



South Sudan Ministry of Health

Integrated Disease surveillance
and response (IDSR)



World Health
Organization
South Sudan

Epidemiological Bulletin Week 49, 2023
(December 4 – 10 December)

Major epidemiological highlights in week 49 of 2023

- In week **49, 2023**, the IDSR reporting timeliness and completeness were at **83%** and **94%**, respectively, and both at **100%** for EWARN sites
- Completeness of reporting for IDSR at private Health facilities in Juba and Wau was at 94%
- A total of 172 alerts were triggered in **week 49, 2023**, and the majority were for **Guinea worm, AWD, Measles, and malaria**
- On December 7, 2023, the Ministry of Health issued a statement on the imported case of cholera in Renk County, Upper Nile state, following an ongoing outbreak in Sudan since September 26, 2023
- As of Epi week 49, 2023; 7 205 suspected measles cases were reported, with 551 (7.6%) lab-confirmed, 162 deaths, and a case fatality rate of 2.3%



SURVEILLANCE PERFORMANCE



For the Integrated Disease Surveillance
(IDSR) network and Early warning alert
and response network (EWARN)



Timeliness of IDSR health facility reporting for week 49 & 48 by admin area

Admin area	# of implementing partners	# of reporting health facilities	% of Timeliness in Week 49	% of Timeliness in Week 48
GPAA	2	15	100%	100%
WES	6	183	100%	72%
Lakes	4	112	94%	96%
WBGZ	6	83	93%	77%
CES	12	124	90%	98%
Jonglei	16	114	89%	78%
NBGZ	5	89	88%	88%
EES	6	107	81%	64%
AAA	2	17	71%	35%
Warrap	9	111	68%	80%
Unity	12	88	67%	86%
Upper Nile	14	136	61%	65%
RAA	1	16	44%	100%
National	95	1195	83%	80%

Reporting timeliness at health facility level is Monday 10:00am of every week



Completeness of IDSR health facility reporting for week 49 & 48 by admin

Admin area	# of implementing partners	# of reporting health facilities	% of Completeness in week 49	% of Completeness in week 48
RAA	1	16	100%	100%
GPAA	2	15	100%	100%
WES	6	183	100%	89%
CES	12	124	99%	100%
Lakes	4	112	99%	100%
NBGZ	5	89	98%	91%
EES	6	107	93%	90%
Jonglei	16	114	92%	89%
Unity	12	88	91%	95%
Warrap	9	111	90%	81%
WBGZ	6	83	88%	77%
Upper Nile	14	136	84%	73%
AAA	2	17	71%	82%
National	89	1195	94%	89%



Timeliness of IDSR mobile clinic reporting for week 49 & 48

Health Partner	# of Reporting Mobile Sites	% of Timeliness in week 49	% of Timeliness in week 48
HFO	3	100%	100%
IMC	4	100%	100%
SSHCO	1	100%	100%
SMC	1	100%	100%
TRI-SS	2	100%	100%
SCI	2	100%	100%
SP	4	100%	100%
WVI	2	100%	100%
TOTAL	19	100%	100%

Reporting timeliness at health facility level is Monday 10:00am of every week



Completeness of IDSR mobile clinic reporting for week 49 & 48

Health Partner	# of Reporting Mobile Sites	% of Completeness in week 49	% of Completeness in week 48
SP	4	100%	100%
SCI	2	100%	100%
SMC	1	100%	100%
IMC	4	100%	100%
HFO	3	100%	100%
SSHCO	1	100%	100%
TRI-SS	2	100%	100%
WVI	2	100%	100%
TOTAL	18	100%	100%

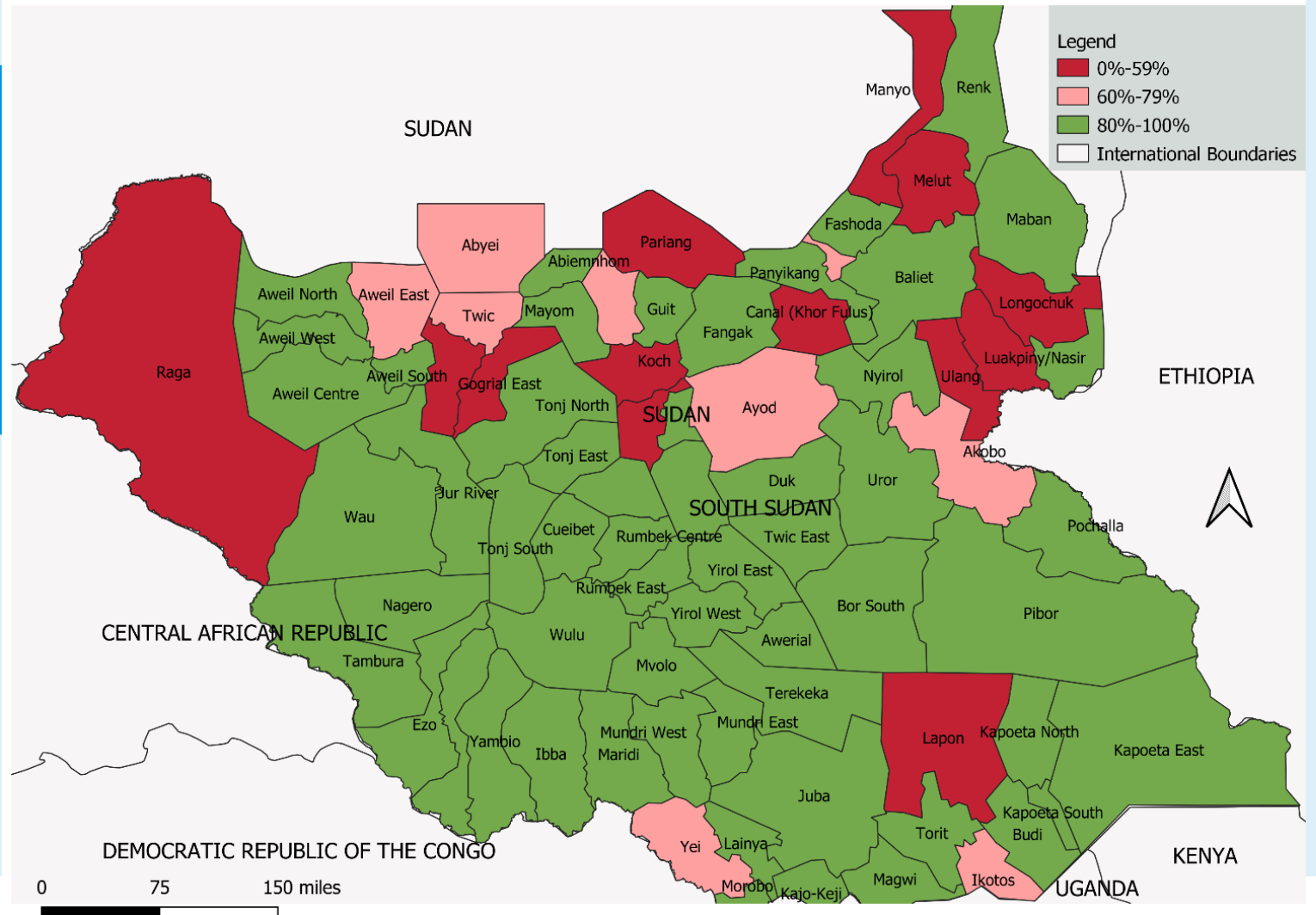


Percentage of IDSR Private Facilities reporting for week 49 & 48

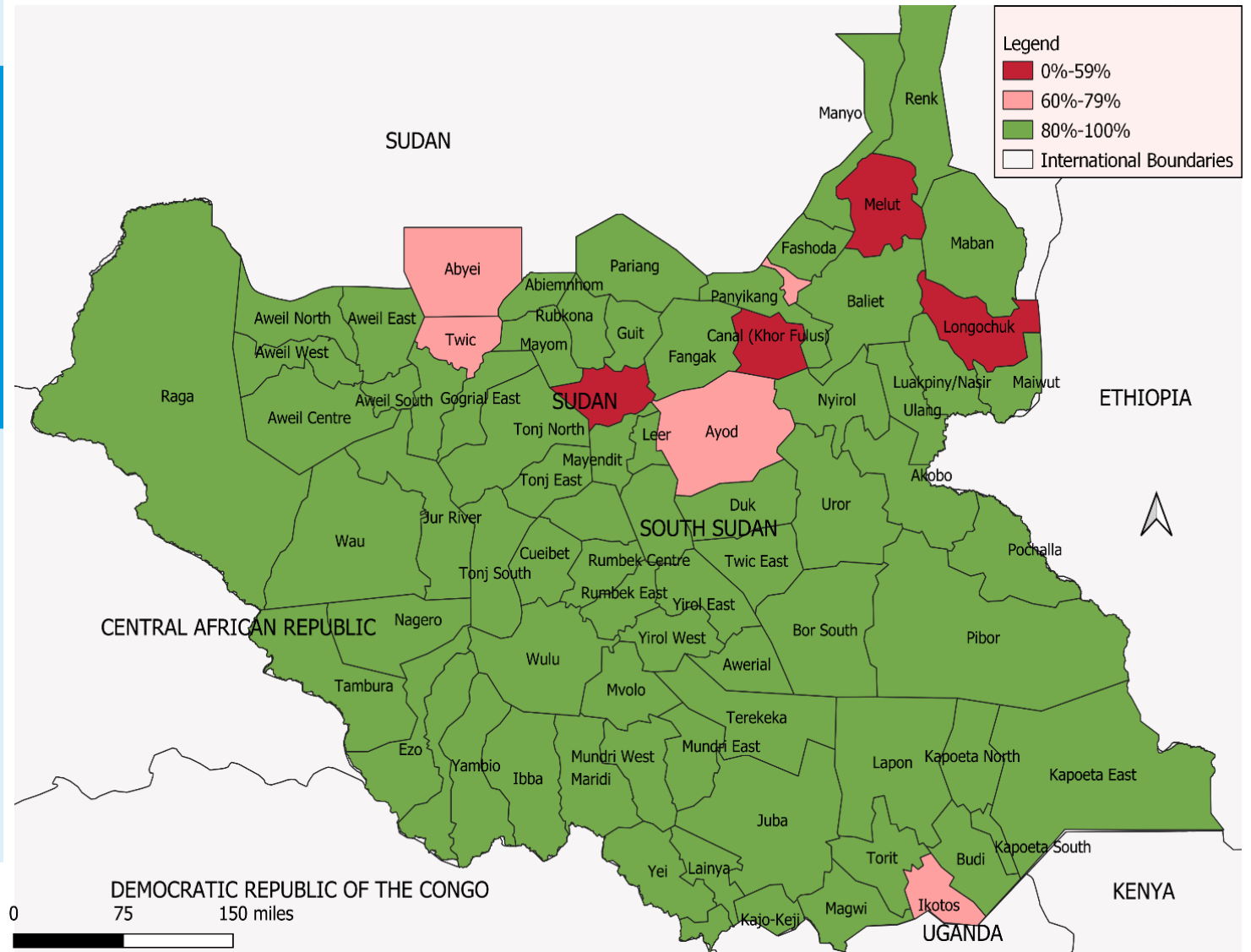
Payams	# of reporting private health facilities	% of Completeness in week 49	% of Completeness in week 48
Muniki	12	100%	100%
Rajaf	4	100%	100%
Juba	10	100%	100%
Kator	3	100%	100%
Northern Bari	1	100%	100%
Marial Baai	1	100%	100%
Wau North	13	92%	69%
Wau South	20	85%	80%
TOTAL	64	94%	88%



Timeliness of IDSR reporting for week 49 by county



Completeness of IDSR reporting for week 49 by county



INDICATOR-BASED SURVEILLANCE



Alert management including detection; reporting; verification; risk assessment; & risk characterization

Alerts reported and verified by the state for week 46

Admin Areas	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		AFP		Bloody Diarrhoea		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Grand Total		
	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	#R	#V	
CES	0	0	0	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	4	4
EES	0	0	0	0	3	3	0	0	0	0	1	1	1	1	0	0	1	1	2	2	8	8	
GPAA	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Jonglei	2	0	1	0	4	0	0	0	6	0	0	0	0	0	6	0	2	0	6	0	27	0	
Lakes	0	0	2	2	3	3	0	0	2	2	0	0	5	5	20	20	3	3	0	0	35	35	
NBGZ	0	0	1	1	3	2	0	0	3	0	0	0	0	0	0	0	0	0	2	1	9	4	
RAA	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	2	0	6	0	
Unity	2	1	2	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	1	0	8	4	
Upper Nile	0	0	4	0	0	0	1	0	7	0	0	0	0	0	0	0	1	0	6	0	19	0	
Warrap	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	2	1	4	0	8	2	
WBGZ	0	0	1	1	4	2	0	0	0	0	0	0	2	2	3	0	5	1	3	2	18	8	
WES	0	0	2	2	16	16	0	0	3	3	0	0	0	0	0	0	6	6	2	2	29	29	
Grand Total	4	1	13	6	37	30	1	0	26	9	1	1	11	8	30	20	20	12	29	8	172	95	

- A total of 172 alerts were generated in week 49 through the EWARS
- Only (95) 55.2% of all the alerts were verified in the system by surveillance officers
- AWD, measles, and Guinea worm were among the highest number of alerts reported

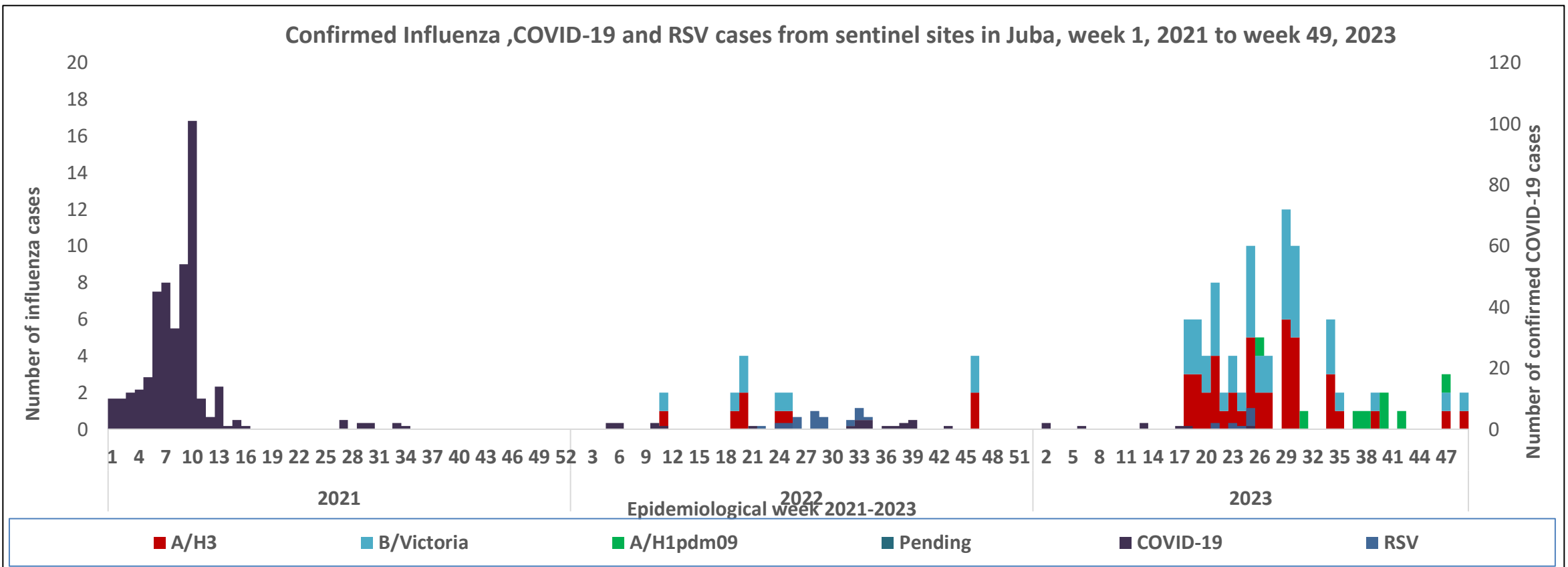
#R= Reported #V= Verified



Influenza Sentinel Surveillance Updates



Routine Sentinel Surveillance | Human Influenza & other Respiratory Pathogens



- There are currently Four designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital and Al Sabah Children’s Hospital Rumbek State Hospital & Juba Military Hospital) that are collecting epidemiological data and samples from ILI/SARI cases.
- By the end of week **52,2022**; a total of **594 ILI/SARI** samples were collected,**529** samples tested negative, and Cumulatively, **21** tested positive for covid-19,**8** positive for Influenza B (Victoria), and **6** were positive for influenza A(H3).**26** RSV was confirmed in Week 52
- From weeks 1-49 2023, a total of 923 ILI/SARI were collected all 831 tested negative,**7** positives for COVID-19, (**40**)Influenza types A (H3), (**21**) B (Victoria), (**8**) for A/H1pdm09 and 13 for RSV in weeks 49,2023

Cholera Readiness Updates from Renk County, Upper Nile State



Ministry of Health statement on imported cholera case in Renk, November 2023

- An ongoing cholera outbreak has been reported in Sudan in at least 9 counties. since September 26, 2023, with over 4,000 cases and more than 130 deaths
- The Ministry of Health and its partners have cemented cholera surveillance in Renk and other counties bordering Sudan.
- On November 30th, 2023, the National Public Health Laboratory in Juba received twelve stool samples suspected of having cholera from Renk.
- One of the samples showed growth on culture media for *Vibrio cholerae* O1 subtype Ogawa.
- The MOH advises the public not to panic as measures have been implemented to conduct further epidemiological investigations, including risk assessment and strengthening surveillance to ensure better preparedness and operational readiness to respond to the threat of cholera and other epidemic diseases.
- MOH/WHO has deployed a team to conduct a rapid assessment, investigation, active case search and line listing, community awareness/engagement, and Risk Communication and Community Engagement (RCCE) to support activities in Renk town and border Wonthou.



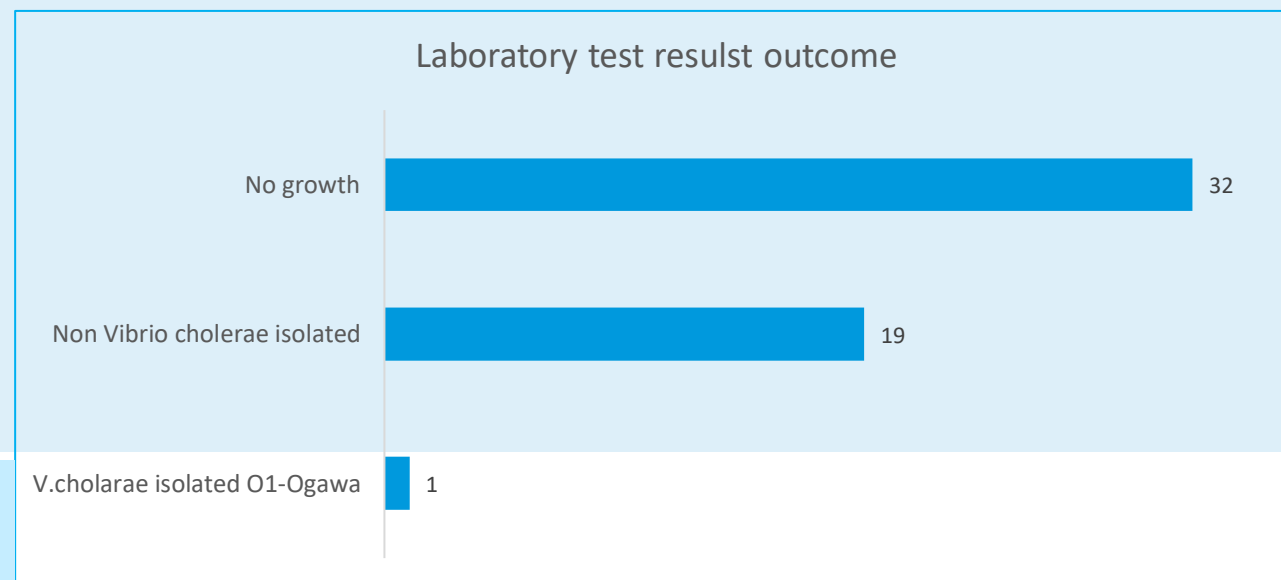
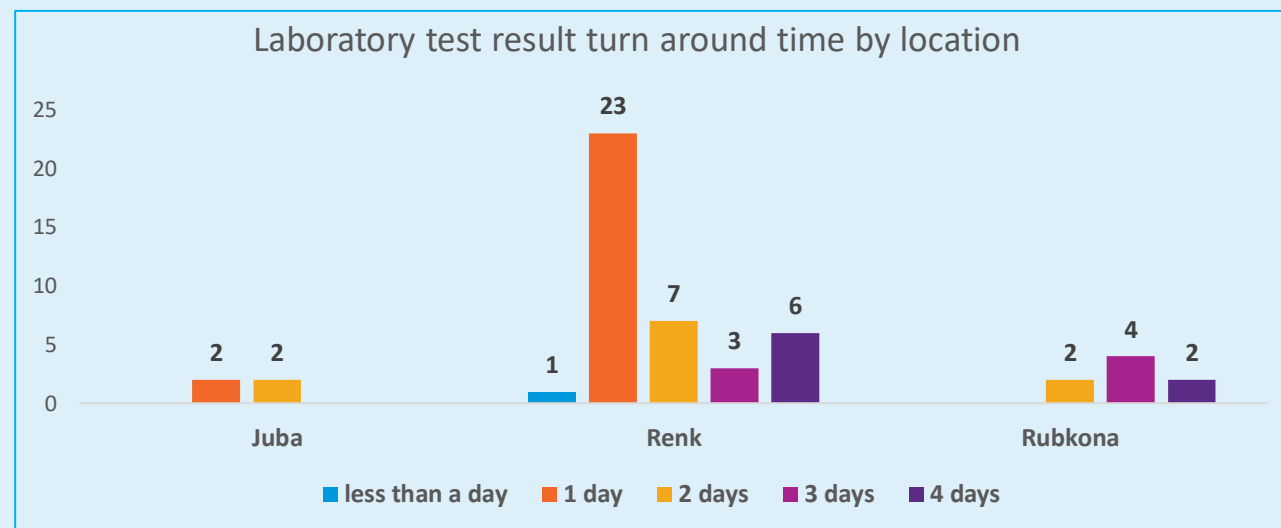
Surveillance updates as of 19 December 2023

- The Wunthou (border) screening desk was set up on the previous day and operated efficiently a total of 1600 individuals screened on the first day, including 1000 returnees and 600 refugees. Out of these, 17 individuals were identified with Acute Watery Diarrhea (AWD) and were quickly referred to the IOM clinic for further management.
- The WHO team and the new County Surveillance Officer conducted an active case search at three facilities within the transit site, as well as Renk Hospital, Gerger PHCC, and Abukadara PHCC.
- AWD cases were reported in Gerger PHCC and Abukadara PHCC.
- Additionally, there were a significant number of malaria cases and Acute Respiratory Tract Infections (ARTI)
- At the transit site, four samples were collected, and they are currently awaiting shipment to Juba for further analysis. However, they tested negative for RDT.
- Staff at the Wunthou screening desk received comprehensive on-the-job orientation to educate them on the Cholera case definition and the proper preparation of Oral Rehydration Solution (ORS).
- Essential medical supplies, including Ringer lactate, ORS, and hygiene items, were delivered to the Wunthou screening desk to support dehydrated patients and the IOM facility at the Border.
- Two megaphones were acquired from UNICEF to enhance risk communication activities at the border. WHO procured batteries for their deployment at the Wunthou border. This initiative aims to strengthen communication strategies and ensure the dissemination of crucial information.



Acute Watery Diarrhea and suspect cholera Sample analysis from Renk, Juba, and Rubkona from 24 to 15 December

- A total of 52 samples were received at the (NPHL) bacteriology lab
- Majority of the samples, 76% (40/52) were from Renk County where we have over 90% of returnees from
- Eight samples were from Rubkona county Unity state and four from Juba
- Of all the samples one was positive for *Vibrio cholerae* serotype O1 biotype Ogawa
- 19 out of the 52 samples showed growth for non-*vibrio cholerae*
- 32 (62%) had no growth
- 58% (30) of the samples tested were collected from male patients
- Age distribution
 - 34% (18) are less than 5 years
 - 6% (3) are between 5 to 9 years
 - 12% (6) are between 10 to 14 years
 - 41% (20) are 15 years and above



Note:

V.cholerae O1 Ogawa Serotype: this results indicates the presence of *Vibrio cholerae* serotype O1, biotype Ogawa, which is one of the two serotypes responsible for cholera outbreaks

Non-vibrio cholerae isolated: This indicates that *vibrio species other than V.cholerae* were present in the stool sample.

No growth: No bacteria grew during stool culture under conditions provided to isolate *V. cholerae* pathogen.





ACTIVE OUTBREAKS AND PUBLIC HEALTH EVENTS

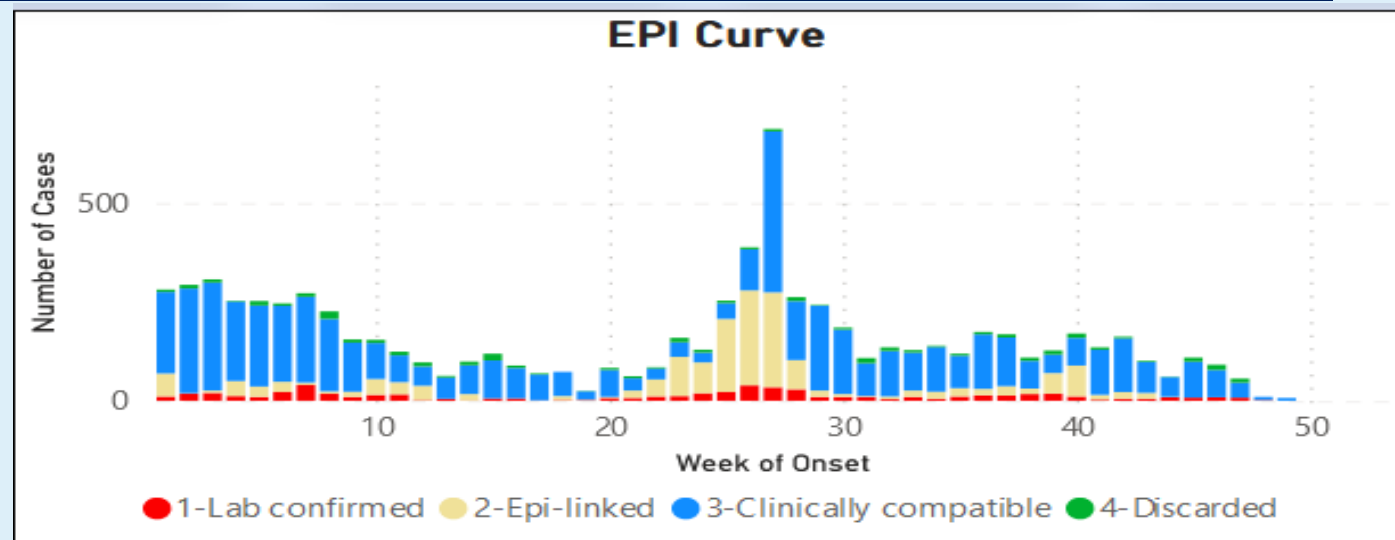


Measles Updates



Measles outbreak situation update

- As of Epi week 49, 2023, 7,841 suspected measles cases were reported, with 579 (7.4%) lab-confirmed, 173 deaths, and a case fatality rate of 2.2.
- A total of 371 cases including 7 deaths have been added since the last update
- No new lab confirmed cases reported this week and late batch of additional 7 lab confirmed out of 16 cases in weeks 38-45 have been reported this week from Abiemnhom (6), and Wau (1) Akobo (255), Ayod (12), Fangak (56), Magwi (11) and Uror (21) also reported late batch of suspected cases from weeks 5-48
- No new death has been reported this week. However, seven (7) additional deaths in weeks 37-46 were reported from Akobo (5), Ayod (1), Uror (1)
- Four (4) ongoing outbreaks in the week under review (Mundri East, Aweil Centre, Bor South and Uror) involving twelve (12) payams
- Aweil East, Aweil North, Aweil West, Kapoeta South, Wulu, Yambio, Akobo, Ayod, Juba, Magwi, Nasir, Pibor, Wau and Yei continue to report suspected/confirmed cases that have not



Age Groups	2023				FINAL CLASSIFICATION	2023	
	No. of cases	%	Deaths	%		NO. OF CASES	%
<1 Yr	1,496	20.0	29	1.9	Lab confirmed	579	7.4
1-4 yrs	3,866	51.8	104	2.7	Epi-linked	1,611	20.5
5-9 yrs	1,425	19.1	22	1.5	Clinically Compatible	5,315	67.8
10-14 yrs	511	6.8	8	1.6	Total	7,505	95.7
15+ yrs	543	7.3	10	1.8	Discarded (-ve)	336	4.3
Total	7,841	100.0	173	2.2	Grand Total	7,841	100.0



Source: measles sitrep



Vaccination Response Following Sudan Crisis

1. Phase I (Reactive campaign in July 2023)

County	Measles					Polio				
	Target (6mth – 15 Yrs)	Host	Returnee	Total	Coverage	Target (0 – 15 Yrs)	Host	Returnee	Total	Coverage
Aweil East	2,504	0	2,378	2,378	95%	2,615	0	478	478	18%
Aweil North	700	0	599	599	86%	731	0	786	786	108%
Aweil West	3,497	0	3,179	3,179	91%	3,652	0	2743	2743	75%
Rubkona	9000	6,494	2,684	9,178	102%	9,400	3814	1461	5275	56%
Renk	53,000	40,518	9,753	50,271	95%	55,356	44,163	10625	54788	99%
Total	68,701	47,012	18,593	65,605	96%	71,754	47,977	16,093	64,070	89%



Phase II Measles Reactive/Mop-Up Vaccination Activities

Counties included for Mop up/Reactive campaign based on

- Low performance of last MFUP campaign both admin and PCE coverage taken as a reference
- Active Measles transmission from Epi week 25 forward (4 weeks after the MFUP campaign)
- Border with Sudan and have registered point of entry (reference IOM population tracking dashboard)
- Counties with temporary transit camps



Measles Reactive/Mop Up Vaccination (Sept to date)

#	County	Target age group	Type of vaccination	Supporting Partner	Status of Implementation
1	Leer	6 to 59 months	Reactive	HFO, /Unicef	• Completed (Final data submitted)
2	Rubkona	6 months to 15 years	Reactive	WHO/MSF/ Unicef	• Completed (Final data submitted)
3	Malakal	6 months to 15 years	Reactive	MSF-Spain/Unicef	• Completed (Final data shared)
4	Juba	6 months to 15 years	Mop up/ Reactive	WHO/Unicef	• Completed (Final data shared)
5	Melut	6 months to 15 years	Reactive	WHO/Unicef	• Completed (Final data submitted)
6	Abyei	6 to 59 months	Mop Up	Save the Children/ Unicef	• Completed (Final data submitted but not uploaded on ODK)
7	Gogrial West	6 to 59 months	Reactive	IHO, /Unicef	• Completed (Final data submitted)
8	Twic	6 to 59 months	Reactive	WHO	• Completed (Final data yet to be submitted)
9	Yirol East	6 to 59 months	Reactive	WHO	• Completed (Final data submitted)
10	Awerial	6 to 59 months	Reactive	WHO	• Completed (Final data submitted)
11	Ayod	6- 59 months	Mop Up	MEDAIR/IMA/Unicef	• Partial Complete (three Payams yet to implement)
12	Fangak	6 to 59 months	Mop up/Reactive	HFO	• Complete (Final data submitted but not uploaded on ODK)
13	Logechuk	6 months to 15 years	Reactive	WHO/Unicef	• Partially Complete ○ Dajo Payam is yet to implement
14	Akobo	6 to 59 months	Reactive	WHO/Unicef	• Completed (Final data submitted)
15	Maban	6 months to 15 years	Reactive	WHO/Unicef	• Completed (Final data submitted)
16	Maiwut	6 months to 15 years	Reactive	WHO/Unicef	• The campaign is ongoing from 10 th of Dec
17	Kapoeta East	6 to 59 months	Reactive	WHO/Unicef	• The campaign is ongoing from 8 th of Dec



Measles Reactive/Mop Up vaccination Data from 15 counties

County	Measles					OPV					Status
	Target	Host	Returnee	Total	Coverage	Target	Host	Returnee	Total	Coverage	
Rubkona	158,970	80,862	15,141	96,003	60%	166,035	88,989	16,505	105,494	64%	Complete
Leer	22,515	20,231	4,837	25,068	111%	24,885	21,012	4,860	25,872	104%	Complete
Abyei	22,761	19,276	2,242	21,518	95%	-	-	-	-	-	Complete
Juba	96,015	75,756	22,312	98,068	102%	104,851	68,742	10,471	79,213	76%	Complete
Gogrial West	81,376	105,198	1,401	106,599	131%	89,942	112,685	1,216	113,901	127%	Complete
Twic	66,070	51,765	3,702	55,467	84%	73,025	61,283	4,998	66,281	91%	Complete
Ayod	42,997	28,642	-	28,642	67%	-	-	-	-	-	Complete
Malakal	29,291	25,654	3,328	28,982	99%	30,592	25,298	3,422	28,720	94%	Complete
Melut	30,470	28,852	652	29,504	97%	31,824	26,469	1,595	28,064	88%	Complete
Longechuk	50,289	33,942	7,189	41,131	82%	52,524	30,331	7,496	37,827	72%	Partially complete
Awerial	33,410	28,536	-	28,536	85%	36,927	20,072	-	20,072	54%	Complete
Yirol East	28,049	35,423	512	35,935	128%	31,001	30,916	597	31,513	102%	Complete
Fangak	29,585	25,973	573	26,546	90%	32,700	25,014	923	25,937	79%	Complete
Akobo	35,531	28,259	8,501	36,760	103%	39,271	30,022	8,843	38,865	99%	Complete
Maban	138,608	62,231	61,194	123,425	89%	-	-	-	-	-	Complete
Total	865,753	650,600	131,584	782,184	90%	713,578	540,833	60,926	601,759	84%	



Summary of Measles Reactive/Mop Up vaccination (Phase I and Phase II)

- As of week 49, a total of 15 counties have implemented the campaign (Ayod, Leer, Juba, Rubkona, Malakal, Melut, Abyei, Longechuk, Gogrial West, Twic, Awerial, Yirol East, Akobo, Fangak and Maban).
- The total number of children vaccinated in phase II reactive campaign is 782,184 (90%) of which 131,584 (17%) of them are returnees from Sudan and Ethiopia and refugees in Maban.
- Akobo and Kapoeta East counties are additional counties included in the vaccine response plan. Accordingly, Akobo complete the campaign and vaccinated 36,760 (103%) including 8,501(23%) returnees from Ethiopia. Similarly, the campaign is ongoing in Kapoeta East and waiting for the data submission.
- Maiwut and Ayod County also completed the preparation and campaign is ongoing in both counties from 10th of Dec and expected to finalize on 17th of Dec 2023.
- POE/Temporary transit post vaccination is ongoing in the 10 prioritized counties. The antigens being used at POE/Transit post are Measles OPV and COVID -19.
- As of Week 49, a total of 10 sites in 5 counties (Juba, Akobo, Aweil East, Malakal and Melut) have started vaccination. The partial data submitted from these sites for the last one week showed a total of 2,394 children of under 15 years vaccinated with Measles and 2,486 with Polio vaccine.



Recommendations

- The following are the key actions that will be taken to support the planned measles mop-up campaign and other activities:-
- The Ministry of Health (MOH) and its partners will provide support- State and County MOH will continue to report measles cases on a weekly basis, including zero reporting where applicable-
- UNICEF will ensure there is enough measles vaccine stock-
- Prompt detection and management of measles cases will be prioritized- Vitamin A will be added to future responses-
- Blood samples will be collected from suspected cases in counties that continue to report measles cases for longer than 4 weeks to monitor the epidemiology- Nasopharyngeal swabs will be collected from new cases-
- Routine immunization at points of entry and within the community will be strengthened-
- Case management will be prioritized to reduce morbidity and mortality-
- Risk communication and community engagement in health and help-seeking behavior will be enhanced.





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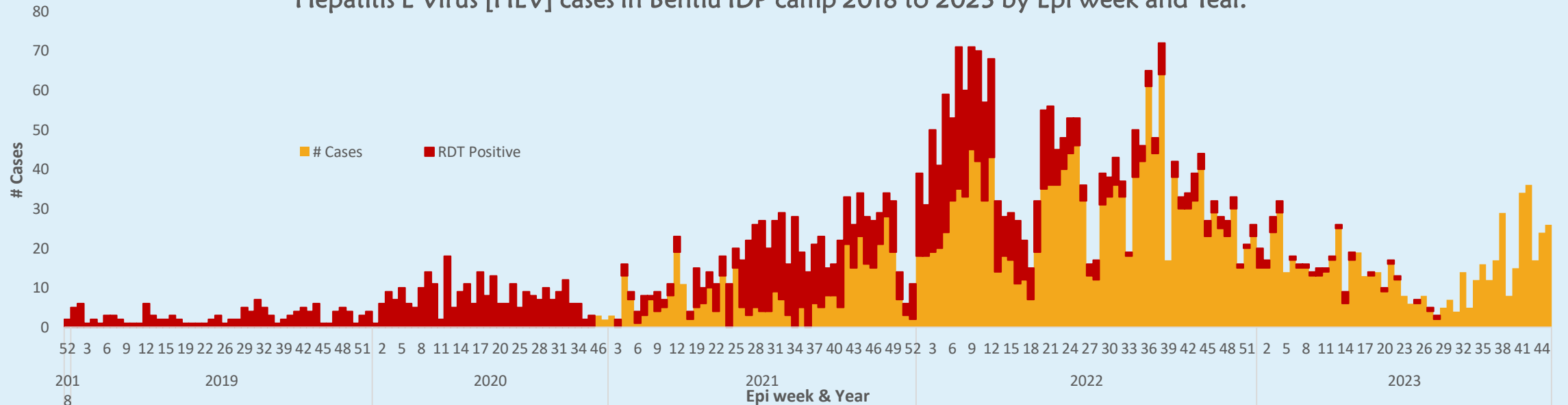


Hepatitis E update From Bentiu

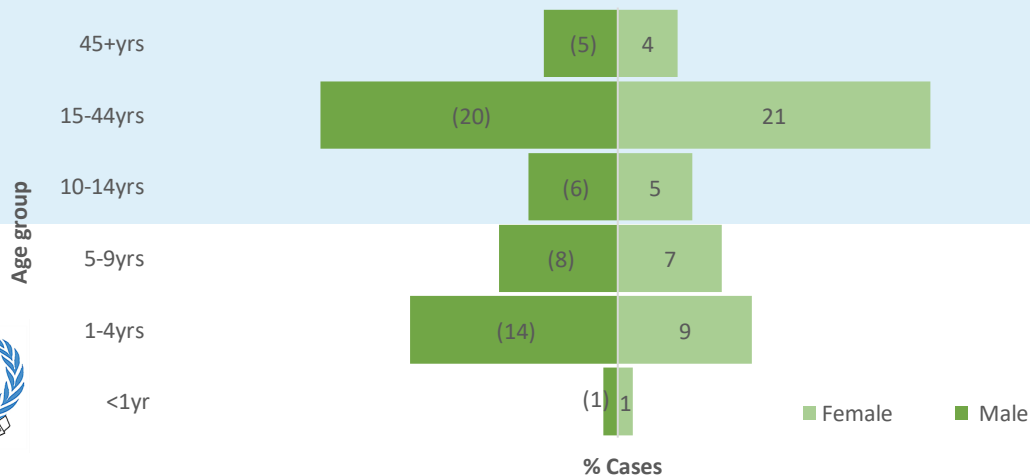


Hepatitis E Virus [HEV] update from Bentiu

Hepatitis E Virus [HEV] cases in Bentiu IDP camp 2018 to 2023 by Epi week and Year.



HEV case distribution by age and sex in Bentiu IDP, 2019-2023.



- A total of **26** suspected cases were reported in week 45, 2023 giving a cumulative **4,529** cases including 28 deaths have been reported since the outbreak began
- No new RDT-positive cases were reported since week 30, 2023. 1488 positive cases since the onset of the outbreak.
- Male sex accounts for most of the total cases 53% (2, 416).
- 15 – 44 years old are the most affected age category.



This bulletin is produced by the Ministry of Health with Technical support from WHO

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Notes

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The data has been collected with support from the EWARS project. This is an initiative to strengthen early warning, alert and response in emergencies. It includes an online, desktop and mobile application that can be rapidly configured and deployed in the field. It is designed with frontline users in mind, and built to work in difficult and remote operating environments. This bulletin has been automatically published from the EWARS application.

More information can be found at <http://ewars-project.org>

