



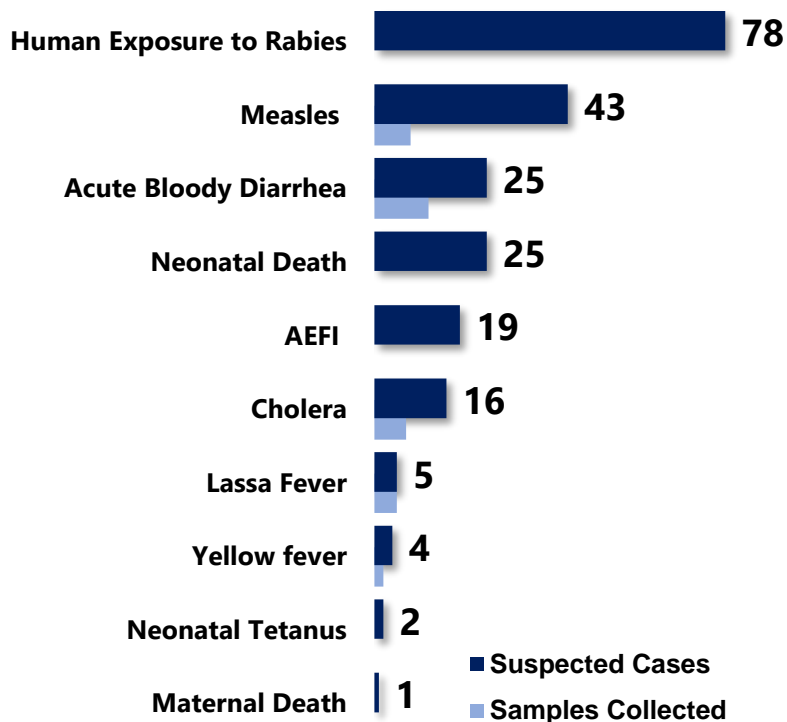
Liberia IDSR Epidemiology Bulletin

Epi-week 36 (Sept 4-10, 2023)

Country Population: 5,104,413 | Volume 36 Issue 18 | September 4-10, 2023 | Data Source: CSOs from 15 Counties and Laboratory

Highlights

Figure 1: Public Health Events Reported



Keynotes and Events of Public Health Significance

- ◆ A total of 218 events of public health importance including 26 deaths reported
- ◆ Completeness and timeliness of health facility reports were both 97%
- ◆ Ongoing Lassa fever outbreak in 3 Counties
- ◆ Ongoing Measles outbreak in 7 Counties

Adverse Events Following Immunization/Adverse Drug Reaction (AEFI)

Reporting Coverage

Table 1: Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 36, 2023

County	Expected Reports From HF*	Reports Received	Received on Time	Completeness (%)	Timeliness (%)
Bomi	28	28	28	100	100
Bong	67	67	67	100	100
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
Grand Kru	24	24	24	100	100
Lofa	60	60	60	100	100
Margibi	66	66	66	100	100
Maryland	28	28	28	100	100
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
Sinoe	41	41	41	100	100
Liberia	978	954	954	97	97

954(97%)
Health facilities reported IDSR data

98(100%)
Health districts reported IDSR data

954 (97%)
Health facilities reported timely IDSR data

- ◆ The national target for weekly IDSR reporting is 80%. Health facility timeliness is monitored at the health district level
- ◆ All counties reported on time to the national level

Legend:

≥80

<80

Vaccine-Preventable Diseases

Measles

- Forty-three (43) suspected cases were reported from 12 Counties (see distribution in Table 2)
- Eight (8) specimens were collected and pending testing
- Twenty-four (24) were vaccinated (see distribution in Table 3)

Table 2: Distribution of Measles cases per county and epi-classification, Liberia, Epi week 36, 2023

COUNTY	CUMULATIVE # SUSPECTED CASES	CUMULATIVE # CONFIRMED CASES	CLASSIFICATION OF CONFIRMED CASES			DEATHS	CFR (%)	# CONFIRMED CASES WEEK 35	# CONFIRMED CASES WEEK 36	% CHANGE
			Lab confirmed	Epi Linked	Clinically Compatible					
Bomi	77	67	2	13	52	0	0.0	2	0	-100
Bong	207	207	2	6	199	1	0.5	2	0	-100
Gbarpolu	38	37	0	0	37	0	0.0	1	0	-100
Grand Bassa	173	171	0	0	170	0	0.0	1	2	100
Grand Cape Mount	74	65	1	2	63	0	0.0	0	1	0
Grand Gedeh	384	340	6	27	307	0	0.0	13	7	-46
Grand Kru	734	729	9	72	648	2	0.3	5	4	-20
Lofa	127	119	0	0	119	0	0.0	4	2	-50
Margibi	201	199	1	8	190	0	0.0	0	0	0
Maryland	685	683	0	0	683	0	0.0	5	8	60
Montserrado	1073	1065	4	53	1008	2	0.2	6	6	0
Nimba	347	341	2	33	305	3	0.9	5	8	60
River Gee	136	110	1	0	109	0	0.0	3	1	-67
Rivercess	34	29	1	0	28	0	0.0	0	0	0
Sinoe	133	116	6	11	97	0	0.0	4	4	0

Table 3: Vaccination Status of Measles Cases, Liberia, Epi-week 36, 2023

County	Vaccinated	Number of Doses Received		
		One Dose	Two Doses	Doses Not Indicated
Bomi	0	0	0	0
Bong	0	0	0	0
Gbarpolu	0	0	0	0
Grand Bassa	2	1	1	0
Grand Cape Mount	0	0	0	0
Grand Gedeh	2	2	0	0
Grand Kru	1	1	0	0
Lofa	2	2	0	0
Margibi	0	0	0	0
Maryland	1	1	0	0
Montserrado	6	5	1	0
Nimba	6	6	0	0
River Gee	1	0	0	1
Rivercess	0	0	0	0
Sinoe	3	3	0	0
National	24	21	2	1

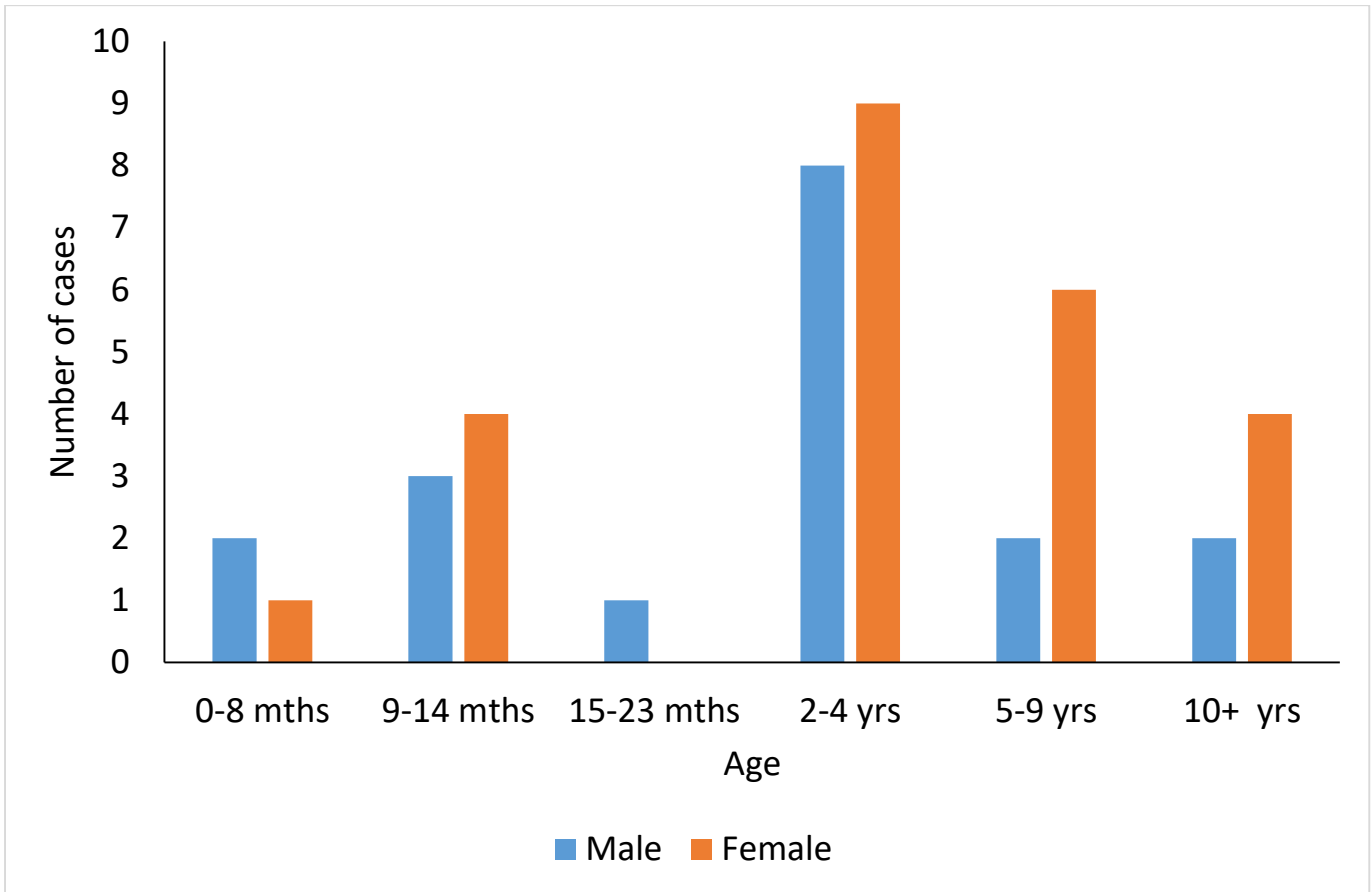


Figure 2: Distribution of Measles Cases by Age Group and Sex, Liberia Epi Week 36, 2023

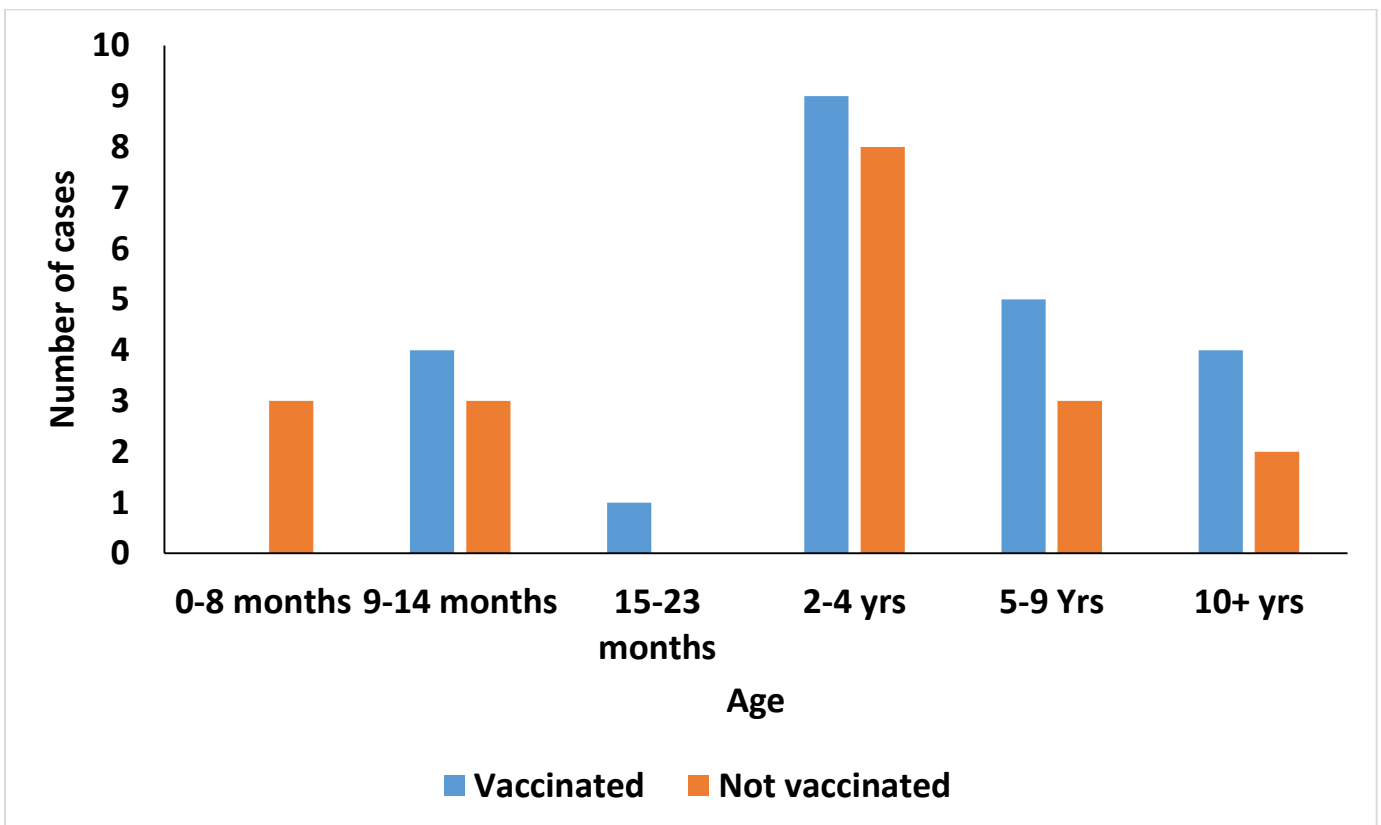


Figure 3: Vaccination Status of Suspected Measles Cases by Age Group, Liberia, Epi-Week 36, 2023

Table 4: Cumulative Distribution of Measles Cases and Deaths, December 13, 2021- September 10, 2023

COUNTY	CUMULATIVE SUSPECTED CASES	CUMULATIVE CONFIRMED CASES	CLASSIFICATION OF CONFIRMED CASES			CLASSIFICATION OF CONFIRMED DEATHS			CUMULATIVE DEATHS	CFR (%)	# CONFIRMED CASES WEEK 34	# CONFIRMED CASES WEEK 35	% CHANGE	Outbreak Status
			Lab confirmed	Epi Linked	Clinically Compatible	Lab confirmed	Epi Linked	Clinically Compatible						
Montserrado	5,430	5,344	145	1658	3,541	3	61	5	69	1.3	5	6	20	Ongoing
Nimba	1,113	1,080	37	187	856	0	1	3	4	0.4	5	8	60	Ongoing
Margibi	827	803	34	136	633	0	0	1	1	0.1	0	0	-	Ended
Grand Bassa	947	909	40	212	657	1	0	6	7	0.9	1	1	-	Ongoing
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	2	0	-100	Ongoing
Maryland	1071	1051	24	308	719	0	0	0	0	0	3	7	133	Ongoing
Grand Gedeh	622	462	34	48	380	0	0	0	0	0	12	5	-58	Ongoing
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	21527	187	17	18	152	0	2	1	3	1.6	0	0	-	Ended
Grand Kru	982	953	22	106	825	0	0	2	2	0.2	4	0	-	Ongoing
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	12,912	12,238	504	2,927	8,807	5	68	22	95	7.8		27		

Public Health Response

I. Coordination

- o IMS meetings are being held for coordination and mobilization of resources in response counties
- o County and District Rapid Response Teams (RRTs) have been activated and taking the lead in the response in Grand Kru County

II. Epidemiological Surveillance

- o Line listed 11 new contacts from Grand Kru
- o Contact tracing is ongoing in the affected communities in Grand Kru County
- o Daily monitoring of contacts at the community level by CHSS, CHAs, and CHPs ongoing in Grand Kru County

III. Case management

- o Case management ongoing

IV. Immunization

- o Routine immunization ongoing

V. Laboratory

- o Specimens were collected from Bong-Jorquelleh, Nimba-Gbehlay-Geh, River Gee-Jedepo, Sinoe- Pynes and Kpanyan Districts.
- o Five hundred four (504) cases have been confirmed by the National Public Health Reference Laboratory (NPHRL) from December 13, 2021 – September 6, 2023.

VI. Risk Communication and Community Engagement

- o Ongoing community advocacy meetings with local leaders and family members in the affected communities in Grand Kru County

- Awareness and health education are ongoing on the spread and prevention of Measles at health facility and community levels in Grand Kru County

Acute Flaccid Paralysis (AFP)

- ☞ Zero suspected cases reported
- ☞ Cumulatively, thirty-four (34) cases were reported
 - Ten (10) tested negative
 - Twenty-four (24) pending

Neonatal Tetanus

- ☞ Two (2) cases were reported from Grand Kru and Grand Bassa Counties
- ☞ Cumulatively, forty-six (46) cases including 6 deaths reported

Influenza-Like Illnesses

Influenza

- ☞ Zero suspected cases were reported
- ☞ Cumulatively, eighty-nine (89) suspected cases reported
 - Proportion cases with sample collected (84/89) 94%
 - Proportion of cases with sample tested (24/84) 29% and all negative

Viral Hemorrhagic Diseases

Lassa fever

- ☞ Five (5) suspected cases were reported from Bong County
- ☞ Specimens were collected: 3 tested negative, 1 positive and 1 pending
- ☞ Cumulatively, one hundred seventy-five (175) suspected cases reported
 - Proportion of suspected cases with a sample collected (162/175) 93%
 - Proportion of suspected cases with sample tested (159/175) 91% (confirmed 47, negative 112)

Current Outbreak

Lassa fever disease

- ☞ One new confirmed case was reported from Suakoko District
- ☞ Cumulatively, ninety-one (91) laboratory-confirmed cases including 27 deaths reported (CFR=30%)

Table 6: Summary of Lassa fever Outbreak, Liberia, January 6, 2022- September 10, 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 countdown	Outbreak Status
Montserrado	Bushrod	13-Feb-23	15	2	0	1	50%	29	21	0	0	0	29	Completed	Over
	Central Monrovia	3-Mar-23	28	1	0	1	100%	28	27	0	0	0	28	Completed	Over
Bong	Suakoko	21-Apr-23	140	38	2	8	21%	342	168	6	4	8	334	Active	Ongoing
	Sanoyea	5-Apr-22	1	1	0	1	100%	31	15	0	0	0	31	Completed	Over
	Jorquelleh	6-Jan-22	13	9	1	2	25%	107	69	3	3	0	107	Completed	Over
Grand Bassa	District 3A&B	9-Sep-22	86	32	0	9	28%	177	35	2	0	18	159	Active	Ongoing
	Buchanan	11-Aug-23	2	1	0	1	100%	4	2	0	0	4	0	Active	Ongoing
Nimba	Sanniquellie-Mah	6-Feb-23	36	2	0	0	0%	43	35	8	0	0	43	Completed	Over
	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%	30	25	0	0	0	30	Active	Ongoing
Total	8		343	90	3	27	30%	827	414	23	7	30	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
- Development and dissemination of weekly sitreps by affected counties

II. Laboratory

- The National Public Health Reference Laboratory continues testing of Lassa fever samples
- Total of 87 Lassa fever cases have been confirmed since this outbreak

III. Case management and IPC

- Cases isolated and managed at designated facilities

Environmental and Vector Control

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

Risk Communication and Community Engagement

- 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

- 📊 Four (4) suspected cases were reported from Grand Kru (2), and River Gee (2) Counties
- 📊 Two specimens were collected and pending testing
- 📊 Cumulatively, eighty-five (85) suspected cases were reported
 - Three (3) samples (3/63) 5% not transported (Epi week 5 from Grand Gedeh, River Gee, and Grand Kru Counties)
 - Proportion of suspected cases with sample collected (69/85) 81%
 - The proportion of samples tested is (51/69) 74%
 - The proportion of samples pending testing is (15/69) 22%

Dengue Fever

- 📊 Zero cases were reported

Ebola Virus Disease

- 📊 Zero cases were reported

Diarrheal Diseases

Acute Bloody Diarrhea (Suspected Shigellosis)

- 📊 Twenty-five (25) cases were reported: Sinoe (7), Nimba (5), Grand Kru (5), Grand Gedeh (3), River Gee (2), Lofa (1), Margibi (1), and Rivercess (1) Counties
- 📊 Twelve (12) specimens were collected and pending testing
- 📊 Cumulatively, five hundred eighteen (518) cases were reported
 - One hundred eighty-two (182) specimens were collected
 - 82 tested negative
 - 93 specimens were not transported
 - 7 pending testing

Severe Acute Watery Diarrhea (Suspected Cholera)

- 📊 Sixteen (16) suspected cases were reported: Nimba (5), Maryland (4), Margibi (2), Grand Gedeh (2), Lofa (1), Grand Kru (1), and Bomi (1) Counties
- 📊 seven (7) specimens were collected and pending testing
- 📊 Cumulatively, six hundred seventy-five (675) cases reported
 - Two hundred ten (210) specimens collected
 - 73 tested negative
 - 7 specimens rejected
 - 121 specimens were not transported
 - 9 pending testing

Other Reportable Diseases

Animal bite (Human Exposure to Rabies)

Seventy-eight (78) animal bites reported

Table 6: Distribution of Animal Bite Cases and PEP Administration per County, Liberia, Epi week 36, 2023

Counties	Cases	Person receiving PEP	PEP doses administered	Cumulative cases (Wk 1-36)	Cumulative PEP administered (Wk 1-36)
Bomi	2	0	0	52	29
Bong	3	1	1	163	68
Gbarpolu	1	0	0	23	1
Grand Bassa	3	2	2	218	20
Grand Cape Mount	1	0	0	56	34
Grand Gedeh	2	2	2	86	12
Grand Kru	7	0	0	196	15
Lofa	3	2	2	180	72
Margibi	3	2	2	147	64
Maryland	4	1	1	140	49
Montserrado	15	1	1	723	179
Nimba	26	7	7	397	140
Rivercess	2	1	1	93	53
River Gee	0	0	0	41	0
Sinoe	6	0	0	100	6
Total	78	19	19	2,615	742

Public Health Actions

Ongoing monitoring and follow-up of cases

Meningitis

Zero cases were reported

Cumulatively, thirty-one (31) suspected cases reported

- Proportion of suspected cases with samples collected (26/31) 84%
- Proportion of sample tested (22/26) 85%
- 17 negative and 4 positive (Streptococcal-3 & Hemophilus Influenza)

Mpox

Zero cases were reported

Cumulatively, one hundred-thirteen (113) suspected cases reported

- Seven (7) confirmed

Unexplained cluster of deaths

Zero cases reported

Events of Public Health Importance

Maternal Mortality

One (1) death was from Nimba County

Reported cause: Postpartum Hemorrhage

Reporting Site: Hospital

Cumulatively, two hundred twenty-eight (228) deaths reported

- Proportion of death reviewed (58/228) 25%
- Proportion of community death (27/228) 12%

Neonatal Mortality

- ☞ Twenty-five (25) deaths were reported: Montserrado (13), Nimba (4), Sinoe (3), Margibi (1), Grand Kru (1), Bomi (1), Maryland (1), and Grand Gedeh (1) Counties
- ☞ Reported causes: Birth Asphyxia (15), Neonatal sepsis (7), Preterm (2), and pending review (1)
- ☞ Reporting sites:
 - Health facility: 24/25 (96%)
 - Community: 1/25 (4%)
- ☞ Cumulatively, five hundred seventy-one (571) deaths reported

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

- ☞ Nineteen (19) cases were reported: Sinoe (10), Lofa (3), Grand Cape Mount (3), Bomi (2), and Montserrado (1) Counties
- ☞ All reported cases were non-serious
- ☞ Related vaccine:
 - Penta (10/19) 53%
 - COVID-19 (2/19) 11%
 - Others (7/19) 37%
- ☞ Cumulatively, five hundred twenty-five (525) events were reported and COVID-19 accounted for (182/525) 35%

Neglected Tropical Diseases

YAWS

- ☞ Zero cases reported
- ☞ Cumulatively, one hundred ninety-two (192) cases have been reported

Buruli Ulcer

- ☞ Zero suspected cases reported
- ☞ Cumulatively, one hundred nineteen (119) cases have been reported

Border Surveillance Update

A total of 4,696 travelers were recorded for the week with incoming travelers accounting for 49% (2,279/4,696)

Table 7: Border activity at the PoE for incoming and outgoing travelers, Liberia, Epi week 36, 2023

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Total travelers with YB	Yellow Book Damage	Card Replaced	Travelers Vaccinated against YF & Issued book	Alerts detected/ Verified	COVID-19 Reactive	Evidence of COVID-19 vaccination card/certificate
Airport	James S. Paynes	139	54	85	5	0	0	0	0	0	10
	Robert Int'l Airport	3571	1712	1859	3491	72	72	16	0	0	3514
Seaport	Freeport of Monrovia	114	57	57	114	0	0	0	0	0	114
	Buchanan Port	42	21	21	42	0	0	0	0	0	42
Land Crossing	Bo Water Side	504	229	275	499	5	5	3	0	0	450
	Ganta	161	112	49	68	0	0	0	0	0	27
	Yekepa	71	41	30	28	0	0	0	0	0	45
	Loguatu	94	53	41	80	0	0	0	0	0	63
Total		4,696	2,279	2,417	4,327	77	77	19	0	0	4,265

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

Public Health Measures

National level

- ↳ Continue to distribute surveillance weekly ledgers and triplicate Lab alert and submission forms to the counties
- ↳ Distribution of 10 motorcycle to nine DSO's 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

- Publication of situational reports
- Active case search ongoing in affected and surrounding communities

↳ Case Management

- Administration of PEP
- Management of measles cases ongoing

Appendix

Summary of Immediately Reportable Diseases, Conditions, and Events by County

		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 Expected Health District		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98			
No. of Health District Reported		4	9	5	8	5	6	5	6	4	6	7	11	6	6	10	98			
Vaccine Preventable Diseases	Acute Flaccid Paralysis (Suspected Polio)	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	A	0	0	0	2	0	8	4	2	0	8	6	8	0	1	4	43	4,423	35
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2
	Neonatal Tetanus	A	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	46	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
	Yellow fever	A	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	4	85	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Viral Hemorrhagic Fe	Dengue fever	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Ebola Virus Disease	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lassa fever	A	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	141	30
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	16
Influenza-Like	COVID-19	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Influenza Like Illnesses	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrheal Disease	Acute Bloody Diarrhoea (Shigellosis)	A	0	0	0	0	3	5	1	1	0	0	5	1	2	7	25	518	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Severe Acute Watery Diarrhoea (Cholera)	A	1	0	0	0	2	1	1	2	4	0	5	0	0	0	16	675	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Events of Public Health In	Maternal Mortality	D	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	228		
	Neonatal Mortality	D	1	0	0	0	1	1	0	1	1	13	4	0	0	3	25	571		
	AEFI	A	2	0	0	0	3	0	0	3	0	0	1	0	0	10	19	525	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Unexplained Cluster of Health Events/Disease	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Reportable Diseases	Mpox	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	7	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tuberculosis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Human Exposure to Rabies (Suspected Human)	A	2	3	1	3	1	2	7	3	3	4	15	26	2	0	6	78	2,615	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Meningitis	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unexplained Cluster of deaths	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
Neglected Tr	Buruli Ulcer	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Yaws	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184	4
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		6	8	1	6	0	16	0	10	0	17	0	49	0	5	30	218	10448	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: $\geq 80\%$). 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

☞ **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 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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National Public Health Institute of Liberia (NPHIL)

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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.