



## Republic of South Sudan

### Weekly Integrated Disease Surveillance and Response (IDSR) Epidemiological Bulletin

Reporting period: Epidemiological Week 21

20 -26 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 21 of 2024, the IDSR reporting timeliness and completeness were 87% and 93%, respectively, a reduction from the 89% and 84% reported in the previous week.
- At the EWARD mobile sites, the Timeliness and Completeness of IDSR performance were 86% and 100%, respectively. Completeness was higher than the previous week 21.
- Timeliness and completeness stand at 94% and 95%, respectively, slightly higher than the 94% in the previous week.
- This week 21, 233 alerts were triggered, and the proportion of verified alerts increased from 63% (122/195) in week 20 to 69% (161/233) in week 21. Most of the alerts in week 21 were for Guinea Worm (19%), AWD (18%) and Measles (15%)
- Updates on ongoing Hepatitis E Outbreaks from Fangak, Twic counties, and Bentiu IDP camp and
- A total of one hundred twenty (124) Yellow Fever cases have been reported in WES with 6 deaths

#### 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 21 were 87% and 93%, respectively.

Table 1: Timeliness and completeness of IDSR reporting by State for week 21, 2024

State	Total facilities	Number of facilities reported (Completeness)†	Current reporting period		Cumulative since year start (2024 level)	
			Timeliness wk21	Completeness wk21	Timeliness	Completeness
Lakes	112	111	97%	99%	90%	98%
NBGZ	89	85	91%	96%	87%	93%
Unity	84	84	100%	100%	93%	100%
WBGZ	81	62	75%	83%	76%	79%
WES	183	183	97%	100%	89%	96%
Jonglei	119	108	89%	91%	86%	89%
Warrap	111	105	84%	95%	83%	92%
EES	107	103	89%	96%	88%	95%
RAA	16	6	31%	38%	54%	68%
CES	122	122	98%	100%	90%	94%
AAA	17	17	100%	100%	72%	78%
Upper Nile	142	115	58%	81%	65%	78%
GPAА	15	15	100%	100%	99%	99%
<b>Total</b>	<b>1198</b>	<b>1116</b>	<b>87%</b>	<b>93%</b>	<b>84%</b>	<b>91%</b>

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 21	% Of Completeness in week 21	Payam	# Of Reporting Private Health Facilities	% Of Timeliness in week 21	% Of Completeness in week 21
IMC	4	75%	100%	Kator	4	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	95%	100%
CIDO	1	0%	100%	Wau North	12	75%	75%
TOTAL	14	86%	100%	Juba	10	100%	100%
				TOTAL	63	94%	95%



Table 3: Summary alerts triggered week 21, 2024

Admin Area	Acute jaundice syndrome		Acute Respiratory Infections (ARI)		Acute Watery Diarrhoea		AFP		Bloody Diarrhoea		Cholera		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	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	3	3
CES	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	1	1	1	0	6	5
EES	0	0	1	1	4	4	0	0	2	2	0	0	1	1	0	0	3	3	0	0	0	0	11	11
Jonglei	1	0	3	0	5	1	0	0	6	0	0	0	1	0	4	0	3	0	1	0	0	0	24	1
Lakes	0	0	4	4	1	1	0	0	1	1	0	0	1	1	30	30	4	4	1	1	0	0	42	42
NBGZ	0	0	2	2	3	3	0	0	2	2	0	0	0	0	0	0	1	1	6	6	0	0	14	14
RAA	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0
Unity	3	2	3	0	0	0	0	0	3	2	0	0	0	0	0	0	4	1	0	0	0	0	13	5
Upper Nile	1	0	6	0	6	0	1	1	7	1	0	0	0	0	0	0	2	0	3	1	0	0	26	3
Warrap	0	0	0	0	0	0	0	0	0	0	1	1	4	3	7	2	0	0	4	3	0	0	16	9
WBGZ	0	0	3	2	2	1	0	0	1	1	0	0	2	2	4	0	1	0	0	0	0	0	13	6
WES	0	0	8	8	20	20	0	0	6	6	0	0	0	0	0	0	11	11	17	17	0	0	62	62
Grand Total	6	3	30	17	43	32	1	1	29	16	1	1	10	7	45	32	32	23	35	29	1	0	233	161

#R= reported #V= verified

### Weekly Update on Indicator-Based Surveillance (Week 21)

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, three (3) designated Influenza sentinel surveillance sites in Juba (Juba Teaching Hospital, Al Sabbah Children’s Hospital, Juba Military Hospital) and Rumbek State Hospital in Lakes State are collecting epidemiological data and samples from ILI/SARI cases. During Epidemiological Weeks 1 to 21 of 2024, a total of 637 ILI/SARI samples were collected; 589 tested negative for all pathogens, (23) were positive for COVID-19, (3) for Influenza Type A (H3), one (4) for Influenza Type B (Victoria), nine (18) for Influenza A/(H1N1) pdm09 and zero (0) for RSV.

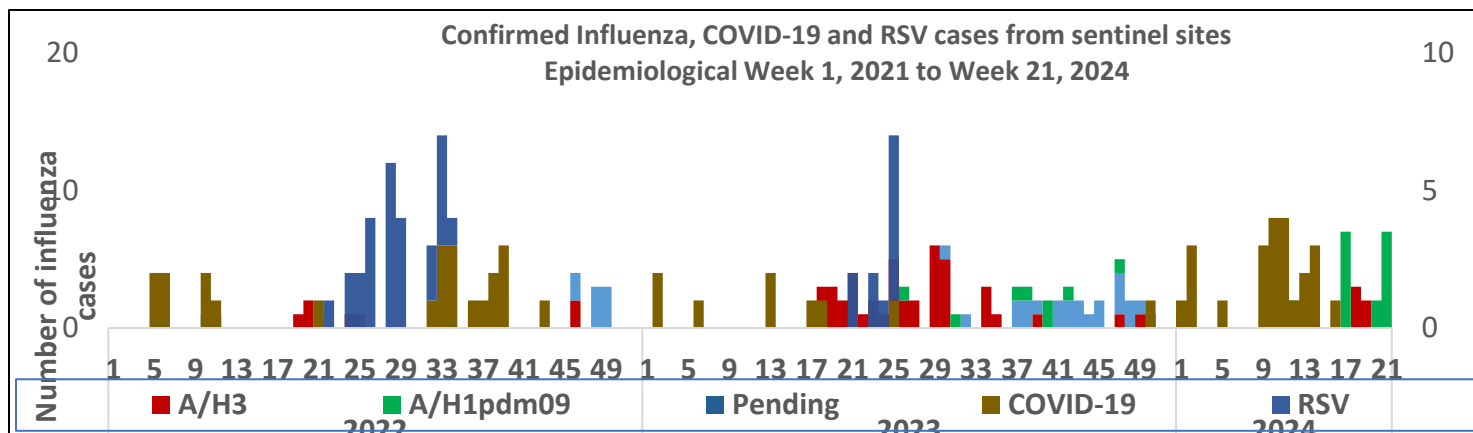


Figure 2: Indicator-Based Surveillance (IBS) Influenza Surveillance

## 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	0	124	3 Laboratory confirmed	Ongoing	Done in 5 counties	Ongoing	Ongoing
Measles	69 counties	2022	19	14,526	1,154	ongoing	ongoing	ongoing	ongoing
Hepatitis E	Fangak	2023		647	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 <sup>rd</sup> round planning is ongoing	ongoing	ongoing
Hepatitis E	Rubkona (Bentiu IDP Camp)	Dec/2018	22	5597	-	ongoing	Done in 2021/22	ongoing	ongoing

## Ongoing Confirmed Outbreaks

Since 2022, South Sudan experienced several 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. Prevention and control measures have been put in place to help mitigate the spread of these outbreaks. Below is a map of the current ongoing emergencies.

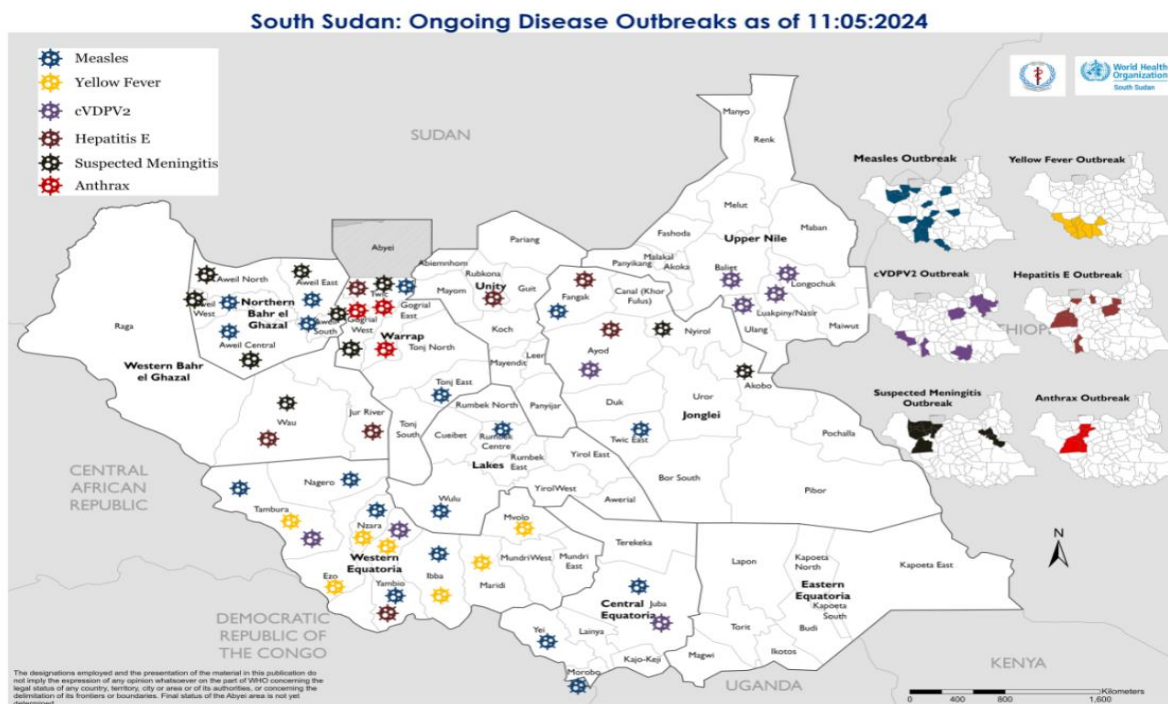


Figure 3: Map showing ongoing disease outbreaks across the country

## Response activities for ongoing/suspected outbreaks

### A- Vaccine-preventable Diseases

#### 1- Measles outbreak

One-third of suspected cases 801 (33%) are 5 years and above children (Not targeted in the outbreak response). Similarly, 40% (68) of lab-confirmed cases are 5 years and above children, however, the case fatality rate is higher among under-five children who constitute 38% of the deaths (16/41) among under five with a CFR of 1.7 – (16/944). Out of the total suspected cases, 1,935 (80%) were unvaccinated (zero, unknown). Children above five years constitute 704 (36.4%) of the unvaccinated children (no opportunity of vaccination both routine immunization (RI) and Supplemental Immunization Activities (SIAs)).

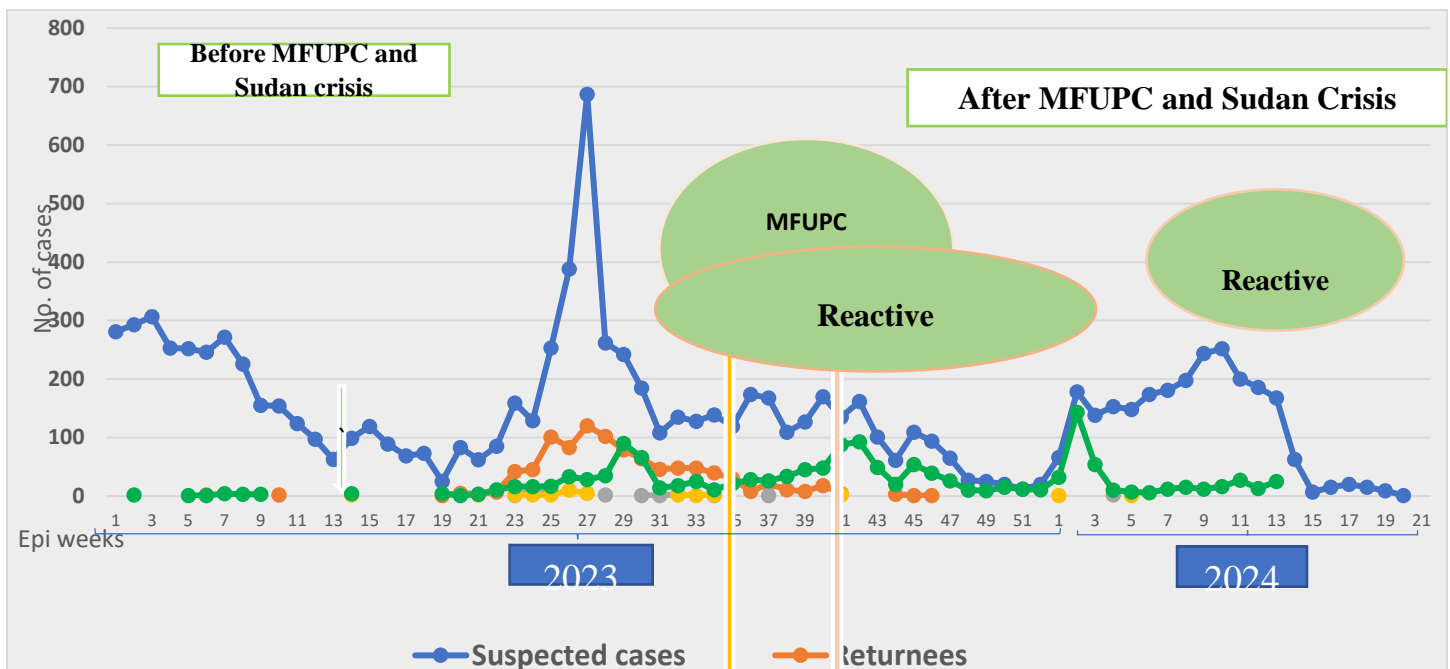


Figure 4: Epi-curve of suspected measles cases by Epi week

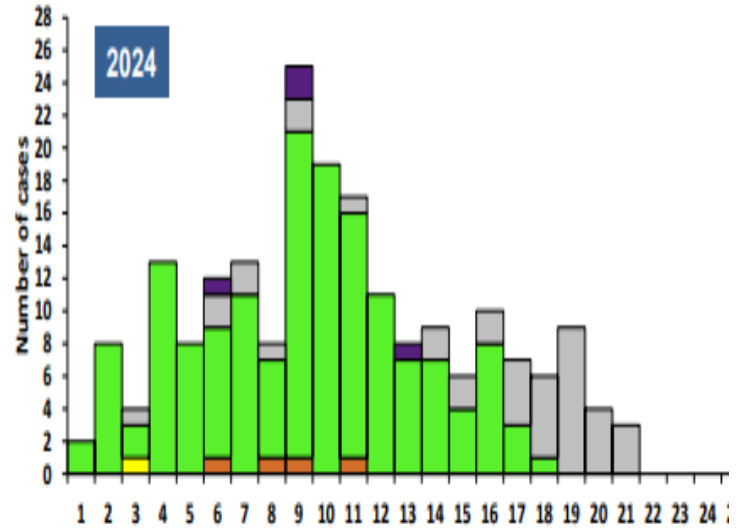
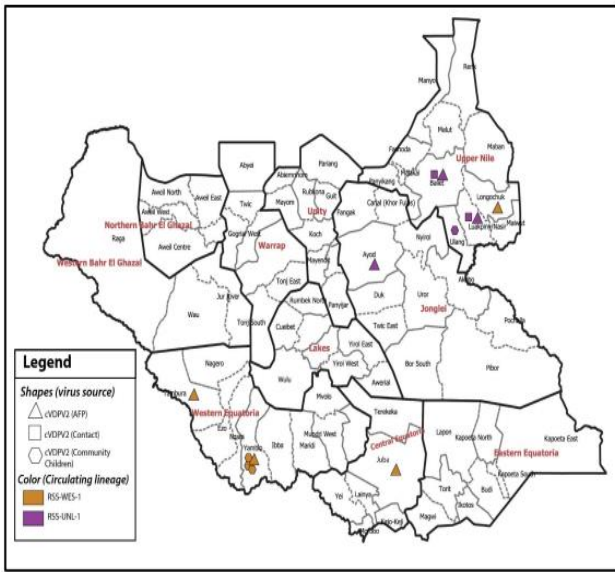
#### Measles Vaccination Updates

In 2024, nineteen (19) counties reported confirmed measles outbreaks. Thirteen (13) counties (Maridi, Mundri East, Tonj North, Tonj South, Aweil East, Aweil North, Aweil South, Aweil Center, Aweil West, Yambio, Nzara, Ibba and Tambura completed reactive vaccination campaign. Tambura County partially implemented a reactive measles vaccination campaign in the camps due to insecurity. Implementation in Ezo County will kick off this week (delayed due to insecurity related to Tambura).

As of 27<sup>th</sup> May 2024, a total of 453,188 (91%) of 499,107 targeted under-five children were vaccinated in 13 counties of which 2.3% are returnees from Sudan and preparation will continue for the remaining outbreak-affected counties while the country secures additional measles vaccines. Targeted vaccination response is also considered an option.



isolated from environmental samples collected in 7 sites in the countries43



■ Pending NPEC   ■ Pending Lab   ■ Pending ITD   ■ NPAFP Cases   ■ Compatible   ■ cVDPV   ■ WPV

figure 7: Distribution of cVDPV2 cases isolates (All sources)   Cases of Polio by Epi- week

## B- Acute Jaundice Syndrome

### 1. Hepatitis E Virus in Fangak county Jonglei State

During week 21 of 2024, two cases tested positive using a rapid diagnostic test (RDT), resulting in a total of 647 AJS cases since the outbreak began in week 2 of 2023 including 22 deaths. Out of these cases, (43%) occurred in individuals aged 15 and above, with females accounting for 66% (423 out of 647) and males accounting for 34% (221 out of 647). The highest number of cases originated from old Fangak Payam, comprising 65% of the total cases, followed by Paguir with 11% and 10 other villages. The outbreak reached its peak in week 42 of 2023, with an RDT positivity rate surpassing 60%. By week 52 of 2023, the Ministry of Health, county health department, MSF-France, and partners had implemented two rounds of Hecolin intervention to address the ongoing outbreak.

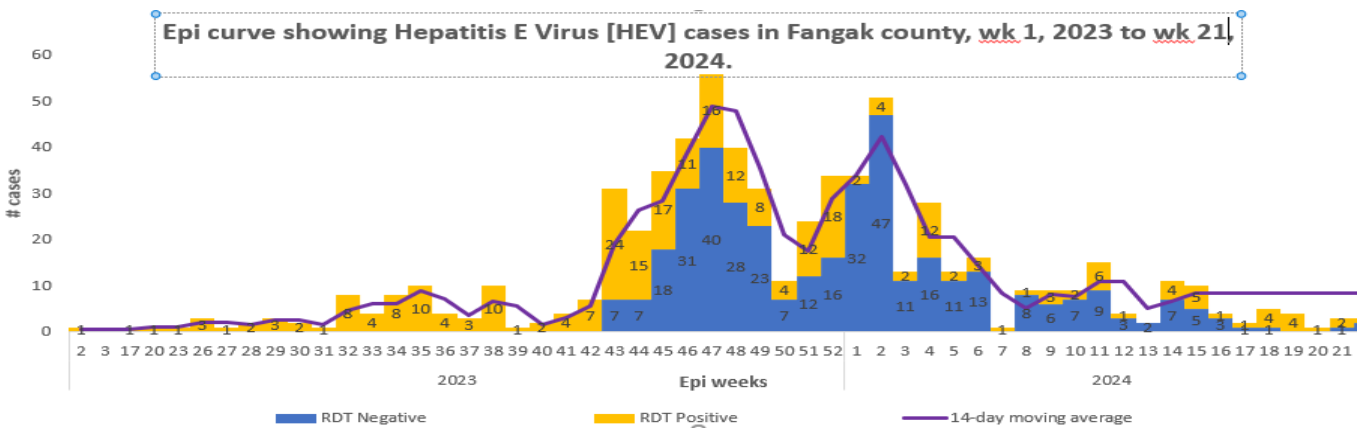




Figure 8: Epi-curve of HEV in Fangak County

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

In week 21 of 2024, 22 new cases were reported, with one RDT positive case and no deaths. Since the outbreak began in 2018, 5579 cases and 27 deaths have been reported. Among these cases, 43% occurred within the age group of 15-44 years. Males accounted for 52% (2,919 cases), and females accounted for 48% (2,660 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.

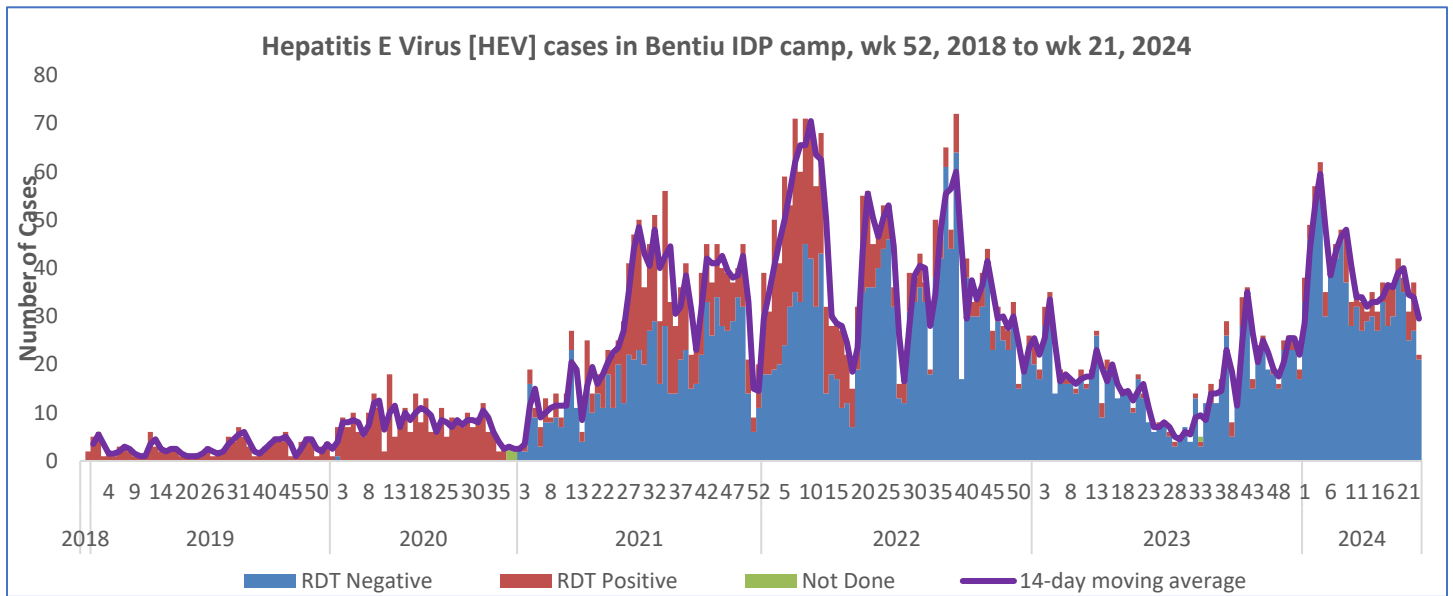


Figure 9: Epi-curve of HEV in in Bentiu IDP Camp in Unity State

## 3- Hepatitis E in Twic, Gograial West and Abiemnum Counties

A total of 32 cases with zero deaths have been reported from week 6 2024 to week 22, 2024 in Twic, Gograial West and Abiemnum Counties. Most cases were concentrated in Wunrok (24) followed by Turalei (3). Of the reported cases, 63% were male and 37% were female, with the most affected age group being 15 years and older.

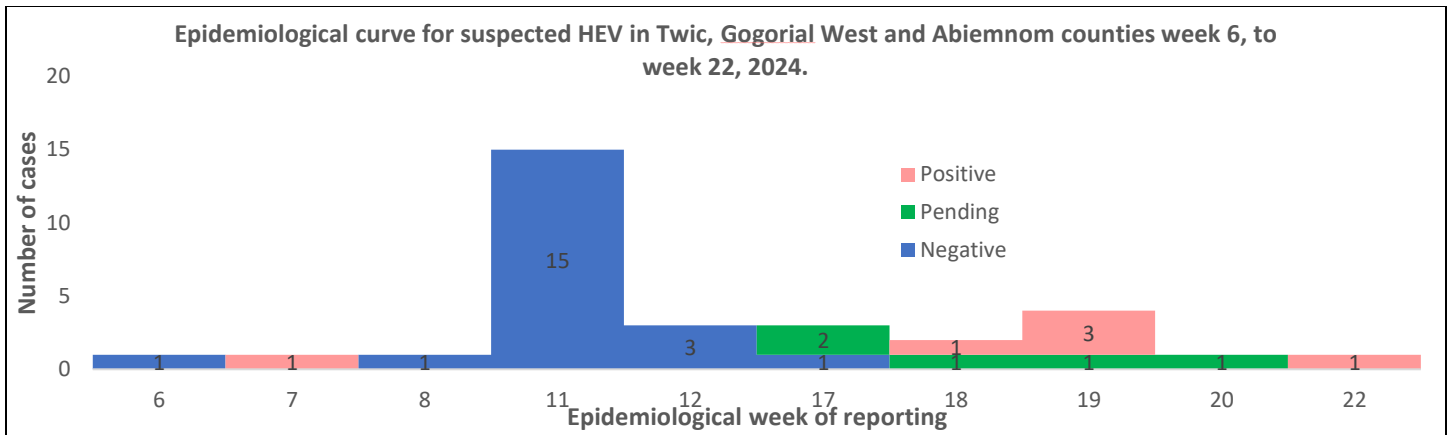


Figure 10: Epi-curve of HEV in Fangak County

#### 4- Yellow fever Outbreak in Western Equatoria State

A total of one hundred twenty (124) Yellow Fever cases have been reported (121 suspected and 3 confirmed). Seven counties in Western Equatoria state were affected: Yambio (64), Tambura (26), Nzara (11), Ezo (13), Ibba (03), Maridi (03), and Mvolo (03) Counties. In This week 21 no additional cases have been reported

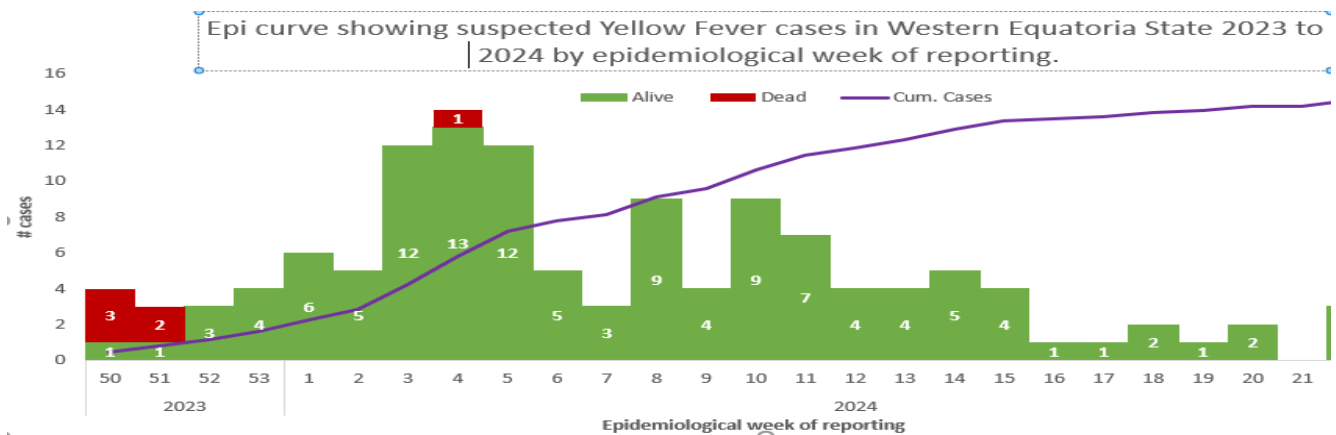


Figure 11: Trend of Yellow fever outbreak in Western Equatoria State

#### Other Events

**Sudan crisis:** As of week 21 of 2024, at least **675,353** 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 other services, morbidity, and mortality among returnees and refugees. The WHO/MoH is leading the comprehensive emergency health response through established coordination structures. As part of the surveillance response, A total of **2,984** consultations were carried out at various healthcare facilities in communities hosting refugees and returnees. Among these cases, acute respiratory infections (ARI) contributed (42%), Malaria cases

(13%), and acute watery diarrhea (AWDs) cases (12%). Psycho-social and mental health sessions were conducted on 79 cases by the MHPSS team. Conducted supportive supervision visit to the Wunthou Cholera Screening Centre, emergency vaccination, the MUAC screening area, the IOM PHCU, and the MSF-B clinic. Four days of training on surveillance, laboratory, case management, IPC/WASH, and RCCE activities for cholera was conducted for **105 HCWs** in Renk (36), Maban (35), and Malakal (34). Active surveillance for potential cholera cases is being conducted and a total of **4,702** individuals were screened for AWDs at the public health desk at the Wunthou Point of Entry (POE). **2,328** children under five were screened for malnutrition-(129) 5.6% SAM, 223 (9.6%) MAM. SAM/MC kits, and during the reporting period one child was referred to the stabilization center due to medical complications. 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** 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 La Niña event in 2024 is projected to lead to approximately 50% higher levels of rainfall in the northern and eastern 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 Ministry of Health will be supported by the Health Cluster partners 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.

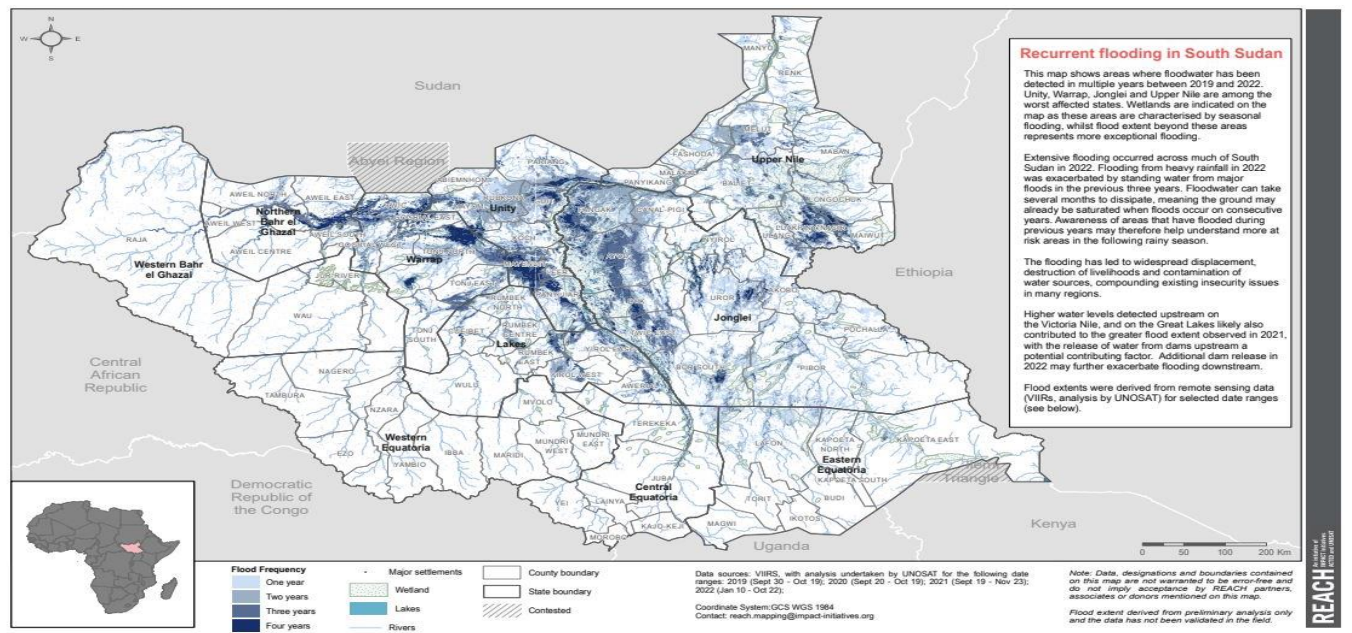


Figure 11: South Sudan Flood frequency 2019-2022 (production date: 28 Oct, 2022)

### Next step

- Strengthening active surveillance across the counties bordering with 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).
- Roll out of MCM in at the Sub-national level
- Support IDSR Supportive supervision
- Support Yellow fever intra action review
- 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

For more help and support, please contact:

Dr Joseph Lasu Hickson  
 Emergency Preparedness and Response  
 Ministry of Health Republic of South Sudan  
 Email: [josh2013.lasu@gmail.com](mailto:josh2013.lasu@gmail.com)  
 Phone number +211921395440

Dr. Kediende Mapour Akech Chong  
 Director General Preventive Health Services Ministry of Health  
 Republic of South Sudan  
 Email: [mkediende@gmail.com](mailto:mkediende@gmail.com)  
 Phone number: +21192888461

Dr BATEGEREZA, Aggrey Kaijuka

#### 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.

WHO-EPR Team Lead  
Email: [bategerezaa@who.int](mailto:bategerezaa@who.int)  
Phone number : +211 924222030

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

Data source: DHIS-2 and EWARS

