



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 20

13 -19 May 2024

Background

This weekly bulletin presents the epidemiological status of priority diseases, conditions under surveillance, and public health events in South Sudan. The data presented in the bulletin come from various actors involved in preparedness and response to public health events in the country.

Highlights for the current reporting period

- In week 20 of 2024, the IDSR reporting timeliness and completeness were 89% and 94%, respectively, which is an improvement from the 84% and 88% reported in the previous week.
- At the EWARN mobile sites, the Timeliness and Completeness of IDSR performance were 76% and 93%, respectively. Completeness was higher than the previous week 19 (86%).
- Timeliness and completeness in private health facilities stand at 90% and 94%, respectively, much higher than the 65% in the previous week.
- In week 20, 195 alerts were triggered in eWARS, and the proportion of verified alerts increased from 47% (91/1191) in week 19 to 63% (122/195) in week 20. Most of the alerts in week 20 were for Guinea Worm (25%), ABD (15%) and Measles (14%).
- Three additional cases of suspected meningitis were reported from Aweil Hospital in week 20 of 2024 making the cumulative number of recorded meningitis cases across South Sudan to be 125 including 17 deaths (Case fatality rate: 13.6%).
- Updates on ongoing Hepatitis E Outbreaks from Fangak, Wau counties and Bentiu IDP camp

Surveillance System Performance

The epidemic alert and response system in South Sudan currently relies mainly on immediate alert notification and weekly case data reporting through the Integrated Disease Surveillance and Response (IDSR) system. This system is complemented by a weekly Early Warning Alert and Response System (EWARS).

Completeness (proportion of all reports received regardless of time) and timeliness (proportion of reports received by the Wednesday following the end of the reporting period) of IDSR and EWARS are shown in **Table 1 below**. Timeliness and completeness for **week 20 of 2024 were at 89% and 94%**, respectively.

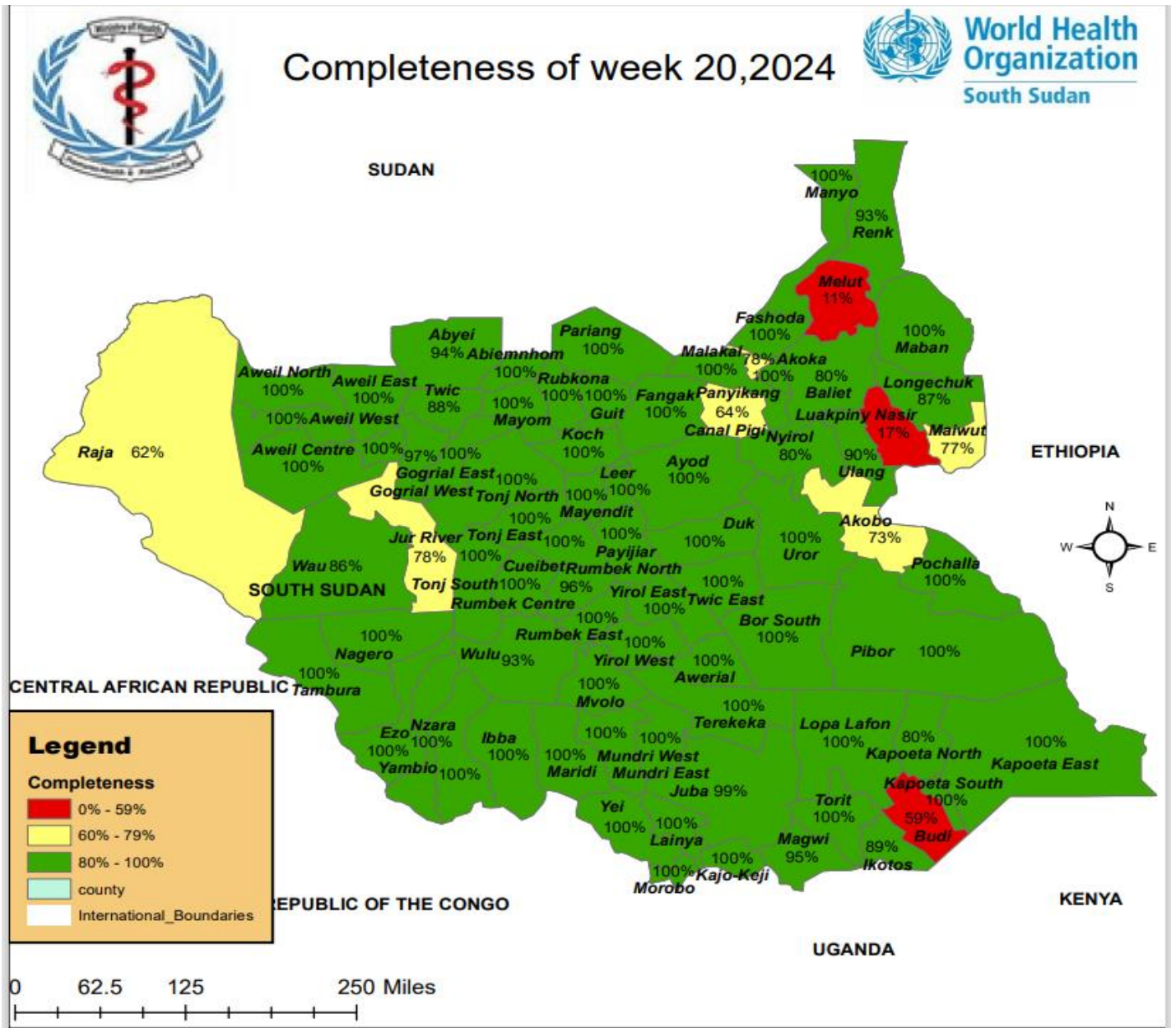
Table 1: Timeliness and completeness of IDSR reporting by State for week 20, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Timeliness		Completeness		Cumulative 2024	
			Wk19	wk. 20	Wk19	wk. 20	Timeliness	Completeness
Lakes	112	112	96%	96%	99%	98%	89%	98%
NBGZ	89	80	97%	92%	100%	100%	87%	92%
Unity	84	84	100%	100%	100%	100%	92%	100%
WBGZ	81	59	69%	62%	72%	73%	77%	80%
WES	183	146	100%	100%	100%	103%	88%	95%
Jonglei	119	101	87%	92%	88%	92%	86%	89%
Warrap	111	105	75%	92%	87%	96%	83%	92%
EES	107	101	88%	85%	93%	90%	88%	95%
RAA	16	7	31%	69%	44%	100%	54%	68%
CES	122	119	69%	92%	73%	100%	90%	94%
AAA	17	17	88%	88%	88%	94%	70%	76%
Upper Nile	141	107	65%	70%	73%	80%	65%	78%
GPAA	15	15	100%	100%	100%	100%	99%	99%
Total	1197	1053	84%	89%	88%	94%	84%	91%

Table 2: Timeliness and completeness of reporting by Payam and Partner of IDSR reporting from NGO-run mobile health facilities and private health facilities in Juba and Wau.

Admin area	# Of Reporting Mobile Sites	% Of Timeliness in week 20	% Of Completeness in week 20	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 20	% Of Completeness in week 20
IMC	4	25%	75%	Kator	3	100%	100%
SSHCO	1	100%	100%	Marial Baai	1	100%	100%
SMC	1	100%	100%	Northern Bari	1	100%	100%
SCI	2	100%	100%	Rajaf	3	100%	100%
HFO	3	100%	100%	Muniki	12	100%	100%
WVI	2	100%	100%	Wau South	20	90%	95%
CIDO	1	100%	100%	Wau North	12	67%	75%
TOTAL	14	79%	93%	Juba	10	100%	100%
				TOTAL	62	90%	94%

Figure 1: Completeness of IDSR reporting by county for week 20, 2024



Epidemic alerts

A total of 195 alerts have been triggered in the EWARS system, with 63% (122/195) verified in the system compared to 47% in the previous week (19). Most of the alerts were for Guinea Worm (25%), ABD (15%) and Measles (14%). See Table 3 below for more details.

Table 3: Summary alerts triggered week 20, 2024

Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		AFP		Blood y Diarrhoea		Chole ra		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		Meningitis		Neonatal Tetanus		Relapsing Fever		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	# R	# V	# R	# V	# R	# V		
AAA	0	0	1	1	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	1	1
CES	0	0	2	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	6	6
EES	0	0	0	0	1	1	0	0	5	5	0	0	0	0	0	0	1	1	3	3	1	1	0	0	0	0	0	0	0	0	11	11
Jong lei	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	8	0	0	0	2	0	0	0	0	0	1	0	14	0		
Lakes	0	0	4	4	1	1	0	0	1	1	0	0	0	0	5	5	30	30	1	1	1	1	1	1	1	1	0	0	0	0	44	44
NBGZ	0	0	2	2	0	0	0	0	4	4	0	0	0	0	0	0	0	0	1	1	4	4	0	0	0	0	0	0	0	0	11	11
RAA	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
Unit y	3	1	3	1	5	1	1	1	1	8	3	0	0	0	1	0	0	0	5	3	0	0	0	0	0	0	0	1	0	27	10	
Upper Nile	1	0	8	0	3	0	0	0	5	1	1	0	0	0	0	0	0	0	1	0	4	1	0	0	0	0	0	0	0	0	23	2
War rap	0	0	0	0	0	0	0	0	2	0	1	1	1	0	5	0	6	3	0	0	4	1	0	0	0	0	1	0	20	5		
WB GZ	0	0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	3	0	1	1	2	2	0	0	0	0	0	1	1	10	6	
WES	0	0	0	0	7	7	0	0	3	3	0	0	0	0	0	0	0	0	6	6	9	9	0	0	1	1	0	0	0	0	26	26
Grand Total	4	1	21	11	22	13	1	1	30	17	3	3	2	2	0	11	5	48	34	19	16	28	19	1	1	1	1	1	4	1	195	122

#R= reported

#V= verified

Alert: Deaths due to bloody diarrhea in Walgak, Akobo county

In week 20, an alert was received from a Health partner in Akobo of five individuals, all under the age of 10 (four of whom were under the age of 5), who arrived at the Walgak Primary Health Care Center (PHCC) displaying symptoms of a coagulation disorder. These patients exhibited signs such as vomiting blood, coughing up blood, and experiencing bloody diarrhea shortly after being admitted to the health facility. Unfortunately, their conditions deteriorated rapidly, and they passed away at the Walgak PHCC. The cases were reported from the Akobo West Payam, specifically from Yidit (3 cases), Buong (1 case), and Diror (1 case). The county team investigated, which was verified to be severe acute malnutrition. However, there is ongoing follow-up with the partners on the ground to a) Conduct contact tracing for all the suspected deaths for at least 21 days, b) Establishment of triage for all cases with hemorrhagic symptoms, c) Provision of Personal Protective Equipment to all health workers designated to see patients with bloody symptoms/signs and; d) report any related event.

Weekly Update on Indicator-Based Surveillance (Week 16)

Indicator-based surveillance is implemented in South Sudan through the EWARS platform according to the IDSR 3rd guidelines, where approximately 59 priority diseases and public health events are regularly monitored and reported from health facilities across the country.

Influenza update

Currently, there are four designated Influenza sentinel surveillance sites in the country, three (3) in Juba (Juba Teaching Hospital, Al Sabbah Children’s Hospital, Juba Military Hospital) and one (1) in Rumbek State Hospital in Lakes State are collecting epidemiological data and samples from ILI/SARI cases.

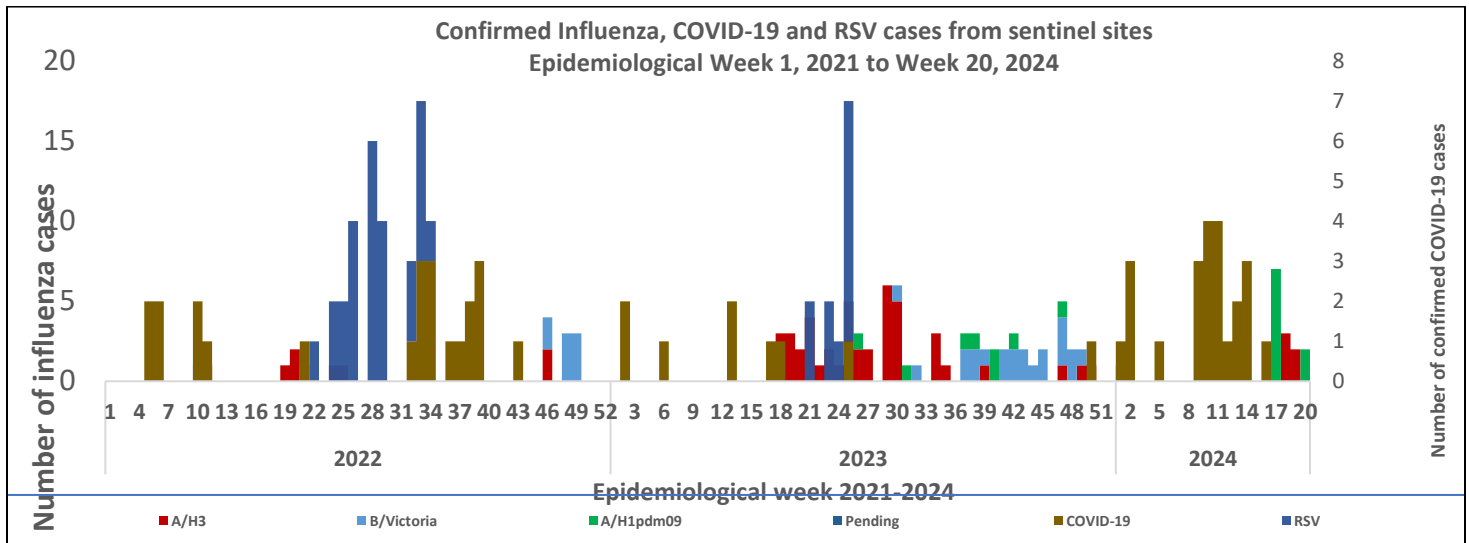


Figure 2: Indicator-Based Surveillance (IBS) Influenza Surveillance

During Epidemiological Weeks 1 to 20 in 2024, a cumulative total of 602 ILI/SARI samples were collected; 561 tested negative for all pathogens, 23 were positive for COVID-19, 3 for Influenza Type A (H3), one for Influenza Type B (Victoria), nine for Influenza A/(H1N1) pdm09 and zero for RSV.

Ongoing confirmed epidemics

Table 4: Summary of new and ongoing confirmed epidemics

Aetiologic agent	Location (county)	Date first reported	New cases since last bulletin	Cumulative cases to date	Response activities				
					Surveillance/Lab	Case management	Vaccination	Health promotion	IPC/WASH
<i>Ongoing outbreaks</i>									
Yellow Fever	Yambio, Nzara, Ezo, Tambura, Ibba and Maridi	21 Dec 2023	2	124	3 Laboratory confirmed	Ongoing	Done in 5 counties	Ongoing	Ongoing
Measles	2 counties with active outbreak Jur River and Fangak	2022	0	14,507	1,154	ongoing	ongoing	ongoing	ongoing

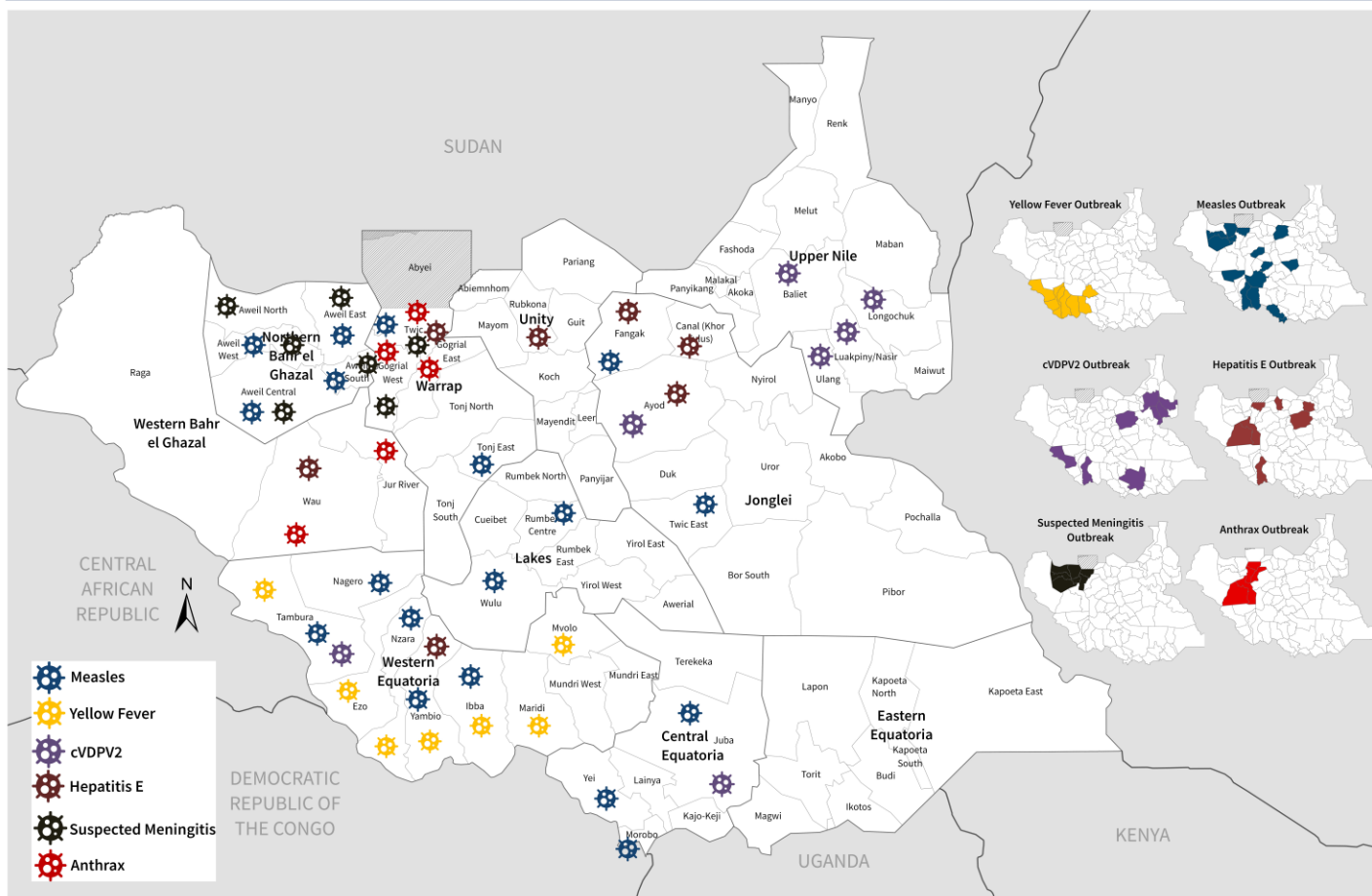
Hepatitis E	Fangak	2023		617	253	ongoing	ongoing	ongoing	ongoing
cVDPV	Yambio, Juba, Ulang, Nasir, Baliet, Ayod	19/Dec 2023	0	11	11	Not applicable	Completed 2 SIAs and 3 rd round planning is ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	38	5269	-	ongoing	Done in 2021/22	ongoing	ongoing

Ongoing Confirmed Outbreaks

Since 2022, South Sudan experienced several health emergencies throughout the country. Based on data provided by the states and the EWARS system, most counties have reported ongoing disease outbreaks. These outbreaks include measles, anthrax, meningitis, cholera, hepatitis E virus, and others. Measures have been put in place to help mitigate the spread of these outbreaks. Below is a map of the current ongoing emergencies

Figure 3: Map showing ongoing disease outbreaks across the country

South Sudan: Ongoing Disease Outbreaks Across Counties (As of 11:05:2024)



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source:
Map Production:
Map Date: 5/16/2024



Response activities for ongoing/suspected outbreaks

Vaccine-preventable Diseases

1- Meningitis Situation Updates

In week 20, three cases were reported from Aweil West, East, and South Counties. This brings the cumulative number of recorded meningitis cases across South Sudan to 125 including 17 deaths (Case fatality rate: 13.6%). Two of the cases were aged 12 and 14 years, while the 3rd suspected case was a 33-month-old baby from Aweil West. In Payams (sub-counties), none surpassed the outbreak threshold (10 cases per 100,000 in payams with over 30,000 population nor five cases per 100,000 or doubling of the Neisseria Meningitidis incidence over two to three consecutive weeks in areas with less than 30,000 population). The number of counties that have reported suspected meningitis cases remained 7 namely Aweil Centre, Aweil East, Aweil North, Aweil South, Aweil West, Gogriell West and Twic.

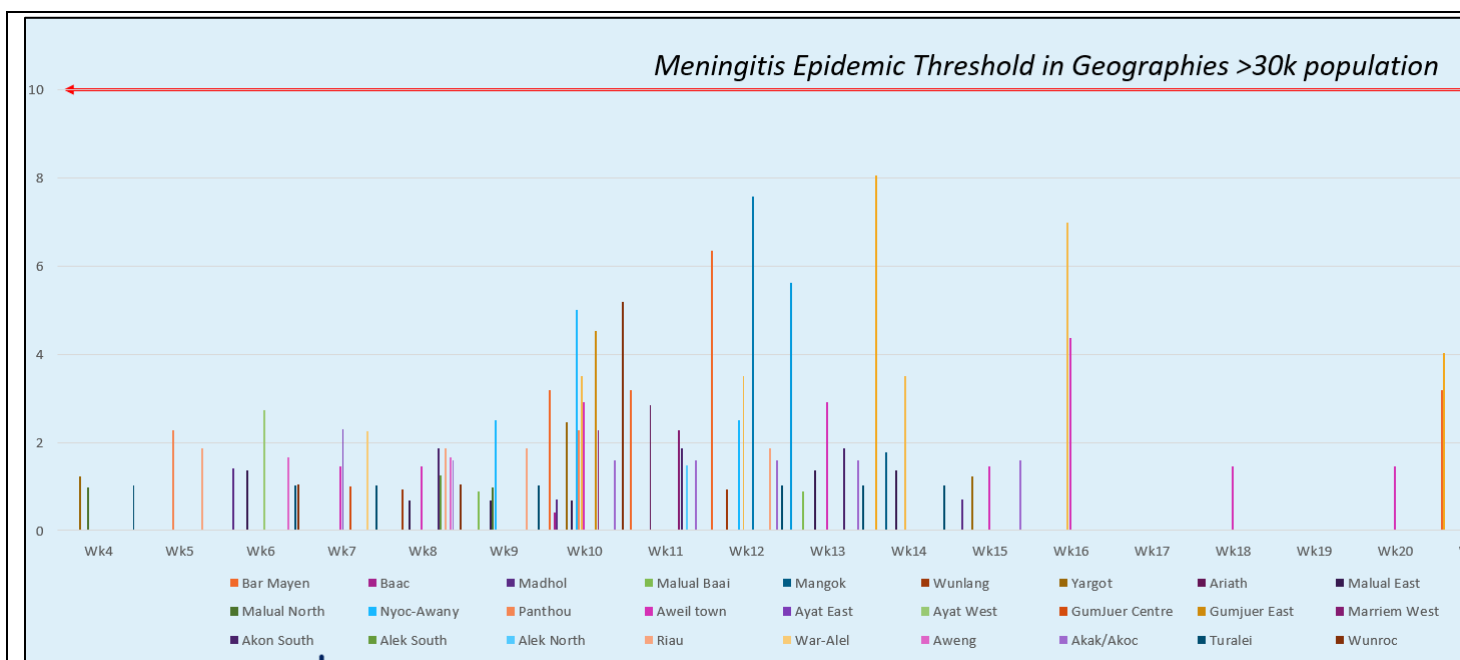


Figure 4: Attack rate of Meningitis cases by Payam and Epi-week 4 to 20, 2024

2- Measles outbreak

In Epi week 20, no additional data on cases from reporting locations. No new cases/deaths reported with date of onset in week 20. In the last four weeks two ongoing outbreaks in Fangak and Jur-River counties. The cumulative total of suspected measles cases from week 1 to week 20 is 2,407 of which, 164 (6.8%) were lab-confirmed, 772 (32.1%) epi-linked, 1,350 (56.1%) clinically compatible, and 121 (5.0%) discarded. A total of 30 rubella-positive cases were discarded (negative measles cases). About 66% (1604 out of 2407) of all cases were in children under 5 years old, and only 23% of those cases involved children who had received at least one dose of the measles vaccine. In the last four weeks, 16-19 of 2024, a total of 46 suspected cases were recorded, with 40 samples collected, and data shows ongoing outbreaks in Fangak, Jur-River, and Wulu counties.

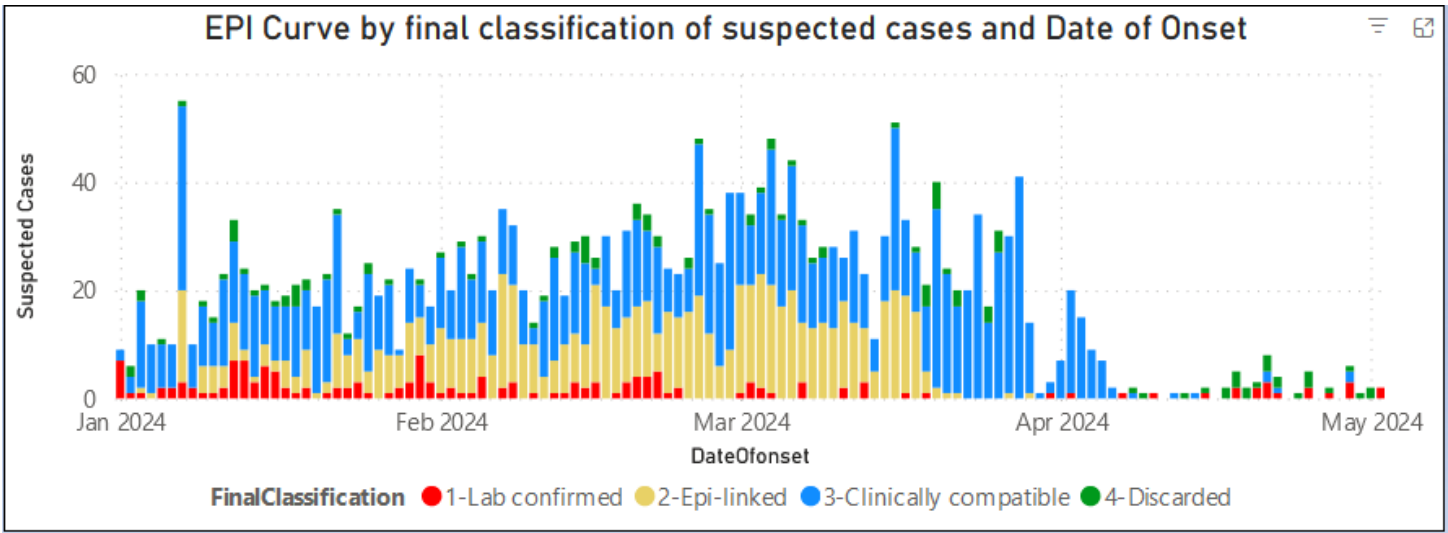
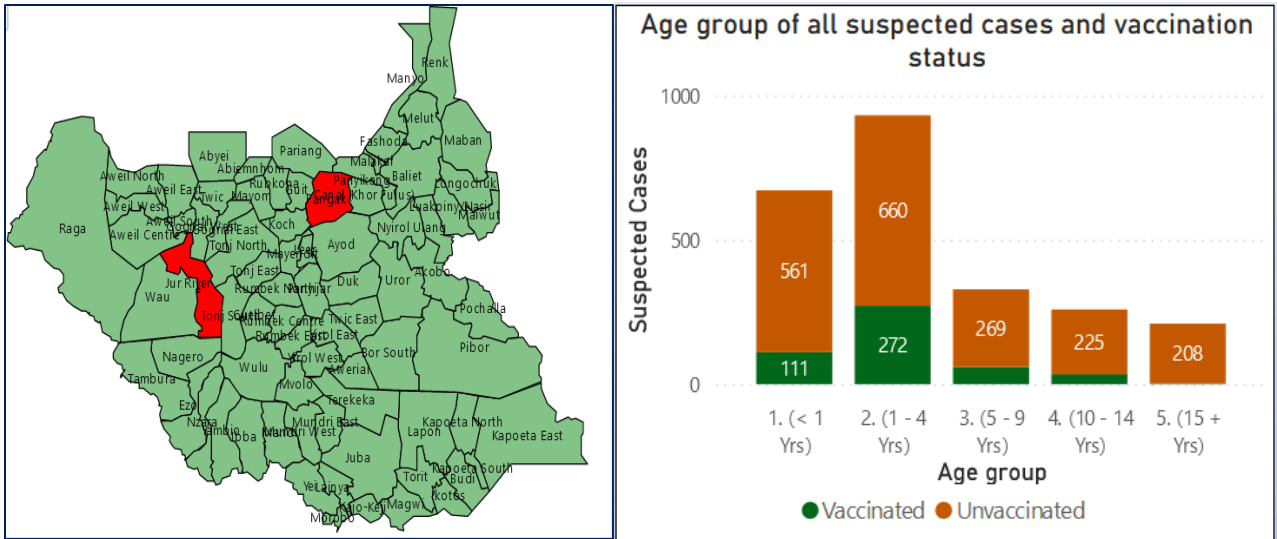


Figure 5: Epi-curve of suspected measles cases against their residential status by Epi week



Figures 6 and 7: Suspected Measles Cases by age group and vaccination status and map showing counties with ongoing transmission

Measles Vaccination Updates

In 2024, the reactive vaccination campaigns against measles continued. By Epi week 20 , thirteen counties (Maridi, Mundri East, Tonj North, Tonj South, Aweil East, Aweil South, Aweil Center, Aweil North, Aweil West, Yambio, Nzara, Ibba and Tambura) had implemented the campaign, vaccinating 453188 (91%) children under the age of five, of which 2.3% are returnees. The campaign is partially implemented in six IDP camps of Tambura County. Ezo county scheduled implementation for the first week of June 2024

3- Poliomyelitis

Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

There are three circulating lineages of VDPV2 emergencies which are RSS-WEQ-1 detected in Yambio/WEQ and Juba CES detected in Ayod, Baliet and Nasir of UNL. An unnamed lineage has been detected in Tambura/WES and Longechuk/UNL. Additionally, there are two new unclassified VDPV2 emergencies, one in Ulang/UNL and one contact isolate in Nasir. The

investigation of these unclassified emergencies is still ongoing. Two nationwide response SIAs using nOPV2 have already been completed and the LQAS results have been completed in 39 counties with only one more to be completed this week. We are enhancing surveillance activities in all states, counties, Payams and villages to identify any suspected cases promptly.

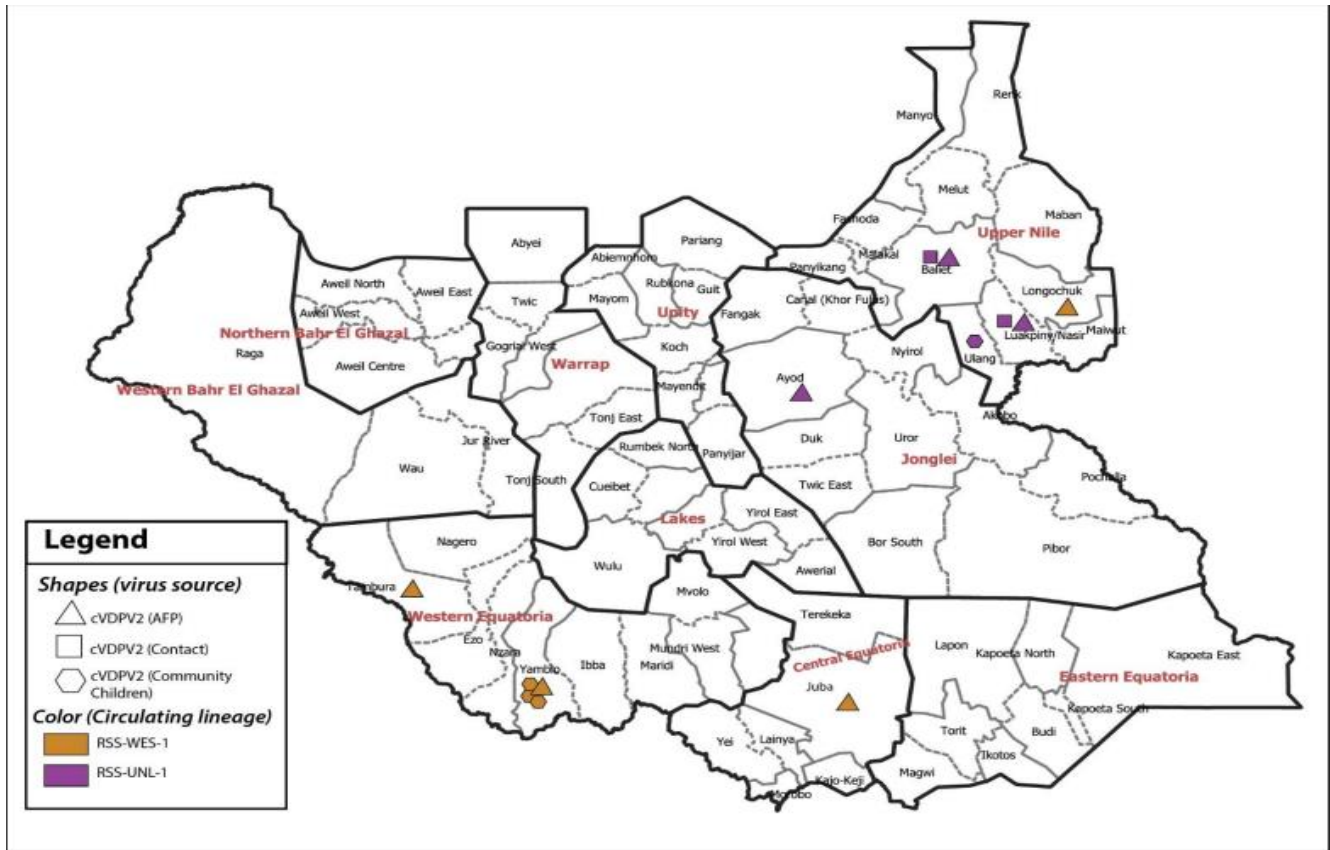


Figure 8: Distribution of cVDPV2 cases isolates (All sources)

4. Hepatitis E Virus in Fangak county Jonglei State

In week 20, one case tested positive for RDT, bringing the total number of AJS cases to 643, with 22 reported deaths since the outbreak began in week 2 of 2023. Most cases occurred in individuals aged 15 and above, with females accounting for 66% (420 out of 643) and males 34% (223 out of 643) of the total cases. Most cases originated from old Fangak Payam (65% of total cases), followed by Paguir (11%) and 10 other villages. The outbreak peaked in week 42 of 2023, with an RDT positivity rate exceeding 60%. By week 52 of 2023, the Ministry of Health, County Health Department (CHD), MSF-France, and partners had initiated two rounds of Hecolin intervention to address the ongoing outbreak with four (04) RDT-positive cases reported in week two of 2024.

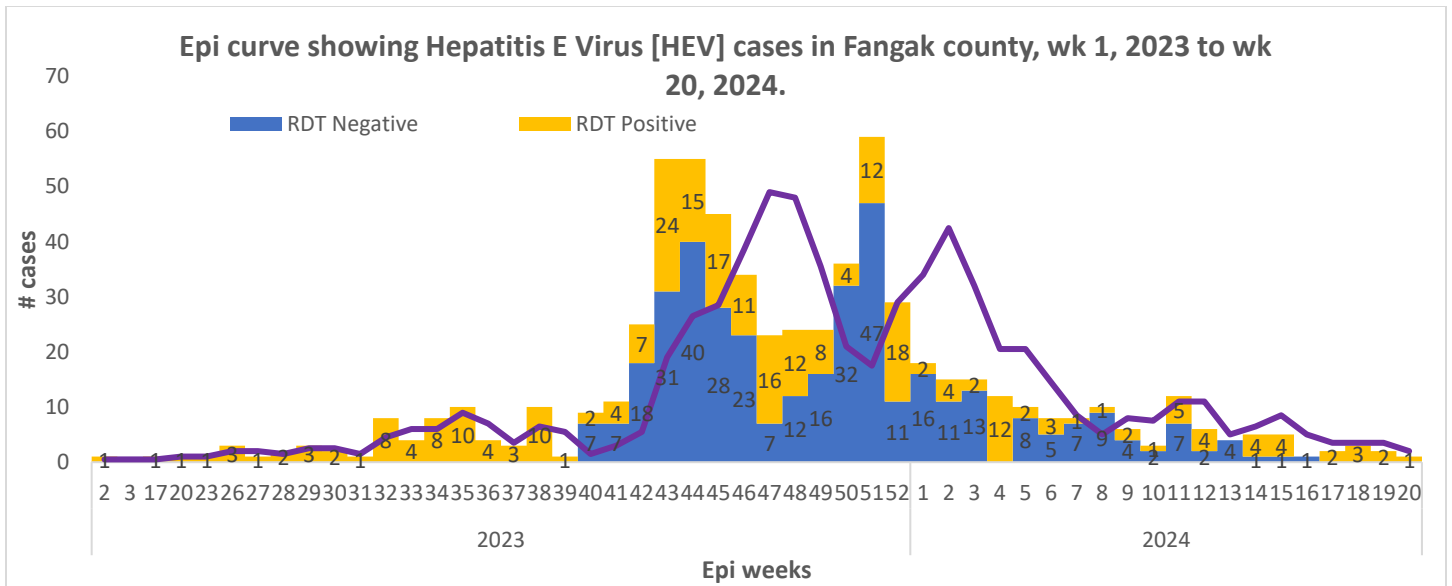


Figure 9: Epi-curve of HEV in Fangak County

5. Hepatitis E outbreak in Bentiu IDP Camp in Unity State

In week 20 of 2024, 38 new cases were reported, with one RDT positive case and no deaths. Since the outbreak began in 2018, 5489 cases and 27 deaths have been reported. Among these cases, 43% occurred within the age group of 15-44 years. Males accounted for 52% (2,876 cases), and females accounted for 48% (2,613 cases). Most of the cases (47%) were among the non-camp residents who came to seek treatment within the camp, within the camp, cases were almost equally distributed with sector 3 with more cases (13%) than the other sectors.

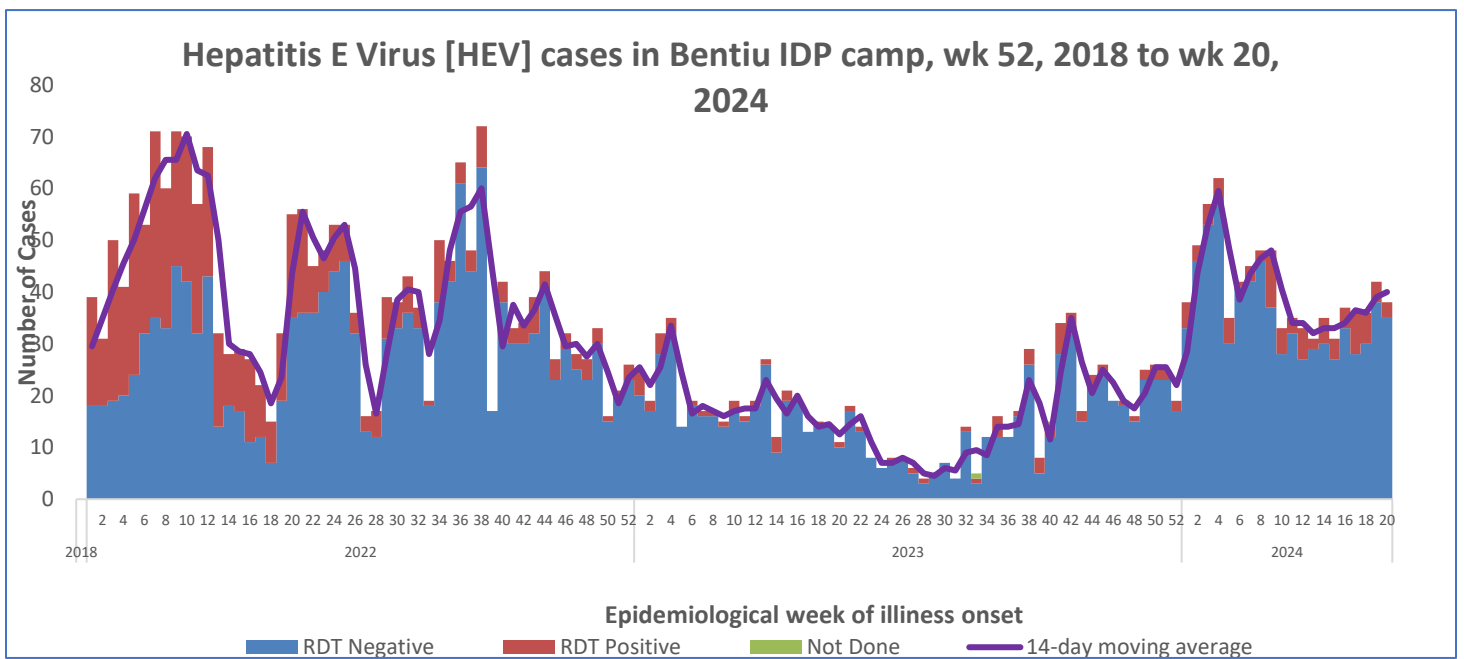


Figure 10: Epicure of HEV in Bentiu IDP camp, Unity State

6. Hepatitis E in Western Bahr EL-Ghazal State

Between week 8 of 2023 and week 20 of 2024, a total of 501 cases were reported, with 19 resulting in fatalities. Most cases (81%) were concentrated in the Wau South Payam region. Of the reported cases, 64% were male and 36% were female, with the most affected age group being 15 years and older. Wau Teaching Hospital accounted for 68% of the reported cases, while 28% were reported from the community. Although there has been a decrease in the weekly case load since the beginning of 2024, there is still an ongoing need for interventions at both the facility and community levels mitigate this outbreak.

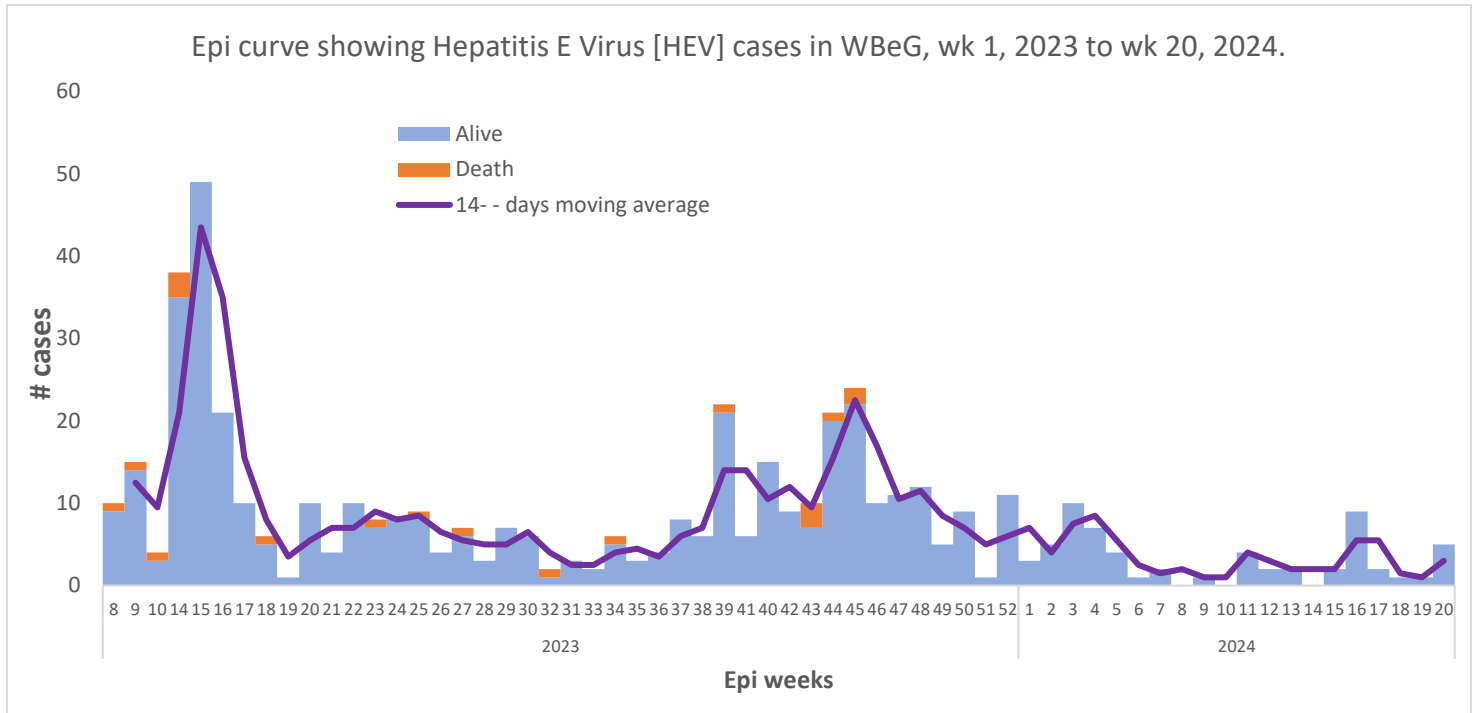


Figure 11: Epi-curve of HEV in Fangak County

Hemorrhagic Fevers

1- Yellow fever Outbreak

In Week 20, two (2) additional cases were reported from Maridi, giving a cumulative total of 124 Yellow Fever cases (121 suspected and 3 confirmed). Seven counties in Western Equatoria state were affected: Yambio (64), Tambura (26), Nzara (11), Ezo (13), Iba (03), Maridi (03), and Mvolo (03) Counties. In Epi week 16, one (01) new suspected Yellow Fever cases were reported from Yambio.

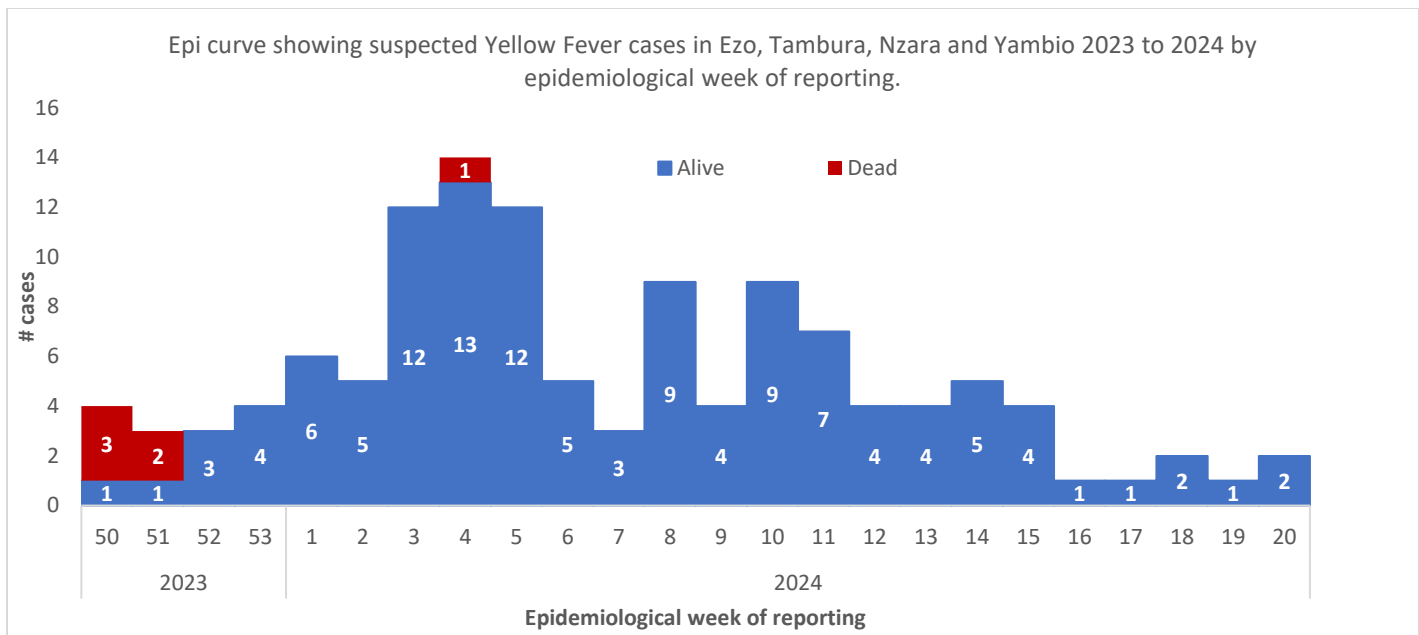


Figure 12: Trend of Yellow fever outbreak in Western Equatoria State

Other Events

Sudan crisis: As of Week 20, at least **674,475** individuals have crossed from 19 different nationalities. Of this number, 78.42% (528,923) are South Sudanese returnees. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 83.4% of the reported influx figures. Hostcommunities and healthcare systems are struggling to cope with the increased demand for health and otherservices, morbidity, and mortality among returnees and refugees. The interconnectedness between Sudan’s and South Sudan's economies has resulted in the conflict significantly affecting market prices. According to the Cash Working Group, the average cost of a Multi-Sectoral Survival Minimum Expenditure Basket has risen by 28 percent since April 2023, indicating the extent of the impact.

Active surveillance for potential cholera cases is being conducted at the Wunthou entry point. Suspect cholera cases are further screened and tested using rapid diagnostic tests (RDT). A total of 2876 consultations were recorded this week, 20 less compared to 5445 consultations in Wk 19. The leading cause of morbidity in Renk is ARI 32% (922/2876) in both children under the age of five years old and adults, followed by malaria 246/2876 and acute watery diarrhea 244/2876

Food insecurity: In 2023, severe acute food insecurity impacted an estimated 7.7 million people across 78 counties in South Sudan. This includes 43,000 people facing catastrophe-level food insecurity at Integrated Food Security Phase Classification (IPC) Phase 5, 2.9 million at IPC Phase 4 (emergency-level), and 4.8 million at IPC Phase 3 (crisis-level). Among those affected are 1.4 million malnourished children. For 2024, it is estimated that millions of people will still be unable to meet minimum food needs as food stocks could be depleted by April 2024. Additionally, ongoing sporadic conflicts and the influx of returnees and refugees from Sudan is likely to strain food supplies and incomes further, driving severe malnutrition.

Flooding: Remains a concern. In 2023, areas of Upper Nile and Unity states remained under floodwaters, with an estimated 7021 people still displaced in Rubkona.

Next step

- Strengthening active surveillance across the counties bordering Sudan for a potential cholera outbreak. Surveillance activities will also be strengthened in counties reporting disease outbreaks such as measles, HEV, Yellow Fever, and Circulating Vaccine-Derived Polio Virus type-2 (cVDPV2).
- Training of rapid response teams (RRTs) in Renk.

- Support printing of IEC materials for red eye prevention awareness.
- Support the ongoing PSH training in Renk County.
- Support detailed Measles outbreak investigations and risk assessment (root cause analysis) to understand the persistent outbreaks.

Acknowledgments

Thanks to the State Surveillance Officers, Health Cluster partners for sharing the weekly IDSR data. To access the IDSR bulletins for 2024 use the link below:

<https://www.afro.who.int/countries/south-sudan/publication/south-sudan-weekly-integrated-disease-surveillance-and-response-bulletin-2024>

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

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Notes

WHO and the Ministry of Health gratefully acknowledge the surveillance officers [at state, county, and health facility levels], health cluster and healthpooled fund (HPF) partners who have reported the data used in this bulletin. We would also like to thank ECHO, USAID and the World Bank for providing financial support.

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>

Data source: DHIS-2 and EWARS

