



Republic of South Sudan

Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 24
10 -16 June 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 24 of 2024, the IDSR reporting timeliness and completeness were 58% and 87% respectively, a reduction from the 80% and 92% reported in the previous week.
- At the EWARN mobile sites, the Timeliness and Completeness of IDSR performance were all 100%, which is Higher than in week 23.
- Timeliness and completeness of the Private Health Facilities reporting stands at 31% and 94% respectively.
- In week 24, a total of 230 alerts were triggered and 141 (61%) of the total alerts verified, a reduction from 70% (173/243) in week 23. Most of the alerts in week 24 were for ARI (20%), Guinea Worm (18%), AWD (16%), Malaria (15%), ABD (14%) and Measles (10%).
- Updates on ongoing Hepatitis E Outbreak from Fangak, Twic counties, and Bentiu IDP camp.
- South Sudan anticipates floods in 2024 due to two separate climate conditions. It is projected to lead to approximately 50% higher levels of rainfall in the northern and eastern parts of South Sudan, with a peak in September.

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 24 were at 58% and 87%**, respectively. The declines in weekly epidemiological reporting is so significant and this level of timeliness of reporting is the lowest ever reported since the year begun. This is attributable to the HSTP transition that affected nearly 700 of the 1198 functional facilities that routinely report epidemiological data.

Table 1: Comparison of Timeliness and Completeness of IDSR reporting by State week 24 and week 23, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Timeliness		Completeness		Cumulative 2024	
			wk. 24	wk. 23	wk. 24	wk. 23	Timeliness	Completeness
Lakes	112	111	77%	97%	100%	100%	90%	98%
NBGZ	89	85	75%	75%	97%	88%	86%	93%
Unity	84	84	99%	100%	100%	100%	94%	100%
WBGZ	81	62	12%	43%	78%	77%	71%	78%
WES	183	183	58%	91%	83%	100%	88%	96%
Jonglei	119	108	66%	88%	92%	90%	85%	89%
Warrap	111	105	64%	65%	74%	91%	81%	91%
EES	107	103	56%	87%	79%	95%	87%	94%
RAA	16	6	56%	0%	94%	100%	51%	69%
CES	122	122	52%	94%	98%	97%	89%	95%
AAA	17	17	6%	82%	88%	82%	71%	79%
Upper Nile	142	115	33%	56%	74%	83%	62%	79%
GPAA	15	15	93%	93%	93%	93%	98%	99%
Total	1198	1116	58%	80%	87%	93%	83%	95%

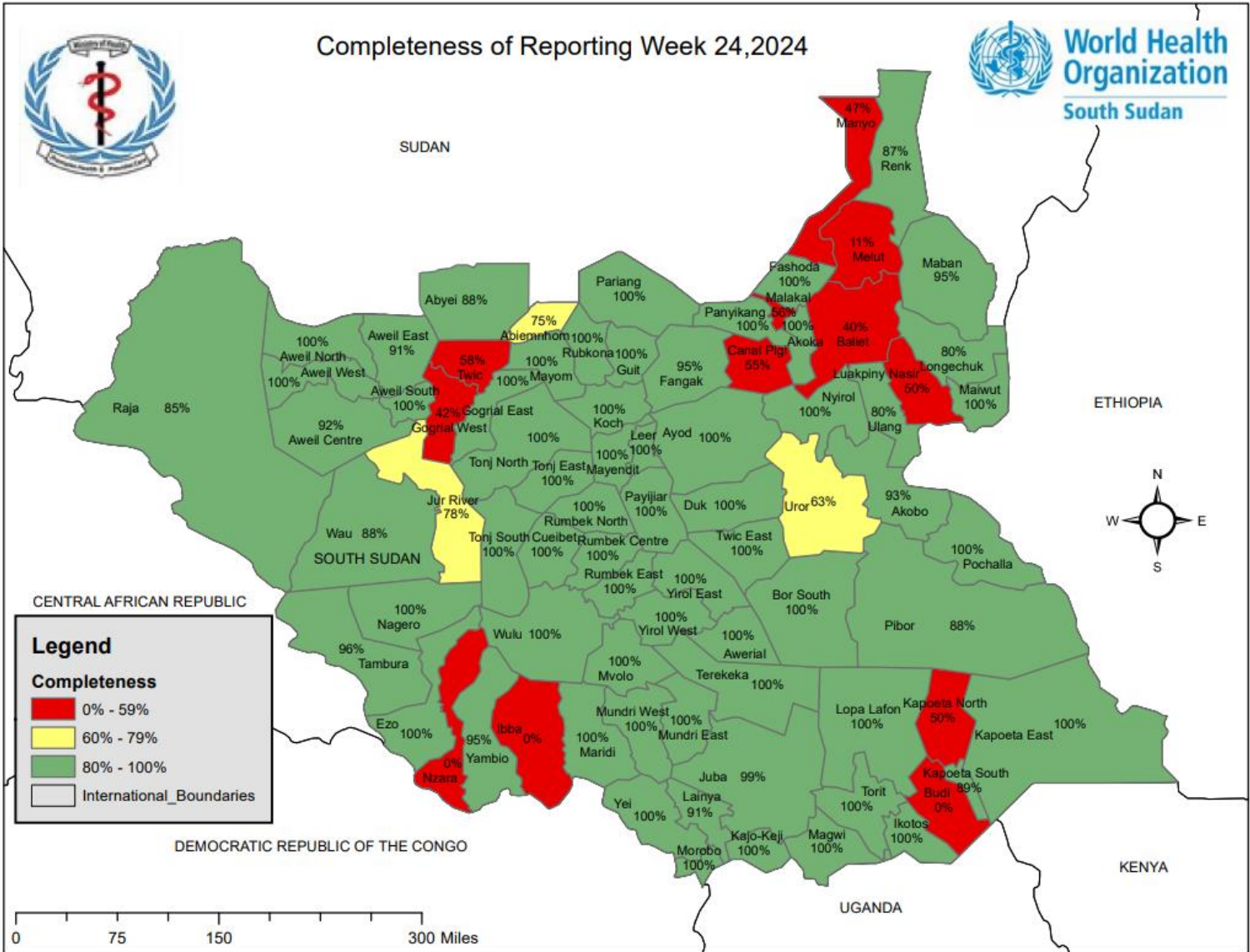
Key to epidemiological Reporting

≥80%	Good performance
60-79%	Fair performance
<60%	Poor performance

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 24	% Of Completeness in week 24	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 24	% Of Completeness in week 24
IMC	4	100%	100%	Kator	4	0%	100%
SSHCO	1	100%	100%	Marial Baai	1	0%	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	15%	95%
CIDO	1	100%	100%	Wau North	12	0%	75%
TOTAL	14	100%	100%	Juba	10	0%	100%
				TOTAL	63	31%	94%

Figure 1: Completeness of IDSR reporting by county of South Sudan in Epi week 24, 2024



Epidemic alerts

A total of 230 alerts were triggered in the EWARS system, with 61% (141/230) verified in the system compared to 70% in the previous week (23). Most of the alerts were for ARI (20%), Guinea Worm (18%), AWD (16%), Malaria (15%), ABD (14%) and Measles (10%). See Table 3 below for more details.

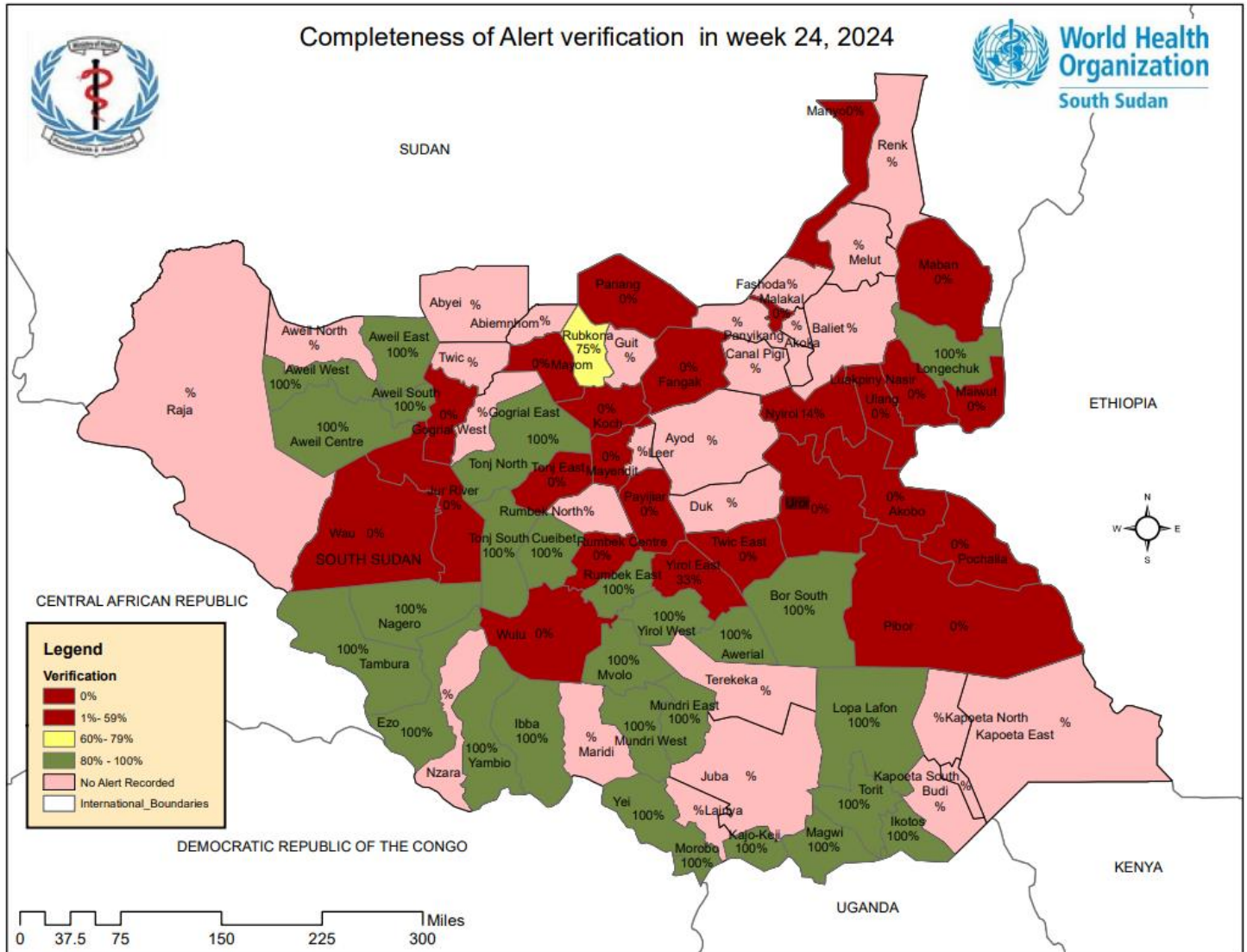
Table 3: Summary of EWARS alerts triggered in South Sudan for Epid-week 24, 2024

Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		AFP		Bloody Diarrhoea		Covid-19		EBS		Guinea Worm		Malaria (Confirmed)		Measles		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
AAA	1	1	1	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	6	1
CES	0	0	3	3	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	1	0	0	9	9
EES	0	0	2	2	0	0	0	0	4	4	0	0	1	1	0	0	0	0	0	0	0	0	7	7
GPAA	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0
Jonglei	0	0	3	1	2	0	0	0	7	1	0	0	0	0	8	0	2	0	6	0	1	0	29	2
Lakes	0	0	6	6	2	1	1	1	5	5	1	1	0	0	27	11	3	3	0	0	0	0	45	28
NBGZ	0	0	8	8	5	5	0	0	2	2	0	0	0	0	1	1	1	1	1	1	0	0	18	18
RAA	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
Unity	3	1	7	1	1	0	0	0	2	1	0	0	0	0	0	0	2	0	0	0	0	0	15	3
Upper Nile	0	0	2	1	1	0	0	0	3	1	0	0	0	0	0	0	4	1	4	1	0	0	14	4
Warrap	0	0	0	0	1	0	0	0	1	0	0	0	4	4	4	3	0	0	4	2	0	0	14	9
WBGZ	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0
WES	0	0	6	6	20	20	2	2	7	7	0	0	0	0	0	0	19	19	6	6	0	0	60	60
Grand Total	4	2	45	28	36	27	4	4	33	21	2	2	6	6	42	15	34	25	23	11	1	0	230	141

#R= reported

#V= verified

Figure2: EWARS Alerts Verification rates by county of South Sudan for week 24, 2024



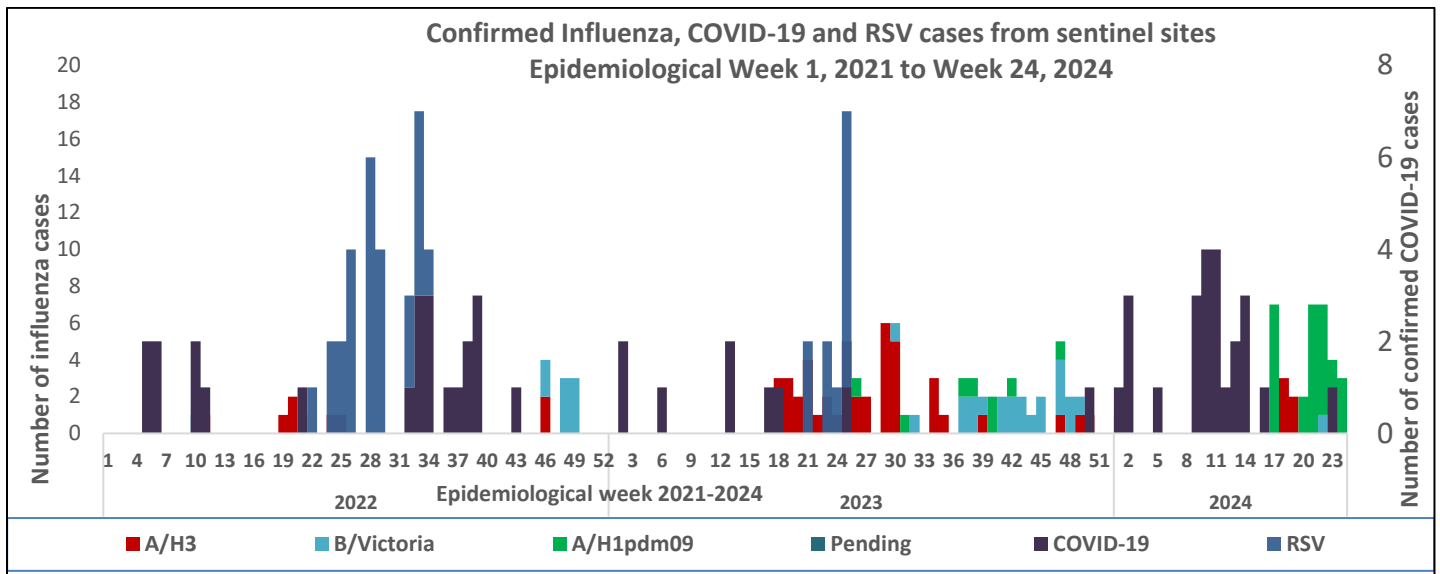
Weekly Update on Indicator-Based Surveillance (Week 22)

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, four (4) 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 3: Indicator-Based Surveillance (IBS) Influenza Surveillance



During Epidemiological Weeks 1 to 24 in 2024, a total of 739 ILI/SARI samples have been collected; 676 tested negative for all pathogens, (24) were positive for COVID-19, (3) for Influenza Type A (H3), (5) for Influenza Type B (Victoria), (31) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

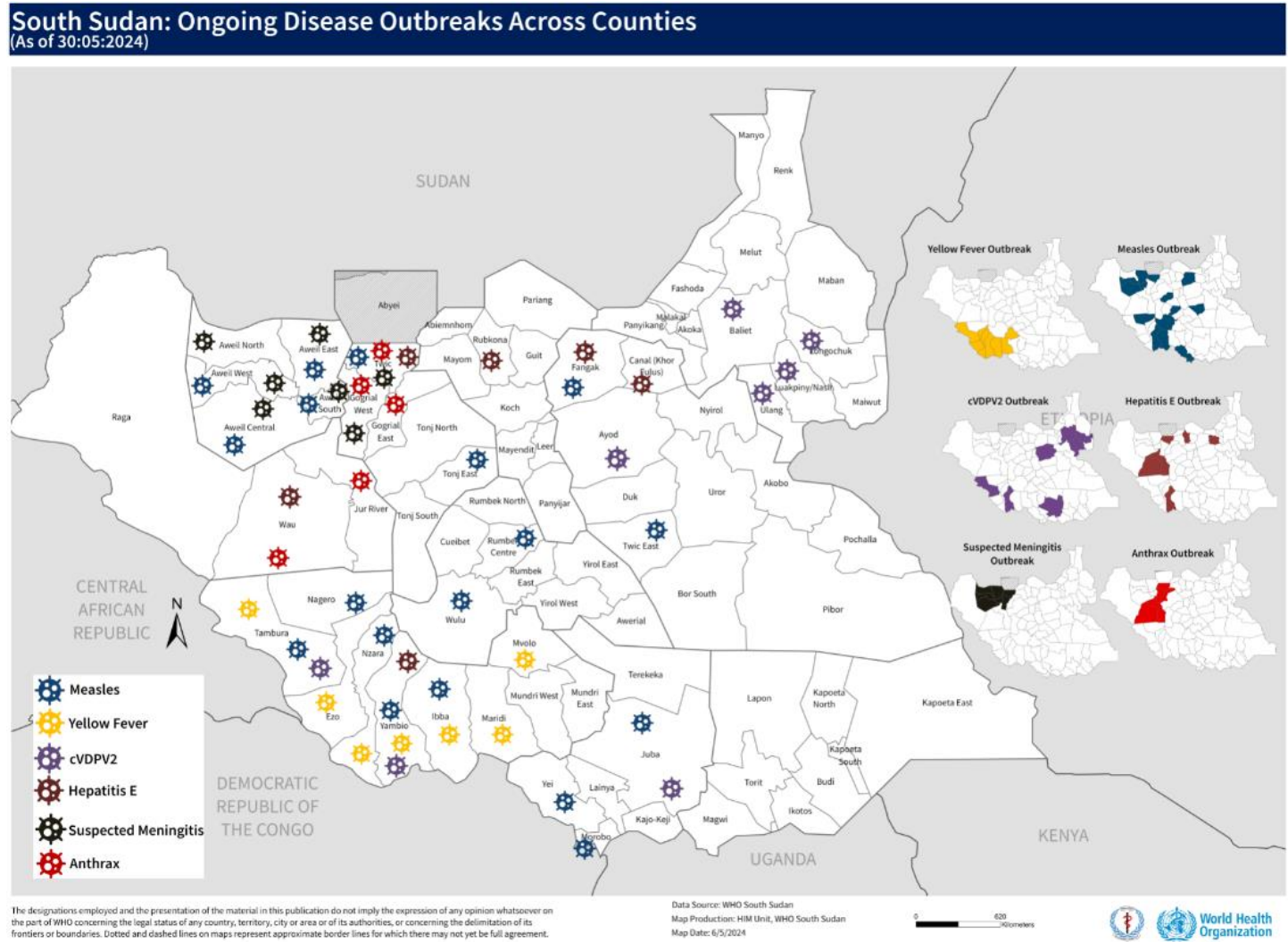
Ongoing confirmed epidemics

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	3	130	3 Laboratory confirmed	Ongoing	Done in 5 counties	Ongoing	Ongoing
Measles	Multiple counties	2022	0	14,507	1,154	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023	2	655	253	ongoing	ongoing	ongoing	ongoing
cVDPV	Yambio, Juba, Ulang, Nasir, Baliet, Ayod	19/Dec 2023	0	16	16	Not applicable	Completed 2 SIAs and 3 rd round planning is ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	27	5 619	-	ongoing	Done in 2021/22	ongoing	ongoing
Hepatitis E	Twic	Feb 2024		32	1	ongoing	Not done	ongoing	ongoing
Anthrax	Gogrial west (WRP) and Jur River (NBS)	2022	-	44	3	ongoing	Ongoing in animal sector	ongoing	ongoing

Since 2022, South Sudan has experienced several emergencies throughout the country. Based on data from the states and the EWARS system, most counties have reported ongoing disease outbreaks. These outbreaks include measles, anthrax, meningitis, cholera, hepatitis E virus, Yellow Fever 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 4: Map showing ongoing disease outbreaks across the country



Response activities for ongoing/suspected outbreaks

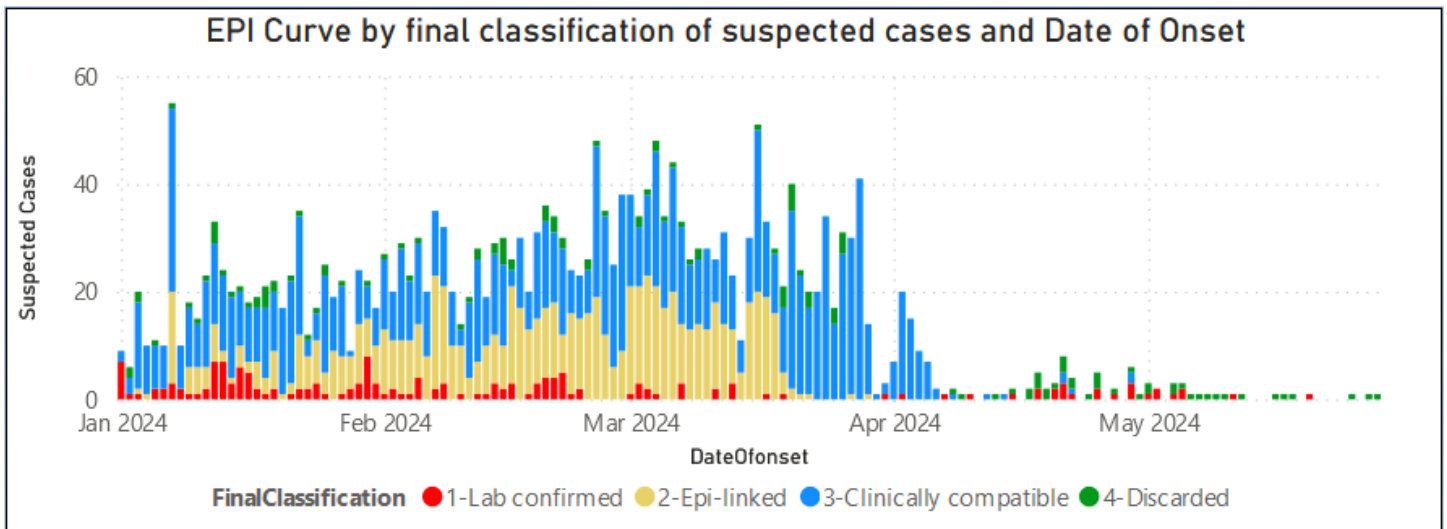
Vaccine-preventable Diseases

1- Measles outbreak

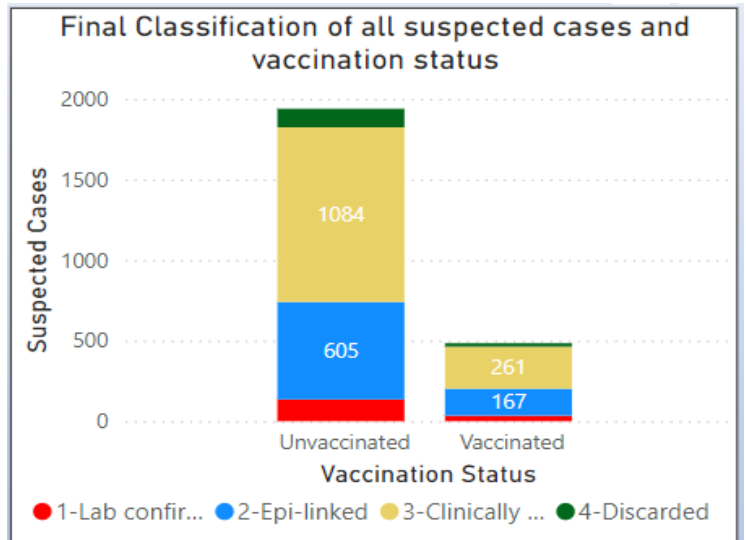
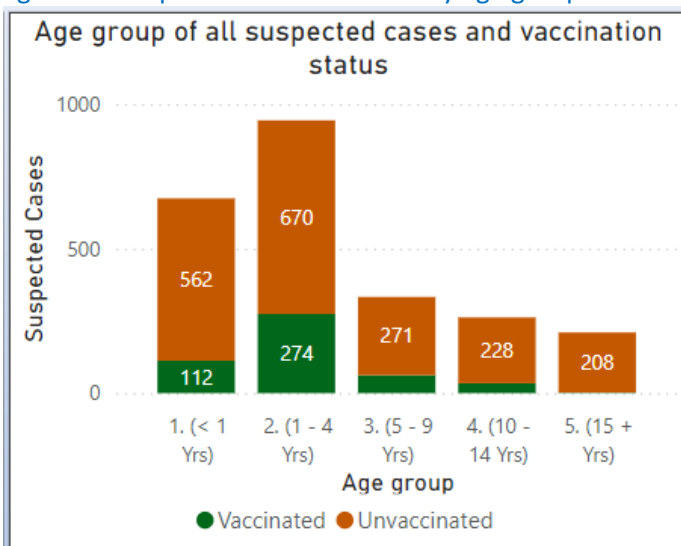
In Epi week 24, no new cases/deaths were reported. The cumulative total from week 1 to week 24 is 2,423 suspected measles cases have been reported of which 170 (6.8%) were lab-confirmed, 772 (32.1%) epi-linked, 1,348 clinically compatible, and 121 (5.0%) discarded. A total of 30 rubella-positive cases were discarded (negative measles cases). About 66% (1618 out of 2423) of all cases were in children under five years old, and only 31% had received at least one dose of the measles vaccine. It is worth noting that for the last 8 weeks running, no single county surpassed the measles outbreak threshold of at least 5 suspected cases or at least 3 IgM positive cases in a month. While the long-awaited end

to protracted measles outbreaks is in sight, its concerning that only 11 of the 23 suspected measles alerts reported in EWARS were verified.

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



Figures 6: Suspected Measles Cases by age group and vaccination status

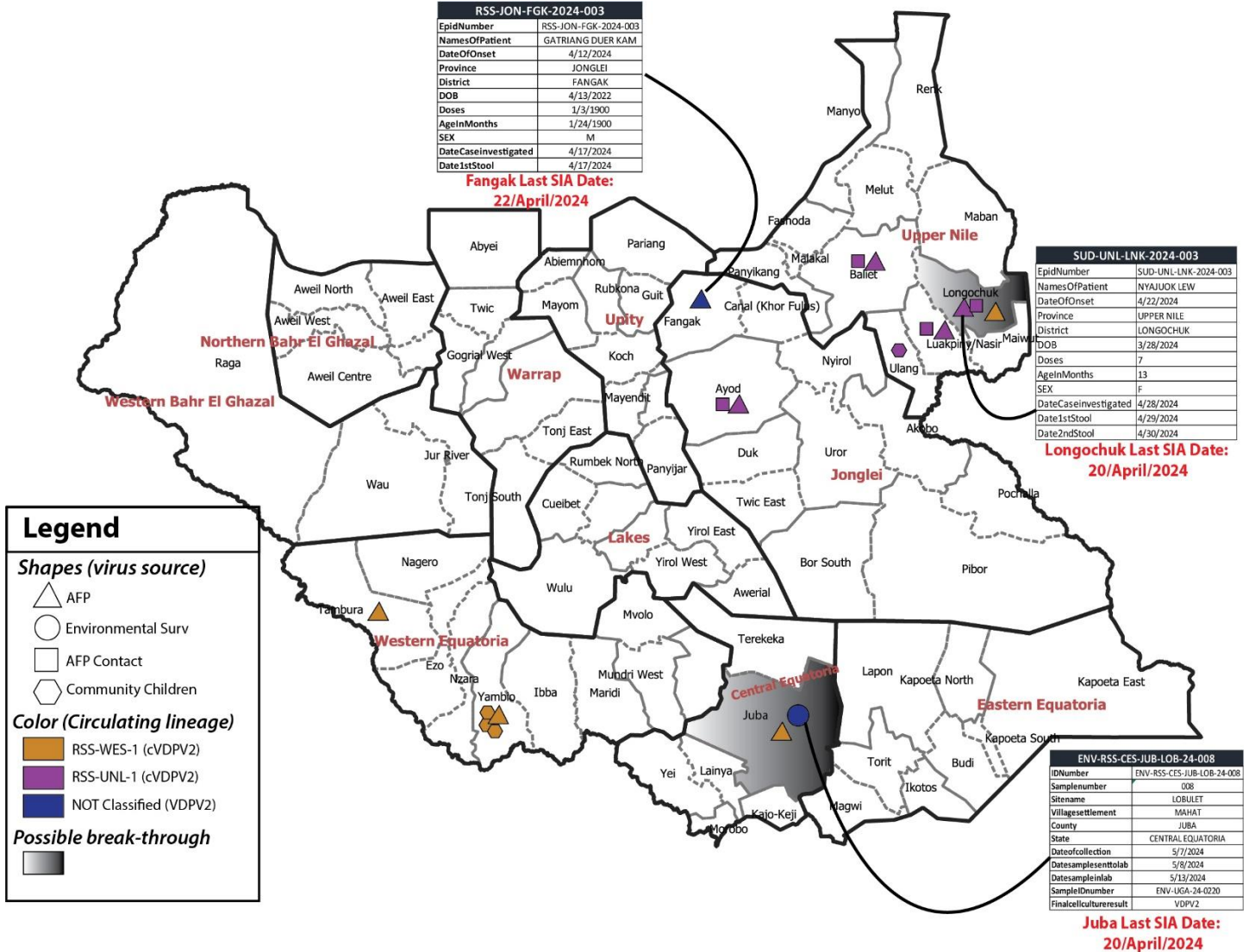


Poliomyelitis

Circulating Vaccine Derived Polio Virus type-2 (cVDPV2)

The Ministry of Health declared the cVDPV2 as a public health emergency on December 22, 2023, following the confirmation of a circulating lineage of polio virus type 2 in Yambio. The total number of laboratory-confirmed cVDPV2 isolates are 16 (7 from AFP cases, 3 from AFP contacts, 4 from community contacts and 2 from the environmental samples). Cases are reported from Yambio in Western Equatoria, Juba in Central Equatoria, Ayod in Jonglei, Baliet, Luakpiny/Nasir, and Longechuk in Upper Nile, and Tambura in Western Equatoria state. The latest cVDPV2 isolates were detected from the environmental samples collected in Lobulet and Roton sampling sites in Juba county of Central Equatoria state, picked on 7th May 2024. The inability of environmental sampling sites failing to detect the circulating lineages finally came to an end. Unfortunately, the date of sample collection was 3 weeks after the latest round of nOPV2 SIAs, suggesting a possible breakthrough transmission. A detailed community investigation of the environmental surveillance isolates is ongoing to determine possible sources, lineages and risk of circulation.

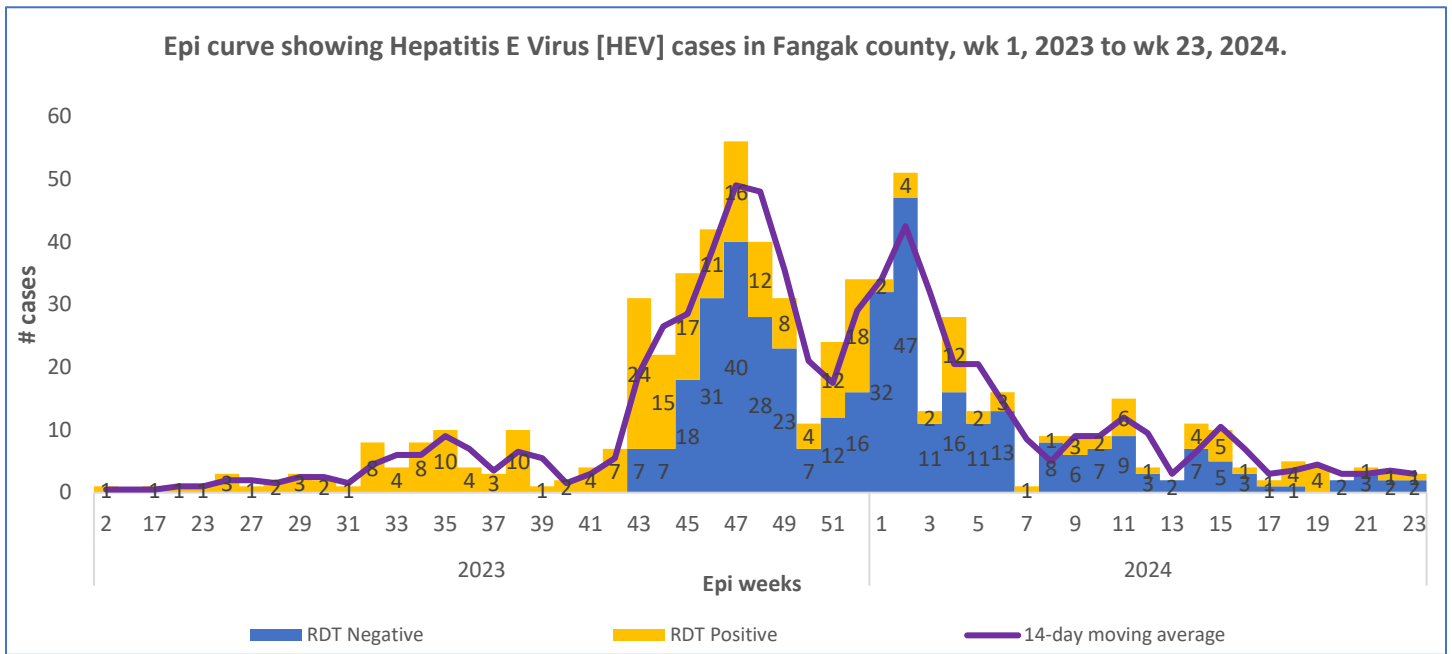
Figure 7: Distribution of cVDPV2 isolates (All sources)



1. Hepatitis E Virus in Fangak county Jonglei State

A cumulative total of 655 cases including 23 death have been reported since week 1, 2023 to week 24, 2024. Most cases were reported among the age group 15 years and above with females representing the majority at 65% (424), while males make up 35% (229) of the total. Most cases originated from old Fangak Payam (65% of total cases), followed by Paguir (11%) and 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, MSF-France, and partners had conducted two rounds of Hecolin Hepatitis E vaccination campaigns to address the ongoing outbreak.

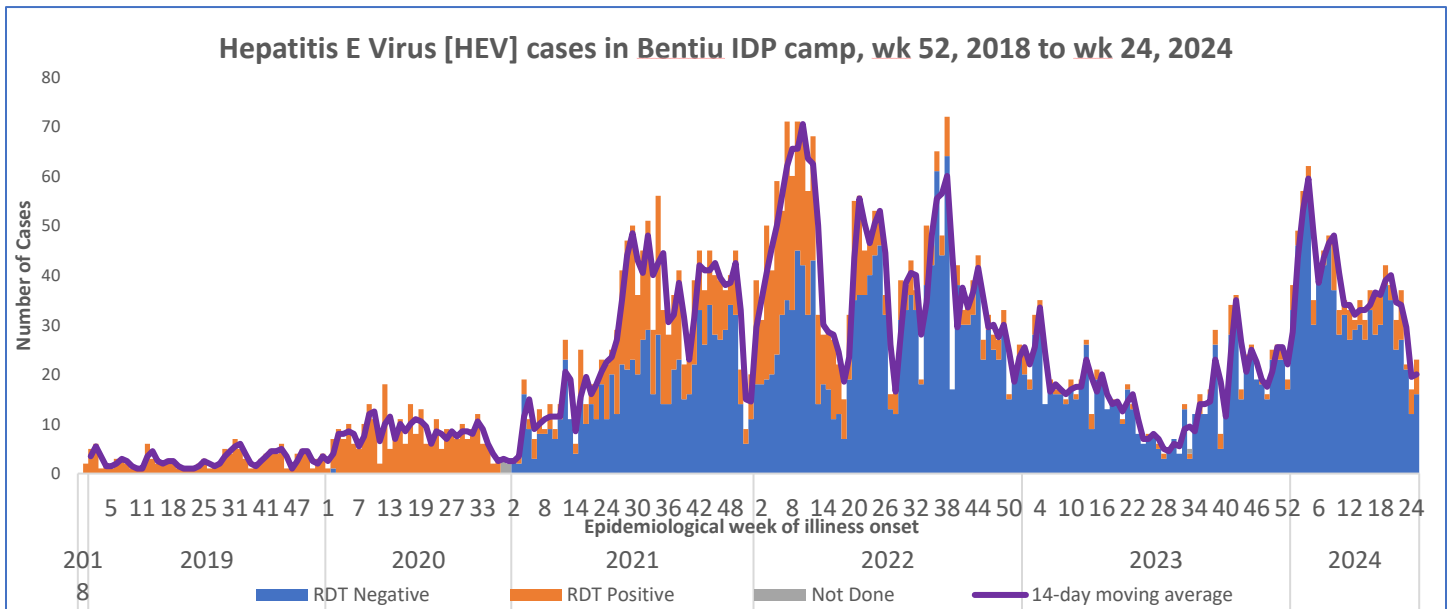
Figure 8: Epi-curve of HEV in Fangak County



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

In week 24 of 2024, 23 new cases were reported, with 7 RDT-positive cases and no deaths. Since the outbreak began in 2018, a cumulative of 5,619 cases and 27 deaths have been reported. Among these cases, 43% occurred among the age group of 15-44 years. Males accounted for 52% of all reported cases. Most of the cases (47%) were among the non-camp residents who seek treatment within the camp. Sector 3 accounted for more cases (13%) than the other sectors. There are ongoing WASH interventions within the camp; however, overcrowding remains one of the main challenges, coupled with the Humanitarian complex due to Sudan crisis.

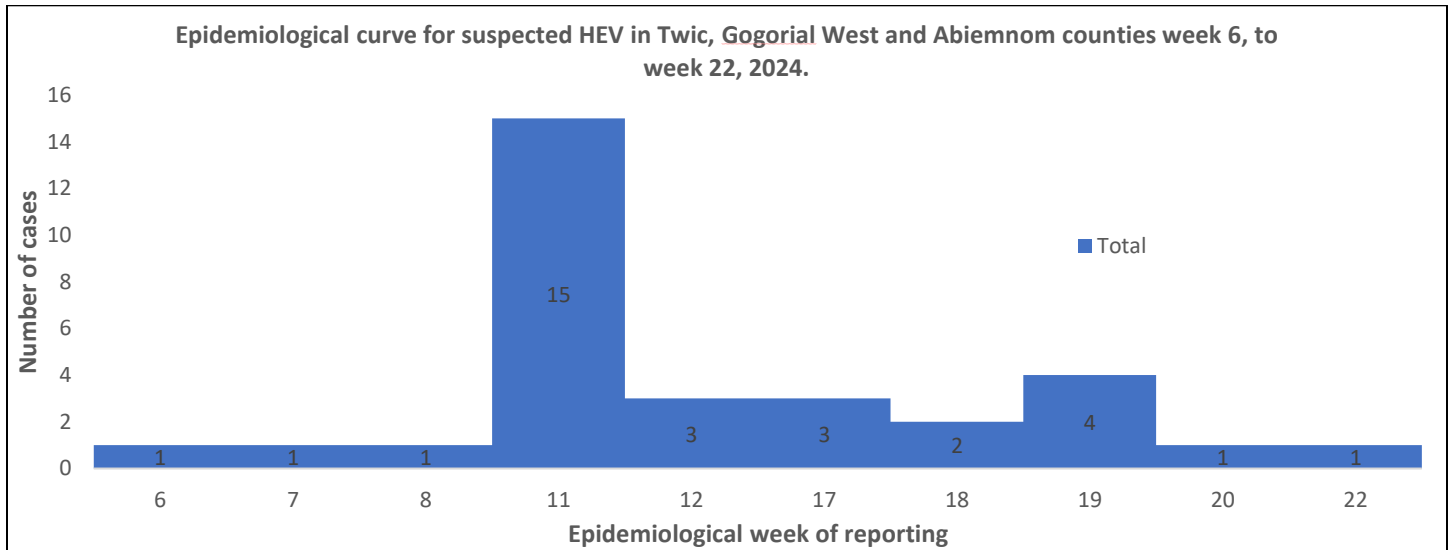
Figure 9: Epicure of HEV in Bentiu IDP camp, Unity State



3. Hepatitis E outbreak Twic county, Warrap State

In March, an outbreak of Hepatitis E was officially declared by the State Ministry of Health. The outbreak was due to a confirmed case from an IDP camp in Twic County. From week 6 to week 22 of 2024, a total of 32 suspected cases were reported, fortunately with no fatalities. The peak of the outbreak occurred in week 15 of 2024. Most cases occurred in individuals aged 15 and older. Among the reported cases, 63% were males and 37% were females. Notably, 75% of the cases were reported from Wunrok payam in Twic County.

Figure 10: Epicure of HEV in TWIC county Warrap State

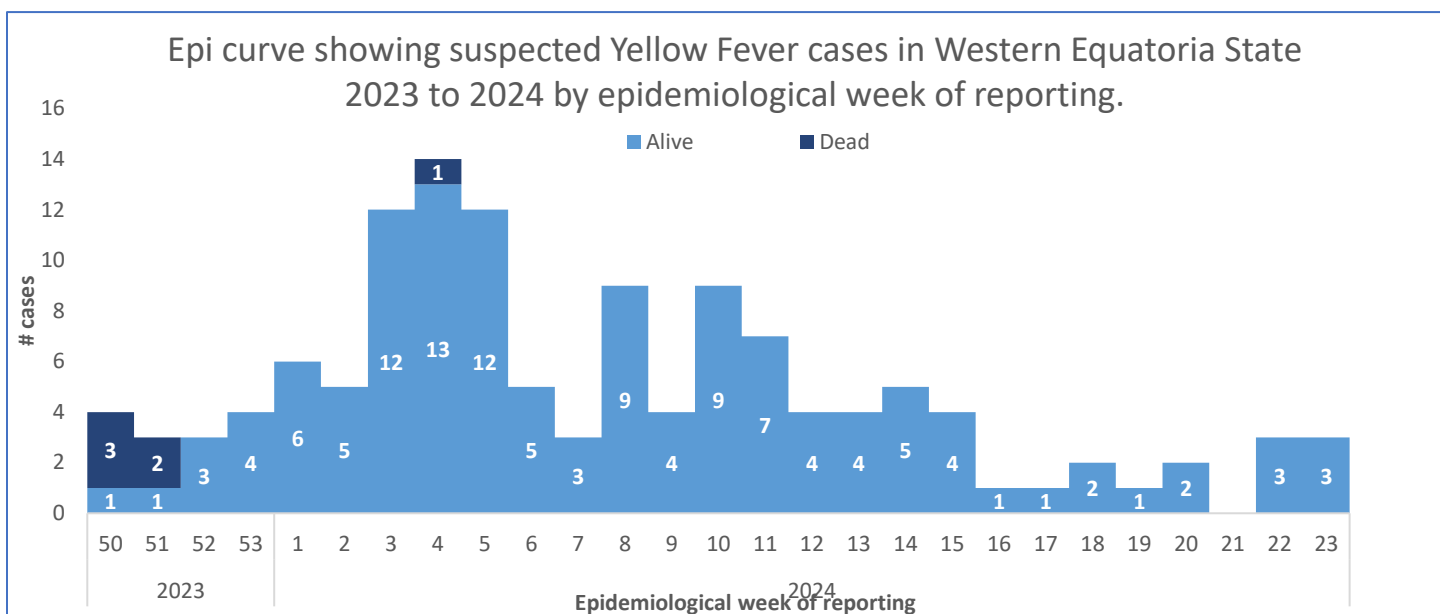


Hemorrhagic Fever

1- Yellow fever Outbreak

In Week24, there were no additional data reported from reporting counties in Western Equatoria State. The cumulative cases remain at 130 yellow fever cases (127 suspected and 3 confirmed). Seven counties in Western Equatoria state were affected: Yambio (70), Tambura (26), Nzara (11), Ezo (14), Ibba (03), Maridi (03), and Mvolo (03) Counties. Vaccination was conducted in three counties. The Ministry of Health and State have conducted an intra-action review to understand what went well and less well and ways to improve ongoing and future responses.

Figure 11: Epi curve of Yellow fever outbreak in Western Equatoria State



Other Events

Sudan crisis: As of Week, 24, at least 713042 individuals have crossed from 19 different nationalities. Of this number, 78.1% (556 852) are South Sudanese returnees. Currently, 21 PoEs are being monitored, with Joda-Renk accounting for 58.9% of the reported influx figures. Hostcommunities and healthcare systems are struggling to cope with the increased demand for health and other services. 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 3057 consultations were recorded this week, ARI is the top leading cause of morbidity 742/3057 followed by AWD 268 and Malaria 268

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 There is an expectation of extensive flooding to occur in South Sudan in 2024 due to two separate climatic events. The tail end of the 2023-24 El Niño event is leading to significantly above-average rainfall in Uganda, which increases the water level of the White Nile, leading to increased flood risks downstream in South Sudan. Additionally, the onset of the El Niño event in 2024 is projected to lead to approximately 50% higher levels of rainfall in the northern and easter parts of South Sudan, which not only further exacerbates the flood risk along the White Nile and its tributaries but will also contribute to flooding in more distant regions, like those occurring during the triple-dip La Niña event of 2020-2023. Historical data indicates a peak in flooding around September,

As part of the preparedness plan, the MoH, WHO, and Health Cluster have developed the 2024 South Sudan Health Sector Flood contingency and response plan. The Health Cluster partners will support the Ministry of Health in implementing this plan, although a key limitation will be the availability of funds. The estimated budget needed for the response is USD 63 million.

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

