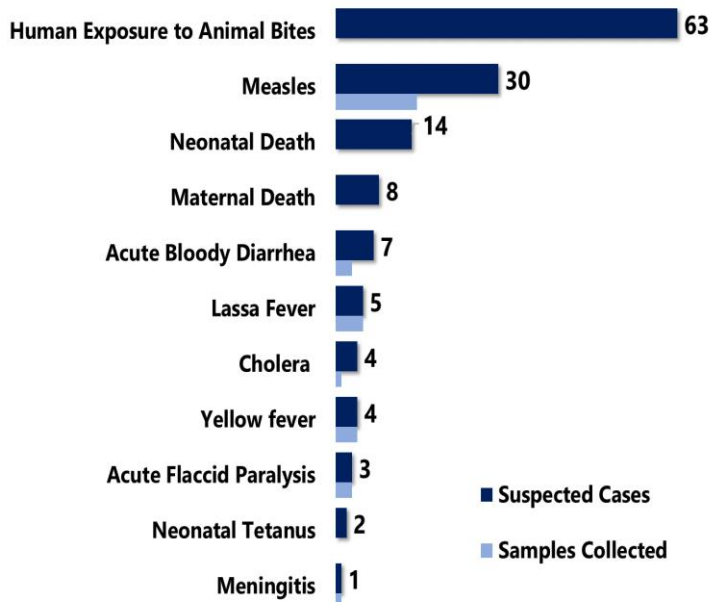


Country Population: 4,433,398 Volume 11, Issue 17 April 22 – 28, 2019 Data Source: CSOs from 15 Counties and Lab

Highlights

Figure 1. Public Health Events Reported during this week



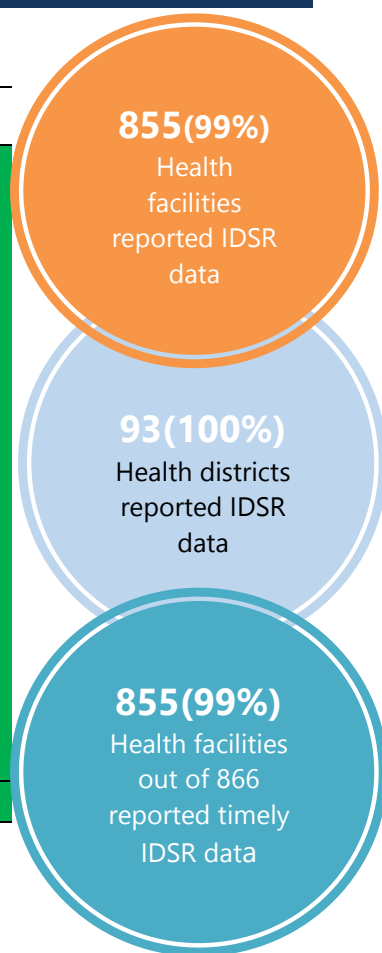
Keynotes and Events of Public Health Significance

- A total of 141 events of public health importance including 25 deaths were reported
- Completeness and timeliness of health facility reports were 99% and 99% respectively
- Ongoing suspected Measles outbreaks in three counties
- Ongoing Lassa fever outbreaks in two counties

Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 17, 2019

County	Expected report from health facility	Reports received	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	351	340	338	97	96
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	855	853	99	99



Legend: ≥80 <80

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

Vaccine Preventable Diseases

Measles

- Thirty (30) suspected cases were reported from Lofa (10), Montserrado (6), River Gee (3), Sinoe (3), Margibi (3), Rivercess (2), Nimba (1), Grand Gedeh (1), and Grand Cape Mount (1) Counties
- Fifteen specimens were collected pending laboratory confirmation
- Fuamah District, Bong County, Firestone District, Margibi County and Kolahun and Voinjama Districts, Lofa County are currently in outbreak phase
- Vaccination status:
 - Among suspected cases: 25 (83.3%) vaccinated, 3 (10%) not vaccinated and 2 (6.6%) unknown
- Age distribution
 - Among suspected cases: <1 year: 2 (6.6%), 1 – 4 years: 9 (30%), ≥5 years: 19 (80.6%)
- Cumulatively, since Epi-week one, 824 suspected cases have been recorded; Of these, 293 have been tested by the laboratory and results showed 65 positive, 222 negative and 6 indeterminate
- Epi-classification is as follows: 596 (72.3%) confirmed (65 lab confirmed, 462 clinically confirmed, 69 epi-linked), 222 (26.9%) negative and 6 (0.7%) indeterminate (*See Table 2*)
 - Of the 222 specimens tested negative for measles, 173 specimens were tested for Rubella; 83 positive, 80 negative and 10 indeterminate for rubella

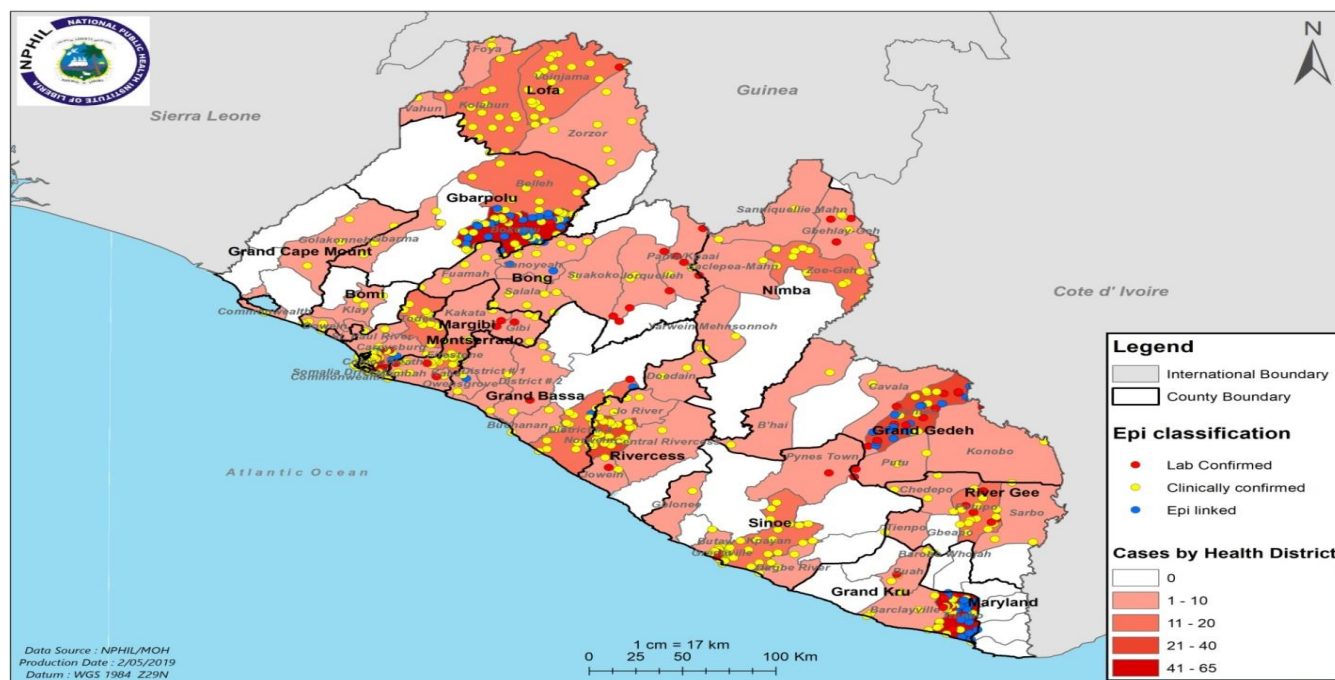
Public Health Action

- Case Management, 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 - 17, 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	8	0	4	12	11.6
Bong	9	2	26	1	11	49	7.7
Gbarpolu	4	27	46	0	5	82	14.6
Grand Bassa	2	2	20	1	15	40	16.5
Grand Cape Mount	0	0	6	0	8	14	15.3
Grand Gedeh	13	14	16	0	14	57	27.2
Grand Kru	8	20	28	0	9	65	37.8
Lofa	1	0	57	0	6	64	5.3
Margibi	6	0	33	1	20	60	23.2
Maryland	0	0	0	0	1	1	1.8
Montserrado	9	4	64	1	55	133	11.6
Nimba	3	0	24	1	27	55	14.2
River Gee	5	0	26	0	21	52	76.5
Rivercess	1	0	38	0	20	59	68.1
Sinoe	4	0	70	1	6	81	14.3
Liberia	65	69	462	6	222	824	15.3
Target Achieved	>=2		Below Target	<2			

Figure 2. Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 17, 2019



Acute Flaccid Paralysis (Suspected Polio)

- Three (3) cases reported in Bong, Nimba, and Grand Bassa Counties
- Of the three cases, Grand Bassa collected specimen from a dead case and pending shipment
- Cumulatively, since Epi week one, 24 cases have been recorded, 18 tested negative and 6 pending laboratory confirmation (See Table 3)

Table 3. Non-polio AFP rate per 100,000 population less than 15 years, Liberia, Epi-week 1 - 17, 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	2	0	3.1	1	50%	0	0%
Gbarpolu	47163	0	0	0.0	0	0%	0	0%
Grand Bassa	125386	2	1	4.9	1	50%	0	0%
Grand Cape Mount	71872	1	1	4.3	1	100%	0	0%
Grand Gedeh	70844	1	0	4.3	1	100%	0	0%
Grand Kru	32755	0	0	0.0	0	0%	0	0%
Lofa	156050	1	0	2.0	1	100%	0	0%
Margibi	118729	2	1	5.2	2	100%	0	0%
Maryland	76884	2	1	8.0	2	100%	0	0%
Montserrado	653849	6	3	2.8	6	100%	0	0%
Nimba	261314	2	1	2.3	1	50%	0	0%
Rivercess	40444	0	0	0.0	0	0%	0	0%
River Gee	37775	1	0	8.1	1	100%	0	0%
Sinoe	57910	3	1	15.8	3	100%	0	0%
Liberia	1995031	23	9	3.5	20	87%	0	0%
Non-Polio AFP Rate	<2	Stool adequacy		<80%	Non-Polio Enterovirus	<10%	Silent	
	≥ 2			≥80%		≥10%		



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Neonatal Tetanus

- Two cases reported from River Gee and Grand Kru Counties
- Cumulatively, since Epi-week one, 15 clinically diagnosed cases have been recorded of which six were dead

Viral Hemorrhagic Diseases

Ebola Virus Disease (EVD)

- Zero alert reported
- Cumulatively, since Epi-week one, 7 EVD alerts have been recorded with negative results

Lassa fever

- Five (5) suspected cases were reported from Bong (3), Nimba (1), and Grand Bassa (1) Counties
 - Specimens were collected and pending laboratory confirmation
- Cumulatively, since Epi week one, 59 suspected cases have been recorded including eleven deaths
- Epi-classification is as follows: 21 positive and 38 negative

Yellow fever

- Four (4) suspected case reported from Grand Kru (3) and River Gee (1) Counties
 - Specimens were collected and one tested negative and two pending laboratory confirmation
- Cumulatively, since Epi-week one, 37 suspected cases including one death have been recorded. Of these, 32 have been tested negative, specimens were not collected for two while three pending laboratory confirmation

Monkeypox

- Zero suspected case reported
- Cumulatively, since Epi week one, 49 suspected cases have been reported and no specimen has been shipped

Meningitis

- One suspected case reported from Nimba County
 - Specimen was collected and pending laboratory confirmation
- Cumulatively, since Epi-week one, 19 suspected cases have been recorded, 17 tested negative, 1 pending laboratory confirmation and one specimen not collected due to lack of specimen collection kits

Events of Public Health Importance

Maternal Mortality

- Eight (8) deaths reported from Nimba (2), Margibi (2), Lofa (1), Bong (1), Grand Gedeh (1), and Grand Cape Mount (1)
- Reported causes: postpartum hemorrhage (6), antepartum hemorrhage (1) and eclampsia (1)
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 75 maternal deaths have been recorded (*See Table 4*)

Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 17, 2019

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Grand Gedeh	6770	1	6	8	271
Margibi	11345	2	8	11	216
Maryland	7347	0	5	7	208
Bong	18775	1	11	15	179
Nimba	24970	2	13	17	159
Gbarpolu	4507	0	2	3	136
Sinoe	5534	0	2	3	111
Grand Bassa	11981	0	4	5	102
Grand Cape Mount	6868	1	2	3	89
River Gee	3610	0	1	1	85
Montserrado	62479	0	17	23	83
Rivercess	3865	0	1	1	79
Bomi	4546	0	1	1	67
Lofa	14911	1	2	3	41
Grand Kru	3130	0	0	0	0
Liberia (National)	190636	8	75	100	120

Neonatal Mortality

- Fourteen (14) deaths were reported from Sinoe (4), Nimba (3), Bong (2), Grand Gedeh (2), Maryland (1), Bomi (1), and Grand Kru (1) Counties
- Reported causes of deaths: asphyxia (10), sepsis (3), and preterm (1)
- Thirteen deaths were reported to have occurred in health facilities while one in the community
- Cumulatively, since Epi-week one, 216 neonatal deaths have been reported (*See Table 5*)

Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 17, 2019

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	1	14	7	13.7
Grand Gedeh	6770	2	18	8	8.1
Margibi	11345	0	22	10	5.9
Bong	18775	2	29	14	4.7
Montserrado	62479	0	85	40	4.2
Rivercess	3865	0	5	2	4.0
Maryland	7347	1	7	3	2.9
Sinoe	5534	4	5	2	2.8
River Gee	3610	0	3	1	2.5
Lofa	14911	0	11	5	2.3
Bomi	4546	1	3	1	2.0
Nimba	24970	3	8	4	1.0
Gbarpolu	4507	0	1	0	0.7
Grand Bassa	11981	0	2	1	0.5
Grand Cape Mount	6868	0	1	0	0.4
Liberia (National)	190636	14	216	100	3.4

Other Reportable Diseases

Animal Bites (Human Exposure to Rabies)

- Sixty-three (63) cases were reported from Montserrado (25), Nimba (9), Lofa (5), Margibi (4), River Gee (3), Grand Kru (2), Sinoe (1), Grand Bassa (1), Grand Gedeh (1), Bong (1), Grand Cape Mount (1), and Rivercess (1) Counties
- Cumulatively, since Epi-week one, 641 cases of animal bites have been recorded including one death

Acute Bloody Diarrhea (Suspected Shigellosis)

- Seven (7) cases were reported from Sinoe (1), Lofa (1), Montserrado (1), River Gee (1), Gbarpolu (1), and Rivercess (1) Counties
- Four (4) specimens collected and one tested positive, two negative, and one pending laboratory confirmation
- Cumulatively, since Epi-week one, 96 acute bloody diarrhea cases have been recorded with 48 stool specimens collected and tested. Result: 8 positive, 43 negative, 1 pending

Severe Acute Watery Diarrhea (Cholera)

- Four (4) suspected cases reported from Lofa (2) and Gbarpolu (1), and Bomi (1) Counties
- Three specimens were collected and pending laboratory confirmation
- Cumulatively, since Epi-week one, 46 suspected cases have been recorded with 36 specimens collected and tested; 28 negative while 3 specimens are pending laboratory confirmation

***The two pending cases fall in week 12 and week 14

Unexplained Cluster of Health Events

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

Points of Entry

- Zero IDSR alert detected and verified
- A total of 4604 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 17, 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	52	42	0	0	0	0	0
	Robert International Airport	3079	1571	1507	9	0	9	0	0
Seaport	Freeport of Monrovia	174	87	87	0	0	0	0	0
	Buchanan Port	82	41	41	0	0	0	0	0
Ground Crossing	Bo Water Side	477	139	338	34	7	27	0	0
	Ganta	485	195	210	0	0	0	0	0
	Yekepa	71	49	22	0	0	0	0	0
	Loguatu	242	142	100	0	0	0	0	0
	Nursing Division	0	0	0	0	0	0	0	0
Total Traveler for the Week		4604	2291	2313	43	7	36	0	0

Note: Yellow book issue for both arrival and departure; Vaccination coverage for both arrival and departure



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Nimba County: Saclepea Mah District

- Case is doing well at home
- All contacts completed 21 days of follow up
- Community engagement and health education ongoing

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

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Counties	No. of Expected Health District		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		
	No. of Health District Reported																																									
Bomi	4	4	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			
Bong	9	9	1	0	0	0	0	0	10	0	3	0	0	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	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	0	0		
Grand Bassa	8	8	1	0	1	0	0	0	1	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	
Grand Cape Mount	5	5	0	0	0	0	0	0	1	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	
Grand Gedeh	6	6	0	0	0	0	0	0	1	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	0	0	0	
Grand Kru	5	5	0	0	0	0	0	0	2	0	0	0	0	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	
Lofa	6	6	0	0	1	0	2	0	5	0	0	0	10	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	
Margibi	4	4	0	0	0	0	0	0	4	0	0	0	3	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	
Maryland	6	4	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	
Montserrado	7	4	0	0	1	0	0	0	25	0	0	0	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	0	0	0	0	
Nimba	6	6	1	0	0	0	0	0	9	0	1	0	1	0	1	0	2	3	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	1	0	0	0	1	0	0	0	2	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
River Oee	6	6	0	0	1	0	0	0	3	0	0	0	3	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
Sinoe	10	10	0	0	2	0	0	0	1	0	0	0	3	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
Total Weekly	93	88	3	0	7	0	4	0	63	0	5	0	30	0	1	0	8	14	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cumulative Reported			3	0	9	0	4	1	63	0	5	6	82	0	1	0	7	21	1	0	5	2	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
Cumulative Laboratory Confirmed			0	0	7	0	0	0	0	0	1	6	65	0	0	0	14	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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