- Zero cases reported
- Cumulatively, since Epi-week one, 13 suspected cases have been reported with 10 specimens collected and all tested negative. One sample discarded and 2 not collected

Unexplained Cluster of Health Events

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

Points of Entry

- Zero IDSR alert detected and verified
- A total of 4664 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 8, 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	110	57	53	0	0	0	0	0
	Robert International Airport	3141	4070	1671	36	18	18	0	0
Seaport	Freeport of Monrovia	168	84	84	0	0	0	0	0
	Buchanan Port	122	61	61	0	0	0	0	0
Ground Crossing	Bo Water Side	659	129	530	6	6	0	0	0
	Ganta	302	109	193	9	9	0	0	0
	Yekepa	88	52	36	0	0	0	0	0
	Loguatu	97	62	35	11	11	0	0	0
	Nursing Division	0	0	0	0	0	0	0	0
Total Traveler for the Week		4687	2024	2663	62	44	18	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, 52 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Cholera in Uganda
- Cholera in Zimbabwe
- Lassa fever in Nigeria
- Lassa fever in Benin
- Listeriosis in South Africa
- Humanitarian crisis in the Democratic Republic of Congo
- Humanitarian crisis in Niger

Outbreaks

Commonwealth District, Montserrado County: Measles

- Reported 10 new suspected cases
- All reported cases were treated symptomatically
- As of January 31, 2019, a total of 31 suspected cases have been line lasted
- 51 children were vaccinated through vaccination Outreach
- 91% Vaccination coverage for Commonwealth District, 2018
- Active case search and health education ongoing

- Vitamin A stock out in county
- No vaccine available for campaign
- Active case search and daily follow up continues

Jorquelleh District, Bong County: Measles

- Reported and treated 2 new suspected cases
- Vaccinated 53 children < 5years during outreach
- Active case search and health education ongoing
- County Health Team continues to respond to the outbreak

Trehn District, Grand Kru County: Measles

- Reported and treated 6 new suspected cases
- A total of 26 suspected cases have been reported from epi week 4 – 7
- CHAs are tracking defaulters in communities and sending to HF for care



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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 search ongoing in affected communities for Measles and Lassa fever

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

National Public Health Institute of Liberia (NPHIL)

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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