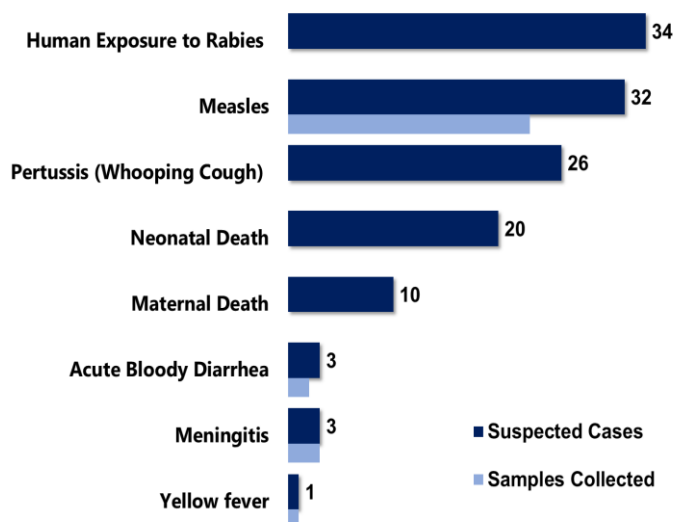


Country Population: 4,433,398 Volume 11, Issue 24 June 10 -16, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported during this week



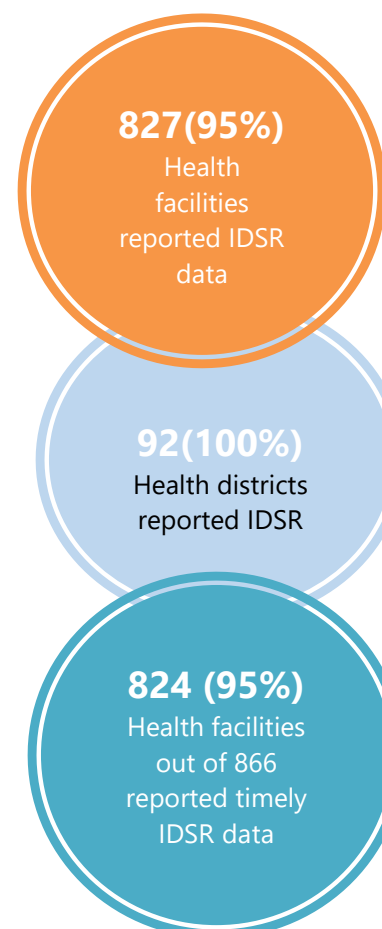
Keynotes and Events of Public Health Significance

- **A total of 129** events of public health importance including **30** deaths were reported
- **Completeness and timeliness** of health facility reports were both **95%**
- **Pertussis** cases reported in Sinoe County

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 23, 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	15	100	94
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	55	55	93	93
Maryland	26	26	26	100	100
Montserrado	351	333	331	95	94
Nimba	84	67	67	80	80
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
Liberia	866	827	824	95	95



Legend: ≥80 <80

- The national target for weekly IDSR reporting is 80%
- Health facility timeliness is monitored at County level
- All Counties submitted their weekly IDSR report on time to the national level

Vaccine Preventable Diseases

Measles

- Thirty – two (32) suspected cases were reported from Grand Bassa (9), Lofa (8), Rivercess (4), Montserrado (3), Grand Kru (3), Bomi (1), Grand Gedeh (1), Margibi (1), Bong (1), Nimba (1), and Sinoe (1) Counties
- Twenty-three (23) specimens were collected and 8 tested (1 positive and 7 negative) with 11 arrival at the laboratory
- Vaccination status:
 - Among suspected cases: 12 (37.5%) vaccinated, 7 (21.9%) not vaccinated and 13 (40.6%) unknown
- Age distribution
 - Among suspected cases: <1 year: 2 (6.3%), 1 – 4 years: 5 (15.6%), ≥5 years: 25 (78.1%)
- Cumulatively, since Epi-week one, 1032 suspected cases have been recorded:
 - Of these, 350 have been tested by the laboratory and results showed 82 positive, 262 negative and 6 indeterminate
- Epi-classification is as follows: 764 (74%) confirmed (82 lab confirmed, 603 clinically confirmed, 79 epi-linked), 262 (25%) negative and 6 (0.6%) indeterminate (*See Table 2*)
 - Of the 262 specimens tested negative for measles, 186 specimens were tested for rubella; 94 positive, 83 negative and 9 indeterminate

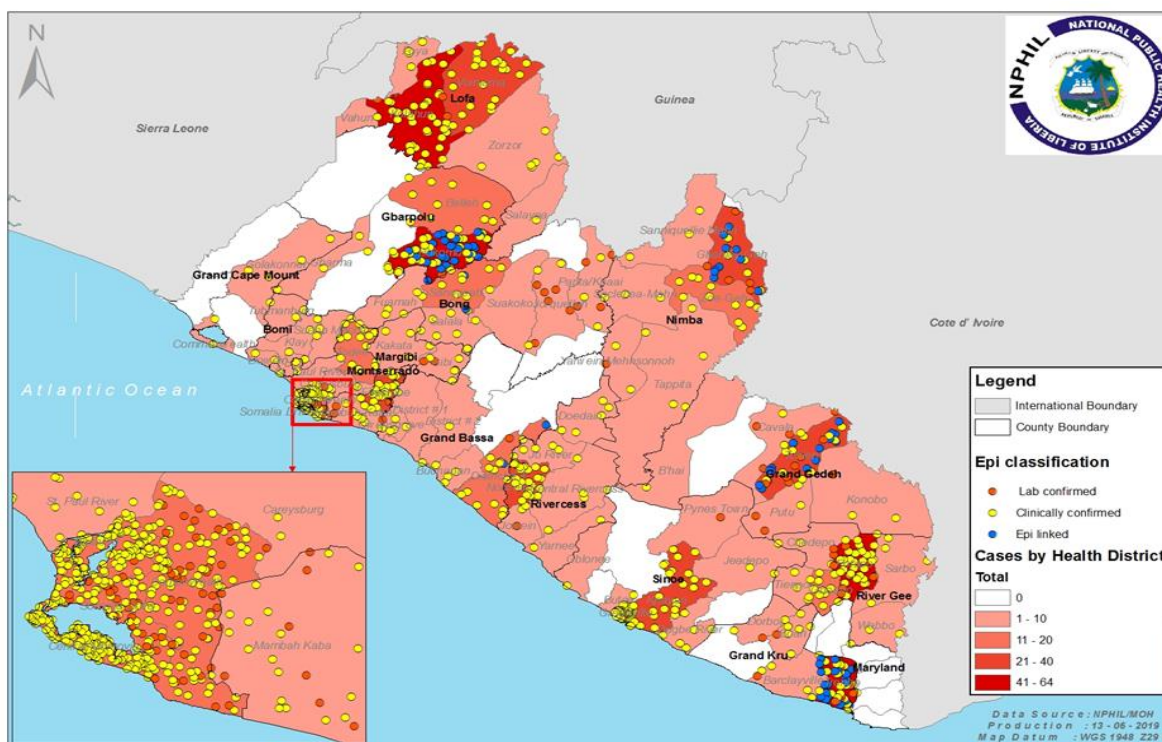
Public Health Action

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

Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 24, 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	14	0	5	19	10.2
Bong	10	2	30	1	13	56	6.5
Gbarpolu	4	27	48	0	5	84	10.3
Grand Bassa	2	2	29	1	17	51	13.2
Grand Cape Mount	0	0	6	0	10	16	13.6
Grand Gedeh	16	14	18	0	13	61	17.9
Grand Kru	10	20	36	0	9	75	26.8
Lofa	3	0	82	0	13	98	8.1
Margibi	6	0	39	1	22	68	18.1
Maryland	0	0	0	0	1	1	1.3
Montserrado	11	4	81	1	63	160	9.4
Nimba	7	10	32	1	27	77	10.1
River Gee	8	0	59	0	24	91	61.9
Rivercess	1	0	47	0	33	81	79.6
Sinoe	4	0	82	1	7	94	11.8
Liberia	82	79	603	6	262	1032	12.8
Target Achieved	>=2		Below Target	<2			

Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 24, 2019



Acute Flaccid Paralysis (Suspected Polio)

- Zero cases reported this week
- Cumulatively, since Epi week one, 32 cases have been recorded:
 - Proportion of suspected cases reported with sample collected and tested is 100%
 - Laboratory confirmed (+) zero

Neonatal Tetanus

- One (1) clinically diagnosed case was reported from Montserrado County
- Cumulatively, since Epi-week one, 17 clinically diagnosed cases have been recorded:
 - Attributable clinically confirmed death 35%

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- Zero alerts were reported
- Cumulatively, since Epi-week one, 11 EVD alerts have been recorded with eleven negative results

Lassa fever

- Zero cases were reported
- Cumulatively, since Epi week one, 66 suspected cases have been recorded:
 - Proportion of suspected cases reported with sample collected and tested is 100%
 - Laboratory confirmed 33% (n=22)
 - Case fatality in confirmed cases is 36% (n=8)
- Epi-classification is as follows: 22 positive, 39 negative and 7 pending laboratory confirmation

Yellow fever

- One (1) suspected case were reported from River Gee County
- Specimen was collected and pending Laboratory confirmation
- Cumulatively, since Epi-week one, 51 suspected cases have been recorded:
 - Zero laboratory confirmed
 - Proportion of suspected cases reported with sample collected and tested is 92%
 - Zero attributable death

Monkeypox

- Zero cases were reported
- Cumulatively, since Epi week one, 50 suspected cases have been reported and no specimen has been shipped

Meningitis

- Three (3) suspected cases were reported from Nimba County
- Specimens were collected: two tested negative and one pending laboratory confirmation
- Cumulatively, since Epi-week one, 29 suspected cases have been reported with one death, 26 tested negative and one pending laboratory confirmation

Events of Public Health Importance

Maternal Mortality

- Ten (10) deaths were reported from Grand Gedeh (2), Montserrado (2), Grand Cape Mount (1), Lofa (1), Bong (1), Nimba (1), and Sinoe (1) Counties
 - Causes of death: postpartum hemorrhage (5), anemia (2), pre-eclampsia (1), antepartum hemorrhage (1) and one pending investigation
 - Reporting sites: health facility 6 (60%) and community 4 (40%)
- Cumulatively, since Epi-week one, 129 maternal deaths have been reported with the top three causes are postpartum hemorrhage accounting for 48.8%, eclampsia 10.2% and sepsis 7.8%

Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 24 2019

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Grand Gedeh	6770	2	9	7	288
Maryland	7347	0	9	7	265
Bong	18775	1	20	16	231
Gbarpolu	4507	1	4	3	192
Margibi	11345	0	10	8	191
Nimba	24970	1	19	15	165
Rivercess	3865	0	3	2	168
Sinoe	5534	1	4	3	157
Grand Bassa	11981	0	7	6	127
Montserrado	62479	2	31	24	108
Bomi	4546	0	2	2	95
Grand Cape Mount	6868	1	3	2	95
Grand Kru	3130	0	1	1	69
River Gee	3610	0	1	1	60
Lofa	14911	1	4	3	58
Liberia (National)	190636	10	127	100	144

Neonatal Mortality

- Twenty (20) deaths were reported from Montserrado (12), Nimba (4), Grand Kru (2), Bong (1), and Rivercess (1) Counties
 - Causes of deaths: asphyxia (10), sepsis (7), neonatal tetanus (1), prematurity (1), and one under investigation
 - Reporting sites: health facility 18 (90%) and community 2 (10%)
- Eighteen (90%) deaths were reported to have occurred in health facilities while two occurred in the community
- Cumulatively, since Epi-week one, 328 neonatal deaths have been reported (*See Table 5*) with the top three causes are asphyxia accounting for 47.6%, sepsis 37.2% and preterm 8.8%

Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 24, 2019

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	2	23	7	15.9
Grand Gedeh	6770	0	25	8	8.0
Rivercess	3865	1	10	3	5.6
Margibi	11345	0	27	8	5.2
Bong	18775	1	44	13	5.1
Montserrado	62479	12	121	37	4.2
Maryland	7347	0	14	4	4.1
River Gee	3610	0	6	2	3.6
Sinoe	5534	0	9	3	3.5
Lofa	14911	0	17	5	2.5
Gbarpolu	4507	0	5	2	2.4
Bomi	4546	0	4	1	1.9
Nimba	24970	4	20	6	1.7
Grand Cape Mount	6868	0	2	1	0.6
Grand Bassa	11981	0	3	1	0.5
Liberia (National)	190636	20	330	100	3.8

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- Thirty-four (34) cases were reported from Montserrado (7), Bong (4), Grand Bassa (3), Margibi (3), Lofa (3), Nimba (3), Sinoe (3), Rivercess (2), Gbarpolu (2), Grand Kru (2), Grand Gedeh (1), and Maryland (1) Counties
- Cumulatively, since Epi-week one, 889 cases of animal bites have been recorded including one death

Acute Bloody Diarrhea (Suspected Shigellosis)

- Three (3) suspected cases were reported from Sinoe (2) and Margibi (1) Counties
- Two specimens were collected and one tested negative
- Cumulatively, since Epi-week one, 130 acute bloody diarrhea cases have been recorded with 76 stool specimens collected and tested. Result: 10 positive, 65 negative

Severe Watery Diarrhea (Cholera)

- Zero cases were reported
- Cumulatively, since Epi-week one, 67 suspected cases have been recorded with 49 specimens collected out of which; 46 negative, 5 rejected by laboratory, while 10 specimens were not collected

Unexplained Cluster of Health Events

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

Designated Points of Entry

- Zero IDSR alert detected and verified
- A total of 4768 travelers were recorded for the week (See Table 6)

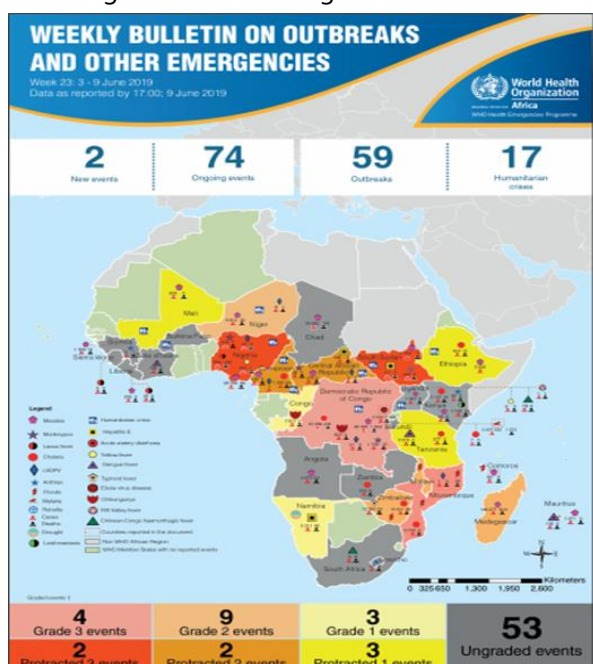
Table 6. IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 24, 2019

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	94	54	40	0	0	0	0	0
	Robert International Airport	3198	1683	1515	0	0	0	0	0
Seaport	Freeport of Monrovia	134	67	67	0	0	0	0	0
	Buchanan Port	42	21	21	0	0	0	0	0
Ground Crossing	Bo Water Side	534	164	370	25	25	0	0	0
	Ganta	156	113	43	0	0	0	0	0
	Yekepa	54	25	29	0	0	0	0	0
	Loguatu	289	59	230	5	5	0	0	0
Total Traveler for the Week		4501	2186	2315	30	30	0	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, 74 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Malaria in Burundi
- Measles in Comoros island
- Ebola virus disease in Democratic Republic of the Congo
- Humanitarian crisis in Central African Republic



Outbreak

Pertussis – Dugbe River District, Sinoe County

- Twenty-six suspected cases were reported
- Ages ranging from 1 – 9 years
- Five (5) females and 21 males
- Sixteen (16) cases have history of completed vaccination
- Zero case fatality rate

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 searches 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

Liberia IDSR Epidemiology Bulletin

2019 Epi-week 23 (June 3 –June 9, 2019)

Counties	No. of Expected Health District		No. of Health District Reported		Acute Flaccid Paralysis (Suspected 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		Ebola Virus Disease		Yellow fever		Monkeypox		Dengue fever		Buruli Ulcer		MDR Tuberculosis		Yaws		Unexplained Cluster of deaths		Unexplained Cluster of Health Events/Disease		Other Diseases/Events			
	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	D	A	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	1	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	1	0	2	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	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	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	
Grand Bassa	8	8	0	0	0	0	0	0	3	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	0	0	0	0	0	0	0	0	0	
Grand Cape Mount	5	5	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	0	0	0	0	0	0	0	0	0	0	0	
Grand Gedeh	6	6	0	0	1	0	0	0	1	0	0	0	0	0	2	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	
Grand Kru	5	5	0	0	0	0	2	0	2	0	0	0	0	0	1	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	0	0	0	0	0	
Lofa	6	6	0	0	0	0	0	0	2	0	0	0	0	0	7	0	0	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	
Margibi	4	4	0	0	1	0	0	0	2	0	0	0	0	0	1	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
Maryland	6	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	2	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
Montserrado	7	7	0	0	3	0	0	0	10	0	0	0	0	0	2	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
Nimba	6	6	0	0	0	0	0	0	6	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	0	0	0	0
Rivercess	6	6	0	0	0	0	1	0	3	0	0	0	0	0	3	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
River Gee	6	6	0	0	0	0	2	0	0	0	1	0	0	0	4	0	0	0	0	0	2	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
Sinoe	10	10	0	0	0	0	2	0	1	0	0	0	0	0	7	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
Total Weekly	93	93	0	0	5	0	8	0	34	0	3	0	28	0	2	0	4	14	2	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Reported			32	0	127	0	66	0	855	0	53	15	1010	0	26	0	120	310	14	6	7	4	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Laboratory Confirmed			0	0	10	0	0	0	0	0	14	8	75	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

D = Dead
A = Alive

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