

Adverse Events Following Immunization/Adverse Drug Reaction (AEFI)

## Reporting Coverage

# Table 1: Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 41, 2023

	Expected Reports From	Reports	Received on	Completeness	Timeliness	953(97%)
County	HF*	Received	Time	(%)	(%)	Health facilities
Bomi	28	28	28	100	100	reported
Bong	67	67	67	100	100	IDSR data
Gbarpolu	18	18	18	100	100	
Grand Bassa	37	37	37	100	100	
Grand Cape Mount	34	34	34	100	100	
Grand Gedeh	24	24	24	100	100	08(100%)
Grand Kru	24	24	24	100	100	<b>98(100%)</b> Health
Lofa	60	60	60	100	100	districts
Margibi	66	66	66	100	100	reported
Maryland	28	28	28	100	100	IDSR data
Montserrado	418	394	394	94	94	
Nimba	92	92	92	100	100	
Rivercess	21	21	21	100	100	
River Gee	20	20	20	100	100	953 (97%)
Sinoe	41	41	41	100	100	Health
Liberia	978	954	953	97	97	facilities
						reported

• The national target for weekly IDSR reporting is 80%. Health facility timeliness is monitored at the health district level

<80

All counties reported on time to the national level

Legend:

≥80

- Seventeen (17) suspected cases were reported from 5 Counties (see distribution in Table 2)
- Two (2) specimens were collected and pending testing
- Four (4) were vaccinated (see distribution in Table 3)

## Table 2: Distribution of Measles cases per county and epi-classification, Liberia, Epi week 41, 2023

COUNTY	CUMULATIVE # SUSPECTED CASES	# CONFIRMED	CON Lab	SIFICAT FIRMED Epi	CASES Clinically	DEATHS	CFR (%)	# CONFIRMED CASES	CASES	% CHANGE
Bomi	80	69	<b>confirmed</b> 2	13	Compatible 54	0	0.0	<b>WEEK 40</b> 1	<b>WEEK 41</b> 0	-100
Bong	209	209	2	6	201	1	0.5	0	0	-
Gbarpolu	41	40	0	0	40	0	0.0	0	0	_
Grand Bassa	174	171	0	0	171	0	0.0	0	0	_
Grand Cape Mount	76	68	1	2	65	0	0.0	0	1	100
Grand Gedeh	409	365	6	27	332	0	0.0	8	3	-62.5
Grand Kru	738	732	10	72	650	2	0.3	0	0	-
Lofa	136	128	0	0	128	0	0.0	4	3	-25
Margibi	201	199	1	8	190	0	0.0	0	0	-
Maryland	724	722	0	0	722	0	0.0	11	8	-27.3
Montserrado	1088	1080	4	53	1023	2	0.2	3	2	-33.3
Nimba	361	352	2	33	317	3	0.9	1	0	-100
River Gee	141	115	1	0	114	0	0.0	2	0	-100
Rivercess	35	30	1	0	29	0	0.0	0	0	-
Sinoe	140	121	6	11	104	0	0.0	2	0	-100

## Table 3: Vaccination Status of Measles Cases, Liberia, Epi-week 41, 2023

			es Received	
County	Vaccinated	One Dose	Two Doses	Doses Not Indicated
Bomi	0	0	0	0
Bong	0	0	0	0
Gbarpolu	0	0	0	0
Grand Bassa	0	0	0	0
Grand Cape Mount	1	1	0	0
Grand Gedeh	0	0	0	0
Grand Kru	0	0	0	0
Lofa	0	0	0	0
Margibi	0	0	0	0
Maryland	1	0	0	1
Montserrado	2	2	0	0
Nimba	0	0	0	0
River Gee	0	0	0	0
Rivercess	0	0	0	0
Sinoe	0	0	0	0
National	4	3	0	1

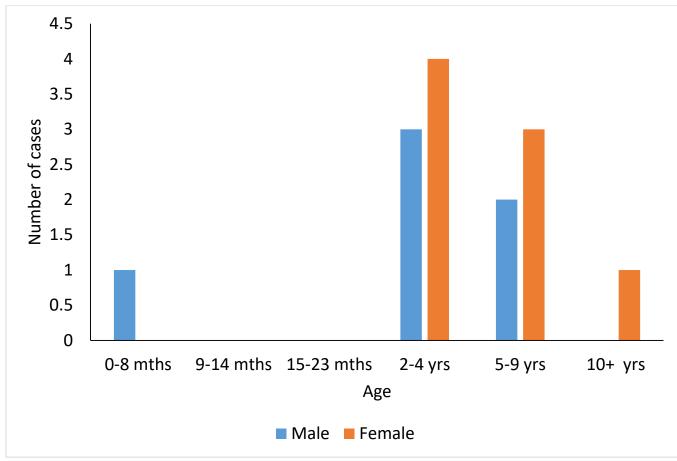
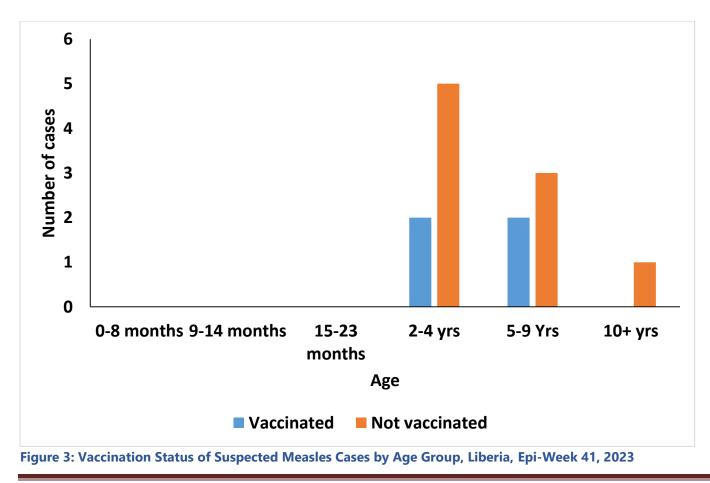


Figure 2: Distribution of Measles Cases by Age Group and Sex, Liberia Epi Week 41, 2023



County	Total Cases	Active	Recovery	Deaths	# of Districts
Montserrado	5,354	2	5,283	69	7/7
Nimba	1,094	0	1,090	4	6/6
Grand Bassa	924	0	917	7	3/8
Margibi	803	0	802	1	0/4
Bong	578	0	575	3	3/9
Maryland	1069	8	1061	0	2/6
Lofa	284	0	284	0	0/6
Grand Kru	961	0	956	2	3/5
Grand Cape Mount	187	0	184	3	0/5
Bomi	147	0	142	5	0/4
Rivercess	84	0	83	1	0/6
Gbpolu	46	0	46	0	0/5
Grand Gedeh	471	3	468	0	3/6
River Gee	79	0	79	0	0/6
Sinoe	231	0	231	0	0/10
Total	12,312	13	12, 204	95	27/98

## Table 5: Cumulative Distribution of Measles Cases and Deaths, December 13, 2021- October 15. 202

COUNTY	CUMULATI VE SUSPECTE	CUMULA TIVE CONFIR MED	CLASSIFICA	TION OF CO CASES	INFIRMED		SIFICATI		CUMUL ATIVE DEATH	CFR (%)	# CONFIR MED CASES	# CONFIRM ED CASES WEEK 39	% CHANGE	Outbrea k Status
	D CASES	CASES	Lab confirmed	Epi Linked	Clinically Compatible	Lab confirmed	Epi Linked	Clinically Compatible	S		WEEK 38			
Montserr ado	5, 440	5,354	145	1658	3, 551	3	61	5	69	1.3	2	3	50	Ongoin g
Nimba	1, 123	1095	37	187	871	0	1	3	4	0.4	1	1	-	Ongoin g
Margibi	827	803	34	136	633	0	0	1	1	0.1	0	0	-	Ended
Grand Bassa	962	924	40	212	672	1	0	6	7	0.9	0	0	-	Ongoin g
Lofa	353	284	32	66	186	0	0	0	0	0	0	0	-	Ended
Bong	603	578	22	21	535	0	1	2	3	0.5	0	0	-	Ongoin g
Marylan d	1089	1069	24	308	737	0	0	0	0	0	5	8	60	Ongoin g
Grand Gedeh	635	473	34	48	391	0	0	0	0	0	3	7	133	Ongoin g
Sinoe	284	231	36	84	111	0	0	0	0	0	0	0	-	Ended
Bomi	183	147	34	27	86	1	2	2	5	3	0	0	-	Ended
Grd Cape Mt	215	187	17	18	152	0	2	1	3	1.6	0	0	-	Ended
Grand Kru	990	961	22	106	833	0	0	2	2	0.2	3	0	-100	Ongoin g
Gbarpolu	67	46	4	2	40	0	0	0	0	0	0	0	-	Ended
Rivercess	112	84	23	54	7	0	1	0	1	1.1	0	0	-	Ended
River Gee	103	79	0	0	79	0	0	0	0	0	0	0	-	Ended
Total	12,986	12,315	504	2,927	8,884	5	68	22	95	7.8	14	19		

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#### Public Health Response

#### I. Coordination

IMS meetings are being held for coordination and mobilization of resources in response counties

#### II. Epidemiological Surveillance

Contact tracing and line listing of cases ongoing in the affected communities in Grand Kru and Grand Gedeh Counties

#### III. Case management

Case management ongoing in affected counties

## **IV. Immunization**

Routine immunization activities have intensified in affected and surrounding communities in Grand Kru County.

#### V. Laboratory

- NPHRL confirmed 3 measles cases from Chedepo District River Gee County, and One from Panta District, Bong County
- Five hundred four (507) cases have been confirmed by the National Public Health Reference Laboratory from December 13, 2021 – October 15, 2023.

## **VI. Risk Communication and Community Engagement**

Free Health education on prevention ongoing in Grand Gedeh and Grand Kru Counties

#### Challenges

- Insufficient gasoline to intensify response activities in Grand Kru and Grand Gedeh Counties
- Delay lab result from NPHRL (Grand Gedeh)
- I Lack of specific budget support for response (Grand Gedeh) County

#### Acute Flaccid Paralysis (AFP)

- Zero suspected cases reported
- Cumulatively, forty (40) cases were reported
  - Ten (10) tested negative
  - Thirty (30) pending

#### Neonatal Tetanus

- Zero suspected cases reported
- Cumulatively, forty-eight (48) cases including 6 deaths reported

# Influenza-Like Illnesses

- Coronavirus Disease (COVID-19)
- Zero suspected cases reported
- Cumulatively, ninety-five (95) cases have been reported

#### Influenza

- Zero suspected cases reported
- Cumulatively, hundred ten (110) suspected cases reported
  - Proportion cases with sample collected (105/110) 95%
  - Proportion of cases with sample tested (44/105) 42% and all negative

- Eight (8) suspected cases were reported from Bong (7 including 1 death), and Nimba (1 death) Counties
- Specimens were collected and tested: 4 negative and 4 positive
- Cumulatively, two hundred one (201) suspected cases reported
  - $\circ$   $\,$  Proportion of suspected cases with a sample collected (185/201) 92%  $\,$
  - o Proportion of suspected cases with sample tested (185/185) 100% (confirmed 57, negative 128)

### Current Outbreak

### Lassa fever disease

- No new confirmed case was reported
- Cumulatively, ninety-six (96) laboratory-confirmed cases including 27 deaths reported (CFR=28%)
- Table 6: Summary of Lassa fever Outbreak, Liberia, January 6, 2022 October 15, 2023

County	Outbreak Districts	Outbreak Start Date	Total suspected cases	Total confirmed cases	Deaths in HCWs	Total Deaths	CFR %	Total Contacts	# HCW contacts	Contacts_ became cases	HCW became confirmed case	Contacts under follow up	Contacts completed	Days in countdow n	Outbreak Status
Montserra	Bushrod	13-Feb-23	15	2	0	1	50%	29	21	0	0	0	29	Completed	Over
do	Central Monrovia	3-Mar-23	28	1	0	1	100%	28	27	0	0	0	28	Completed	Over
	Suakoko	21-Apr-23	148	42	2	8	19%	423	177	6	4	26	334	Active	Ongoing
Bong	Sanoyea	19-Sep-23	2	2	0	1	50%	36	18	0	0	6	31	Completed	Over
Dong	Kokoya	3-Oct-23	1	1	0	0	0%	5	0	0	0	5	0	Active	Ongoing
	Jorquelleh	6-Jan-22	13	9	1	2	25%	107	69	3	3	0	107	Completed	Over
Grand	District 3A&B	9-Sep-22	86	32	0	9	28%	177	40	40	0	23	159	Active	Ongoing
Bassa	Buchanan	11-Aug-23	2	1	0	1	100%	4	2	0	0	4	0	Active	Ongoing
	Sanniquell ie-Mah	6-Feb-23	36	2	0	0	0%	43	35	8	0	0	43	Completed	Over
Nimba	Tappita	13-Mar-23	12	1	0	1	100%	36	17	4	0	0	36	Completed	Over
	Bain-Garr	1-Jun-23	10	3	0	3	100%	61	25	0	0	31	30	Active	Ongoing
Total			353	96	3	27	28%	1000	424	61	7	95	797		

## Public Health Measures

• The National Public Health Institute of Liberia (NPHIL) and the Ministry of Health (MOH) are providing technical and logistical support to County Health Teams with support from partners.

## I. Surveillance:

- Active case search and contact tracing ongoing in affected communities and districts
- o Development and dissemination of weekly sit-reps by affected counties

## **II. Laboratory**

- o The National Public Health Reference Laboratory continues testing of Lassa fever samples
- A total of 96 Lassa fever cases have been confirmed since this outbreak

#### **Case Management and IPC**

o Cases isolated and managed at designated facilities

## **Environmental and Vector Control**

o Ongoing clean-up campaigns and rodent control measures in Grand Bassa County

## **Risk Communication and Community Engagement**

- o Risk communication and community engagement ongoing in affected and surrounding communities
- Airing of jingles on Lassa fever prevention and control in Bong and Grand Bassa Counties

## Yellow fever

- Two (2) suspected cases were reported: Rivercess (1), and River Gee (1) Counties
- One (1) specimen was collected from River Gee pending testing
- Cumulatively eighty-nine (89) suspected cases were reported
  - Three (3) samples (3/86) 3% not transported (Epi week 5 from Grand Gedeh, River Gee, and Grand Kru Counties)

- Proportion of suspected cases with samples collected (71/89) 80%
- The proportion of samples tested is (54/71) 76%
- The proportion of samples pending testing is (13/71) 18%

#### **Dengue Fever**

Zero cases were reported

### Ebola Virus Disease

Zero cases were reported

## Diarrheal Diseases

## Acute Bloody Diarrhea (Suspected Shigellosis)

- Thirteen (13) cases were reported: Sinoe (4), Lofa (3), Rivercess (2), Gbarpolu (2), Grand Gedeh (1), and River Gee (1) Counties
- Three (3) specimens were collected and pending testing
- Cumulatively, six hundred thirty-nine (639) cases were reported
  - Two hundred forty-nine (249) specimens were collected
  - o One hundred sixty-one (161) specimens were received by NPHRL
    - 121 tested negative
    - 12 specimens pending testing by NPHRL
    - 28 specimens rejected by NPHRL
  - o 88 specimens not received by NPHRL

## Severe Acute Watery Diarrhea (Suspected Cholera)

- Eight (8) suspected cases were reported: Grand Kru (5), Gbarpolu (1), Maryland (1), and Bong (1) Counties
- Provide the second seco
- Cumulatively, seven hundred sixty-six (766) cases reported
  - Two hundred forty-seven (247) specimens were collected
  - Ninety-six (96) specimens were received by NPHRL
    - 76 tested negative
    - 2 pending testing by NPHRL
    - 18 specimens rejected by NPHRL
  - o 10 pending arrival at NPHRL
  - o 141 specimens were not received by NPHRL

## **Other Reportable Diseases**

Animal bite (Human Exposure to Rabies)

# Seventy (70) animal bites were reported

 Table 6: Distribution of Animal Bite Cases and PEP Administration per County, Liberia, Epi week 41, 2023

Counties	Cases	Person receiving PEP	PEP doses administered	Cumulative cases (Wk 1-41)	Cumulative PEP administered (Wk 1-41)
Bomi	1	0	0	60	33
Bong	1	0	0	174	73
Gbarpolu	1	0	0	29	1
Grand Bassa	2	1	0	239	28
Grand Cape Mount	1	0	0	63	36
Grand Gedeh	0	0	0	91	13
Grand Kru	9	0	0	229	15
Lofa	2	1	1	203	81
Margibi	4	2	2	168	71
Maryland	4	0	0	165	57
Montserrado	18	8	8	843	220
Nimba	19	1	1	490	145
Rivercess	3	0	0	101	57
River Gee	0	0	0	45	0
Sinoe	5	0	0	119	6
Total	70	13	12	3019	836

#### **Public Health Actions**

- Ongoing monitoring and follow-up of cases
- Provide a state of the second state of the sec

#### **Meningitis**

- Provide the set of the
- Specimen was collected and pending testing
- Cumulatively, thirty-three (33) suspected cases reported
  - Proportion of suspected cases with samples collected (27/33) 82%
  - Proportion of sample tested (22/27) 81%
  - o 17 negative and 4 positive (Streptococcal-3 & Hemophilus Influenza)

#### <u>Mpox</u>

- Zero suspected cases reported
- Cumulatively, one hundred-twenty (120) suspected cases reported
  - Seven (7) confirmed

#### Unexplained cluster of deaths

Zero cases reported

## Events of Public Health Importance

#### **Maternal Mortality**

- One (1) death was reported from Montserrado County
- 🖙 Reported cause: Eclampsia
- Reporting Site:
  - Health Facility (1/1) 100%
- Cumulatively, two hundred one (252) deaths reported
  - Proportion of death reviewed (68/252) 27%
  - Proportion of community death (31/252)12%

#### Neonatal Mortality

- Eleven (11) deaths were reported from Montserrado (7), Grand Kru (1), Grand Bassa (1), Lofa (1), and Sinoe (1) Counties
- Reported causes: Birth asphyxia (6), Neonatal sepsis (3), and Preterm (2)
- Reporting site:
  - Health facility: 11/11 (100%)
- Cumulatively, six hundred thirty-three (633) deaths reported

## Adverse Events Following Immunization (AEFI)/Adverse Drug Reaction (ADR)

- Twenty (20) cases were reported: Sinoe (13), Grand Gedeh (2), Maryland (2), Gbarpolu (2), and Grand Bassa (1) Counties
- All reported cases were classified as non-serious
- Related vaccine:
  - Penta (9/20) 45%
  - o Tetanus (4/20) 20%
  - o Others (7/20) 35%
- Cumulatively, six hundred eighty-nine (689) events were reported and COVID-19 accounted for (205/689) 30%

## **Neglected Tropical Diseases**

#### <u>YAWS</u>

- Zero cases were reported
- Cumulatively, two hundred forty-one (241) cases have been reported

#### **Buruli Ulcer**

- Zero cases were reported
- Cumulatively, one hundred seventy-one (171) cases have been reported

#### Border Surveillance Update

A total of 3,632 travelers were recorded for the week with incoming travelers accounting for 38% (1362/3632) Table 7: Border activity at the PoE for incoming and outgoing travelers, Liberia, Epi week 41, 2023

					Total			Travelers Vaccinated against YF	Alerts		Evidence of COVID-19
		Weekly			traverlers	Yellow	Card	& Issued	detected/	COVID-19	vaccination
Type of Ports	Point of Entry	total	Arrival	Departure	with YB	Book Damage	Replaced	book	Verified	Reactive	card/certificate
	James S. Paynes	106	49	57	10	0	0	0	0	0	10
Airport	Robert Int'l Airport	2811	924	1887	2739	62	62	16	0	0	2771
Seaport	Freeport of Monrovia	140	70	70	140	0	0	0	0	0	140
	Buchanan Port	122	61	61	122	0	0	0	0	0	122
	Bo Water Side	265	180	85	260	5	5	0	0	0	250
Land Crossing	Ganta	61	28	33	30	6	6	0	0	0	20
Land Crossing	Yekepa	73	37	36	29	0	0	0	0	0	37
	Loguatuo	54	13	41	50	0	0	0	0	0	13
Total		3,632	1,362	2,270	3,380	73	73	16	0	0	3,363

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

# Public Health Measures

National level

- For Continue to distribute surveillance weekly ledgers and triplicate Lab alert and submission forms to the counties
- Distribution of 10 motorcycles to nine DSOs and one CSO from seven counties
- Providing remote technical and operational support to counties
- Produced and disseminated situation reports (Lassa fever, Measles, and Mpox outbreaks)

## **County-level**

- Coordination
  - Partner coordination and resource mapping
- Surveillance
  - o Publication of situational reports
  - o Active case search ongoing in affected and surrounding communities

## Case Management

- o Administration of PEP
- o Management of measles cases ongoing

Appendi	x																			
Summar	y of Immediately Reportable I	Dise	ease	es, C	ond	litio	ns, a	and	Eve	nts	by (	Coui	nty							
			Bomi	Bong	Gbarpolu	Grand Bassa	Grand Cape Mount	Grand Gedeh	Grand Kru	Lofa	Margibi	Maryland	Montserrado	Nimba	Rivercess	River Gee	Sinoe	Total Weekly	Cumulative Reported	Cumulative Lab-confirmed
No. of Expect	ted Health District		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98		
•/	District Reported		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98		
Events of Public Health II Diarrheal Dised Influenza-Likk Viral Hemorrhagic F Vaccine Preventable Disea	Acute Flaccid Paralysis (Suspected Polio)	A D A	0 0 0	0 0 0	0 0 0	0 0 0	0 0 1	0 0 3	0 0 0	0 0 3	0 0 0	0 0 8	0 0 2	0 0 0	0 0 0	0 0 0	0 0 0	0 0 17	39 0 4,553	0 0 36
enta	Measles	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2
le Preve	Neonatal Tetanus	A D	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	41 6	0
F Vaccir	Yellow fever	A D	0	0	0	0	0	0	0	0	0	0	0	0	1 0	1	0	2	88 0	0
ırrhagic	Dengue fever	A D A	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	0 0 0	0 0 0	0 0 0	0 0 0	2 0 0	0 0 0
al Hemo	Ebola Virus Disease	A D A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 6	0 160	0 30
ik	Lassa fever	D	0	2 0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	36 11	16 0
uenza-l	COVID-19	D A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 100	0
ised In fl	Influenza Like Illnesses Acute Bloody Diarrhoea (Shigellosis)	D A	0 0	0	0 2	0 0	0	0 1	0	0	0	0 0	0 0	0 0	0 2	0 1	0 4	0 13	0 624	0
rrheal D	Severe Acute Watery Diarrhoea (Cholera)	D A	0	0	0 1	0	0	0 0	0	0	0	0	0	0	0	0	0	0 8	0 764	0
h I Dia	Maternal Mortality	D D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 247	0
c Healt	Neonatal Mortality	D	0	0	0	1	0	0	1	1	0	0	7	0	0	0	1	. 11	623	
of Publi	AEFI	A D	0	0	2 0	1 0	0	2 0	0	0	0	2 0	0	0	0	0	13 0	20 0	606 0	0
Events o	Unexplained Cluster of Health Events/Disease	A D	0	0	0 0	0	0	0 0	0	0	0	0	0 0	0	0 0	0	0	0	0	0
ses	Мрох	A D	0 0	0	0 0	0	0	0 0	0	0	0	0 0	0 0	0	0 0	0 0	0	0	120 0	7 0
Other Reportable Diseases	Tuberculosis	A D	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
portab	Human Exposure to Rabies (Suspected Human	A D	1 0	1 0	1 0	2 0	0	0	9 0	2 0	5 0	4 0	18 0	19 0	3 0	0	5 0	70 0	2,930 0	0
ther Re	Meningitis	A D	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	33 0	0
	Unexplained Cluster of deaths	A D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neglected Tr	Buruli Ulcer	A D	0	0	0	0	0	0	0	0	0	0	0 0 0	0	0	0	0	0	119 0	0 0 4
Negl	Yaws	A D	0	0	0	0	0	0	0	0	0	0	0	0 0 20	0	0	0	0	241 0	0
	TO	TAL	1	9	6	4	0	6	0	9	0	15	0	20	0	3	23	151	11352	57

**D** = Dead **A** = Alive

#### 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: ≥80%). The time requirement for weekly IDSR reports:
  - Health facility required on or before 5:00 pm every Saturday to the district level
  - Health district required on or before 5:00 pm every Sunday to the county level
  - County required on or before 5:00 pm every Monday to the national level
- Image: 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 of 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 of 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 been 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

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# For comments or questions, please contact

Ralph W. Jetoh, MD, MPH Director Infectious Disease and Epidemiology Division National Public Health Institute of Liberia Republic of Liberia Email: ralphica2000@gmail.com Phone: +231 886526388/777372655 Website: www.nphil.gov.lr

# National Public Health Institute of Liberia (NPHIL)

#### MISSION

To prevent and control public health threats by promoting healthy outcomes and serving as a source of knowledge

## VISION

A center of excellence to create health outcomes for Liberians through a strong preventive health system and expertise

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Ministry of Health WHO Liberia Office US CDC Liberia Office

#### **Data sources**

Data and information is provided by the fifteen County Surveillance Officers and National Public Health Reference Laboratory via regular weekly reports, telephone calls and email exchanges. Situations are evolving and dynamic therefore numbers stated are subject to change.