Liberia IDSR Epidemiology Bulletin

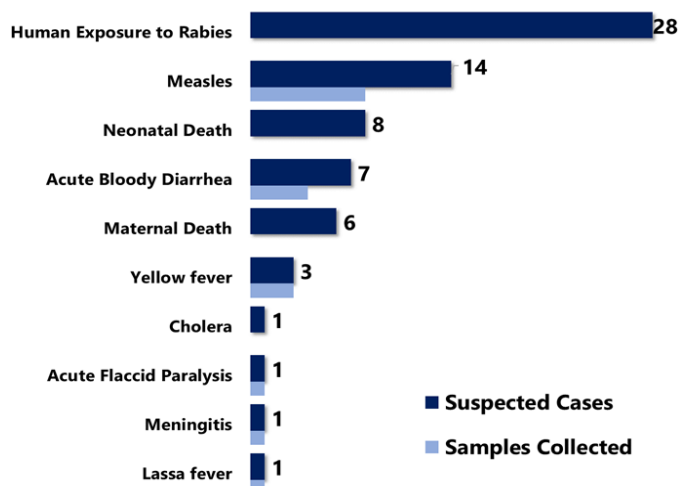## 2019 Epi-week 30 (July 22 – 28, 2019)

Highlights

Figure 1: Public Health Events reported during this week

Keynotes and Events of Public Health Significance

♦ **A total of 70** events of public health importance including **14** deaths were reported

♦ **Completeness and timeliness** of health facility reports were both 98%

♦ **Measles outbreaks ongoing in** Rivercess and Grand Gedeh Counties

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 30, 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	59	59	100	100
Maryland	26	26	26	100	100
Montserrado	347	332	332	95	95
Nimba	84	83	83	99	99
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
Liberia	**862**	**846**	**846**	**98**	**98**

846(98%) Health facilities reported IDSR data

93(100%) Health districts reported IDSR data

846 (98%) Health facilities out of 862 reported timely IDSR data

Legend: ≥80   <80

♦ *The national target for weekly IDSR reporting is 80%*
♦ *Health facility timeliness is monitored at County level*
♦ *Montserrado and Grand Cape Mount counties submitted their weekly IDSR report late to the national level*

Vaccine Preventable Diseases

Measles

- ♦ Fourteen (14) suspected cases were reported from Montserrado (3), Grand Bassa (2), Grand Kru (2), Rivercess (2) River Gee (2), Grand Gedeh (1), Sinoe (1), and Margibi (1) Counties
  - o Eight specimens were collected and pending laboratory confirmation
- ♦ Vaccination status among suspected cases:
  - o vaccinated 10 (71.4%), not vaccinated 1 (7.1%) and unknown 3 (21.4%)
- ♦ Age distribution among suspected cases:
  - o <1 year: 1 (7.1%), 1 – 4 years: 5 (35.7%), ≥5 years: 8 (57.1%)
- ♦ Cumulatively, since Epi-week one, 1207 suspected cases have been recorded; Of these, 442 have been tested by the laboratory and results showed 123 positive, 310 negative and 9 indeterminate
- ♦ Epi-classification is as follows: 873 (73.2%) confirmed (123 lab confirmed, 668 clinically confirmed, 82 epi-linked), 310 (25.9%) negative, 9 (0.8%) indeterminate, and 1 (0.1%) pending *(See Table 2, Figure 2)*
  - o Cumulative vaccination status among lab confirmed: 37 (30.1%) vaccinated, 41 (33.3%) not vaccinated, 45 (36.6%) unknown
  - o Age distribution among lab confirmed: <1 year: 11 (8.9%), 1 – 4 years: 15 (12.2%), ≥5 years: 97 (78.9%)
  - o Of the 310 specimens tested negative for measles, 229 specimens were tested for rubella, as follows: 102 positive, 118 negative, and 9 indeterminate
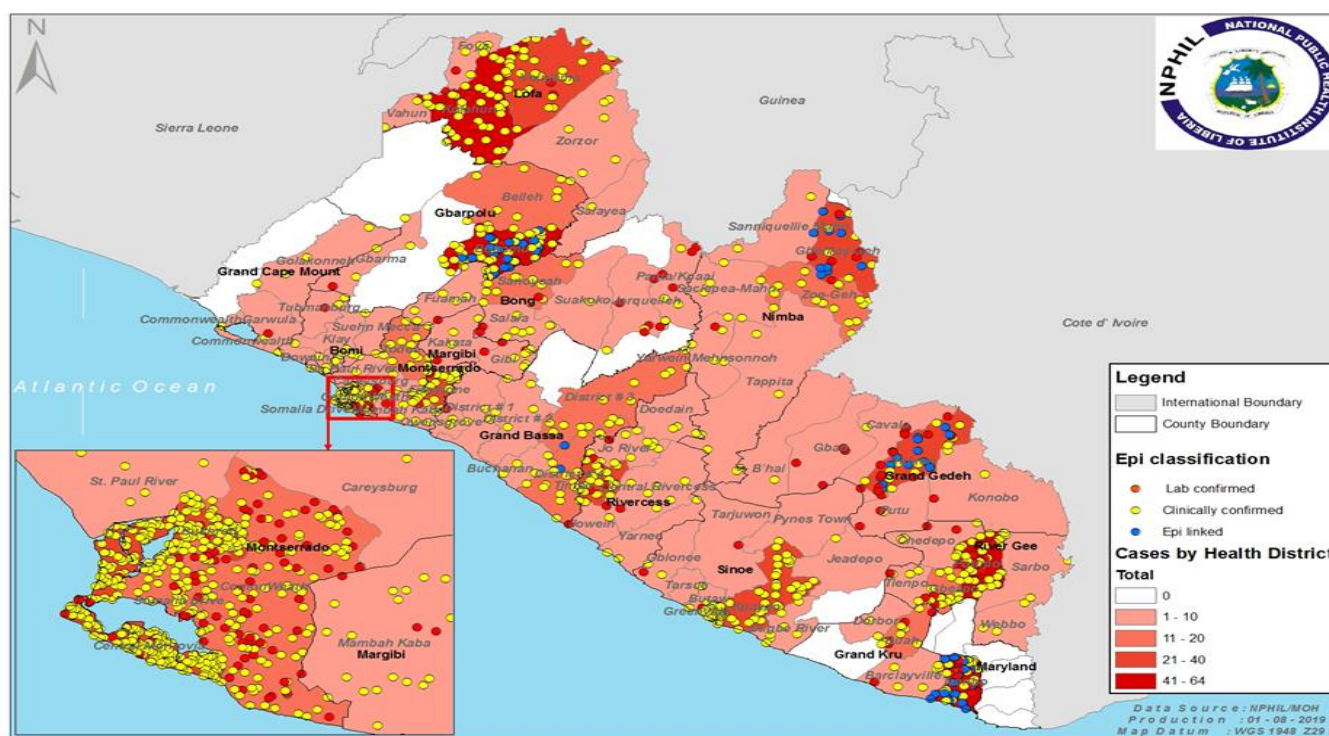
Public Health Action

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

Table 2. Annualized Non-Measles Febrile Rash Illness Rate by Counties, Liberia, Epi-week 1 - 30, 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	11	1	25	18.7
Bong	13	0	32	1	16	0	62	6.6
Gbarpolu	5	21	54	0	6	0	86	10.3
Grand Bassa	2	2	46	2	18	0	70	11.6
Grand Cape Mount	1	0	7	0	11	0	19	12.3
Grand Gedeh	21	14	18	0	14	0	67	15.9
Grand Kru	15	20	35	0	11	0	81	27.1
Lofa	7	0	85	0	18	0	110	9.3
Margibi	10	0	35	2	31	0	78	21.1
Maryland	0	0	0	0	1	0	1	1.0
Montserrado	12	4	84	1	74	0	175	9.1
Nimba	7	10	40	1	28	0	86	8.6
River Gee	16	0	61	0	27	0	104	57.7
Rivercess	7	11	49	1	36	0	104	71.8
Sinoe	6	0	110	1	8	0	125	11.1
Liberia	**123**	**82**	**668**	**9**	**310**	**1**	**1193**	**12.5**

Target Achieved	>=2	Below Target	<2

Figure 3. Cumulative Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 30, 2019

Acute Flaccid Paralysis (Suspected Polio)

- ♦ One case was reported from Lofa County
- ♦ Cumulatively, since Epi week one, 36 cases have been recorded:
    - o Proportion of cases reported with sample collected and tested is 100%
    - o Laboratory confirmed (+) zero

Neonatal Tetanus

- ♦ Zero case was reported
- ♦ Cumulatively, since Epi-week one, 21 clinically diagnosed cases have been recorded:
    - o Attributable death 29% (n=6)

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- ♦ Zero alert was reported
- ♦ Cumulatively, since Epi-week one, 13 EVD alerts have been recorded and all tested negative

Lassa fever

- ♦ One suspected case was reported from Bong County
    - o Specimen was collected and pending laboratory confirmation
- ♦ Cumulatively, since Epi week one, 79 suspected cases have been recorded:
    - o Proportion of suspected cases reported with sample collected is 94% (n=75)
    - o Laboratory confirmed 28.2% (n=22)
    - o Case fatality in confirmed cases is 36% (n=8)
    - o Epi-classification is as follows: 22 positive, 39 negative, 14 pending laboratory confirmation and 4 suspected

Yellow fever

- Three (3) suspected cases were reported from River Gee (2) and Lofa (1) Counties
- Specimens were collected and pending laboratory confirmation
- Cumulatively, since Epi-week one, 70 suspected cases have been recorded:
  - Zero laboratory confirmed
  - Proportion of suspected cases reported with sample tested is 87% (n=61)
  - Zero attributable death

Monkeypox

- Zero suspected case was reported
- 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 Lofa County
- Specimen was not collected
- Cumulatively, since Epi-week one, 38 suspected cases have been recorded, 31 tested negative, 2 pending testing and 5 specimens were not collected from Gbarpolu (2), Lofa (2) and Maryland (1) Counties

Events of Public Health Importance

Maternal Mortality

- Six (6) deaths were reported from Bong (2) and one each from Grand Bassa, Montserrado, Margibi and Nimba Counties
- Causes of death: Postpartum Hemorrhage (2), Eclampsia (2), Sepsis (1) and Anemia (1)
- Reporting sites: health facilities 5 (83%) and community 1 (17%)
- Cumulatively, since Epi-week one, 172 maternal deaths have been recorded and the major attributable causes are: postpartum hemorrhage 83 (48.2%), eclampsia 24 (14%), and anemia 14 (8.1%) *(See Table 3)*

Table 3. Annualized and Cumulative Maternal Death Reported by County, Liberia, Epi-week 1 - 30, 2019

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Maryland	7347	0	11	6	278
Grand Gedeh	6770	0	10	6	274
Bong	18775	2	25	15	247
Margibi	11345	1	13	8	213
Rivercess	3865	0	4	2	192
Nimba	24970	1	25	15	186
Gbarpolu	4507	0	4	2	165
Montserrado	62479	1	52	30	155
Grand Cape Mount	6868	0	5	3	135
Sinoe	5534	0	4	2	134
Grand Bassa	11981	1	8	5	124
Grand Kru	3130	0	2	1	119
River Gee	3610	0	2	1	103
Bomi	4546	0	2	1	82
Lofa	14911	0	5	3	62
Liberia (National)	**190636**	**6**	**172**	**100**	**168**

Neonatal Mortality

♦ Eight (8) deaths were reported from Montserrado (4), Margibi (2), Bong (1) and Lofa (1) Counties

♦ Causes of deaths: Sepsis (4), Asphyxia (3) and Preterm (1)

♦ Reporting sites: health facilities (100%)

♦ Cumulatively, since Epi-week one, 435 neonatal deaths have been reported (*See Table 4*) and the major attributable causes are: asphyxia 199 (46.0%), sepsis 148 (34.2%) and preterm 34 (7.8%)

Table 4. Annualized and Cumulative Neonatal Death Reported by County, Liberia, Epi-week 1 – 30 2019

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	0	25	6	13.8
Grand Gedeh	6770	0	28	6	7.2
Montserrado	62479	4	189	43	5.2
Maryland	7347	0	21	5	5.0
Margibi	11345	2	32	7	4.9
Bong	18775	1	49	11	4.5
Rivercess	3865	0	10	2	4.5
Gbarpolu	4507	0	10	2	3.8
River Gee	3610	0	7	2	3.4
Sinoe	5534	0	9	2	2.8
Bomi	4546	0	6	1	2.3
Lofa	14911	1	19	4	2.2
Nimba	24970	0	25	6	1.7
Grand Cape Mount	6868	0	2	0	0.5
Grand Bassa	11981	0	3	1	0.4
Liberia (National)	**190636**	**8**	**435**	**100**	**4.0**

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

♦ Twenty-eight (28) cases were reported from Montserrado (11), Maryland (4), Nimba (3), Bong (2), Grand Bassa (2), Margibi (2), one each from Bomi, Rivercess, River Gee, and Sinoe Counties

♦ Cumulatively, since Epi-week one,1065 cases of animal bites have been recorded including five attributable deaths

Acute Bloody Diarrhea (Suspected Shigellosis)

♦ Seven (7) cases were reported from Sinoe (3), one each from Grand Gedeh, Grand Bassa, Rivercess and River Gee Counties

  o Four specimens were collected and pending laboratory confirmation

♦ Cumulatively, since Epi-week one, 175 acute bloody diarrhea cases have been recorded with 122 stool specimens collected and 84 tested. Result: 12 positive and 72 negative

Severe Watery Diarrhea (Cholera)

♦ One suspected case was reported from Gbarpolu County

  o No specimen was collected

♦ Cumulatively, since Epi-week one, 83 suspected cases have been recorded with 64 specimens collected out of which; 50 negative and 0 positive

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
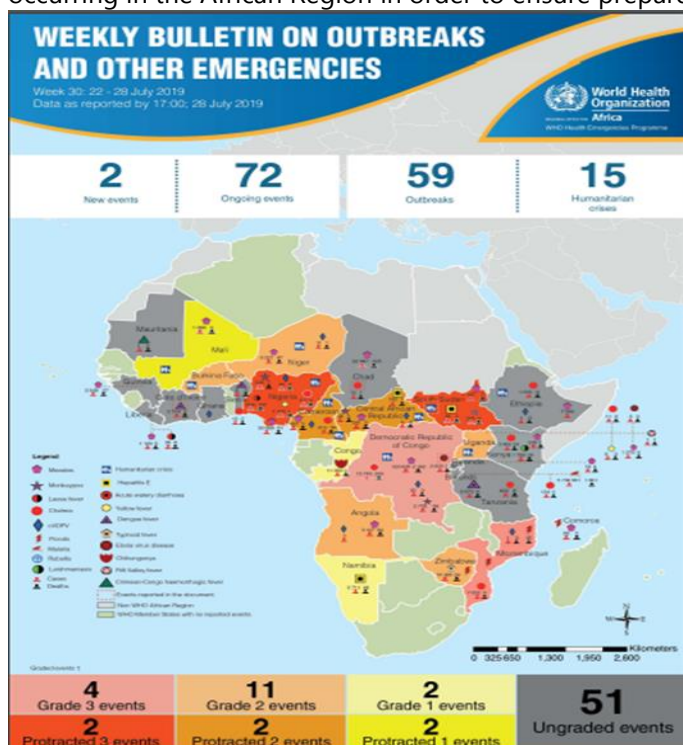- A total of 5199 travelers were recorded for the week *(See Table 5)*

Table 5. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 30, 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	143	82	61	0	0	0	0	0
	Robert International Airport	3750	1850	1900	39	39	10	0	0
Seaport	Freeport of Monrovia	170	85	85	0	0	0	0	0
	Buchanan Port	84	42	42	0	0	0	0	0
Ground Crossing	Bo Water Side	426	132	294	12	0	0	0	0
	Ganta	473	263	210	10	10	-	-	-
	Yekepa	80	37	43	0	0	0	0	0
	Loguatuo	73	45	28	0	0	0	0	0
Total Traveler for the Week		**5199**	**2536**	**2663**	**61**	**49**	**10**	**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, 72 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 South Sudan
- Ebola virus disease in Democratic Republic of the Congo
- Dengue fever in Cote D'Ivoire
- Cholera in Chad

Public Health Measures

National level

♦ Providing technical remote support to Counties
  o Heighten surveillance in affected and surrounding communities
  o **URGENCY**! **URGENCY! URGENCY!**
      o There is no ribavrin to treat Lassa fever patients in Liberia as of June 30, 2019
      o There is no human rabies vaccine in country to provide post exposure prophylaxis
  o **ACTION! ACTION! ACTION!**
      o NPHIL requested WHO since April, 2019 for ribivarin;
      o 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

Outbreaks

Measles: Gbao District, Grand Gedeh County

♦ A total of 30 cases have been reported
♦ Twenty-six epi-linked cases reported in this week
♦ Three confirmed cases with ages 1, 9, 19 years
♦ Epi-linked cases age range from 1 month to 44 years
♦ Confirmed case fatality rate is zero
♦ Vaccination status in confirmed cases
  o Not vaccinated: 3 (100%)
♦ Vaccination status in epi-linked cases
  o Vaccinated: 10 (37%)
  o Not vaccinated: 9 (33.3%)
  o Unknown: 8 (29.6%)

Public Health Actions

♦ Cases managed in OPD
♦ **Grand Gedeh**
  ♦ Mini campaign is ongoing in affected and surrounding communities targeted 942 children below 15 years
  ♦ Health education and active case search ongoing in the affected communities

♦ **Rivercess**: CHT is requesting partner support to conduct supplementary immunization activities

Measles: Timbo District, Rivercess County

♦ No new cases for this week
♦ Thirteen confirmed cases with age range from 3 to 25 years
♦ Confirmed case fatality rate is zero
♦ Vaccination status in confirmed cases
  o Vaccinated: 100%

Notes

♦ *Completeness* refers to the proportion of expected weekly IDSR reports received (target: ≥80%)

♦ *Timeliness refers to the* proportion of expected weekly IDSR reports received by the next level on time (target: ≥80%). Time requirement for weekly IDSR reports:

  o Health facility - required on or before 5:00pm every Saturday to the district level

  o Health district - required on or before 5:00pm every Sunday to the county level

  o 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: ≥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 30 (July 22 – 28, 2019)

Appendix 1: Summary of immediately reportable diseases, conditions, and events by County during Epi week 30 and cumulative report, Liberia, 2019

Counties	No. of Expected Health District	No. of Health District Reported	Acute Flaccid Paralysis (Suspected Polio) A	D	Acute Bloody Diarrhoea (Shigellosis) A	D	Severe Acute Watery Diarrhoea (Cholera) A	D	Human Exposure to Animal bites (Suspected Rabies) A	D	Lassa fever A	D	Measles A	D	Meningitis A	D	Maternal Mortality D	Neonatal Mortality D	Neonatal Tetanus A	D	Ebola Virus Disease A	D	Yellow fever A	D	Monkeypox A	D	Dengue fever A	D	Buruli Ulcer A	D	MDR Tuberculosis A	D	Yaws A	D	Unexplained Cluster of deaths A	D	Unexplained Cluster of Health Events/Disease A	D	Other Diseases/Events 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
Bong	9	9	0	0	0	0	0	0	2	0	1	0	0	0	0	0	2	1	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
Grand Bassa	8	8	0	0	1	0	0	0	2	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
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
Grand Gedeh	6	6	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	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	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	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margibi	4	4	0	0	0	0	0	0	2	0	0	0	1	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
Maryland	6	6	0	0	0	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
Montserrado	7	7	0	0	0	0	0	0	11	0	0	0	3	0	0	0	1	4	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	0	0	3	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
Rivercess	6	6	0	0	1	0	0	0	1	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
River Gee	6	6	0	0	1	0	0	0	1	0	0	0	2	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
Sinoe	10	10	0	0	3	0	0	0	1	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
Total Weekly	**93**	**93**	**1**	**0**	**7**	**0**	**1**	**0**	**27**	**0**	**1**	**0**	**14**	**0**	**1**	**0**	**6**	**8**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cumulative Reported			**36**	**0**	**175**	**0**	**83**	**0**	**1065**	**0**	**68**	**11**	**1207**	**0**	**37**	**0**	**172**	**435**	**19**	**0**	**11**	**0**	**70**	**0**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**
Cumulative Lab-confirmed			**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**22**	**8**	**123**	**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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