



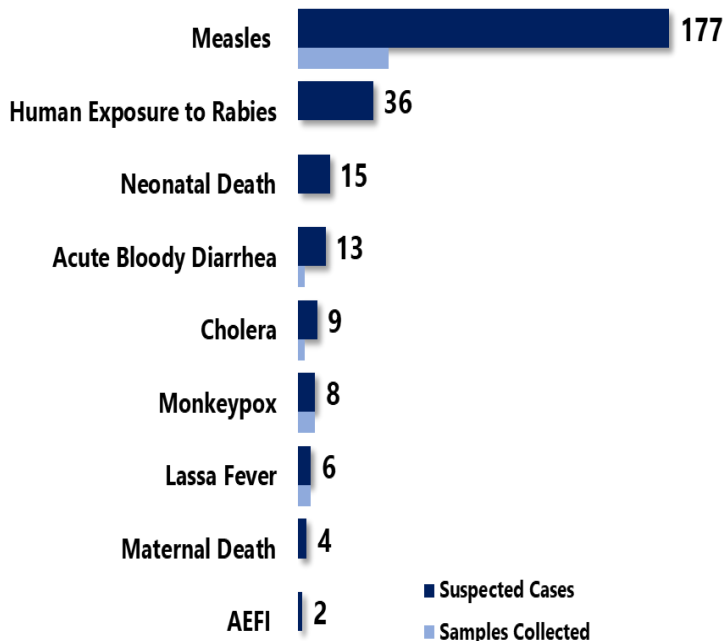
Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Country Population: 5,104,413 | Volume 18 Issue 4 | January 23 -29, 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 270 events of public health importance including 19 deaths reported
- ◆ Completeness and timeliness of health facility reports were both 99%
- ◆ Ongoing Lassa fever outbreak in 2 Counties
- ◆ Ongoing Measles outbreak in 11 Counties
- ◆ Ongoing Monkey pox outbreak in Rivercess and Lofa Counties

Adverse Events Following Immunization/Adverse Drug Reaction

Reporting Coverage

Table 1: Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi-week 4, 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	318	318	318	100	99
Nimba	91	91	91	100	100
Rivercess	21	21	21	100	100
River Gee	20	20	20	100	100
Sinoe	41	41	41	100	100
Liberia	877	877	877	100	100

877(100%) Health facilities reported IDSR data

93 (100%) Health districts reported IDSR data

877(100%) 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

Legend: ≥80 <80



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Vaccine-Preventable Diseases

Measles

Table 2: Distribution of Measles cases per county and epi-classification, Liberia, Epi week 4, 2023

COUNTY	CURRENT WEEK		CUMULATIVE CONFIRMED CASES WEEK 1-4	CLASSIFICATION OF CONFIRMED CASES wk 1-4			CUMULATIVE DEATHS	CFR (%)
	SUSPECTED	CONFIRMED		Lab confirmed	Epi-Linked	Clinically Compatible		
Bomi	1	1	8	2	2	4	0	0.0
Bong	9	9	26	2	10	14	1	3.8
Gbarpolu	12	12	12	0	0	12	0	0.0
Grand Bassa	9	9	20	0	20	0	0	0.0
Grand Cape Mount	2	2	9	1	5	1	0	0.0
Grand Gedeh	7	7	21	0	0	14	0	0.0
Grand Kru	42	42	145	0	144	1	2	1.4
Lofa	4	4	10	0	1	9	0	0.0
Margibi	6	6	17	0	17	0	0	0.0
Maryland	38	38	104	0	103	1	0	0.0
Montserrado	18	18	92	1	90	0	0	0.0
Nimba	21	21	40	1	39	0	2	5.0
River Gee	1	1	7	0	1	6	0	0.0
Rivercess	2	2	5	0	5	0	0	0.0
Sinoe	5	5	13	2	1	7	0	0.0
Total	177	177	529	9	438	69	5	10.2

Table 3: Vaccination Status of Measles Cases, Liberia, Epi week 4, 2023

County	Vaccinated	Number of Doses Received		
		One Dose	Two Doses	Doses Not indicated
Bomi	1	0	1	0
Bong	5	0	1	4
Gbarpolu	8	8	0	0
Grand Cape Mount	2	2	0	0
Grand Gedeh	5	1	0	4
Grand Kru	9	0	0	9
Lofa	4	4	0	0
Margibi	2	2	0	0
Maryland	3	2	1	0
Montserrado	18	14	4	0
Nimba	8	8	0	0
River Gee	1	0	0	1
Rivercess	2	2	0	0
Sinoe	3	3	0	0
Grand Total	71	46	7	18



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Outbreak Section

Table 4: Cumulative Distribution of Measles Cases and Deaths, 13th December 2021-1st February 2023

COUNTY	CUMULATIVE SUSPECTED CASES	CUMULATIVE CONFIRMED CASES	CLASSIFICATION OF CONFIRMED CASES			CLASSIFICATION OF CONFIRMED DEATHS			CUMULATIVE DEATHS	CFR (%)	# CONFIRMED CASES WEEK 2	# CONFIRMED CASES WEEK 3	% CHANGE	Outbreak Status
			Lab confirmed	Epi Linked	Clinically Compatible	Lab confirmed	Epi Linked	Clinically Compatible						
Montserrado	4,460	4,399	139	4,106	154	3	61	3	67	1.6	23	18	-22	Ongoing
Nimba	812	783	35	710	38	0	0	2	3	0.1	6	21	250	Ongoing
Margibi	647	626	33	585	8	0	1	1	1	0	6	6	200	Ongoing
Grand Bassa	806	769	40	627	102	1	6	0	7	1	6	9	50	Ongoing
Lofa	253	192	32	121	39	0	0	0	0	0	0	2	-	Ongoing
Bong	415	393	17	331	45	0	1	2	3	0.6	4	5	25	Ongoing
Maryland	484	492	22	451	19	0	0	0	0	0	7	38	-442	Ongoing
Grand Gedeh	256	143	30	80	33	0	0	0	0	0	0	0	--	Ended
Sinoe	193	155	30	61	64	0	0	0	0	0	0	0	-	Ended
Bomi	119	86	33	37	16	1	2	2	5	7.4	3	1	-67	Ongoing
Grd Cape Mt	156	137	16	94	27	0	2	1	3	2.7	2	2	-	Ongoing
Grand Kru	410	384	16	362	6	0	2	0	2	0	37	42	-14	Ongoing
Gbarpolu	74	60	5	50	5	0	0	0	0	0	0	0	-	Ended
Rivercess	101	82	20	55	7	0	1	0	1	1.3	2	0	-	Ongoing
River Gee	14	4	3	0	1	0	0	0	0	0	0	0	-	Ended
Total	9,200	8,705	471	7,670	564	5	76	11	92	1.5	96	144		

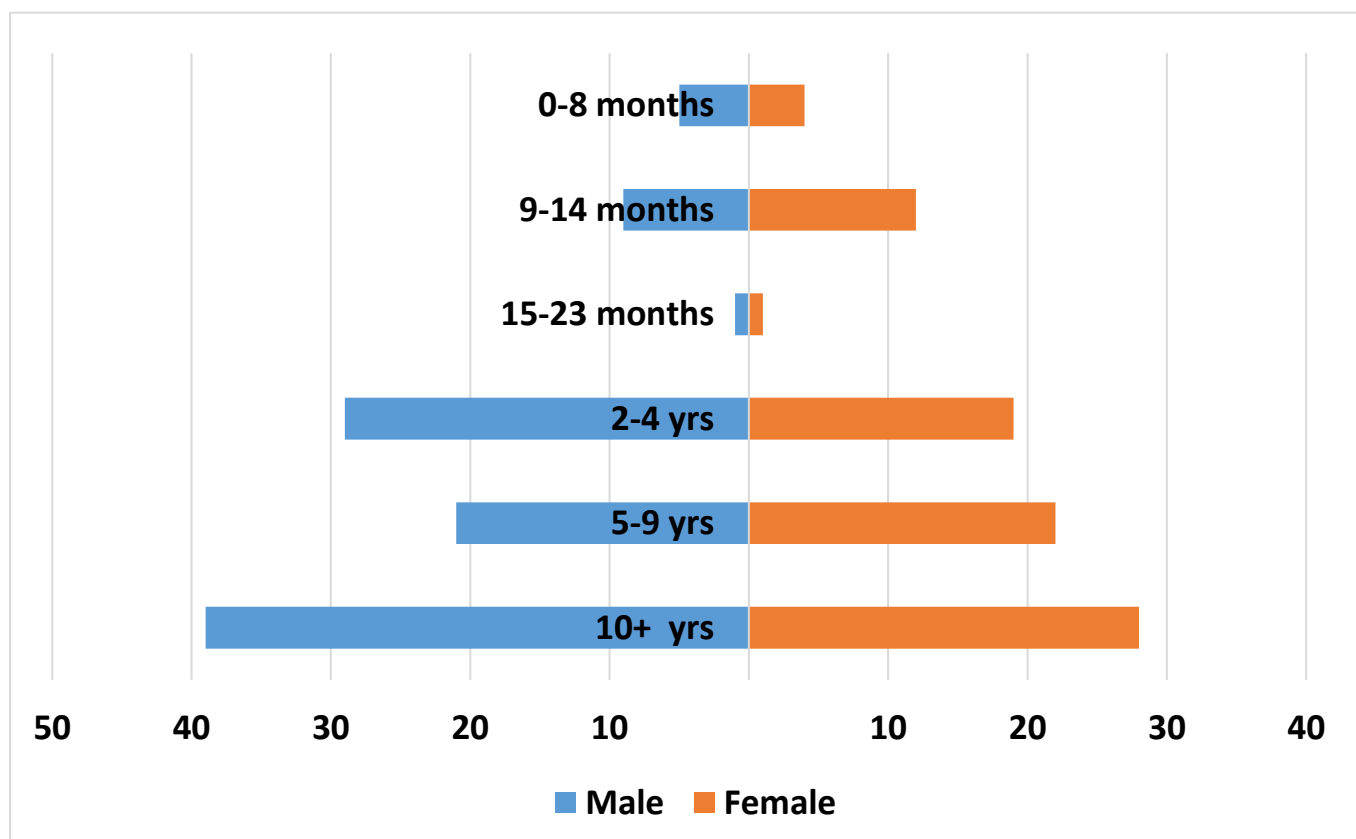


Figure 2: Distribution of Measles Cases by Age and Sex, epi-week 4, 2023



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

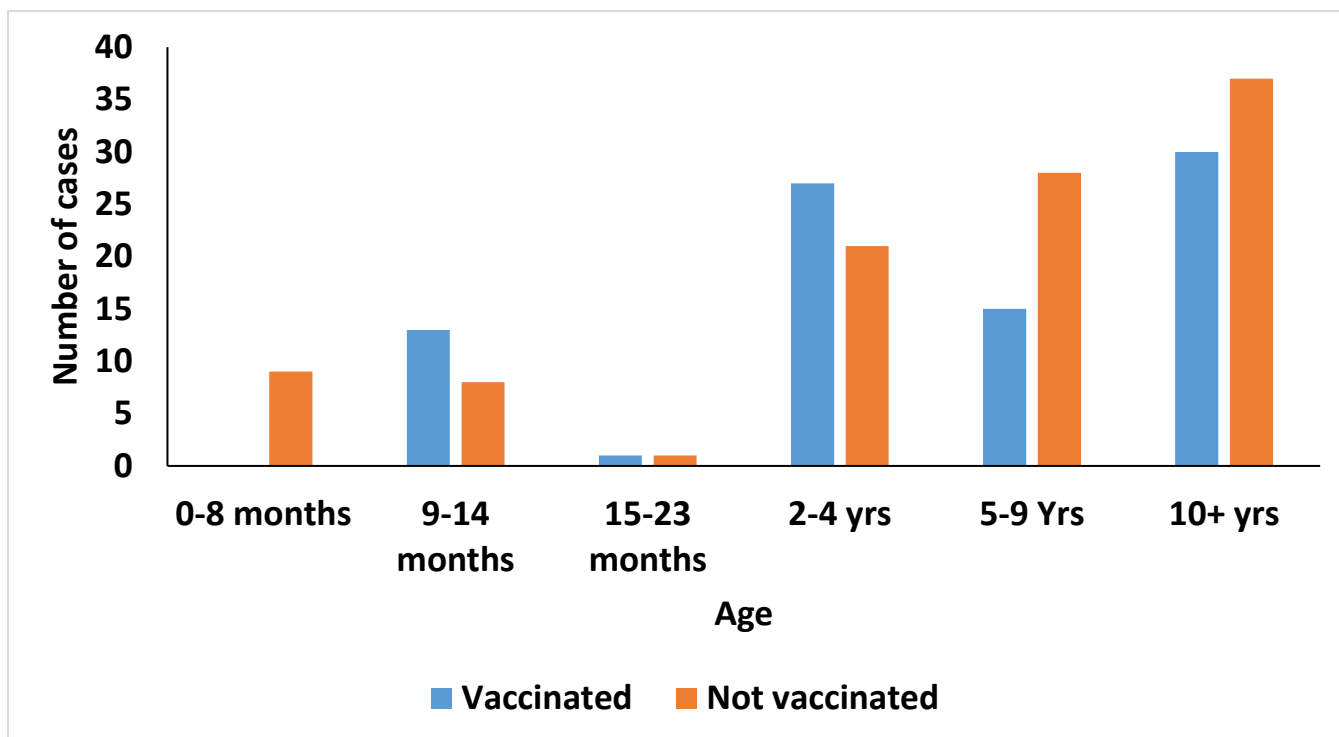


Figure 3: Vaccination Status of Measles Cases by Age group, epi-week 4, 2023

Public Health Response

I. Coordination

☞ Ongoing monitoring of measles surveillance data with the provision of feedback to relevant stakeholders and developmental partners

II. Epidemiological Surveillance

☞ Active case search and line listing of cases ongoing

III. Case Management

☞ Isolation and treatment of cases ongoing

V. Laboratory

☞ Four hundred ninety-seven (497) cases have been confirmed by the laboratory across the 15 counties

VI. Risk Communication and Community Engagement

☞ Community engagement and health education ongoing in affected counties

Acute Flaccid Paralysis (AFP)

☞ Zero cases were reported

☞ Cumulatively, three (3) cases reported

Neonatal Tetanus

☞ Zero cases were reported

☞ Cumulatively, one (1) case reported

Influenza-Like Illnesses

Coronavirus Disease (COVID-19)

Outbreak

- ☞ No new confirmed case reported
- ☞ Cumulatively, eight thousand, twenty-two (8,062) confirmed cases, including 294 deaths
 - 601 healthcare workers
- ☞ A total of 17,827 contacts have been generated
 - 1,772 healthcare workers

Public Health Actions

- IMS coordination meeting ongoing
- Surveillance activities including active case search and case investigation ongoing in the affected counties using WHO interim guidelines
- Case management ongoing for confirmed cases
- Compulsory testing among outgoing travelers as required by the country of destination ongoing

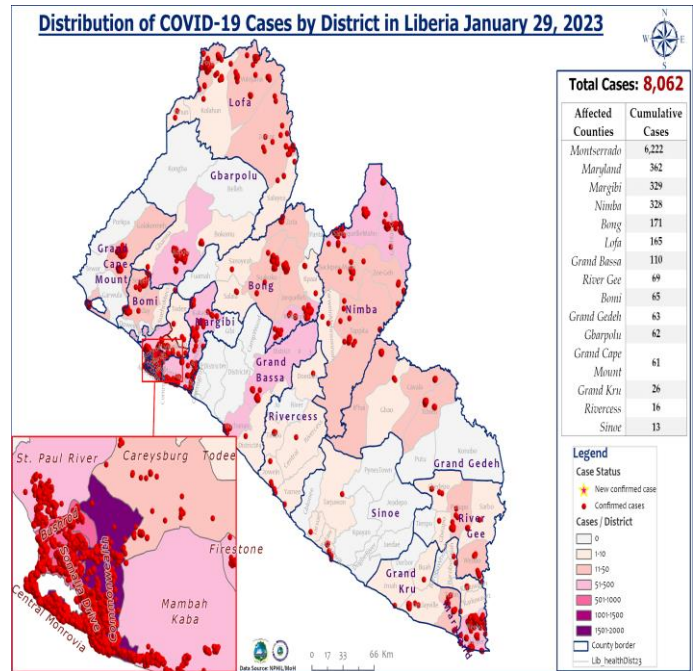


Figure 4: Geographical Distribution of Laboratory Confirmed COVID-19 Cases by Health Districts, Liberia, as of Jan 23-29, 2023

Influenza Like Illnesses

- ☞ Zero cases reported

Viral Hemorrhagic Diseases

Lassa fever

- ☞ Six (6) suspected cases were reported from Bong (3), Bomi (1), Lofa (1), and Grand Bassa (1) Counties
- ☞ Specimens were collected: 3 tested negatives and 3 pending testing
- ☞ Cumulatively, (28) suspected cases reported
 - Proportion of suspected cases with a sample collected (27/28) 96%
 - Proportion of suspected cases with sample tested (22/28) 79%

Outbreak

Lassa fever disease

- ☞ Zero new confirmed cases were reported
- ☞ Ninety-four (94) contacts under 21 days' follow-up
- ☞ Cumulatively, eighty-four (84) laboratory-confirmed cases including 26 deaths reported (CFR=31%)



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Table 5: Summary of Lassa fever Outbreak, Liberia, January 6, 2022 to January 29, 2023

County	Outbreak Start Dates	Outbreak Districts	Total suspected cases	Total confirmed cases	Total Deaths	CFR %	Confirmed cases in HCW	Total contacts	#HCWs contacts	Contact under follow-up	Contacts completed
Bong	January 6, 2022 to date	Suakoko, Sanoyea, & Jorquelleh	87	33	6	18	8	291	179	76	215
Nimba	January 18 April 15, 2022	Sanniquellei-Mah	14	7	4	57	0	294	185	0	294
	August 15 to date	Sanniquellei-Mah, Tappita, & Saclepea-Mah	28	10	7	70	0				
Grand Bassa	November 5, 2021- April 2, 2022	District #3 A&B	12	5	1	20	0	24	0	0	24
	May 5 to August 14, 2022	District #3AB	13	6	1	17	0	24	0	0	24
	September 9 to date	District #3 A&B	38	21	6	29	0	110	19	18	92

Public Health Measures

- NPHIL continues to provide technical support to the affected counties

I. Surveillance:

- Heightened surveillance in affected communities and districts
- Situational reports are produced and shared regularly at the National Level
- Daily follow-up/monitoring of contacts

II. RCCE

- Health Education in affected and surrounding communities
- Health workers and visitors are encouraged to enhance IPC practices by regular washing of hands

III. Case Management

- Isolation and treatment of confirmed cases

IV. IPC

- Affected communities were empowered with the WASH package to enable them to undertake short-term interventions that will improve the sanitation situation in each community thereby helping in Lassa fever prevention and control

Challenges

- Lack of Ribavirin in country

Yellow fever

- ☞ Zero suspected case reported
- ☞ Cumulatively, one (1) suspected case reported
 - Proportion of suspected cases with samples collected (1/1) 100%

Ebola Virus Disease

- ☞ Zero suspected case reported



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Diarrheal Diseases

Acute Bloody Diarrhea (Suspected Shigellosis)

- ☞ Thirteen (13) cases were reported from Sinoe (5), Grand Kru (4), Nimba (2), Gbarpolu (1), and Grand Gedeh (1) Counties
- ☞ Three specimens were collected and pending testing
- ☞ Cumulatively, thirty-one (31) cases reported

Severe Acute Watery Diarrhea (Suspected Cholera)

- ☞ Nine (9) cases were reported from Grand Kru (6), Maryland (2), and Sinoe (1) Counties
- ☞ Four specimens were collected and pending testing
- ☞ Cumulatively, twenty (20) suspected cases reported

Other Reportable Diseases

Animal bite (Human Exposure to Rabies)

- ☞ Thirty-six (36) animal bite cases were reported:

Table 6: Distribution of Animal bite cases and PEP administration per county, Liberia, Epi week 4, 2023

Counties	Cases	Person receiving PEP	PEP doses administered	Cumulative cases (Wk 1-4)	Cumulative PEP administered (Wk 1-4)
Bomi	0	0	0	3	0
Bong	5	1	1	14	4
Gbarpolu	0	0	0	0	0
Grand Bassa	4	0	0	11	0
Grand Cape Mount	2	0	0	4	0
Grand Gedeh	0	0	0	5	0
Grand Kru	0	0	0	15	9
Lofa	1	0	0	13	1
Margibi	3	1	1	16	8
Maryland	3	0	0	7	3
Montserrat	9	4	4	46	22
Nimba	8	1	1	21	4
Rivercess	1	0	0	10	0
River Gee	0	0	0	1	0
Sinoe	0	0	0	4	0
Total	36	7 (19%)	7	170	51 (30%)

Legend

1-2 doses

3-4 doses

5 doses

Public Health Actions

- ☞ Ongoing monitoring and follow-up of cases

Meningitis

- ☞ Zero suspected case reported
- ☞ Cumulatively, four (4) suspected cases reported
 - Proportion of suspected cases with samples collected (4/4) 100%



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

- Proportion of sample tested (3/4) 75%

Monkeypox

- ☞ Eight (8) suspected cases were reported from River Gee (3), Grand Gedeh (2), Rivercess (1) Nimba (1), and Maryland (1) Counties
- ☞ Specimens were collected: 5 tested negative, 1 positive, and 2 pending testing
- ☞ Cumulatively, fourteen (14) suspected cases reported

Outbreak

Monkeypox:

- ☞ One (1) new confirmed case reported
- ☞ Two contacts generated from new confirmed case 0777909595
- ☞ All nineteen (19) contacts completed follow-up
- ☞ Total confirmed cases reported: 4
- ☞ Counties currently in outbreak: 2

Table 7: Summary of Monkeypox Outbreak, Liberia, December 5, 2022 – January 29, 2023

County	Outbreak Start Date	Outbreak Districts	Total suspected cases	Total confirmed cases	Total Deaths	CFR %	Total Contacts	# HCW contacts	Contacts under follow up	Contacts completed
Rivercess	Dec 5 to date	Central "C"	3	2	0	0.0	8	2	2	6
Lofa	Dec 22 to date	Salayea	3	1	0	0.0	13	0	0	13
	Dec 22 to date	Voinjama	2	1	0	0.0				

Public Health Measures

I. Coordination

- National Public Health Institute of Liberia (NPHIL) and the Ministry of Health (MOH) along with partners are providing technical and financial support to affected counties

II. Epidemiological Surveillance

- Active case search, case investigation, and contact tracing ongoing in the affected and neighboring communities and districts
- Development and dissemination of Sitrep by affected county and national

III. Case management and IPC

- Symptomatic treatment of the suspected case initiated
- IPC measures instituted in affected communities and schools

IV. Risk Communication and Community Engagement

- Community engagement and awareness with local leaders and community health development committees in the affected community and surrounding towns ongoing



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Key Challenges

- No specimen collection kits for monkeypox in Rivercess county
- No support from county-based partners for response activities
- Limited IPC materials for response activities
- Limited copies of monkeypox standard case definitions

Events of Public Health Importance

Maternal Mortality

- ☞ Four (4) deaths were reported from Montserrado (3), and Lofa (1) Counties
- ☞ Reported causes: Post-partum hemorrhage (2), obstructed labor (1), and sepsis (1)
- ☞ Reported sites:
 - Health facility: 3 (75%)
 - Community: 1(25%)
- ☞ Cumulatively, twenty-three (23), deaths reported
 - Proportion of death review (5/23) 22%
 - Proportion of community death (5/23) 22%

Neonatal Mortality

- ☞ Fifteen (15) deaths were reported: Montserrado (10), Grand Kru (2) Maryland (2), and Nimba (1), Counties
- ☞ Reported causes: Sepsis (5), birth asphyxia (5), anemia (2), preterm (1), and pending review (2)
- ☞ Reporting sites:
 - Health facility: (14) 93%
 - Community: (1) 7%
- ☞ Cumulatively, forty (40) deaths reported

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

- ☞ Two (2) cases were reported from Grand Gedeh County
- ☞ Related vaccine:
 - COVID-19 (2/2) 100%
- ☞ Cumulatively, eight (8) events were reported and COVID-19 accounted for (4/8) 50%

Border Surveillance Update

- ☞ A total of 5,170 travelers were recorded for the week with incoming travelers accounting for 47% (2,420/5,170)

Table 8: Border activity at the PoE for Incoming and Outgoing Travelers, Liberia, Epi week 4, 2023

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Total travelers with YB	Yellow Book Damage	Card Replaced	Vaccinated against YF & Issued book	Alerts detected/ Verified	COVID-19 Reactive	COVID-19 vaccination card/certificate
Airport	James S. Paynes	66	13	53	6	0	0	0	0	0	6
	Robert Int'l Airport	3611	1626	1985	3541	49	0	0	0	0	3543
Seaport	Freeport of Monrovia	340	170	170	340	0	0	0	0	0	340
	Buchanan Port	80	40	40	80	0	0	0	0	0	80
Land Crossing	Bo Water Side	547	327	220	538	0	5	4	0	0	374
	Ganta	324	137	187	215	13	10	0	0	0	222
	Yekepa	66	40	26	46	0	0	0	0	0	41
	Loguatu	136	67	69	95	0	0	0	0	0	74
Total		5,170	2,420	2,750	4,861	62	15	4	0	0	4,680

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



Liberia IDSR Epidemiology Bulletin

Epi-week 4 (January 23 - 29, 2023)

Public Health Measures

National level

- Trained 25 POE staff on vector control and Disease Surveillance in Bong, Grand Cape Mount, Margibi, Montserrado, and Nimba Counties

County-level

Surveillance

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

Case Management

- Administration of PEP and ribavirin
- 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	6	6	6	10	93				
No. of Health District Reported		4	9	5	8	5	6	5	6	4	6	7	6	6	6	10	93				
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	3	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	A	1	9	12	9	2	7	42	4	6	38	18	21	2	1	5	177	529	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Neonatal Tetanus	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Yellow fever	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Influenza-Like Viral Hemorrhagic Diseases	Dengue fever	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
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	1	3	0	1	0	0	0	1	0	0	0	0	0	0	0	6	28	6	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
COVID-19 and Influenza Like Illnesses	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	7	0	
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrheal Diseases	Acute Bloody Diarrhoea (Shigellosis)	A	0	0	1	0	0	1	4	0	0	0	2	0	0	5	13	31	0		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Severe Acute Watery Diarrhoea (Cholera)	A	0	0	0	0	0	0	6	0	2	0	0	0	0	1	9	20	0		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Events of Public Health Interest	Maternal Mortality	D	0	0	0	0	0	0	1	0	0	3	0	0	0	0	4	23		
			D	0	0	0	0	0	0	2	0	0	2	10	1	0	0	15	40		
Adverse Events Following Immunization (AEFI)		A	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	8	0		
		D	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		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Other Reportable Diseases		Monkeypox	A	0	0	0	0	2	0	0	0	1	0	1	1	3	0	8	14	0	
			D	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		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Human Exposure to Rabies (Suspected Human)	A	0	5	0	4	2	0	0	1	3	3	9	8	1	0	36	170	0		
		D	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	4	0		
		D	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		
		D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Neglected Tropical Diseases	Buruli Ulcer	A	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		
	Yaws	A	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		
TOTAL		2	17	13	14	0	12	0	7	0	46	0	33	0	4	11	270	880	7		

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 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 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

Epidemiological bulletin published with support from WHO and CDC

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

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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.