



South Sudan Ministry of Health

Integrated Disease surveillance
and response (IDSR)



World Health
Organization
South Sudan

Epidemiological Bulletin Week 50, 2023
(December 11 – 17 December)

Major epidemiological highlights in week 50 of 2023

- In week 50, 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 92%
- A total of 147 alerts were triggered in week 50, 2023, and the majority were for Guinea worm, AWD, Measles, and malaria
- On 22 December, an alert of suspected viral hemorrhagic fever was reported from Gangura Payam, Yambio County in Western Equatoria State.
- Ongoing preparedness measures and readiness are underway in Renk County, Upper Nile State, in response to a Ministry of Health statement on imported cholera case in Renk in November 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 50 & 49 by admin area

Admin area	# of implementing partners	# of reporting health facilities	% of Timeliness in Week 50	% of Timeliness in Week 49
GPAA	2	15	100%	100%
NBGZ	5	89	98%	88%
Lakes	4	112	94%	94%
Unity	12	88	91%	67%
Warrap	9	111	88%	68%
Jonglei	16	114	86%	89%
WES	6	183	83%	100%
EES	6	107	81%	81%
RAA	1	16	75%	44%
CES	12	124	65%	90%
Upper Nile	14	136	64%	61%
WBGZ	6	83	58%	93%
AAA	2	17	29%	71%
National	95	1195	80%	83%

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



Completeness of IDSR health facility reporting for week 50 & 49 by admin area

Admin area	# of implementing partners	# of reporting health facilities	% of Completeness in week 50	% of Completeness in week 49
RAA	1	16	100%	100%
GPAA	2	15	100%	100%
NBGZ	5	89	98%	98%
Lakes	4	112	97%	99%
Unity	12	88	93%	91%
Warrap	9	111	90%	90%
CES	12	124	89%	99%
Jonglei	16	114	88%	92%
EES	6	107	85%	93%
WES	6	183	83%	100%
WBGZ	6	83	78%	88%
Upper Nile	14	136	72%	84%
AAA	2	17	29%	71%
National	89	1195	86%	94%



Timeliness of IDSR mobile clinic reporting for week 50 & 49

Admin area	# of Reporting Mobile Sites	% of Timeliness in week 50	% of Timeliness in week 49
HFO	3	100%	100%
IMC	4	100%	100%
SSHCO	1	100%	100%
SMC	1	100%	100%
SCI	2	100%	100%
SP	4	100%	100%
WVI	2	100%	100%
TRI-SS	2	0%	100%
TOTAL	19	89%	100%

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



Completeness of IDSR mobile clinic reporting for week 50 & 49

Admin area	# of Reporting Mobile Sites	% of Completeness in week 50	% of Completeness in week 49
HFO	3	100%	100%
IMC	4	100%	100%
SSHCO	1	100%	100%
SMC	1	100%	100%
SCI	2	100%	100%
SP	4	100%	100%
WVI	2	100%	100%
TRI-SS	2	0%	100%
TOTAL	18	89%	100%



Percentage of IDSR Private Facilities reporting for week 50 & 49

Payams	# of reporting private health facilities	% of Completeness in week 50	% of Completeness in week 49
Muniki	12	100%	100%
Rajaf	4	100%	100%
Kator	3	100%	100%
Northern Bari	1	100%	100%
Marial Baai	1	100%	100%
Juba	10	90%	100%
Wau South	20	90%	85%
Wau North	13	85%	92%
TOTAL	64	92%	94%



INDICATOR-BASED SURVEILLANCE



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

Alerts reported and verified by state for week 50

States/A dmin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		Bloody Diarrhoea		Cholera		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Neonatal Tetanus		Grand Total		
	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	# R	# V	
AAA	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
CES	0	0	2	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	1
EES	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	3	3	4	3	0	0	10	9
GPAA	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Jonglei	0	0	1	0	2	0	3	0	0	0	0	0	0	0	0	1	0	0	0	6	0	0	0	13	0
Lakes	0	0	2	1	2	0	0	0	0	0	0	0	8	0	25	11	1	1	2	2	0	0	40	15	
NBGZ	0	0	1	0	3	1	2	0	1	0	0	0	0	0	0	0	0	1	0	7	3	0	0	15	4
RAA	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Unity	1	0	0	0	2	0	5	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	11	0
Upper Nile	0	0	3	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	6	1	0	0	12	2
Warrap	0	0	1	0	1	0	2	1	0	0	0	0	0	0	0	3	3	1	1	2	1	0	0	10	6
WBGZ	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0	3	0	3	2	1	1	1	1	11	6
WES	1	0	0	0	5	1	1	1	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	13	3
Grand Total	3	1	12	3	22	5	19	4	3	0	1	1	8	0	32	14	12	7	34	12	1	1	147	48	

- A total of 147 alerts were generated in week 50 through the EWARS
- Only (48) 32% of all the alerts were verified in the system by surveillance officers and partners
- AWD, measles, and Guinea worm were among the highest number of alerts reported

#R= Reported #V= Verified

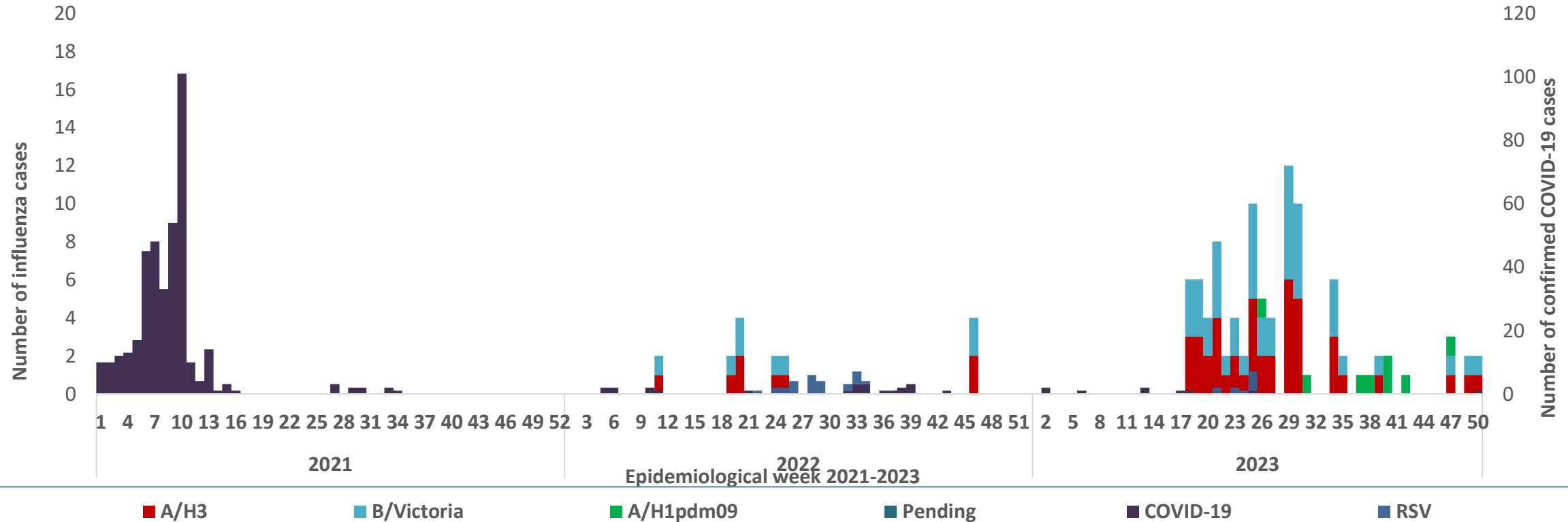


Influenza Sentinel Surveillance Updates



Routine Sentinel Surveillance | Human Influenza & other Respiratory Pathogens

Confirmed Influenza ,COVID-19 and RSV cases from sentinel sites in Juba, week 1, 2021 to week 50, 2023



- 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 1-50 2023, a total of 939 ILI/SARI were collected all 845 tested negative,(8) positives for COVID-19, (40)Influenza types A (H3), (21) B (Victoria), (8) for A/H1pdm09 and 13 for RSV in weeks 50,2023

**Alert of suspect Viral Hemorrhagic Fever From
Gangura, Yambio County Western Equatoria
State**

Suspect Viral Hemorrhagic Fever from Gangura, Yambio county WES

- On December 7, 2023, an 18-year-old male from Kangura village in Gangura Payam, Yambio County, experienced symptoms such as generalized body weakness, headache, epigastric discomfort, fever, and vomiting. He was initially diagnosed with typhoid and received treatment on the same day at Gangura PHCC. However, The patient's mother reported the worsening of his illness to a health worker on December 21st, 2023, as he began vomiting blood.
- The case was initially isolated at Gangura PHCC in a separate room but has since left the facility.
- On December 23rd, 2023, the patient developed jaundice, and the sample was collected and sent to Juba National Public Health Laboratory (NPHL) on December 22, 2023.
- At the NPHL, the sample tested negative for Ebola, Marburg, and malaria; however, the sample tested positive for **Yellow Fever virus on 23 December 2023** upon differential testing.
- The Yellow Fever Disease outbreak declaration statement will be shared with the media by the Ministry of Health accordingly.



Source: Suspect VHF Yambio Daily Sitrep



Ongoing coordination and Response

- Yambio County has a projected population of 138,976 and 37 health facilities.
- The county shares borders with Nzara and Ibba counties within Western Equatoria and with Wulu county in Lakes as well as the Democratic Republic of Congo
- As of 28 December 2023, six (06) cases have been reported, from which 05 were suspected cases and 01 were confirmed as yellow fever. Of all suspected cases, two were community deaths.
- The Ministry of Health and State Ministry of Health, with support from WHO and partners, are guiding VHF preparedness and response.
- A daily meeting is being held at the Public Health Emergency Operation Centre, chaired by the Director General of Preventive Health Services, as the PHEOC is on alert mode
- Development of an incident action plan is ongoing for Surveillance, laboratory, and reporting
- A National Rapid Response Team was deployed on 27 December to support the state in conducting Rapid Risk Assessment, including outbreak investigation
- The Core Group (CGPP-WVI) has started community engagement through their home health promoters and community key informants to strengthen RCCE activities during Christmas Church Services and market days to sensitize community members on Yellow Fever prevention and control measures



Source: Suspect VHF Yambio Daily Sitrep



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.



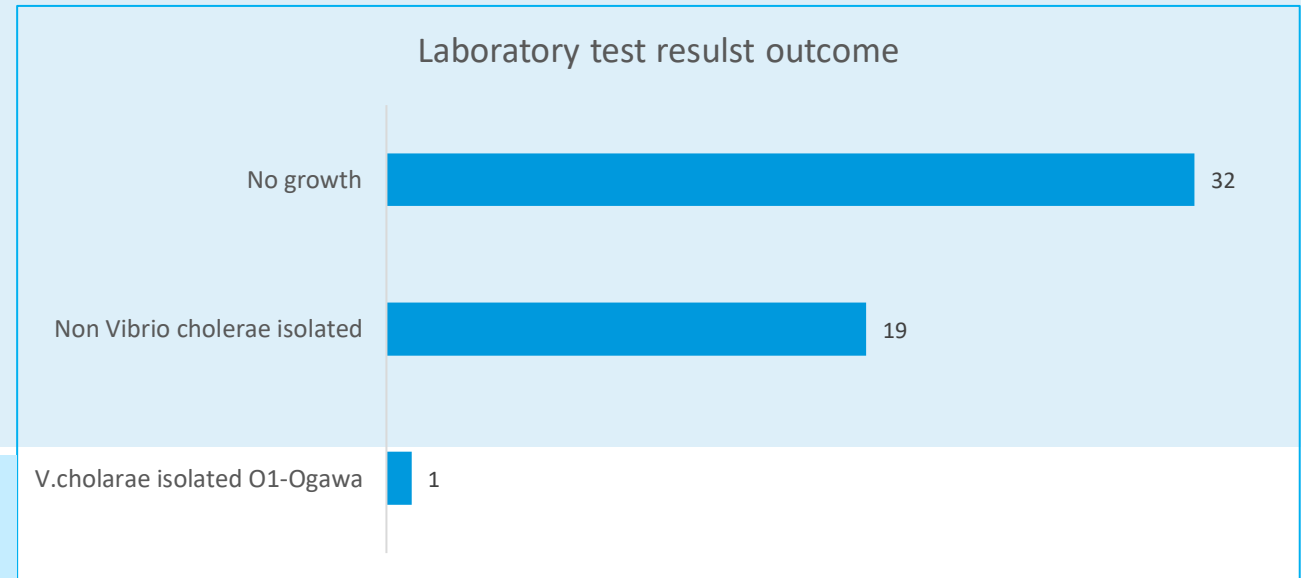
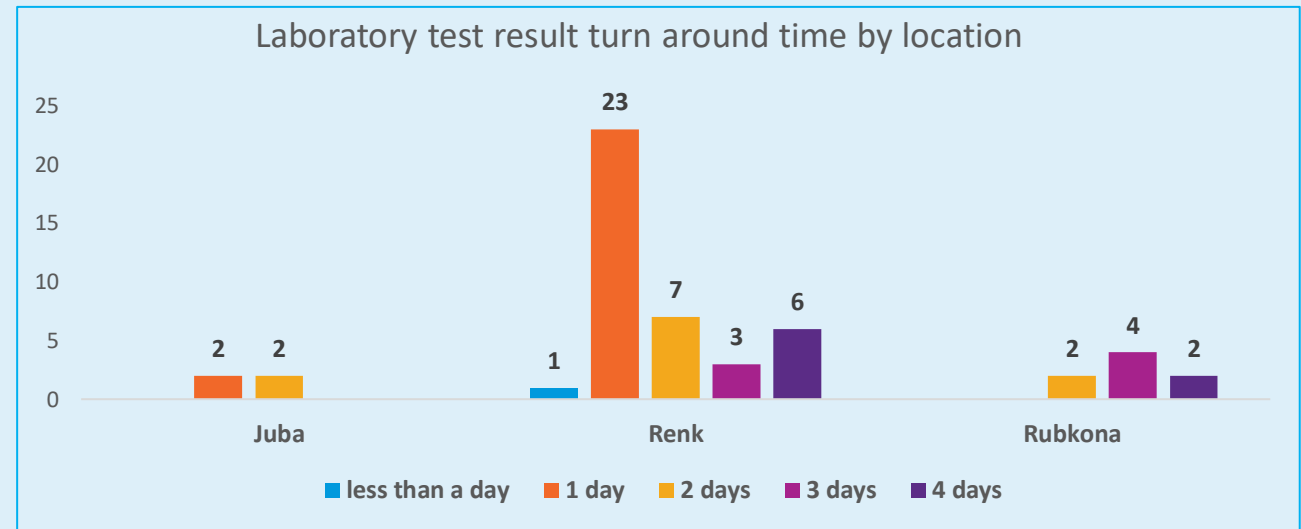
Surveillance updates as of 24 December 2023

- **Screening and testing:** A total of 9,540 people were screened at the Wonthou border for AWD. **six** more samples tested on 24 December were negative using RDT.
- **Laboratory:** Currently the hospital laboratory is conducting culture and sensitivity testing for AWD samples for *Vibrio cholerae* and other enteric bacteria with support from NPHL and WHO lab consultant.
- **Training and deployment:** conducted orientation for **ten** health workers on various aspects of AWD/cholera surveillance and management, case definition, active case search, outbreak investigations, and risk communication. The training also included a practical session on collecting and properly packaging samples. Seven trainees are from Relief International's health facilities, and the remaining three are from Renk Hospital and the County Health Department.
- The rapid response team has also continued to monitor the situation at the transit center and the border and provide timely support and feedback.
- **Staffing and supervision:** CHD/WHO have recruited and oriented **five** more screeners to join our team at the Wunthou border crossing screening desk.
- **Service delivery and coordination:** Partners are discussing creating a one-stop-shop for services and registration at the border to improve service delivery and reduce congestion.



Acute Watery Diarrhea and suspect cholera Sample analysis from Renk, Juba, and Rubkona from 24 Nov. 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

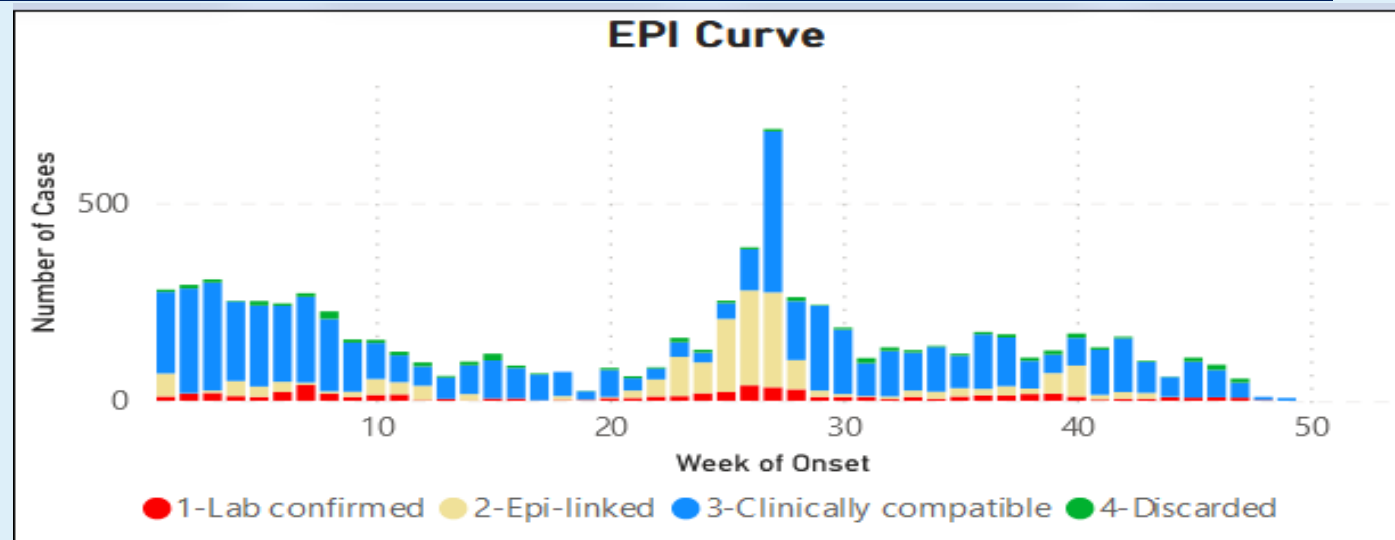


Measles Updates



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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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>

