



Liberia IDSR Epidemiology Bulletin

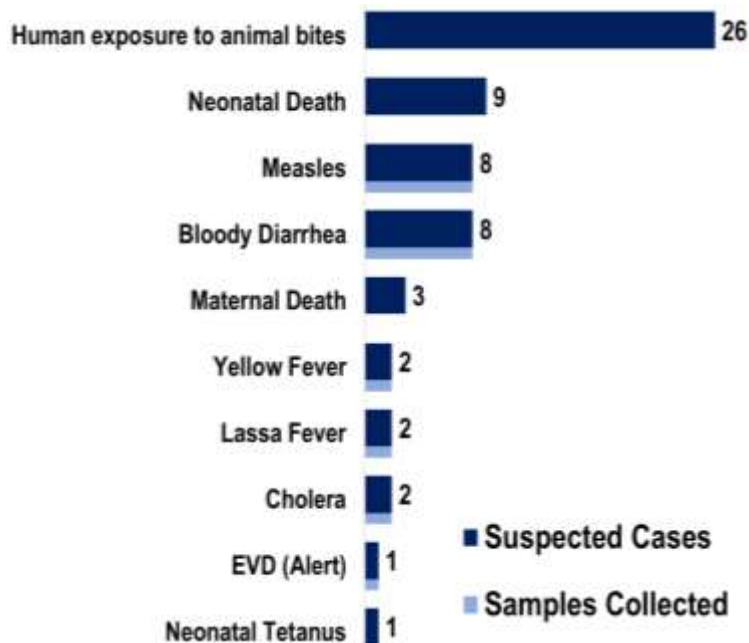
2017 Epi Week 34 (Aug 21-27, 2017)



Country Population: 4,373,279 | Volume 09, Issue 34 Aug. 21 – 27, 2017 | Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported in Epi-week 34



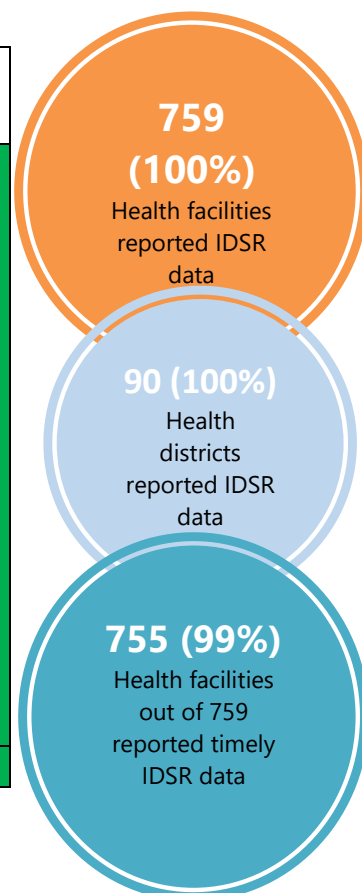
Keynotes and Events of Public Health Significance

- A total of Sixty-two suspected cases of immediately reportable diseases and events including 13 deaths were reported from 15 counties
- Hundred percent (100%) reporting for completeness and Ninety-nine (99%) reporting for timeliness from health facilities respectively
- One confirmed case of Shigella from Montserrado County

Reporting Coverage

Table 1. Weekly IDSR Reporting Coverage, Liberia, Epi week 34, 2017

County	Number of Health Facility Report Expected	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	23	23	23	100	100
Bong	55	55	55	100	100
Gbarpolu	15	15	15	100	100
Grand Bassa	33	33	33	100	100
Grand Cape Mount	32	32	32	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	19	19	19	100	100
Lofa	59	59	59	100	100
Margibi	44	44	40	100	91
Maryland	25	25	25	100	100
Montserrado	283	283	283	100	100
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	759	759	755	100	99



Legend

≥80

<80

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



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Vaccine Preventable Diseases

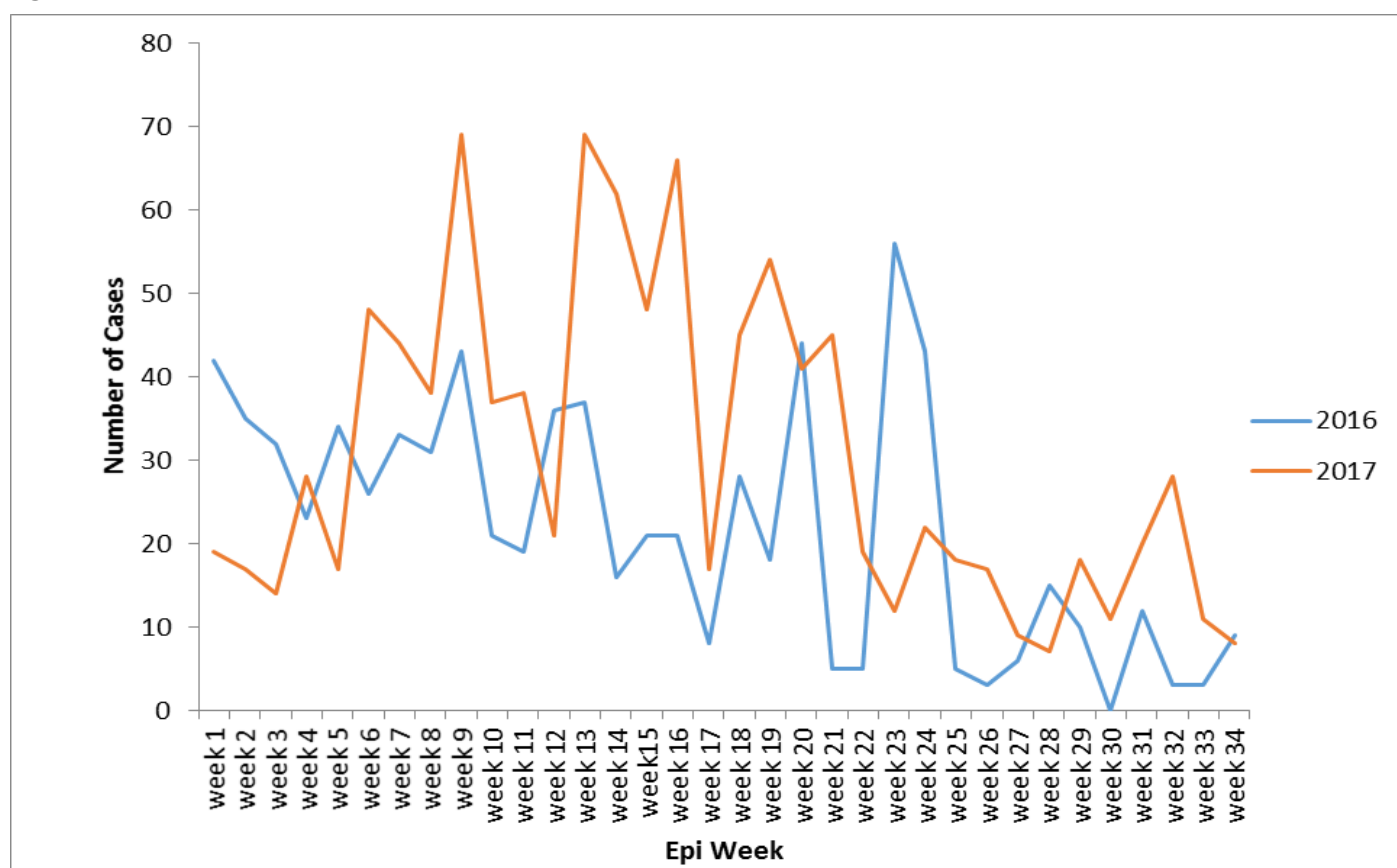
Measles

- Eight suspected cases were reported from Gbarpolu (2), Lofa (2), Nimba (1), Margibi (1), River Gee (1) and Grand Cape Mount (1) Counties
- Of the (8) suspected cases reported this week, 4 (50%) were reported to have been previously vaccinated, 3 (38%) had unknown vaccination status and 1 (12%) was not vaccinated
- Three (37.5%) of the suspected cases were <5 years and five (62.5%) were ≥5 years of age
- Cumulatively, since Epi week one, 1,048 suspected cases have been reported, of which 884 were tested: 147 (17%) positive, 691 (78%) negative, and 46 (5%) equivocal. One hundred sixty-four of the suspected cases were compatible and epi-linked. Of the 737 equivocal and negative cases, 708 (96%) samples have been tested for rubella, of which, 312 (44%) were positive

Public Health Actions

- Case management initiated for all suspected cases
- Samples were collected from 8 suspected cases and sent to the National Reference Laboratory for confirmation
- Active surveillance ongoing in Counties

Figure 3. Comparison of Suspected Cases of Measles Reported, Liberia, Epi weeks 1 – 34, 2016 & 2017



Acute Flaccid Paralysis (Suspected Polio)

- Zero cases of Acute Flaccid Paralysis were reported
- Cumulatively, since Epi week one, 70 AFP cases have been reported, of which, 68 (97%) have been tested negative for poliovirus and 2 (3%) are pending laboratory confirmation



Neonatal Tetanus

- One case of Neonatal tetanus was reported from Margibi County
- Cumulatively, since Epi week one, 13 clinically diagnosed cases have been reported

Public Health Actions

- The case was transferred from C.H. Rennie hospital to J.F. K. hospital in Montserrado County for further management

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- One dead EVD alert was reported from Rivercess County, and tested negative
- Cumulatively, since Epi week one, 304 EVD alerts have been reported, all of which have been tested negative by PCR

Lassa fever

- Two suspected cases of Lassa fever were reported from Grand Bassa County
- Samples have been collected and sent to the lab for confirmation
- Cumulatively, since Epi week one, 40 suspected cases have been reported, and samples were collected from all cases
- Of the 40 samples, 7 have been confirmed positive by RT-PCR and ELISA-Antigen and 10 negative
- Of the 7 confirmed cases, 4 deaths were reported, for a case fatality rate in confirmed cases of 57%.

Public Health Actions

- The two cases are undergoing treatment at Liberia Agriculture hospital
- Active surveillance ongoing in counties

Yellow fever

- Two suspected cases were reported from River Gee and Bomi Counties and samples were collected
- Cumulatively, since Epi-week one, 138 suspected cases have been reported, 120 samples tested negative and 15 are pending laboratory confirmation

Meningitis

- No suspected cases of meningitis were reported this week
- Cumulatively, since Epi week one, 46 suspected cases have been reported
- Of the 46 suspected cases, 31 (including 13 deaths) were reported as part of an outbreak in three counties (Grand Bassa, Montserrado and Sinoe), with *Neisseria meningitidis* serogroup C confirmed in 13 cases, including 11 deaths (case fatality rate 85%).

Events of Public Health Importance

Maternal Mortality

- Three maternal deaths were reported from Grand Bassa (2) and Bong (1) Counties
- Reported causes of deaths were: Postpartum hemorrhage (1), Eclampsia (1) and Anemia (1)
- Two of the deaths were reported to have occurred in the health facility and one in the community
- Cumulatively, since Epi-week one, 171 maternal deaths have been reported (see Table 3 for causes of death)



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Figure 4. Comparison of the trend of Maternal Deaths Reported, Liberia, Epi weeks 1 - 34, 2016 & 2017

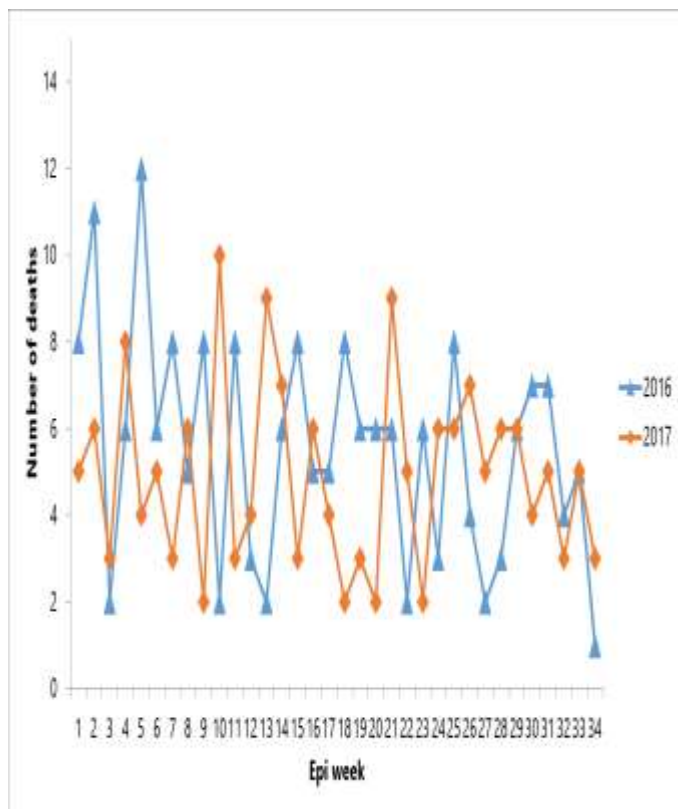


Table 3. Causes of Maternal Death, Liberia, Epi weeks 1 - 34, 2017 (n=171)

Maternal Death	Number	Percentage
Post-partum hemorrhage	58	33.9
Sepsis	24	14.3
Anemia	23	13.1
Eclampsia	18	10.1
Ruptured uterus	7	4.2
Unknown	7	4.2
Renal failure	6	3.6
Cardiac pulmonary failure	6	3.6
Congestive Heart failure	4	2.4
Pre-eclampsia	4	2.4
Abruptio placenta	3	1.8
Multiple organ failure	2	1.2
Obstructed labor	2	1.2
Dissimilated intravascular coagulation	1	0.6
Amniotic fluid embolism	1	0.6
Respiratory Distress	1	0.6
Umbilical Hernia (Omphalocele)	1	0.6
Spinal shock	1	0.6
Prolong Labour	1	0.6
Hepatitis B	1	0.6
Total	171	100

Table 5. Cumulative Maternal Deaths Reported by Counties, Liberia, Epi weeks 1 - 34, 2017

County	Annual Live birth ¹	Current week	Cumulative Maternal deaths	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/ 100,000
Bomi	4361	0	8	5	596
Grand Bassa	11494	2	20	11	509
Grand Kru	3002	0	5	3	433
Sinoe	5308	0	7	5	429
Margibi	10883	0	13	8	388
Maryland	7048	0	8	6	369
River Gee	3707	0	4	2	351
Bong	17289	1	18	10	301
Gbarpolu	4323	0	4	2	301
Grand Gedeh	6494	0	7	2	300
Nimba	23953	0	21	13	258
Montserrado	57974	0	42	26	235
Lofa	14354	0	11	8	226
Rivercess	3463	0	2	1	188
Grand Cape Mount	6588	0	1	1	49
Liberia	180242	3	171	100	292

¹ Number of live birth is at 4.3% of the estimated population for 2017 (Source: EPI/MoH)



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Neonatal Mortality

- Nine neonatal deaths were report from Montserrado (4), Rivercess (2), Maryland (1), and Grand Bassa (1), Bong (1) Counties
- Reported causes of death were:
 - Neonatal sepsis (3)
 - Birth asphyxia (3)
 - Preterm (3)
- All nine deaths were reported to have occurred at health facility
- Cumulatively, since Epi week one, 402 neonatal deaths have been reported

Figure 5. Causes of Neonatal Death, Liberia, Epi weeks 1 - 34, 2017 (n=402)

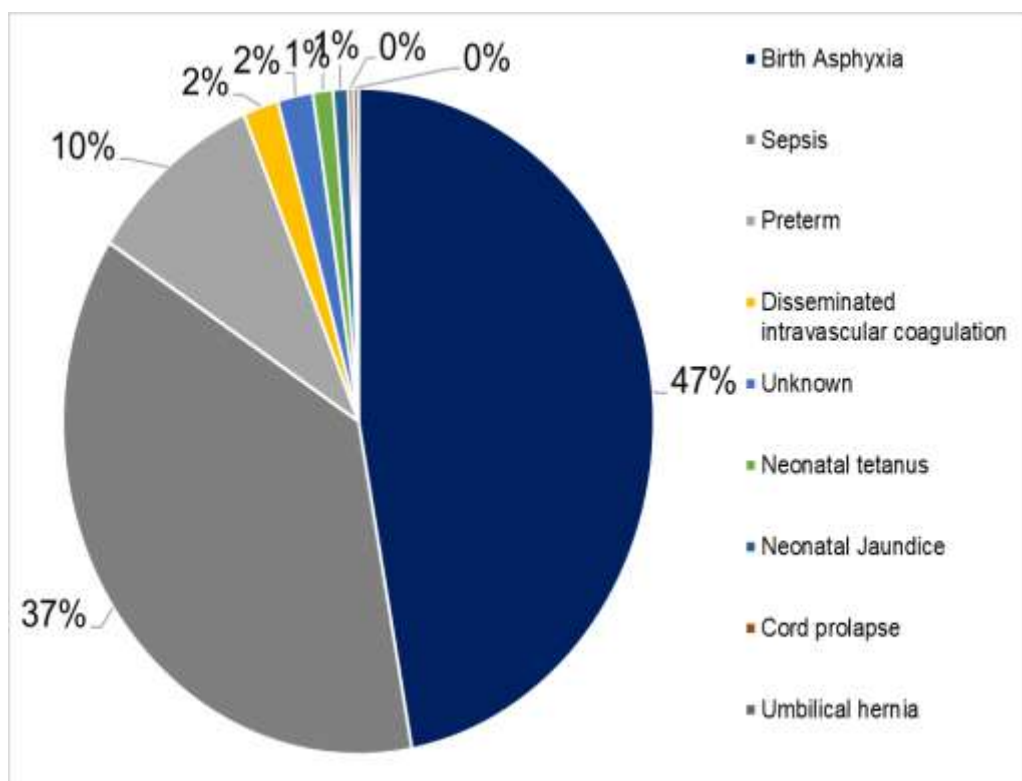


Table 5. Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi weeks 1 - 34 2017

County	Annual Live birth ²	Current week	Cumulative Neonatal Deaths	% of Cumulative Neonatal Deaths	Annualized Neonatal Mortality Ratio/1,000
River Gee	3707	0	27	7	23.7
Maryland	7048	1	47	12	21.7
Sinoe	5308	0	21	5	12.9
Grand Kru	3002	0	11	3	11.9
Montserrado	57974	4	145	36	8.1
Bong	17289	1	41	10	7.7
Rivercess	3463	2	11	3	10.3
Grand Gedeh	6494	0	16	4	8.0
Gbarpolu	4323	0	4	1	3.0
Grand Bassa	11494	1	11	3	3.1
Lofa	14354	0	38	9	8.6
Nimba	23953	0	14	3	1.9
Margibi	10883	0	11	3	3.3
Grand Cape Mount	6588	0	2	0	1.0
Bomi	4361	0	3	1	2.2
Liberia	180242	9	402	100	7.2

² Number of live birth is at 4.3% of the estimated population for 2017 (Source: EPI/MoH)



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Human Exposure to Animal Bites (Suspected Rabies)

- Twenty-six events of animal bites were reported from Montserrado (14), Grand Bassa (5), Margibi (3), Nimba (2), Bong (1), and Rivercess (1) Counties
- Cumulatively, since Epi week one, 939 events of animal bites have been reported

Public Health Actions

- Grand Bassa and Rivercess Counties administered Post-Exposure Prophylaxis to affected patients

Bloody Diarrhea (Shigellosis)

- Eight cases of bloody diarrhea were reported from Margibi (4), Sinoe (1), Montserrado (1), Gbarpolu (1) and Grand Bassa (1) Counties; specimens were collected from all cases.
- One confirmed case of *Shigella* from Central Monrovia District, Montserrado County
- Cumulatively, since Epi week one, 176 cases of bloody diarrhea have been reported, of which 13 (7%) were confirmed positive for *Shigella*, 64 (36%) were negative and 99 (57%) are pending laboratory testing

Severe Acute Watery Diarrhea (Cholera)

- Two suspected cases of cholera were reported from Grand Bassa (1) and Maryland (1) Counties; specimens were collected from both cases
- Cumulatively, since Epi week one, 126 suspected cases of cholera have been reported, including 4 deaths attributable to cholera. Of the 46 samples collected, 2 (5%) were confirmed positive, 35 (80%) tested negative and 9 pending

Public Health Measures

National level

- Validated IDSR Health Facility Operational Guide
- Weekly meeting with the laboratory to ensure data verification and harmonization
- Work with Counties to determine response state of preparedness (lab specification for CSF collection and transportation, medical supplies and IPC)
- Preparation for AVADAR performance review meeting in Montserrado County
- Follow up with counties to conduct maternal deaths investigation, revision of forms and implementation of recommendations made
- Counties are encouraged to conduct health education for all public health diseases based on risk
- Counties are encouraged to update their cholera preparedness plans and review existing stocks of supplies for repositioning

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



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- *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



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Appendix 1: Summary of immediately reportable diseases, conditions, and events by County during Epi week 34 and cumulative reports, Liberia, 2017

Counties	No. of Health Districts	No. of Health District reported	Acute Flaccid Paralysis (Polio)		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
Bomi	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Bong	8	8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Gbarpolu	5	5	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Bassa	8	8	0	0	1	0	1	0	5	0	2	0	0	0	0	0	2	1	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	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
Grand Kru	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
Lofa	6	6	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Margibi	4	4	0	0	4	0	0	0	3	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Maryland	6	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Montserrado	7	7	0	0	1	0	0	0	14	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Nimba	6	6	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rivercess	6	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	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	1	0	0	0
Sinoe	10	10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Weekly	90	90	0	0	8	0	2	0	26	0	2	0	8	0	0	0	3	9	1	0	0	1	2	0	0	0
Cumulative Reported			70	0	176	0	126	5	939	1	22	18	1048	2	13	2	171	402	11	2	32	272	138	1	1800	23
Cumulative Laboratory Confirmed			0	0	6	0	2	0	0	0	3	4	145	0	0	0			0	0	0	0	0	0	0	0

Note: **A** = Alive
D = Dead

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