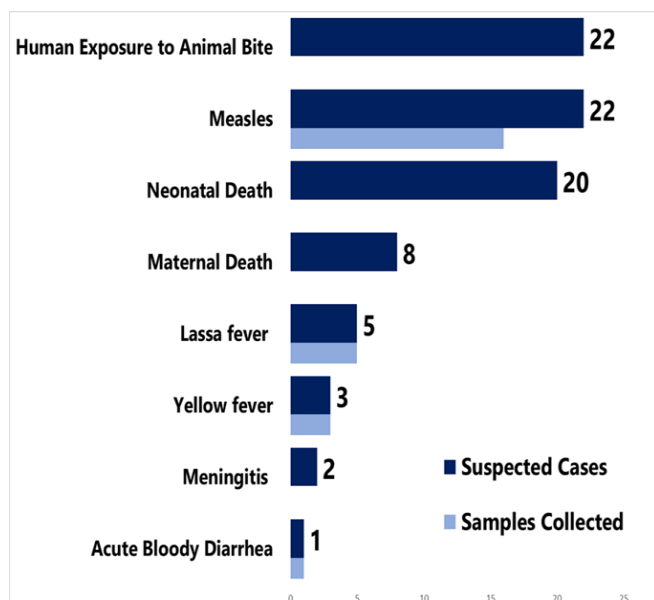


Country Population: 4,373,279    Volume 10, Issue 31    Jul 30– AUG 5, 2018    Data Source: CSOs from 15 Counties and Lab

## Highlights

**Figure 1. Public Health Events Reported in Epi week 31**



## Keynotes and Events of Public Health Significance

- A total of **83** suspected cases of immediately reportable disease and events including **28** deaths were reported
- Completeness and timeliness of health facility reports were **61%** and **58%** respectively
- Backlog of fifty-four Measles cases tested positive from ten counties
- Three newly confirmed cases of Measles reported from Montserrado County

## Reporting Coverage

**Table 1. Weekly IDSR Reporting Coverage, Liberia, Epi week 31, 2018**

County	Number of Expected Report from Health Facility	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	2	2	8	8
Bong	55	21	21	38	38
Gbarpolu	16	11	11	69	69
Grand Bassa	33	26	26	79	79
Grand Cape Mount	34	18	18	53	53
Grand Gedeh	24	9	9	38	38
Grand Kru	19	9	9	47	47
Lofa	59	16	16	27	27
Margibi	50	39	13	78	26
Maryland	25	22	22	88	88
Montserrado	283	217	217	77	77
Nimba	74	18	18	24	24
Rivercess	19	8	8	42	42
River Gee	19	19	19	100	100
Sinoe	35	35	35	100	100
<b>Liberia</b>	<b>771</b>	<b>470</b>	<b>444</b>	<b>61</b>	<b>58</b>

Legend	≥80	<80
--------	-----	-----

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

**470(61%)**  
Health facilities reported IDSR data

**79 (86%)**  
Health districts reported

**444(58%)**  
Health facilities out of 771 reported timely IDSR data

## Vaccine Preventable Diseases

### Measles

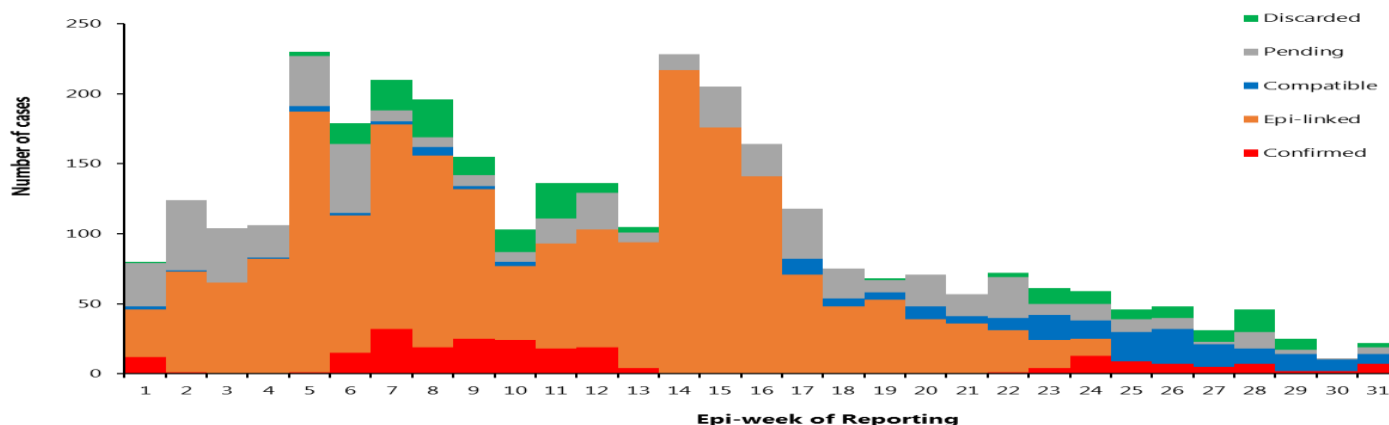
- Twenty-two (22) suspected cases of measles were reported from Montserrado (7), Grand Gedeh (3), Sinoe (3), Grand Kru (2), River Gee (2), Maryland (1), Bong (1), Grand Cape Mount (1), Margibi (1) and Nimba (1) Counties
- Fifteen (15) specimens were collected; ten (10) pending arrival at the National Reference Laboratory while five (5) were tested and 7 cases were clinically compatible
- One hundred thirty-three (133) samples were tested from epi week 22-31; of these samples tested,
  - Sixty (60) Positive of which 54 are from the backlog and 73 Negative
  - The Confirmed fifty- four (54) cases were reported from the following counties: Grand Kru (16), Bong (7), Sinoe (6), Grand Bassa (4) Grand Cape Mount (4), River Gee (4), Montserrado (4), Rivercess (3), Maryland (3) and Grand Gedeh (3)
  - Ongoing outbreak in two Counties (Grand Kru and Montserrado)
- Of the twenty-two (22) suspected cases, 2 (9%) were reported to have been previously vaccinated, while 1(5%) Not vaccinated and 19 (86%) had unknown status
- Age distribution among suspected cases are as follow: <1 year: 4 (18%), 1 – 4 years: 7 (32%), ≥5 years: 11 (50%)
- Cumulatively, since Epi-week one, 3,520 suspected cases have been reported. Epi-classification among these cases are as follow: lab confirmed 239 (7%), Epi-linked 2,118 (60%), clinically compatible 462 (13%), discarded 234 (7%) and 475 (13%) pending
- Of the 234 samples tested negative for Measles, 234 were tested for Rubella; positive 80 (34%), and negative 154 (66%)

### Public Health Action

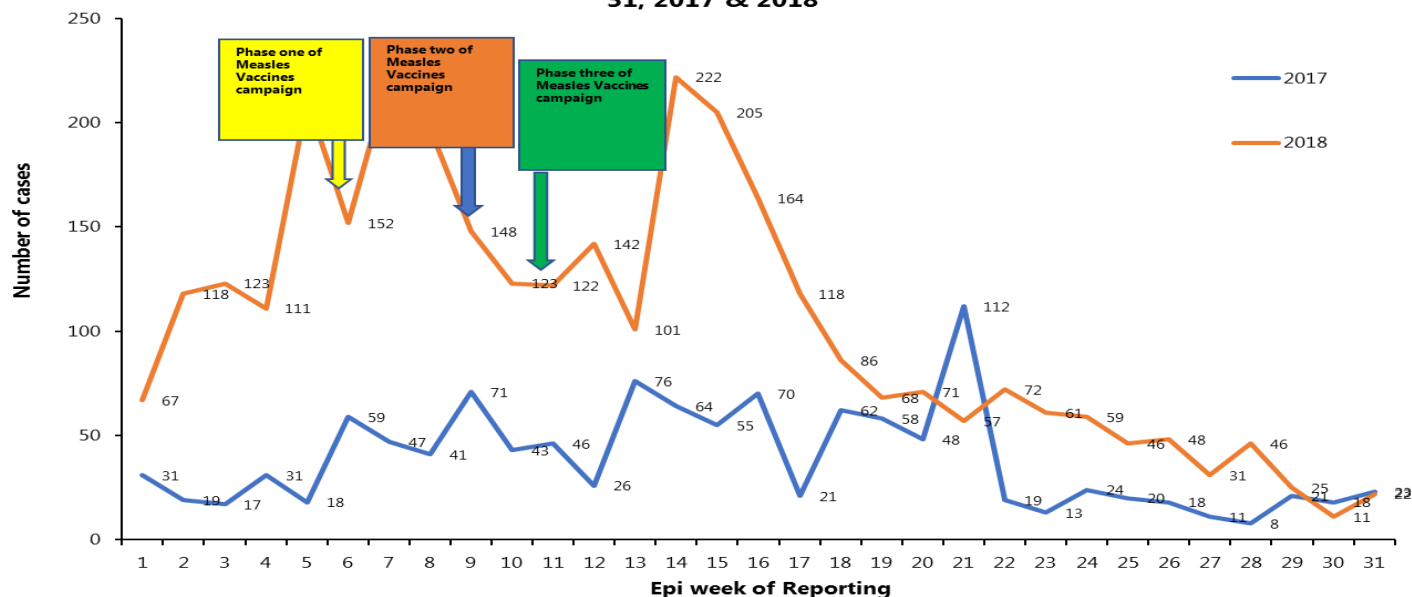
Counties with confirmed cases were notified for action:

- Case management for all reported cases ongoing
- Active case search and community engagement are ongoing in affected communities

**Epi-classification of measles cases reported, Liberia, Epi-week 1 - 31, 2018**



**Comparative weekly trend of suspected cases of Measles reported, Liberia, Epi week 1-31, 2017 & 2018**



## Acute Flaccid Paralysis (Suspected Polio)

- Zero case was reported.
- Cumulatively, since Epi week one, 41 cases have been reported and 36 tested negative while 4 pending (all have been ship and pending testing)

## Neonatal Tetanus

- Zero case was reported
- Cumulatively, since Epi-week one, 8 clinically diagnosed cases have been reported

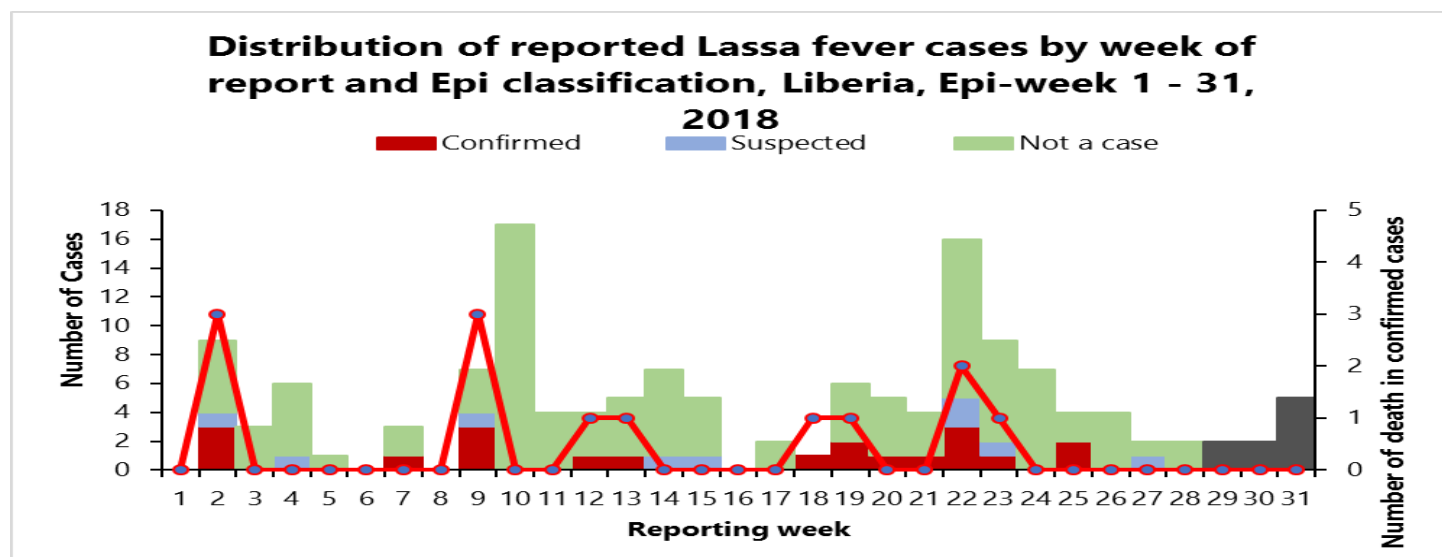
## Viral Hemorrhagic Diseases

### Ebola Virus Disease (EVD)

- Zero alert of EVD was reported
- Cumulatively, since Epi-week one, 23 EVD alerts have been reported and all tested negative by RT-PCR

### Lassa fever

- Five (5) suspected Lassa fever cases were reported from Grand Bassa (3), Montserrado (1) and Nimba (1) Counties
- Specimens were collected for all and pending testing
- Cumulatively, since Epi week one, 144 suspected cases have been reported including 35 deaths
- A total of 128 suspected cases have been tested with 20 positive, 108 negative by RT-PCR; 9 pending testing
- Case fatality rate in confirmed cases is 65% (13/20)



### Yellow fever

- Three (3) suspected Yellow fever case was reported from Bomi (2) and River Gee (1) Counties
- Specimen were collected for all and result showed negative
- Cumulatively, since Epi-week one, 68 suspected cases have been reported; 61 tested negative

### Monkeypox

- Zero cases of Monkeypox was reported
- Cumulatively, since Epi-week one, 4 suspected case have been reported from Sinoe, Rivercess, Nimba and Maryland counties

### Meningitis

- Two suspected cases of meningitis were reported from Maryland (1) and Nimba (1) Counties
- Specimens were collected for all results showed negative
- Cumulatively, since Epi-week one, fifty-eight (58) suspected cases have been reported of which twenty- six (26) have been tested; two positive by RT-PCR for *Neisseria meningitides serotype w*, twenty-four negatives

## Events of Public Health Importance

### Maternal Mortality

- Eight (8) maternal deaths were reported from Bong (2), Nimba (2), Grand Gedeh (1), Montserrado (1), River Gee (1) and Grand Bassa (1) Counties
- Reported causes of death were: PPH (2), Severe Anemia (1), Rupture Uterus (1), Sepsis (1), Abruptio placenta (1), Pre-Eclampsia (1) and Sepsis (1)
- All of the deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 176 maternal deaths have been reported (*see Table 3 for causes of death*)

**Table 3. Causes of reported maternal deaths, Liberia, Epi-week 1 – 31, 2018**

Causes	Number	Percent (%)
Post-partum hemorrhage	52	30.0
Anemia	24	14.0
Sepsis	21	12.0
Eclampsia	18	11.0
Cardio-pulmonary arrest	7	4.3
Obstructed labor	4	2.4
Retained placenta	4	2.4
Unsafe abortion	4	2.4
Congestive heart failure	3	1.8
Ruptured ectopic	3	1.8
Abruptio placenta	4	2.2
Renal failure	3	1.8
Septic abortion	3	1.7
Malaria in pregnancy	2	1.2
Embolism	2	1.2
Immunosuppression Tuberculosis		1.2
Ante-partum hemorrhage	2	1.2
Pulmonary embolism	2	1.2
Transfusion reaction	1	0.6
Epileptic	1	0.6
Induced Abortion	1	0.6
Pre-Eclampsia	2	1.1
Hypertension	1	0.6
Anaphylactic shock	1	0.6
Rupture spleen	1	0.6
Rupture uterus	2	1.1
Placental previa	1	0.6
Sickle cell anemia	1	0.6
<b>Total</b>	<b>176</b>	<b>100</b>

**Table 4. Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 – 31, 2018**

County	Annual Live birth 4.3% (EPI 2018)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Bomi	4361	0	8	5	308
Bong	17289	2	31	18	301
River Gee	3707	1	7	4	317
Maryland	7048	0	10	6	238
Gbarpolu	4323	0	7	4	233
Grand Gedeh	6494	1	10	6	232
Grand Kru	3002	0	3	2	168
Nimba	23953	2	22	13	154
Montserrado	57974	1	47	27	136
Grand Bassa	11494	1	9	5	131
Rivercess	3463	0	2	1	97
Margibi	10883	0	7	4	92
Lofa	14354	0	7	4	82
Grand Cape Mount	6588	0	3	2	76
Sinoe	5308	0	3	2	63
<b>Liberia (National)</b>	<b>180241</b>	<b>8</b>	<b>176</b>	<b>100</b>	<b>164</b>

## Neonatal Mortality

- Twenty (20) neonatal deaths were reported from Montserrado (12), Margibi (3), Grand Kru (2), River Gee (2) and Maryland (1), Counties
- Causes of deaths were: Birth asphyxia (10), Neonatal sepsis (8) and Preterm (2)
- All of the deaths were reported to have occurred in the health facilities
- Cumulatively, since Epi-week one, 455 neonatal deaths have been reported

**Table 5. Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 – 31, 2018**

County	Annual Live birth 4.3% (EPI 2018)	Current Week	Cumulative Neonatal deaths	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate
Grand Kru	3002	2	17	4	9.5
Montserrado	57974	12	216	48	6.2
River Gee	3707	2	15	3	6.8
Margibi	10883	3	33	7	5.1
Bong	17289	0	48	11	4.7
Rivercess	3463	0	9	2	4.4
Maryland	7048	1	17	4	4.0
Grand Gedeh	6494	0	14	3	3.6
Gbarpolu	4323	0	9	2	3.5
Lofa	14354	0	29	6	3.4
Sinoe	5308	0	9	2	3.5
Grand Bassa	11494	0	14	3	2.0
Nimba	23953	0	19	4	1.3
Bomi	4361	0	2	0	0.8
Grand Cape Mount	6588	0	2	0	0.5
<b>Liberia (National)</b>	<b>180241</b>	<b>20</b>	<b>455</b>	<b>100</b>	<b>4.2</b>



# Liberia IDSR Epidemiology Bulletin

2018 Epi Week 31 (July 30-Aug 5, 2018)



## **Exposure to Human Rabies (Dog/ Animal Bites)**

- Twenty-two (22) animal bite cases were reported from Bong (6), Bomi (4), Nimba (3), River Gee (3) Grand Gedeh (2), Montserrado (2), Lofa (1), and Margibi (1)
- Cumulatively, since Epi-week one, 871 cases of animal bites have been reported in human of which three cases have been confirmed in animal.

## **Acute Bloody Diarrhea (Shigellosis)**

- One (1) case of acute bloody diarrhea was reported from Sinoe County
- Specimen was collected and tested, results showed negative
- Cumulatively, since Epi-week one, 289 acute bloody diarrhea cases were reported with stool specimens collected from 194 cases
- Of the 194 specimens collected, 96 were tested; 19 positive for *shigella dysenteriae* and 77 negative

## **Severe Acute Watery Diarrhea (Cholera)**

- Zero suspected cases of cholera reported
- Cumulatively, since Epi-week one, 61 suspected cases of cholera have been reported of which 29 tested negative (*no growth of Vibrio cholera isolated*); specimens were not collected for 31 cases.

## **Confirmed Measles Outbreak**

### **Grand Kru Outbreak**

- ❖ A total of 108 suspected cases of measles have been reported from Trenh health District Grand Kru County
- ❖ Four (4) of the confirmed cases reside in Genoyah community including one of the cases that was reported by Behwah health center. Additionally, one of the cases came from Wlwoein community located in Maryland County to seek medical care in Behweh health center and five (5) of the cases were reported from Garraway Clinic

### **Vaccination status**

- ❖ Eight (9%) are not vaccinated, six (7%) are vaccinated while 78 (85%) have unknown vaccination history
- ❖ CFR is 0%

### **Over all this year**

- ❖ A total of two hundred twenty-nine (229) suspected cases of measles were reported across the five Health Districts in Grand Kru County; Trehn (108), Barclayville (46), Buah (78), Jroah (3), Dorbor (2) and thirty detected from the community

### **Confirmed cases by district**

- ❖ Trehn (13), Buah (4), Barclayville (2)

### **Montserrado Outbreak**

- ❖ A total of 18 new cases were identified from Todee District
- ❖ The affected cases sought care at the Koon Town clinic
- ❖ Intense routine immunization out-reach is ongoing in the affected community and its surrounding communities

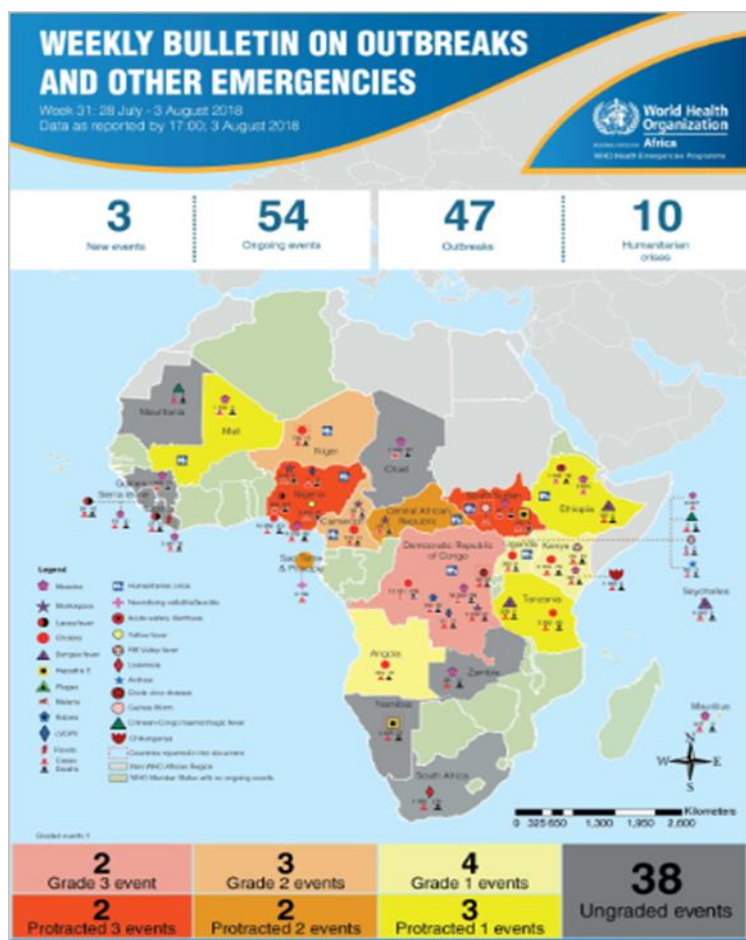
### **Confirmed cases by district**

- Todee (3)

## Points of Entry Update

Type of Ports	Point of Entry	Cumulative	Arrival	Departure	Yellow Book Issued	IDSR Alerts	Alerts Verified
Airport	James Spriggs Paynes	161	78	83	0	0	0
	Robert International Airport	3519	1763	1756	16	0	0
Seaport	Freeport of Monrovia	144	72	72	0	0	0
	Buchanan Port	0	0	0	0	0	0
Ground Crossing	Bo Water Side	322	100	222	35	0	0
	Ganta	246	108	138	28	0	0
	Yekepa	72	48	24	0	0	0
	Loguatu	212	101	111	36	0	0
<b>Total Traveler for the Week</b>		<b>4676</b>	<b>2270</b>	<b>2406</b>	<b>115</b>	<b>0</b>	<b>0</b>

## AFRO Public Health Event



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

During this week, 54 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- The declaration of end of Ebola Virus Disease in Democratic Republic of Congo
- Guinea worm in South Sudan
- Cholera in Niger
- Hepatitis E in Namibia
- Humanitarian crisis in South Sudan

Source: WHO Afro week 31 outbreak bulletin





## Public Health Measures

### National level:

- Providing technical support to Counties
  - Follow up calls to Counties for response activities
  - Ongoing data harmonization at WHO central office to reclassify Lassa fever and measles cases
  - Analysis of data for appropriate advice to Counties
  - Infection prevention and control and risk communication activities are ongoing
  - NPHIL and partners are making effort to address operation support issues with counties

### County level:

- Social mobilization jingles from MOH on Lassa fever are being played on two radio stations daily in Nimba County
- Environmental cleanup campaigns in communities intensified
- Health education have been provided to communities to seek early care

## 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

# Liberia IDSR Epidemiology Bulletin

2018 Epi Week 31 (July 30 – Aug 5, 2018)

## Immediately reportable diseases, conditions, and events by County during Epi week 31 and cumulative reports, Liberia, 2018

Counties	No. of Health Districts No. of Health District 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	D	D	A	D	A	D	A	D	A	D	A	D
Bomi	4	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0		
Bong	8	7	0	0	0	0	0	0	6	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0		
Gbarpolu	5	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		
Grand Bassa	8	6	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
Grand Cape Mount	5	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Gedeh	6	2	0	0	0	0	0	0	2	0	0	0	3	0	0	0	1	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	0	0	0	2	0	0	0	0	0	0	0	0		
Lofa	6	6	0	0	0	0	0	0	1	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	1	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0		
Maryland	6	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0		
Montserrado	7	7	0	0	0	0	0	0	2	0	1	0	7	0	0	0	1	12	0	0	0	0	0	0	0	0		
Nimba	6	6	0	0	0	0	0	0	3	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0		
Rivercess	6	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		
River Gee	6	4	0	0	0	0	0	0	3	0	0	0	2	0	0	0	1	2	0	0	0	0	1	0	0	0		
Sinoe	10	10	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Total Weekly</b>	<b>92</b>	<b>79</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>20</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>Cumulative Reported</b>			<b>41</b>	<b>0</b>	<b>289</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>871</b>	<b>0</b>	<b>144</b>	<b>0</b>	<b>3520</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>176</b>	<b>455</b>	<b>8</b>	<b>0</b>	<b>19</b>	<b>5</b>	<b>68</b>	<b>0</b>	<b>18</b>	<b>5</b>		
<b>Cumulative Laboratory Confirmed</b>			<b>0</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>13</b>	<b>239</b>	<b>0</b>	<b>2</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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**Partners: CDC & WHO**

## 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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